



COOKING, HOLDING, SMOKING
GUIDELINES

ALTO-SHAAM®

Cooking, Holding, Smoking Guidelines

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The times and temperatures are suggested guidelines only. All cooking should be based on internal product temperatures. Due to variations in product quality, weight and desired degree of doneness, cooking time may need to be adjusted accordingly. Always follow local health [hygiene] regulations for all internal temperature requirements.

Quantities listed in the "Poultry" section are per oven compartment.

General Guidelines

- For cooking specific products, refer to your Cook and Hold Operator's Manual.
- **PROBE HOLD:** When cooking proteins to rare by probe, general guidelines are: Cook to 250°F [121°C], Probe to 90°F [32°C], Probe Hold 130°F [54°C]. When cooking to a higher level of doneness, cook to 40°F less than the desired temperature. Probe hold at the desired temperature.
- When cooking at 250° F [121°C], it takes approximately one hour for the cooking temperature to decrease to the selected holding temperature. The product will continue to cook during this time period.
- Cooking times in this guide are based on products taken directly from a refrigerated temperature of 38° to 40°F [3.3° to 4.4°C], and placed in a preheated oven. Make adjustments when cooking products at other than refrigerated temperatures.
- **BEEF:** Cooking times and temperatures in the "Beef" section are suggested guidelines for cooking beef to a rare degree of doneness only. Adjust times and temperatures as desired for medium rare to well done.
- Keep the oven door closed during the cooking cycle. Opening the door will only increase the length of time necessary to cook the product.
- Puncturing an item with any sharp instrument may inject bacteria into the product. Avoid using a fork to handle products. Always use standard sanitary methods when handling any food item.
- Use a metal-stemmed thermometer to check the internal temperature of a product. Be certain to sanitize the thermometer before each use.
- Aged meat will cook faster, will shrink more, and cannot be held as long as fresh meat. Because of the tenderizing capabilities of the oven, aged meat or tenderizing agents such as MSG [monosodium glutamate] are not recommended for Cook and Hold ovens.
- Fully clean the oven interior, drip pan, shelves, and side racks on a daily basis.
- When cooking full loads, never cook below the first shelf spacing from the bottom of the oven.
- Because there is no air movement inside the oven, condensation will form on the inside of the door during operation and may drip out of the oven door vents. This is a normal operating condition. Regularly wipe any condensation spilled on the floor to prevent slips or falls.
- External drip trays are included as standard equipment with most ovens. Drip pan overflow may occur when cooking some cuts of beef to an internal temperature in excess of 130 °F [54 °C]. The external drip tray will help to reduce overflow problems. Optional Extended Drip trays are available from Alto-Shaam.
- Drip pan overflow may also be caused by overloading the oven compartment. **DO NOT OVERLOAD THE OVEN.** Follow the recommended load capacities listed in each recipe in this guide.
- For best results, many products should be cooked on an overnight cook-and-hold basis. Refer to individual recipes for time and temperature settings.

Beef

Product >	Beef brisket	Beef short ribs
Size of meat	Beef brisket, fresh, 9-13 lbs (4 to 6 kg)	Short ribs, 10 to 12 oz. (0.28 to 0.34 kg) pieces
Instructions	Season brisket and wrap individually in clear plastic wrap for cooking. Place wrapped brisket directly on wire shelves.	Season as desired. Place ribs side-by-side in pans. For an overnight cook and hold, cover pans loosely with clear plastic wrap to retain additional product moisture.
Suggested pan	None	300, 1000, 1200 - Full-size hotel pan 500, 750 - Sheet pan
Number of shelves		
300	1	2
500	3	3
750	2	3
1000, 1200	3	4
Items per shelf		
300	1 roast	1 full-size pan
500	1 roast	1 half-size sheet pan
750	3-4 roasts	1 full-size sheet pan
1000, 1200	2-3 roasts	1 full-size pan
Maximum capacity		
300	1 roast	2 full-size hotel pans
500	3 roasts up to 40 lbs (18 kg)	3 half-size sheet pans
750	6-8 roasts up to 100 lbs (45 kg)	3 full-size sheet pans
1000, 1200	6-9 roasts up to 100 lbs (45 kg)	4 full-size hotel pans
Vent position	One-half open	One-half open
Cook temperature	250°F (121°C)	300: 225°F (107°C) 500, 750, 1000, 1200, 1750: 250°F (121°C)
Probe temperature	Probe hold cooking/holding: For slicing: 140°F (71°C) For shredding: 150°F (66°C)	300: 160°F (71°C) 500, 750, 1000, 1200, 1750: 170°F (77°C)
Hold temperature	For slicing: 160°F (71°C) For shredding: 170°F (77°C)	160°F (71°C)
Cook time	18 min/lb for first roast (44 min/kg) plus 30 minutes each additional roast.	3 hours for the first pan plus 30 minutes for each additional pan.
Minimum hold time	6 hours	6 hours
Maximum hold time	24 hours	18 hours
Overnight cook / hold	Highly recommended	Required

Beef

Product >	Beef strip loin	Prime rib	Prime rib special
Size of meat	Short-cut, boneless: 8-12 lb (4 to 5 kg)	Beef rib, roast ready, with fat cap, #109: 20 lb [9 kg] average weight	Beef rib, roast ready special, tied: 14 to 18 lb [6 to 8 kg] average weight
Instructions	Season as desired. Place roasts directly on the wire shelves with fat side down. Place larger roasts toward the top of the oven compartment.	Season as desired. Place roasts directly on wire shelves with the larger roasts toward the top of the oven compartment.	Season as desired. Place roasts directly on wire shelves with the larger roasts toward the top of the oven compartment.
Suggested pan	None	None	None
Number of shelves 300 500 750, 1750 1000, 1200	2 2 2 3	1 2 2 3	1 2 2 3
Items per shelf 300 500 750, 1750 1000, 1200	1 roast 2 roasts 4 roasts 3 roasts	1 roast 1 roast 3 roasts 2 roasts	1 roast 1 roast 3 roasts 2 roasts
Maximum capacity 300 500 750, 1750 1000, 1200	2 roasts up to 24 lb [11 kg] 4 roasts up to 40 lb [18 kg] 8 roasts up to 100 lb [45 kg] 9 roasts up to 100 lb [45 kg]	1 roast 20 lb [9 kg] 2 roasts - 40 lb [18 kg] 6 roasts - 120 lb [54 kg] 6 roasts - 120 lb [54 kg]	1 roast 18 lb [8 kg] 2 roasts 36 lb [16 kg] 6 roasts 100 lb [45 kg] 6 roasts 100 lb [45 kg]
Vent position	One-half open	One-half open	One-half open
Cook temperature	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]
Probe temperature	300: 95°F [35°C] 500, 750, 1000, 1200, 1750: 100°F [38°C]	300: 90°F [32°C] 500, 750, 1000, 1200, 1750: 100°F [38°C]	300: 90°F [32°C] 500, 750, 1000, 1200, 1750: 100°F [38°C]
Hold temperature	140°F [60°C]	140°F [60°C]	140°F [60°C]
Cook time	8 to 10 lb roasts [4 to 4.5 kg]: 8 minutes per pound for the first roast [18 minutes per kilogram] plus add 8 minutes for each additional roast. 12 lb roasts [5 kg]: 10 minutes per pound for the first roast [22 minutes per kilogram] plus add 8 minutes for each additional roast.	10 minutes per pound for the first roast [22 minutes per kilogram] plus add 30 minutes for each additional roast.	10 minutes per pound for the first roast [22 minutes per kilogram] plus add 15 minutes for each additional roast.
Minimum hold time	4 hours	4 to 6 hours	4 or more hours
Maximum hold time	12 hours	24 hours	24 hours
Overnight cook / hold	Optional	Highly recommended	An overnight cook and hold can be done with this cut.
Final internal temperature	130°F [54°C] Rare	130°F [54°C] Rare	130°F [54°C] Rare
Override allowance	300: 40°F [22°C] 500, 750, 1000, 1200, 1750: 30°F to 40°F [17°C to 22°C] depending on size	300: 40°F [22°C] 500, 750, 1000, 1200, 1750: 30°F [17°C]	300: 40°F [22°C] 500, 750, 1000, 1200, 1750: 30°F [17°C]

Beef

Product >	Corned beef	Ribeye roll	Beef round
Size of meat	9 to 12 lb [4 to 5 kg]	Beef ribeye roll, lip on, #112A: 8 to 12 lb [3 to 5 kg]	Beef round, top (inside), or bottom (gooseneck), Untrimmed: 14 to 23 lb [6 to 10 kg]
Instructions	Leave the corned beef in the original plastic bag and place the corned beef bag directly on the wire shelf.	Season as desired. Place roasts directly on wire shelves, fat side down. Place larger roasts toward top of oven compartment.	Season as desired. Place roasts directly on wire shelves, fat side down. Place larger roasts toward top of oven compartment.
Suggested pan	None	None	None
Number of shelves 300 500 750, 1750 1000, 1200	2 2 2 3	1 2 2 3	1 1 or 2 2 3
Items per shelf 300 500 750, 1750 1000, 1200	1 roast 2 roasts 3 to 4 roasts 2 to 3 roasts	1 roast 2 roasts 3 roasts 3 roasts	1 roast 1: 23 lb [10 kg] or 2: 14 lb [6 kg] roasts 3: 23 lb [10 kg] or 4: 14 lb [6 kg] roasts 2: 23 lb [10 kg] or 3: 14 lb [6 kg] roasts
Maximum capacity 300 500 750, 1750 1000, 1200	2 roasts up to 24 lb [11 kg] 4 roasts up to 40 lb [18 kg] 6 to 8 roasts up to 100 lb [45 kg] 6 to 9 roasts up to 100 lb [45 kg]	1 roast 12 lb [5 kg] 4 roasts up to 40 lb [18 kg] 6 roasts up to 100 lb [45 kg] 9 roasts up to 100 lb [45 kg]	1 roast up to 23 lb [10 kg] 2 lg. or 4 sm. roasts up to 40 lb [18 kg] 6 roasts up to 100 lb [45 kg] 6 lg. or 9 sm. roasts up to 100 lb [45 kg]
Vent position	One-half open	One-half open	One-half open
Cook temperature	250°F [121°C]	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]
Probe temperature	For slicing: 140°F [71°C], for shredding: 150°F [66°C]	300: 95°F [35°C] 500, 750, 1000, 1200, 1750: 100°F [38°C]	300: 90°F [32°C] 500, 750, 1000, 1200, 1750: 100°F [38°C]
Hold temperature	Probe hold setting: For slicing: 160°F [71°C], for shredding: 170°F [77°C]	140°F [60°C]	140°F [60°C]
Cook time	20 minutes per pound for the first corned beef [44 minutes per kilogram] plus add 30 minutes for each additional corned beef.	8 to 11 lb [4 to 5 kg] roasts: 8 minutes per pound for the first roast [18 minutes per kilogram] plus add 10 minutes for each additional roast. 12 lb [5 kg] roasts: 10 minutes per pound for the first roast [22 minutes per kilogram] plus add 10 minutes for each additional roast.	14 lb [6 kg] roasts: 10 minutes per pound for the first roast [22 minutes per kilogram] plus add 15 minutes for each additional roast. 15 to 23 lb [7 to 10 kg] roasts: 10 minutes per pound for the first roast [22 minutes per kilogram] plus add 30 minutes for each additional roast.
Minimum hold time	6 or more hours	4 hours	14 lb [6 kg] roasts: 4 to 6 hours 15 to 23 lb [7 to 10 kg] roasts: 8-10 hrs.
Maximum hold time	24 hours	12 hours	14 lb [6 kg] roasts: 12 hours 15 to 23 lb [7 to 10 kg] roasts: 24 hours
Overnight cook / hold	Required	Optional	Optional for smaller roasts. Highly recommended for larger cuts.
Final internal temperature	175°F [79°C]	130°F [54°C] Rare	130°F [54°C] Rare
Override allowance	—	30°F to 40°F [17°C to 22°C] depending on size	300: 40°F [22°C] 500, 750, 1000, 1200, 1750: 30°F [17°C]
Additional information	If desired corn beef can be removed from the bag and wrapped in clear plastic wrap for cooking.	—	Do not overload the oven.

Beef

Product >	Beef Tri-Tip Steak (Cook by Probe)	Beef Tri-Tip Steak (Cook by Time)
Size of meat	Approximately 5 pounds (2.3 kg)	Approximately 5 pounds (2.3 kg)
Instructions	Season roast as desired..	Season roast as desired..
Suggested pan	None	None
Number of shelves 300 500 750, 1750 1000, 1200	2 3 3 3	2 3 3 3
Items per shelf 300 500 750, 1750 1000, 1200	1 roast 2 roasts 3 to 4 roasts 2 to 3 roasts	1 roast 2 roasts 3 to 4 roasts 2 to 3 roasts
Maximum capacity 300 500 750, 1750 1000, 1200	3 roasts up to 24 lb (11 kg) 7 roasts up to 40 lb (18 kg) 17 to 19 roasts up to 100 lb (45 kg) 17 to 19 roasts up to 100 lb (45 kg)	3 roasts up to 24 lb (11 kg) 7 roasts up to 40 lb (18 kg) 17 to 19 roasts up to 100 lb (45 kg) 17 to 19 roasts up to 100 lb (45 kg)
Vent position	One-half open	One-half open
Cook temperature	300: 225°F (107°C) 500, 750, 1000, 1200: 250°F (121°C)	300: 225°F (107°C) 500, 750, 1000, 1200: 250°F (121°C)
Probe temperature	300: 94°F (34°C) 500, 750, 1000, 1200: 94°F (34°C)	300: 94°F (34°C) 500, 750, 1000, 1200: 94°F (34°C)
Hold temperature	135°F (57°C)	135°F (57°C)
Cook time	—	7 minutes per pound for the first tri-tip roast (15 minutes per kilogram) plus add 10 minutes for each additional pound (22 minutes per kilogram)
Minimum hold time	30 minutes	30 minutes
Maximum hold time	8 hours	8 hours
Overnight cook / hold	Not recommended	Not recommended
Final internal temperature	130°F (54°C)	130°F (54°C)
Override allowance	—	—
Additional information	I	I

Beef, Veal

Product >	Steamship round	Beef tenderloin	Veal loin
Size of meat	Any one of a variety of beef rounds used for carving on a buffet line. May be bone-in or boneless and may have a handle on or off as required. Weight range: 40 to 50 lb [18 to 23 kg] 50 to 80 lb [23 to 36 kg]	Beef loin, full tenderloin, side muscle off, skinned: 4 to 6 lb [2 to 3 kg]	Veal loin, trimmed: 8 to 10 lb [4 to 5 kg]
Instructions	Meat should be at a refrigerated internal temperature of 38°F to 40°F [3°C to 4°C] when placed in a preheated oven. Preheat to 325°F [163°C] due to mass of meat.	Season as desired and place directly on wire shelves.	Season as desired and place directly on wire shelves.
Suggested pan	None	None	None
Number of shelves 300 500 750, 1750 1000, 1200	— 1 1 1	2 2 3 3	1 2 2 3
Items per shelf 300 500 750, 1750 1000, 1200	— 1 roast 1-2 roasts 1-2 roasts	2 tenderloins 3 tenderloins 5 tenderloins 5 tenderloins	1 roast 2 roasts 4 roasts 3 roasts
Maximum capacity 300 500 750, 1750 1000, 1200	— 40 lb [18 kg] up to 80 lb [36 kg] up to 80 lb [36 kg]	4 tenderloins 6 tenderloins 15 tenderloins 15 tenderloins	1 roast 4 roasts 8 roasts 9 roasts
Vent position	One-half open	One-half open	One-half open
Cook temperature	250°F [121°C]	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F to 275°F [121°C to 135°C]	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]
Probe temperature	100°F [38°C]	300: 85°F [29°C] 500, 750, 1000, 1200, 1750: 95°F [35°C]	300: 90°F [32°C] 500, 750, 1000, 1200, 1750: 100°F [38°C]
Hold temperature	150°F [66°C]	140°F [60°C]	140°F [60°C]
Cook time	40 to 49 lb [18 to 22 kg] roasts: 10 minutes per pound for the first roast (22 minutes per kilogram) plus add 15 minutes for a second roast. 50 to 80 lb [23 to 36 kg] roasts: one roast only — 7 minutes per pound (15 minutes per kilogram)	Full load to Rare: 1 hour NOTE: A pre-sear is recommended due to rapid cooking time.	10 minutes per pound for the first roast (22 minutes per kilogram) plus add 10 minutes for each additional roast.
Minimum hold time	40 to 49 lb [18 to 22 kg] roasts: 6 to 8 hrs. 50 to 80 lb [23 to 36 kg] roasts: 8 to 12 hrs.	1 hour	1 hour
Maximum hold time	24 hours	6 hours	10 hours
Overnight cook / hold	Required	Not recommended	Not recommended
Final internal temperature	138°F [59°C] Rare	130°F [54°C] Rare	140°F [60°C] Medium rare
Override allowance	—	300: 45°F [25°C] 500, 750, 1000, 1200, 1750: 35°F [14°C]	300: 50°F [28°C] 500, 750, 1000, 1200, 1750: 40°F [22°C]
Additional information	When cooking these large roasts, reinforce the shelf support by using two wire shelves in one shelf bracket.	—	—

Fish and Seafood

Product >	Fish fillets, smoked	Whole smoked fish	Shrimp, smoked
Item/Amount	Fish fillets	Whole fish	Shrimp: 16 to 20 count
Instructions	Portion cut fish. Place fillets side-by-side.	Scale and wash fish thoroughly. If desired, fish can be placed in a salt brine and refrigerated for 2 to 3 hours. Place fish upright on sheet pans. Do not lay the fish on its side.	Shrimp may remain in the shell or may be peeled and deveined. Season as desired. Place side-by-side on pans.
Suggested Pan	Full-size steam pan G/N Pan placement: Position 1, 4, & 7 from the top of the oven	Sheet pan	Sheet pan
No. of Shelves 750, 1750 1000, 1200	None None	2 4	1 full-size sheet pan 5 full-size sheet pans
Items per Shelf 750, 1750 1000, 1200	2 pans per shelf position 1 sheet pan per shelf position	1 full-size sheet pan 4 full-size sheet pans	1 full-size sheet pan 1 full-size sheet pan
Maximum Capacity 750, 1750 1000, 1200	6 pans 7 sheet pans	3 full-size sheet pans - 6 whole salmon 4 full-size sheet pans - 8 whole salmon	4 full-size sheet pans 5 full-size sheet pans
WOOD CHIP CONTAINER	Full	Full	Full
Vent position	Closed	Closed	Closed
Cook temperature	250°F [121°C]	275°F [135°C]	250°F [121°C]
Probe temperature	160°F [71°C]	145°F [63°C]	Not recommended
Hold temperature	160°F [71°C]	160°F [71°C]	160°F [71°C]
Cook time	1-1/2 to 2 hours	2 to 2-1/2 hours	45 minutes to 1 hour
Smoke time	1 hour	1 to 2 smoking cycles 45–60 minutes for each smoking cycle Fill wood chip container for each cycle	10–20 minutes
Minimum hold time	—	—	—
Maximum hold time	—	1 hour	—
Overnight cook / hold	Not recommended	Not recommended	Not recommended
Final internal temperature	150°F [66°C]	150°F [66°C]	150°F to 160°F [66°C to 71°C]
Override allowance	—	35°F [19°C]	—

Fish and Seafood

Cold Smoked Fish

The oven must be at room temperature before the cold smoke procedure is begun.

Soak wood chips in water according to directions (a minimum of 24 hours), completely fill wood chip container, and insert in chip holder located at the back of the oven.

Fill pan with ice and locate pan in shelf position number 5 [just above wood chip container].

Place prepared fish fillets on a wire grid as indicated on the diagram and place wire grid on oven shelf beginning with the top shelf position.

Insert probe of thermocouple thermometer into the center of the middle fish fillet located in the top shelf position or central shelf position when smoking a full load. To maintain proper color, the internal temperature of the fish must not exceed 77°F [25°C]. For this reason, it is important to begin the smoking process with the oven at room temperature.

Ensure oven vents are closed. Close oven door and set the smoke time from 10 to 20 minutes depending on taste preference.

Note: If using a manual control oven, cook temperature must be set to 32°F [0°C] before setting smoke time in order for the smoke process to work.


When the smoke time has elapsed, the fillets must remain in the oven for 30 to 60 minutes. Do not open the oven door during this time.

Following the required oven time, remove the fillets, cover with clear plastic wrap and refrigerate until fully chilled.

Smoking Times	
It is recommended the operator be familiar with the taste preferences of the area. Initially experimenting with a minimal amount of smoking time is suggested.	
Light Smoke Flavor	15 minutes
Medium Smoke Flavor	30 minutes
Heavy Smoke Flavor	40 minutes
Very Heavy Smoke Flavor	60 minutes*
*For 60 minutes: Load wood chip container twice and activate smoke timer twice .	



WARNING

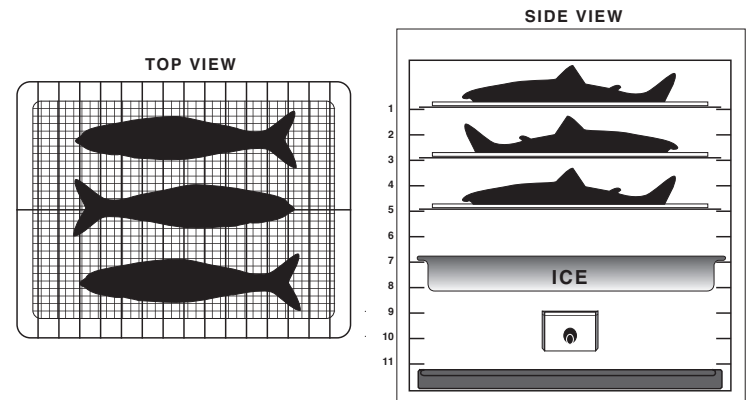


Fire Hazard

The use of improper materials for the smoke function could result in a fire which may lead to personal injury or property damage.

Only use wood chips supplied by Alto-Shaam.

Soak one full tray of wood chips in water as instructed by National Fire Protection Agency Standard NFPA-96 or local codes. As of 2017, the NFPA-96 Standard reads 24 hours.



Fish and Seafood

Product >	Octopus, Greek Stifado
Size of meat	Raw Octopus 1 large (approximately 2 pounds [1 kg])
Instructions	Place octopus in pan filled with warm water. Add 1 tablespoon salt. Simmer at 120°F [49°C] steam mode for 30 minutes. Drain water. Saute 5 garlic cloves in 1 cup olive oil; pour over octopus. Add 3 tablespoons tomato juice., 3 bay leaves, 1 cinnamon stick, 1/2 tablespoon allspice, 1 bunch rosemary, 1/2 cup vinegar, 1/2 cup red wine, and salt and pepper to taste. Stir to combine. Add, 2-1/4 pounds [1 kg] shallots. Place into oven.
Suggested pan	1 full size steam pan G/N
Number of shelves 300 500 750 1000, 1200	2 4 6 None
Items per shelf 300 500 750 1000, 1200	1 1 2 2
Maximum capacity 300 500 750 1000, 1200	2 pans 3 pans 6 pans 3 pans
Vent position	One-half open
Cook temperature	275°F [135°C]
Probe temperature	Not recommended
Hold temperature	160°F [71° C]
Cook time	2 hours Full load
Minimum hold time	N/A
Maximum hold time	Not recommended
Overnight cook / hold	No
Final internal temperature	N/A

Lamb

Product >	Lamb, leg	Lamb racks (frenched)
Size of meat	Lamb leg, boneless, tied: 8 to 11 lb [4 to 5 kg]	Lamb rack, roast ready, single, frenched: 7-bone
Instructions	Season as desired and place directly on wire shelves.	Season as desired. Place racks on sheet pans with icing racks inserted in pans.
Suggested pan	None	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	2 2 2 3	2 4 4 None
Items per shelf 300 500 750, 1750 1000, 1200	1 roast 2 roasts 6 roasts 4 roasts	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan
Maximum capacity 300 500 750, 1750 1000, 1200	2 roasts 4 roasts up to 40 lb [18 kg] 12 roasts up to 100 lb [45 kg] 12 roasts up to 100 lb [45 kg]	2 half-size sheet pans 4 half-size sheet pans 4 full-size sheet pans 4 full-size sheet pans
Vent position	One-half open	One-half open
Cook temperature	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]
Probe temperature	300: 95°F [35°C] 500, 750, 1000, 1200, 1750: 105°F [41°C]	300: 85°F [29°C] 500, 750, 1000, 1200, 1750: 90°F [32°C]
Hold temperature	Rare: 140°F [60°C] Medium rare: 140°F [60°C] Medium: 150°F [66°C] Medium well: 160°F [71°C] Well: 160°F [71°C]	140°F [60°C]
Cook time	10 minutes per pound for the first roast [22 minutes per kilogram] plus add 15 minutes for each additional roast	1-1/2 hours Full Load
Minimum hold time	2 hours	1 hour
Maximum hold time	10 hours	4 hours
Overnight cook / hold	Optional	Not recommended
Final internal temperature	Rare: 130°F [54°C] Medium rare: 135°F [57°C] Medium: 145°F [63°C] Medium well: 150°F [66°C] Well: 160°F [71°C]	135°F to 140°F [57°C to 60°C]
Override allowance	300: 35°F [19°C] 500, 750, 1000, 1200, 1750: 25°F [14°C]	300: 55°F-60°F [31°C-33°C] 500, 750, 1000, 1200, 1750: 45°F-50°F [25°C-28°C]

Pork

Product >	Pork leg, fresh	Ham - cured and smoked	Pork chops
Size of meat	Pork leg, fresh: 14 to 17 lb [6 to 8 kg]	Ham, boneless, skinless, cured and smoked: 10 to 14 lb [4,5 to 6 kg]	Pork loin chops: 3 to 8 oz [85 to 227 grams] approximate weight range. Pork loin rib chops with pocket [stuffed]: 5 to 8 oz [142 to 227 grams] approximate weight range. Thickness: 1" to 1-1/2" [25 to 38 mm]
Instructions	Season as desired and place directly on wire shelves.	Place ham directly on wire shelves for cooking.	Season as desired. Place chops side-by-side on sheet pans.
Suggested pan	None	None	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	1 2 2 3	2 2 2 3	3 4 4 None
Items per shelf 300 500 750, 1750 1000, 1200	1 pork leg 2 pork legs 2-4 pork legs 2-3 pork legs	1 ham 2 hams 4 hams 3 hams	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan
Maximum capacity 300 500 750, 1750 1000, 1200	1 pork leg 4 pork legs up to 40 lb [18 kg] 4 to 8 pork legs up to 100 lb [45 kg] 6 to 9 pork legs up to 100 lb [45 kg]	2 hams 4 hams up to 40 lb [18 kg] 8 hams up to 100 lb [45 kg] 9 hams up to 100 lb [45 kg]	3 half-size sheet pans 4 half-size sheet pans 4 full-size sheet pans 5 full-size sheet pans
Vent position	One-half open	One-half open	One-half open
Cook temperature	250°F to 275°F [121°C to 135°C]	250°F to 275°F [121°C to 135°C]	250°F [121°C]
Probe temperature	300: 120°F [49°C] 500, 750, 1000, 1200, 1750: 130°F to 135°F [54°C to 57°C]	300: 138°F [59°C] 500, 750, 1000, 1200, 1750: 148°F [64°C]	300: 120°F [50°C] 500, 750, 1000, 1200, 1750: 130°F [54°C]
Hold temperature	160°F [71°C]	160°F [71°C]	160°F [71°C]
Cook time	12 minutes per pound for the first pork leg [26 minutes per kilogram] plus add 30 minutes for each additional pork leg	12 minutes per pound for the first ham [26 minutes per kilogram] plus add 30 minutes for each additional ham	3-1/2 hours Full Load
Minimum hold time	2 hours	1 to 2 hours	1-1/2 hours
Maximum hold time	10 hours	10 hours	6 to 8 hours
Overnight cook / hold	Optional	Optional	Not recommended
Final internal temperature	160°F [71°C]	160°F [71°C]	160°F to 170°F [71°C to 77°C]
Override allowance	300: 40°F [22°C] 500, 750, 1000, 1200, 1750: 30°F [17°C]	300: 22°F [12°C] 500, 750, 1000, 1200, 1750: 12°F [7°C]	300: 40°F [22°C] 500, 750, 1000, 1200, 1750: 30°F [17°C]

Pork

Product >	Pork loin	Pork shoulder	Pork ribs
Size of meat	Pork loin, boneless, tied: 8 to 10 lb [4 to 5 kg]	Pork shoulder, Boston butt, boneless: 8 to 10 lb [4 to 5 kg]	Spareribs: 1-1/2 down [38 kg or less] Pork loin, back ribs [baby back ribs]: 1-1/2 down [38 kg or less]
Instructions	Season as desired and place roasts directly on wire shelves for cooking.	Season as desired and place in pans.	Ribs can be cooked from frozen or thawed. Season as desired. Place ribs on sheet pans, slightly overlapping and cover with clear plastic wrap only if cooking overnight. If desired, barbecue sauce can be included with initial seasoning to allow it to cook into the ribs.
Suggested pan	None	Full-size steam pan G/N	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	2 2 3 3	1 2 None 3	2 3 4 None
Items per shelf 300 500 750, 1750 1000, 1200	2 roasts 2 roasts 3 roasts 3 roasts	2 roasts per pan / 1 pan 2 roasts per pan / 2 pans 2 roasts per pan / 2 pans 2 roasts per pan / 2 pans	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan
Maximum capacity 300 500 750, 1750 1000, 1200	4 roasts 4 roasts up to 40 lb [18 kg] 9 roasts up to 100 lb [45 kg] 9 roasts up to 100 lb [45 kg]	2 roasts 4 roasts up to 40 lb [18 kg] 10 roasts up to 100 lb [45 kg] 12 roasts up to 100 lb [45 kg]	3 half-size sheet pans approx. 20 lb [9 kg] 3 half-size sheet pans approx. 20 lb [9 kg] 4 full-size sheet pans 5 full-size sheet pans
Vent position	One-half open	One-half open	One-half open
Cook temperature	250°F to 275°F [121°C to 135°C]	250°F [121°C]	250°F [121°C]
Probe temperature	300: 110°F [43°C] 500, 750, 1000, 1200, 1750: 120°F [49°C]	300: 165°F [74°C] 500, 750, 1000, 1200, 1750: 175°F [80°C]	Not recommended
Hold temperature	160°F [71°C]	160°F [71°C]	160°F [71°C]
Cook time	15 minutes per pound for the first roast [33 minutes per kilogram] plus add 30 minutes for each additional roast.	20 minutes per pound for the first roast [33 minutes per kilogram] plus add 30 minutes for each additional roast.	Thawed ribs: 2-1/2 to 3-1/2 hours Frozen ribs: 3-1/2 to 4-1/2 hours Overnight cook: St. Louis/spareribs: 2-1/2 hours Overnight cook: Baby back ribs: 2 hours Full Load
Minimum hold time	2 hours	2 hours	1-1/2 hours
Maximum hold time	12 hours	12 hours	12 hours
Overnight cook / hold	Highly recommended	Highly recommended	Optional: Additional cook time is needed if not cooking and holding overnight.
Final internal temperature	155°F to 165°F [68°C to 74°C]	180°F [82°C]	160°F to 170°F [71°C to 77°C] Well Done
Override allowance	300: 55°F [31°C] 500, 750, 1000, 1200, 1750: 45°F [25°C]	—	—

Pork, Processed Meats

Product >	Porchetta	Pig, whole	Processed meats
Size of meat	Fresh pork belly Fennel seeds, pesto, sage leaves, rosemary, garlic, onion, capers, chili flakes, ground cloves, kosher salt, and ground pepper	33 lb [15 kg] whole pig	Sausage, fresh: Any of a variety of processed meat product including bratwurst, Polish sausage, breakfast links, smoked sausage, poachd sausages, hot dogs, etc.
Instructions	Saute onions, garlic, chili flakes, and capers. Chill. Season pork belly. Pick herbs; leave whole. Distribute herbs and pesto evenly on pork belly, then spread with onion mixture. Roll pork belly tightly and tie. Preheat oven.	Bend hind legs under the pig so that it sits on the shelf. Season as desired.	Place sausage side-by-side on sheet pans. Add a sufficient amount of hot water so that it just covers the bottom of each pan. Cover each pan with clear plastic wrap.
Suggested pan	None	None	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	1 2 3 3	— — 1 1000–1, 1200–2	2 4 5 None
Items per shelf 300 500 750, 1750 1000, 1200	1 1 2 2	— — 1 1	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan
Maximum capacity 300 500 750, 1750 1000, 1200	1 2 3 3	— — 1 1	2 half-size sheet pans 4 half-size sheet pans 5 full-size sheet pans 8 full-size sheet pans
Vent position	Open half	Open full	Open full
Cook temperature	250°F [121°C]	250°F [121°C]	250°F [121°C]
Probe temperature	130°F [54°C]	175°F [80°C]	Not recommended
Hold temperature	150°F [61°C]	160°F [71°C]	300: 150°F [66°C] 500, 750, 1000, 1200, 1750: 160°F [71°C]
Cook time	—	5 hours	1-1/2 to 2 hours, Full load
Minimum hold time	4 hours	—	—
Maximum hold time	10 hours	12 hours	6 hours
Overnight cook / hold	Optional	Required	Not recommended
Final internal temperature	145°F [63°C]	167°F [75°C]	170°F [77°C]
Additional information	Crisp fat in a Combitherm oven at 425°F [218°C] until golden brown. Slice to order.	Reheating time: 250°F [121°C] 5 hours	For precooked sausage, follow the same time and temperature settings as fresh sausage. Cooking time for a precooked sausage will vary, particularly for less than full loads. When heating a full load of precooked sausage, check the internal product temperature after approximately one [1] hour of cooking time.

Poultry

Product >	Chicken, pieces and halves	Chicken, whole
Size of meat	2-1/2 to 2-3/4 lb [1,1 to 1,2 kg] average weight	2-1/4 to 2-3/4 lb [1 to 1,2 kg]
Instructions	Clean chicken and remove excess fat. Brush chicken with margarine [optional]. Season as desired and sprinkle with paprika.	Clean chicken and remove excess fat. Brush chicken with oil, butter or margarine [optional]. Season as desired and sprinkle with paprika. For better whole bird appearance, fold chicken wings and tuck under the back of the bird. Make a slit in the skin of the chicken [lower end of the bird], cross chicken legs and insert both legs through the slit.
Suggested pan	Sheet pan	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	2 3 3 None	2 2 2 None
Items per shelf 300 500 750, 1750 1000, 1200	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan	3 chickens 4 chickens 9 chickens 9 chickens
Maximum capacity 300 500 750, 1750 1000, 1200	12 halves, 2 half-size sheet pans 18 halves or 60 pieces, 3 half-size sheet pans 36 halves or 120 pieces, 3 full-size sheet pans 48 halves or 160 pieces, 4 full-size sheet pans	6 chickens - 6 full size pans 8 chickens - 2 half-size sheet pans 18 chickens - 2 full-size sheet pans 27 chickens - 3 full-size sheet pans
Vent position	Open full	Open full
Cook temperature	275°F to 300°F [135°C to 149°C]	275°F to 300°F [135°C to 149°C]
Probe temperature	300: 145°F [63°C] 500, 750, 1000, 1200, 1750: 155°F [68°C]	300: 145°F [63°C] 500, 750, 1000, 1200, 1750: 155°F [68°C]
Hold temperature	160°F [71°C]	160°F [71°C]
Cook time	2-1/2 to 3 hours, full load	3 to 3-1/2 hours, full load
Minimum hold time	30 minutes	1 hour
Maximum hold time	8 hours Note: When holding longer than 30 minutes, cover chickens with clear plastic wrap.	8 to 10 hours Note: When cooking and holding overnight, cover the pans of raw chicken with clear plastic wrap for cooking. Set cooking thermostat to 250°F [121°C] for 4 hours.
Overnight cook / hold	Not recommended	Optional See maximum hold time note above
Final internal temperature	170°F [77°C]	185°F [85°C]
Override allowance	300: 25°F [14°C] 500, 750, 1000, 1200, 1750: 15°F [8°C]	300: 25°F [14°C] 500, 750, 1000, 1200, 1750: 15°F [8°C]
Additional information	After cooking, place into oven set at a minimum 450°F [232°C] if additional browning and crisp skin is desired.	After cooking, place into oven set at a minimum 450°F [232°C] if additional browning and crisp skin is desired.

Poultry

Product >	Chicken, fried (two-step method**)	Cornish hens
Size of meat	2-1/2 to 2-3/4 lb [1,1 to 1,2 kg] fryer, 8 piece cut	12 oz [340 grams] each
Instructions	Clean chicken and remove all excess fat. Soak chicken in cold, salted water for 15 minutes, drain, and dredge in dry breading. Coat pans with vegetable release spray. Place chicken side-by-side on pans — separating breasts and wings from legs and thighs. Cover chicken loosely with clear plastic wrap.	Clean hens and remove excess fat. Fold wings and tuck under the back of the bird. Make a slit in the skin of the hen (lower end of bird), cross hen legs and insert both legs through the slit. Brush hens with oil, butter, or margarine (OPTIONAL). Season as desired and sprinkle with paprika. Space evenly on sheet pans.
Suggested pan	Sheet pan	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	2 3 3 None	1 2 3 None
Items per shelf 300 500 750, 1750 1000, 1200	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan	1 half-size sheet pan, 9 hens per pan 1 half-size sheet pan, 9 hens per pan 1 full-size sheet pan, 18 hens per pan 1 full-size sheet pan, 18 hens per pan
Maximum capacity 300 500 750, 1750 1000, 1200	12 halves, 2 half-size sheet pans 18 halves or 60 pieces, 3 half-size pans 36 halves or 120 pieces, 3 full-size pans 48 halves or 160 pieces, 4 full-size pans	1 half-size sheet pan, 9 hens per pan 2 half-size sheet pans, 18 Cornish hens 3 full-size sheet pans, 54 Cornish hens 4 full-size sheet pans, 72 Cornish hens
Vent position	One-half open	Open full
Cook temperature	275°F [135°C]	275°F [135°C]
Probe temperature	300: 145°F [63°C] 500, 750, 1000, 1200, 1750: 155°F [68°C]	300: 145°F [63°C] 500, 750, 1000, 1200, 1750: 155°F [68°C]
Hold temperature	160°F [71°C]	160°F [71°C]
Cook time	2-1/2 to 3 hours - Full load	3 to 3-1/2 hours - Full load
Minimum hold time	—	1 hour
Maximum hold time	4 hours	4 to 6 hours
Overnight cook/hold	Not recommended	Not recommended
Final internal temperature	170°F [77°C]	175°F [79°C]
Override allowance	300: 25°F [14°C] 500, 750, 1000, 1200, 1750: 15°F [8°C]	300: 30°F [17°C] 500, 750, 1000, 1200, 1750: 20°F [11°C]

**Two-step fried chicken

The two-step method consists of precooking the chicken in a low-temperature oven to retain the product moisture, then adding the crisp, fried appearance by inserting the product in a fryer for a very short period of time. This method can be used with product directly from the oven or the product can be precooked and fried directly from refrigerated storage. With the two-step method the chicken will be moist, flavorful, plump and golden brown. Shrinkage will be low and shortening in the fryer will last much longer.

Frying directly from the oven

1. Preheat the fryer to 335°F [168°C].
2. If heavier or crisper breading is desired, remove the required portion of chicken from the oven and dredge in fresh breading.
3. Drop the chicken in the fryer for 3 minutes or until the chicken is golden brown.
4. The chicken can be fried per customer order or in larger quantities. When frying larger quantities, place the fried pieces on a sheet pan with a wire grid insert and place the pans in a preheated Alto-Shaam display case or in a preheated holding cabinet with the door vents fully open.

Frying from refrigerated storage

1. Remove the chicken from the Alto-Shaam Halo Heat oven, wrap, chill rapidly and store under refrigeration at 38°F to 40°F [3°C to 4°C].
2. Preheat the fryer to 335°F [168°C].
3. Remove the required portion of precooked chicken from refrigerated storage.
4. Drop the chicken in the fryer for 6 to 7 minutes or until chicken is golden brown.

Poultry

Product >	Duck, whole	Duck confit	Turkey
Size of meat	Duck, whole: 4 to 5 lb [2 kg]	Duck, pieces	Turkey, whole: 25 lb [11 kg]
Instructions	Season as desired. Rub duck with oil and paprika and place directly on wire shelves.	Prepare according to recipe. Warm oil to 200°F [93°C] before adding duck.	Turkey must be fully thawed. Season as desired. Rub with oil, butter or margarine [OPTIONAL], and sprinkle with paprika. Place directly on wire shelves.
Suggested pan	None	Full-size steam pan G/N	None
Number of shelves 300 500 750, 1750 1000, 1200	1 2 2 3	2 2 4 4	1 1 1 2
Items per shelf 300 500 750, 1750 1000, 1200	3 ducks 3 ducks 6 ducks 4 ducks	1 full-size pan 1 full-size pan 2 full-size pans 1 full-size pan	1 turkey 1 turkey 2 turkeys 2 turkeys
Maximum capacity 300 500 750, 1750 1000, 1200	3 ducks 6 ducks 12 ducks 12 ducks	2 full-size pans 4 full-size pans 8 full-size pans 4 full-size pans	1 turkey 1 turkey 2 turkeys 4 turkeys
Vent position	Open full	Open full	Open full
Cook temperature	300°F [149°C]	250°F [121°C]	250°F [121°C]
Probe temperature	300: 145°F [63°C] 500, 750, 1000, 1200, 1750: 155°F [68°C]	Not recommended	300: 135°F [57°C] in thigh 500, 750, 1000, 1200, 1750: 145°F [63°C] in thigh
Hold temperature	160°F [71°C]	160°F [71°C]	160°F [71°C]
Cook time	2-1/2 to 3 hours - Full Load	3 hours	10 minutes per pound for the first turkey (22 minutes per kg) plus add 30 minutes for each additional turkey.
Minimum hold time	1 hour	—	1 to 2 hours
Maximum hold time	8 hours	12 hours	10 hours
Overnight cook / hold	Not recommended	Yes	Highly recommended
Final internal temperature	170°F [77°C]	175°F [79°C]	170°F [77°C]
Override allowance	300: 25°F [14°C] 500, 750, 1000, 1200, 1750: 15°F [8°C]	—	300: 35°F [19°C] 500, 750, 1000, 1200, 1750: 25°F [14°C]
Additional information	—	—	After cooking, place into oven set at a minimum 450°F [232°C] if additional browning and crisp skin is desired.

Poultry

Product >	Turkey breast	Turkey roll
Size of meat	10 to 15 lb [5 to 7 kg]	Precooked, frozen: 8-12 lb [4-5 kg]
Instructions	Turkey breast should be at a refrigerated temperature of 38°F to 40°F [3°C to 4°C] when placed in a preheated oven. Season as desired. Brush with oil, butter or margarine (optional), and sprinkle with paprika. Place turkey breasts directly on wire shelves.	Place fully frozen turkey rolls directly on wire shelves to reheat. After cooking, place into oven set at a minimum 450°F (232°C) if additional browning and crisp skin is desired.
Suggested pan	None	None
Number of shelves 300 500 750, 1750 1000, 1200	2 2 2 3	1 2 2 3
Items per shelf 300 500 750, 1750 1000, 1200	1 turkey breast 2 turkey breasts 4 turkey breasts 3 turkey breasts	1 turkey roll 2 turkey rolls 4 turkey rolls 3 turkey rolls
Maximum capacity 300 500 750, 1750 1000, 1200	2 turkey breasts 4 turkey breasts 8 turkey breasts 9 turkey breasts	1 turkey roll 4 turkey rolls 8 turkey rolls 9 turkey rolls
Vent position	Open full	Open full
Cook temperature	275°F [135°C]	250°F [121°C]
Probe temperature	140°F [60°C]	—
Hold temperature	300: 165°F [74°C] 500, 750, 1000, 1200, 1750: 160°F [71°C]	160°F [71°C]
Cook time	12 minutes per pound [26-1/2 minutes per kg] for first turkey breast 15 minutes per breast for each additional turkey breast Full load	12 minutes per pound [26-1/2 minutes per kg] for first turkey roll 15 minutes per roll for each additional turkey roll Full load
Minimum hold time	1 hour	1 hour
Maximum hold time	10 hours	6 to 8 hours
Overnight cook / hold	Optional Note: When cooking and holding overnight, set the cook thermostat at 250°F [121°C]	Not recommended
Final internal temperature	170°F [77°C]	165°F [74°C]
Override allowance	30°F [17°C]	10°F [6°C]

Miscellaneous

Product >	Quiche	Rice	Baked egg custard or crème brûlée
Item/Quantity	As needed	As needed	As needed
Instructions	Pre-bake the shells in pie plates at 275°F [135°C] for approximately 40 minutes. Pour quiche mixture into the pre-baked shells and bake in a preheated oven. Quiche is done when product sets up.	Use 1 x 1 or 1 x 1-1/2 ratio of rice to water. Rice that is high in starch needs to be rinsed. Fill pans to half the pan depth and cover pans with foil. NOTE: Maximum capacity of a 2" [50mm] deep pan is 6 cups of dry rice.	Use a favorite recipe. Pour mixture into cups to a depth of 2/3 the container height and place cups on a sheet pan. No water bath is required. Bake in a preheated oven. Custard/crème brûlée is done when knife inserted in center of cup is clean when removed.
Suggested Pan	Pie plate	Steam pan G/N	Perforated pan covered with foil
Number of shelves 300 500 750, 1750 1000, 1200	2 2 4 8	None None None 3	2 4 4 None NOTE: Maximum load is 2 perforated pans per wire shelf.
Items per shelf 300 500 750, 1750 1000, 1200	2 quiches 2 quiches 5 quiches 3 quiches	1 1 2 1	1 half-size perforated pan 1 half-size perforated pan 1 full-size perforated pan 1 full-size perforated pan
Maximum capacity 300 500 750, 1750 1000, 1200	4 quiches 4 quiches 20 quiches 24 quiches	2 2 4 3	2 half-size sheet pans 4 half-size sheet pans 4 full-size sheet pans 5 full-size sheet pans
Vent position	Open full	Closed	Closed
Cook temperature	275°F [135°C]	275°F [135°C]	250°F [121°C]
Probe temperature	Not recommended	Not recommended	Not recommended
Hold temperature	160°F [71°C]	160°F [71°C]	—
Cook time	Bake approximately 2 hours or until product sets up. Full load	1—3 hours depending on load and pan size [1 hour for first pan; 30 minutes for each additional pan.]	60 to 90 minutes, 4 oz. ramekins Up to 3 hours for 4" [100mm] hotel pans
Minimum hold time	—	—	—
Maximum hold time	5 hours	8 hours	—
Overnight cook / hold	No	Optional	No
Final internal temperature	—	160°F to 170°F [71°C to 77°C]	—
Override allowance	—	—	—

Miscellaneous

Product >	Au gratin potatoes	Pork Terrine (Pâte)	Canning jar sterilization
Item/Quantity	As needed	3 pounds [1.4 kg] ground pork 1 tablespoon black pepper, 6 whole cloves, 2 bay leaves, 1 teaspoon dried thyme, 1/3 cups diced onion or shallot, 1/4 pound [113 g] mushrooms, 1/3 cups pistachio, 1/3 cups white wine, 2 tablespoons cognac or brandy, 1 tablespoon cornstarch, 1 tablespoon kosher salt, 1 teaspoon chopped garlic	As needed
Instructions	Follow recipe as desired.	Add all ingredients to ground pork. Mix well, cover, and allow to rest overnight. Next day, place meat mixture into terrine. Push down to remove any air pockets. Place into oven. Cook to probe temperature. When at probe temperature, remove, weight, and chill. Unmold and slice when ready to serve.	Follow recipe as desired.
Suggested Pan	Steam pan G/N	Terrine	Steam pan G/N or sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	2 3 3 5	1 3 3 4	As needed
Items per shelf 300 500 750, 1750 1000, 1200	2 half-size pans 2 half-size pans 4 half-size pans 2 half-size pans	2 2 8 6	As needed
Maximum capacity 300 500 750, 1750 1000, 1200	2 full-size pans 4 full-size pans 8 full-size pans 4 full-size pans	2 6 24 24	2 hotel or full-size pans 4 hotel or full-size pans 8 full-size pans/ 4 sheet pans 4 hotel or full-size pans
Vent position	Closed	Open full	Closed
Cook temperature	325°F [163°C]	250°F [121°C]	225°F [107°C]
Probe temperature	Not recommended	150°F [66°C]	Not recommended
Hold temperature	160°F [71°C]	150°F [66°C]	—
Cook time	90 minutes, plus 20 minutes per additional pan	To probe temperature	10 minutes
Minimum hold time	—	—	—
Maximum hold time	8 hours	—	—
Overnight cook / hold	No	No	No
Final internal temp.	—	—	—
Override allowance	—	—	—

Miscellaneous

Product >	Tempering chocolate	Cheese cake
Item/Quantity	As needed	As needed
Instructions	Place chocolate in a pan	Use a favorite cheese cake recipe or mix. Pour the batter into spring-form pans and bake in a preheated oven. The cheese cake is done when a toothpick inserted in the center is clean when removed. To prevent cracking, allow the cheese cake to remain in the oven until it reaches room temperature.
Suggested Pan	As desired	Spring-form pan
Number of shelves 300 500 750, 1750 1000, 1200	As needed	2 3 3 4
Items per shelf 300 500 750, 1750 1000, 1200	As needed	2 cakes 2 cakes 5 cakes 3 cakes
Maximum capacity 300 500 750, 1750 1000, 1200	—	4 cakes 4 cakes 20 cakes 12 cakes
Vent position	Closed	Open full
Cook temperature	115°F [46°C]	250°F [121°C]
Probe temperature	Not recommended	Not recommended
Hold temperature	—	—
Cook time	Until 115°F [46°C]	90 minutes for first cake depending on pan depth; 20 minutes for each additional cake.
Minimum hold time	—	—
Maximum hold time	—	—
Overnight cook / hold	No	No
Final internal temperature	115°F [46°C]	—
Override allowance	—	—

Miscellaneous

Product >	Frozen convenience entrées	Frozen portioned convenience entrées	Roller grill items
Item/Quantity	As needed	As needed	Full capacity: 128 items Half capacity: 64 items
Instructions	Product must be fully frozen when placed in a preheated oven. Leave the product in the original container with a foil cover in place. Pour 1/2 gallon [1 liter] of hot water into the drip pan located on the bottom surface of the oven compartment. Place the containers directly on wire shelves.		Line sheet pans with baking pan liners (optional). Place items side-by-side on sheet pan, or on optional wire pan grids.
Suggested Pan	Half-size pan	None	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	2 3 3 5	2 3 3 3	2 3 5 3
Items per shelf 300 500 750, 1750 1000, 1200	4 4 4 2	6 6 9 9	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan
Maximum capacity 300 500 750, 1750 1000, 1200	8 12 12 10	12 18 27 27	2 half-size sheet pans 3 half-size sheet pans 5 full-size sheet pans 5 full-size sheet pans
Vent position	Closed	Closed	Open full
Cook temperature	275°F [135°C]	275°F [135°C]	300°F [149°C]
Probe temperature	Not recommended	Not recommended	165°F [74°C]
Hold temperature	160°F [71°C]	160°F [71°C]	160°F [71°C]
Cook time	See pan placement diagrams and time settings on the following page.	Approximately 2 hours. See pan placement diagrams on the following page. Do not over-cook — check internal product temperature.	Full capacity: 2 hours Half capacity: 90 minutes
Minimum hold time	—	—	—
Maximum hold time	16 to 18 hours	4 hours	4 hours
Overnight cook / hold	Optional	Not recommended	Not recommended
Final internal temperature	140°F [60°C]*	140°F [60°C]*	160°F [71°C] or greater
Override allowance	—	—	—
Additional information	* Frozen convenience entrées that are removed from the original food processor's intact packaging must be treated as a product for reheating. Products that are reheated must reach an internal product temperature of 165°F [74°C] for the amount of time specified by local health (hygiene) regulations.		

Miscellaneous

Product >	Precooked frozen finger food	Breakfast sandwiches and burritos	Proofing dough
Item/Quantity Chicken nuggets: 40 per full-size sheet pan Corn dogs: 30 per full-size sheet pan Egg rolls: 40 per full-size sheet pan Mini pizza: 12 to 15 per full-size sheet pan <div>Quantities are approximate</div>	Chicken nuggets: 40 per full-size sheet pan Corn dogs: 30 per full-size sheet pan Egg rolls: 40 per full-size sheet pan Mini pizza: 12 to 15 per full-size sheet pan	Approximately 36 wrapped, refrigerated sandwiches per full-size sheet pan.	As needed
Instructions	Line sheet pans with baking pan liners (optional) and insert a wire pan grid. Place items side-by-side on wire pan grids.	Place sandwiches on pans.	Remove dough from the retarder or refrigerator, and allow covered product to set up at room temperature. Preheat oven for 45-60 minutes. Pour approximately 2 quarts [c. 2 liters] of hot water, 140°F-180°F [60°C-82°C] into a pan on the bottom surface of the oven compartment.
Suggested Pan	Sheet pan	Sheet pan	Sheet pan
Number of shelves 300 500 750, 1750 1000, 1200	2 3 5 None	2 3 3 None	2 6 6 None
Items per shelf 300 500 750, 1750 1000, 1200	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan	1 half-size sheet pan 1 half-size sheet pan 1 full-size sheet pan 1 full-size sheet pan
Maximum capacity 300 500 750, 1750 1000, 1200	2 half-size sheet pans 3 half-size sheet pans 5 full-size sheet pans 5 full-size sheet pans	2 half-size sheet pans 3 half-size sheet pans 3 full-size sheet pans 5 full-size sheet pans	2 half-size sheet pans 6 half-size sheet pans 6 full-size sheet pans 8 full-size sheet pans
Vent position	Open full	Open full	One-Half Open
Cook temperature	275°F [135°C]	250°F—275°F [121°C—135°C] depending on product type	—
Probe temperature	Not recommended	150°F—165°F [66°C—74°C] per food safety standards	Not recommended
Hold temperature	160°F [71°C]	160°F [71°C]	90°F to 110°F [32°C to 43°C]
Cook time	Corn dogs: 30 to 45 minutes Egg Roll/Chicken Nuggets: 45 to 60 minutes Mini Pizza: 60 minutes	90 minutes [45 minutes for one tray; 10 minutes for each additional tray] Probe to 160°F [71°C]	—
Minimum hold time	—	—	20 minutes
Maximum hold time	Maximum holding time varies from product to product. Generally expect a 1 to 3 hour maximum holding time.	5 hours	45 minutes
Overnight cook / hold	Not recommended	Not recommended	No
Final internal temperature	150°F [66°C]	160°F [66°C]	—
Override allowance	—	—	—
Additional information	Make certain product reaches the fully heated temperature. Check internal product temperature before removing product from oven and adjust heating time as required.	Make certain product reaches the fully heated temperature. Check internal product temperature before removing product from oven and adjust heating time as required.	This procedure is suggested as a general guideline only. Due to variations in product, product quality, and weight, adhere to product manufacturer's instructions.

Braised Items

Product >	Braised items
Item/Quantity	Short ribs, shanks, knuckles, cubes, etc. 10 to 12 oz. (0.28 to 0.34 kg) pieces
Instructions	Add ribs to hot liquid for braising.
Suggested Pan	Full-size hotel pan
Number of shelves 300 500 750, 1750 1000, 1200	2 3 3 5
Items per shelf 300 500 750, 1750 1000, 1200	1 full-size pan 1 full-size pan 2 full-size pan 1 full-size pan
Maximum capacity 300 500 750, 1750 1000, 1200	2 full-size pans 4 full-size pans 8 full-size pans 4 full-size pans
Vent position	One-half open
Cook temperature	300: 225°F [107°C] 500, 750, 1000, 1200, 1750: 250°F [121°C]
Probe temperature	300: 165°F [74°C] 500, 750, 1000, 1200, 1750: 175°F [79°C]
Hold temperature	160°F [71°C]
Cook time	3 hours for the first pan plus 30 minutes for each additional pan.
Minimum hold time	6 hours
Maximum hold time	12 hours
Overnight cook / hold	Highly recommended
Final internal temperature	150°F [66°C]
Override allowance	—
Additional information	Make certain product reaches the fully heated temperature. Check nternal product temperature before removing product from oven and adjust heating time as required.

Smoked Items

Product >	Beef brisket, smoked	Pastrami, smoked	Beef tongue, smoked
Item/Amount	Beef brisket, fresh: 9 to 13 lb [4 to 6 kg]	Corned beef: As needed	Beef tongue: 3-1/4 lb [1,5 kg] average
Instructions	Season brisket as desired. Place the brisket directly on wire shelves fat side down. The briskets can also be wrapped in clear plastic wrap for the cooking, smoking, and holding function [optional].	Season as desired. Place directly on wire shelves.	—
Suggested Pan	None	None	Full-size Hotel Pan w/ 18" x 26" wire rack
No. of Shelves 750, 1750 1000, 1200	3 3	3 3	Cooking: None - Smoking: 2 Cooking: None - Smoking: 2
Items per Shelf 750, 1750 1000, 1200	3 to 4 roasts 2 to 3 roasts	3 to 4 roasts 2 to 3 roasts	5 tongues per pan 10 tongues per pan
Maximum Capacity 750, 1750 1000, 1200	12 roasts - up to 100 lb [45 kg] 6-9 roasts - up to 100 lb [45 kg]	12 roasts - up to 100 lb [45 kg] 6-9 roasts - up to 100 lb [45 kg]	20 beef tongues - 65 lb [30 kg] 30 beef tongues - 98 lb [44 kg]
WOOD CHIP CONTAINER	Full	Full	Full
Vent position	Closed	Closed	Closed
Cook temperature	250°F [121°C]	250°F [121°C]	250°F [121°C]
Probe temperature	160°F [71°C]	160°F [71°C]	175°F [79°C]
Hold temperature	160°F [71°C]	160°F [71°C]	150°F [66°C]
Cook time	20 minutes per pound for the first roast [44 minutes per kilogram]; add 30 minutes for each additional roast Sliced: 18 minutes per pound for the first roast [40 minutes per kilogram]; add 20 minutes for each additional roast Shredded: 20 minutes per pound for the first roast [44 minutes per kg]; add 30 minutes for each additional roast	20 minutes per pound for the first roast [44 minutes per kilogram]; add 30 minutes for each additional roast Sliced: 18 minutes per pound for the first roast [40 minutes per kilogram]; add 20 minutes for each additional roast Shredded: 20 minutes per pound for the first roast [44 minutes per kg]; add 30 minutes for each additional roast	4-1/2 hours for the first pan plus add 30 minutes for each additional pan.
Smoke time	Due to the density of the meat, set smoke timer for 1 hour to achieve a medium smoke flavor.	Due to the density of the meat, set the smoke timer for 1 hour to achieve a medium smoke flavor.	Smoke during the cook cycle. Set smoking time at 30 minutes for one pan; 60 minutes for four pans. After cooking and minimum holding time, leave oven set at a holding temperature of 150°F [66°C].
Minimum hold time	6 hours	6 hours	4 hours
Maximum hold time	24 hours	24 hours	8 hours
Overnight cook / hold	Highly recommended	Recommended	Optional
Final internal temperature	165°F [73°C]	165°F [73°C]	Before activating the Smoking Timer: 188°F [87°C]
Override allowance	6°F [3°C]	6°F [3°C]	12°F [7°C]

Smoked Items

Product >	Ham, smoked	Ribs, smoked	Pork butt, smoked
Item/Amount	Pork fresh ham: 14 to 17 lb [6 to 8 kg]	Spareribs or pork loin, back ribs (baby back ribs): 1-1/2 down [38 mm or less]	Pork butt: 8 to 10 lbs [4 to 5kg]
Instructions	Season as desired and place ham directly on wire shelves.	Ribs can be cooked frozen or thawed. Season as desired. Place ribs on sheet pans, slightly overlapping or use rib rack shelves for more even smoke penetration. If desired, barbecue sauce can be included with the initial seasoning to allow it to cook into the ribs.	Season as desired.
Suggested Pan	None	Sheet pan	Full-size hotel pan
No. of Shelves 750, 1750 1000, 1200	2 3	2 rib racks or 3 flat wire shelves, 13 slabs per rib rack shelf 3 rib racks or 5 flat wire shelves, 13 slabs per rib rack shelf	2 3
Items per Shelf 750, 1750 1000, 1200	3 to 4 hams 3 hams	14 to 18 slabs per flat wire shelf 14 to 18 slabs per flat wire shelf	2 2
Maximum Capacity 750, 1750 1000, 1200	6 to 8 hams - up to 100 lbs [45 kg] 9 hams - up to 100 lbs [45 kg]	60 lb [27 kg] 60 lb [27 kg]	8 full-size pans 4 full-size pans
WOOD CHIP CONTAINER	Full	Full	Full
Vent position	Closed	Closed	Closed
Cook temperature	250°F to 275°F [121°C to 135°C]	250°F [121°C]	250°F [121°C]
Probe temperature	148°F [64°C]	Not recommended	160°F to 180°F [71°C to 82°C]
Hold temperature	160°F [71°C]	160°F [71°C]	160°F [71°C]
Cook time	12 minutes per pound for the first ham [26 minutes per kilogram] plus add 30 minutes for each additional ham.	Thawed ribs: 2-1/2 to 3-1/2 hours Frozen ribs: 3-1/2 to 4-1/2 hours	18 minutes per pound for the first roast [40 minutes per kilogram] plus add 15 minutes for each additional roast.
Smoke time	3 to 4 smoking cycles 1 hour for each smoking cycle Fill wood chip container for each cycle	1 hour for medium smoked flavor	1 hour for medium smoked flavor
Minimum hold time	2 hours	1-1/2 hours	2
Maximum hold time	10 hours	12 hours: At the end of the hold cycle, heated barbecue sauce can be added to the ribs immediately before serving.	12
Overnight cook / hold	Optional	Optional	Highly recommended
Final internal temperature	100°F [71°C]	160°F to 170°F [71°C to 77°C] Well done	160°F [71°C]
Override allowance	12°F [7°C]	—	20°F [11°C]

Smoked Items

Product >	Pork belly, smoked	Duck, smoked	Turkey, smoked
Item/Amount	Pork belly: As needed	Duck, whole: 4 to 5 lb [2 kg]	Turkey, whole: 25 lb [11 kg]
Instructions	Season or cure as desired.	Season as desired. Rub the duck with oil and paprika. Place ducks directly on wire shelves.	The turkey must be fully thawed. Season as desired. Rub with oil, butter, or margarine [optional]. Place turkeys directly on wire shelves.
Suggested pan	Full-size hotel pan	None	None
Number of shelves 750, 1750 1000, 1200	6 3	2 per compartment 3 per compartment	1 per compartment 2 per compartment
Items per shelf 750, 1750 1000, 1200	1 1	6 ducks per shelf 4 ducks per shelf	2 turkeys 2 turkeys
Maximum capacity 750, 1750 1000, 1200	6 pork bellies 3 pork bellies	12 ducks - 60 lb [27 kg] 12 ducks - 60 lb [27 kg]	2 turkeys 4 turkeys
Wood chip container	Full	Full	Full
Vent position	Closed	Closed	Closed
Cook temperature	250°F [121°C]	300°F [149°C]	275°F [135°F]
Probe temperature	135°F [57°C]	165°F to 170°F [74°C to 77°C]	165°F to 170°F [74°C to 77°C]
Hold / Probe Hold temperature	150°F [66°C]	160°F [71°C]	160°F [71°C]
Cook time	8 minutes per pound for the first pork belly [18 minutes per kg] plus add 10 minutes for each additional pork belly. Probe to 135°F [57°C]	3-1/2 to 4 hours	10 minutes per pound for the first turkey [22 minutes per kilogram] plus add 30 minutes for the second turkey. Probe to 155°F [68°C]
Smoke time	1 hour for medium smoked flavor	1 hour	1 hour
Minimum hold time	—	1 hour	1 to 2 hours
Maximum hold time	—	8 hours	10 hours
Overnight cook / hold	Optional	Not recommended	Highly recommended. When cooking and holding overnight, set the cook thermostat to 250°F [121°C].
Final internal temperature	155°F [68°C]	185°F to 190°F [85°C to 88°C]	185°F [85°C]
Override allowance	25°F [14°C]	12°F [7°C]	20°F [11°C]

Smoked Items

Product >	Eggplant	Cold smoked canned tomatoes
Item/Amount	Whole eggplants; quantity as desired Wood chips	As needed
Instructions	Rinse whole eggplant in cold water. Pierce each with a sharp knife to vent steam.	Add the tomatoes to the pan.
Suggested Pan	Full-size sheet pan Pan placement: Position 1, 4, & 7 from the top of the oven	Full-size hotel pan
No. of Shelves 750, 1750 1000, 1200	3 3	6 3
Items per Shelf 750, 1750 1000, 1200	1 sheet pan per shelf position	2 pans 1 pan
Maximum Capacity 750, 1750 1000, 1200	3 full-size pans 3 full-size pans	6 pans 3 pans
Wood chip container	Full	Full
Vent Position	Closed	Closed
Cook temperature	300°F [149°C]	—
Probe temperature	Not recommended	—
Hold temperature	160°F [71°C]	—
Cook time	1-1/2 to 2 hours	—
Smoke time	1 hour	15 minutes Leave in oven for 1 hour
Minimum hold time	—	
Maximum hold time	3 to 4 hours	
Overnight cook / hold	Not recommended	
Final internal temperature	150°F [66°C]	
Override allowance	—	



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