

GUIDELINES FOR COMBI-OVENS

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A combi-oven is a versatile piece of equipment that combines three modes of cooking in one oven: steam, circulated hot air or a combination of both. The combi mode is used to re-heat foods and to roast, bake and “oven fry.” The steam mode is ideal for rapid cooking of vegetables and shellfish. The hot air mode operates as a normal convection oven for baking cookies, cakes and pastries. The combi mode decreases overall cooking times, reduces product shrinkage and eliminates flavor transfer when multiple items are cooked simultaneously.

OVEN MODES

COMBI MODE: Use to roast and braise meats, bake poultry and fish and reheat prepared foods. The combination of steam and hot air will improve yield and reduce overall cooking times. To **OVEN FRY**, use food items that are labeled “ovenable” by the manufacturer. Refer to cooking guidelines for oven frying individual items. Place items on perforated sheet pan in a single layer. **DO NOT** place excess amount of product on pan. A solid sheet pan may be placed under perforated pan to catch excess oils and eliminate smoke.

HOT AIR MODE: Use to bake cakes, cookies and breads and to roast and bake meats and poultry. The hot air mode circulates air in the same manner as a convection oven.

STEAMING MODE: Use to steam fresh, frozen or canned vegetables and shellfish. Use of the Combi-oven to steam foods can save time, labor, and help maintain appearance, and preserve nutrients normally lost by other cooking methods. The oven is ideal for steaming more than one type of vegetable at the same time without flavor transfer. Foods may be steamed in perforated or solid pans. Perforated pans are generally used, particularly for vegetables, unless the cooking liquid is retained or manufacturer’s directions specify solid pans. Pans are normally filled no more than 2/3 full to allow steam to circulate for even cooking.

Steam temperature is preset at 212° F. The cooking time will vary depending on the type of food and the number of pans in the oven. The cooking time should include the time it requires to heat food up to cooking temperature, as well as steaming. Be sure to record the most successful steaming times on the recipe card for future reference.

TEMPERATURE SETTING: At this time the AFRS recipes do not contain combi-oven information. Refer to the attached cooking guidelines for individual items or begin by using the recommended convection oven temperature noted on individual recipes. If food is cooked around the edges, but the center is still raw or not thoroughly cooked, or if there is too much color variation (some is normal), turn pan or reduce the heat by 10° F. to 15° F. and return food to the oven and continue cooking until done. Be sure to record the most successful

temperature on the recipe card for future reference.

TIME SETTING: Follow the recommended convection cooking times on recipe cards. Check progress halfway through the cooking cycle since times will vary in the Combi mode with the quantity of food being cooked, the temperature, and the type of pan used.

MEAT PROBE: The meat probe measures a product core temperature during the cooking process. Use of the meat probe is recommended for the cooking of all meats. It is the most accurate method of determining the temperature and doneness of a product.

FAN SPEED SETTING: See general operations notes below.

GENERAL OPERATION NOTES:

- 1. OVEN RACKS:** Position oven racks for the number of pans and product to be cooked.
- 2. WATER SUPPLY:** Verify water supply is on.
- 3. SELECT COOKING MODE AND TEMPERATURE:** Turn oven on; SELECT the cooking mode. To cook in the combi or hot air mode, set thermostat to desired temperature. To cook in the steam mode, set thermostat to 200° F. The thermostat light will come on indicating oven temperature is below set point.
- 4. PREHEAT:** Heat oven until thermostat light goes out indicating that the oven has reached the set temperature. The oven should preheat to 350° F. within 10 to 15 minutes. (Note: To conserve energy, DO NOT turn the oven on until 15 minutes before actual cooking time is to begin.)
- 5. FAN SPEED:** If two-speed fan is available, adjust the fan to recommended speed noted on individual recipe card. NOTE: The Combi-oven is equipped with electric interlock, which energizes/de-energizes both the heating element and fan motor when the doors are closed and open. Therefore, the heating elements and fan will not operate with the doors open, only when closed.
- 6. MEAT PROBE:** Insert the meat probe in the thickest section of the product. NOTE: The tip of the probe should not be placed near bone or fat. This will result in inaccurate temperature readings. Turn the meat probe switch on and set the desired core temperature by using the up or down arrows. Press the set button to store the set point temperature. Set the timer to the STAY ON position. When the selected core temperature is reached the buzzer will sound and the oven automatically turns off.
- 7. CLEANING AND MAINTENANCE:** Refer to the manufacturer's operating manual for cleaning and maintenance instructions. NOTE: Wipe out all spills as soon as they occur for ease of cleaning.

COMBI-OVEN COOKING GUIDELINES

Food	Cook Mode	Recommended Temperature	Time
MEATS			
Steak	Hot Air	400	See Recipe No. L 007 00
Bacon, oven fried	Hot Air	325	25-30 minutes
Roasts, boneless			
Beef	Combi	325	1 hr 45 minutes
Pork	Combi	325	2 to 2-1/2 hours
Spareribs	Combi	350	1 to 1-1/2 hours
Meatloaf	Combi	300	1 hour
POULTRY			
Turkey, boneless	Combi	325	2 to 2-1/2 hours
Chicken, pieces (with bone)	Combi	350	20-30 minutes
FISH			
Fish, baked	Combi	325	10-20 minutes
Shrimp, raw, frozen	Steam	Preset	3-5 minutes
MISCELLANEOUS			
Casserole type dishes			
Macaroni & cheese	Combi	325	15-20 minutes
Lasagna	Combi	300	40-50 minutes
BREADS			
Breads, yeast	Hot Air	375	30 minutes
Coffee cakes	Hot Air	325	15 minutes
Muffins	Hot Air	350	30 minutes
Rolls Yeast	Hot Air	350	10-15 minutes
Sweet rolls	Hot Air	325	15 minutes
EGGS			
Hard Cooked Eggs	Steam	Preset	12 minutes
CAKES			
Angel Food	Hot Air	300	30-35 minutes
Layer	Hot Air	300	25-35 minutes
Loaf	Hot Air	325	65-75 minutes
Sheet	Hot Air	300-325	25-35 minutes
DESSERTS			
Brownies	Hot Air	325	25-30 minutes
Cookies	Hot air	325	12-15 minutes
Pies, Fruit	Hot air	375	25 minutes
VEGETABLES			
Frozen	Steam	Preset	12-15 minutes
Canned	Steam	Preset	10-12 minutes
Fresh*	Steam	Preset	*See individual recipe cards
OVEN FRYING			
French Fries	Combi	400	7-9 minutes
Fish Portions	Combi	400	10-12 minutes
Shrimp, Battered	Combi	400	7-8 minutes
Chicken Pieces	Combi	400	20 minutes
Chicken Nuggets	Combi	400	8-14 minutes
Onion Rings	Combi	400	6-8 minutes
Jalapeno Popper	Combi	400	9-12 minutes
Egg rolls	Combi	400	12-18 minutes