

Overnight cooking, Mixed loads, Sous-Vide

Application Manual



RATIONAL SelfCookingCenter® – the heart of your kitchen

Dear Customer,

The demands of your customers are rising constantly; maximum flexibility is expected while also delivering the highest quality at the lowest price. The cooking of meat and poultry has always required a high level of monitoring, years of experience, and ties up production equipment for many hours.

With the **SelfCookingCenter®** you can easily deal with these challenges. Discover on the following pages how you can:

- › Roast, braise, and boil overnight at the touch of a button, allowing you to utilize your **SelfCookingCenter®** 24 hours a day.
- › Cook many different products at the same time in a mixed load.
- › With Sous-Vide (Vacuum cooking) new possibilities are presented and you learn how to optimize production processes and extend storage times.

On the following pages, our RATIONAL chefs have compiled a comprehensive list of practical hints and tips that explain how you can utilize your **SelfCookingCenter®** even better.

You can also contact a RATIONAL chef directly by using our ChefLine®. We are more than happy to answer any culinary questions you may have regarding the **SelfCookingCenter®**.

USA (866) 306-CHEF (2433)

Canada (877) 728-4662

Your RATIONAL chefs wish you every success in learning about your **SelfCookingCenter®**.

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1. Overnight cooking at a glance

1.1. The benefits of overnight cooking

- › No need to monitor or control
- › Exceptionally tender and juicy meat
- › Capacity gain through 24 hour usage
- › Reduction in shrinkage and greater yield
- › Energy savings by using off peak electricity
- › Greater flexibility by cooking different products with different sizes in a single mixed load
- › Exceptional quality of stock for sauces
- › Safe and hygienic at the touch of a button

1.2. The settings

- › You can use overnight cooking in the **Overnight Roasting, Braising, Overnight Moist Cooking, and Overnight Roasting Poultry** cooking processes.
- › Recommended core temperatures and examples of mixed loads can be found in the descriptions of the individual cooking processes.
- › With poultry always select a hygienic core temperature that meets the HACCP standards for your region / country.

1.3. Preheating and loading

- › After the automatic "preheating" phase, the **SelfCookingCenter®** will notify you to "load". For hygiene reasons, the core probe should be inside the cooking cabinet during preheating, the food should be well chilled before loading.
- › With products of various sizes, place the core temperature probe in the smallest product, a sufficient maturing and holding phase is then required to achieve the desired core temperature in all of the products (per lbs (kg) 1.5-2 hours).
- › With very large joints, where the core temperature probe cannot reach the center, the **SelfCookingCenter®** will automatically calculate the necessary cooking time.

1.4. The maturing

- › The slow "**maturing**" at low temperatures reduces shrinkage and therefore your products stay exceptionally juicy and tender.
- › Through the gentle cooking process, products with filling retain their shape and are therefore easier to cut or carve. This helps you achieve maximum yield.

1.5. Maturing and holding

- › Upon reaching the desired core temperature, the cooking process will finish and automatically advance into a "**maturing and holding**" phase. The products will then be held at the desired core temperature for up to 24 hours and "over cooking" will be prevented.
- › Through the quicker maturing, even young meat will be perfectly aged and deliver an exceptionally tender result. This enables you to buy cheaper produce and reduce costs even further.
- › To prevent well aged meat, smaller products, and game becoming too soft they should not be left in "**maturing and holding**" for extended periods.
- › To achieve minimal shrinkage we recommend a short "**maturing and holding**" phase.



If there is a power cut during a low temperature cooking process, the cooking process will be interrupted. If the power cut lasts less than 15 minutes, the cooking process will continue. If the power cut lasts longer than 15 minutes, the unit will switch to standby mode after the power cut. You must restart the cooking process to finish cooking the food. The RATIONAL overnight cooking is both hygienic and safe. The official judgement from the Institute of Hygiene and Technology for Food can be found on page 35.

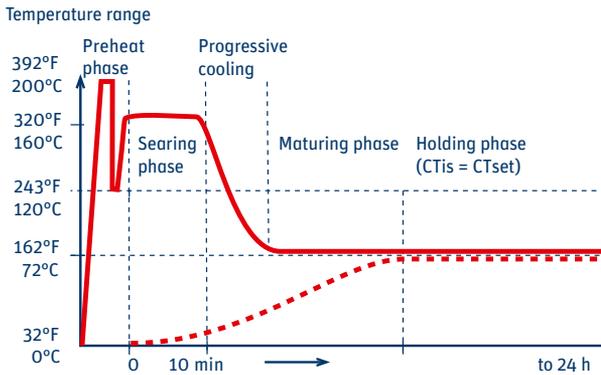


2. The process "overnight roasting"

The process "overnight roasting" is suitable for all large meat and poultry products.

The products are seared and gently cooked at the touch of a button.

The meat will be exceptionally juicy and tender. There is also an extra coloration step for roasts with crackling.



Graphic is showing the overnight cooking sequence.

2.1. The preparation

- > Place the well seasoned and lightly oiled roast in a granite enamelled container, or simply lay it on a stainless steel grid. A deep container can be placed under the grid to catch any juices, which can then be used as the basis for an excellent stock.
- > Steam large roasts with rind for 10 minutes before roasting. This allows the rind to be cut and salted easier. With thin roasts such as pork belly, place a raw potato under the joint to prevent any indentations and assist the juices to run underneath. This also helps provide a light crispy crackling.



Seasoned roast beef



Steamed and cut pork belly



Seasoned veal shank

Tip: Making a sauce

Place some bones and vegetables, mixed with a little oil and tomato puree, into a granite enamelled container (2 3/8" / 60mm) and load this together with the joint. After the searing phase, deglaze with stock. This way you create a perfect basis for a rich sauce. Vegetables that brown quickly, such as leek or celery, should be added later.

2.2. The settings

2.2.1. The automatic searing

- > The intensity of the searing is chosen by selecting the coloration level from low to high. A lighter coloration will deliver minimum shrinkage.
- > Quick browning seasonings, herbs, or marinades will produce a stronger coloration on the meat. A lower coloration setting should be selected.
- > The high searing temperature kills any surface bacteria and allows for hygienically safe cooking at low temperatures.
- > When selecting the coloration level, consider that roasts with rind will also receive an intensive coloration at the end, providing a crispy skin before serving.



Tip:

The **"without searing"** function also offers the possibility for smaller, pre-seared meat and poultry pieces to be gently cooked. The searing phase is eliminated and the cooking process starts directly with the slow and gentle cooking. Exceptionally tender meat, such as veal filet, is not suitable for a long maturing phase.



Select meat



Select overnight roasting



Select desired results; when preferred without searing.

2.2.2 The settings

- › Select your desired result from medium to well done or adjust the core temperature to the exact degree yourself.
- › Due to the slow and gentle cooking method, a core temperature of up to 50°F (10°C) lower than traditional cooking methods is recommended.
- › With poultry products, a minimum core temperature of at least 162°F (72°C) is recommended. Country specific HACCP guidelines should be followed.



2.2.3. Recommended settings

Product	Core Temperature	Coloration	Cooking Time
Pork neck 4 lbs (2 kg)	162 - 167°F (72 - 75°C)	middle	Approx. 4 hrs.
Pork knuckle 3 lbs (1.5 kg)	162 - 167°F (72 - 75°C)	low	Approx. 4 hrs.
Meat loaf 2 lbs (1 kg)	155 - 162°F (68 - 72°C)	low	Approx. 2 hrs.
Veal knuckle 6 lbs (2.5 kg)	162 - 167°F (72 - 75°C)	low	Approx. 4 hrs.
Veal shoulder 9 lbs (4 kg)	162 - 167°F (72 - 75°C)	low	Approx. 4 hrs.
Loin of veal 7 lbs (3 kg)	136 - 144°F (58 - 62°C)	low	Approx. 2 hrs.
Roast beef 7 lbs (3 kg)	126 - 133°F (52 - 56°C)	middle	Approx. 3 hrs.
Leg of lamb 4 lbs (2 kg)	126 - 133°F (52 - 56°C)	middle	Approx. 3 hrs.
Beef filet 4-5 lbs (2-2.5 kg)	126 - 133°F (52 - 56°C)	middle	Approx. 2 hrs.

2.2.4. Preheating and loading

- › After the automatic "preheating" phase, the **SelfCookingCenter®** will notify you to "load". For hygiene reasons, the core probe should be inside the cooking cabinet during preheating and the food should also be well chilled before loading.
- › With products of various sizes, place the core temperature probe in the smallest product. A sufficient maturing, and holding phase is then required to achieve the desired core temperature in all of the products (per lbs (kg) 1.5-2 hours)
- › With very large joints, where the core temperature probe cannot reach the center, the **SelfCookingCenter®** will automatically calculate the necessary cooking time.



Preheat



Load and insert core temperature probe



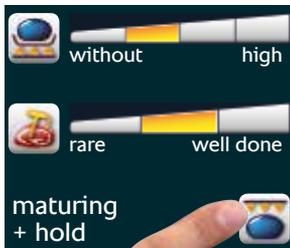
Maturing

Tip:

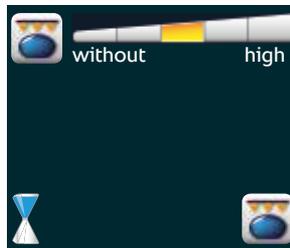
The process "roast" offers the possibility to cook various products together even when they require a different degree of cooking. Simply select the "Continue and reposition"- function (page 28).

2.2.5. The final coloration

- › After the gentle "maturing" and upon reaching the "maturing + holding" phase, the SelfCookingCenter® offers you the option to color and crisp your roast at the touch of a button. Final coloration allows roasts to receive an intense color and crispy crust.
- › Choose a slightly lower core temperature when roasting smaller joints as these continue cooking during the coloration phase.
- › Products and joints that should remain pink, like roast beef, are not suitable for use with the final coloration. The high temperatures can cause a grey edge to appear.
- › With a mixed load containing various joints, any joints that you do not wish to color further should be removed before selecting the coloration function.
- › If containers have been used to catch any dripping or fat remove these from the cooking cabinet before final coloration. This will help prevent excessive smoke being created.
- › After coloration, if your roast still does not have the crackling or color that you want, you can set the coloration time to the minute by pressing the "Continue with time" button.



Select final coloration



Select desired result



Pork belly with crackling

Tip:

Your roasts can be removed and cooled after reaching the **"maturing and holding"** phase. This offers great benefits when producing large amounts of roast with crackling, which are intended to be served on the following day. Before serving, select under **Finishing®** the **"coloration"** process and complete only the roasts that are needed. The pre-prepared roasts will automatically be given a crackling and will be ready for service much faster. This also allows for better service planning.

2.3. Mixed load "overnight"

You can also roast various products that have different sizes together in one load. The desired degree of cooking should be the same for each product and the core temperature probe should be placed into the smallest joint. A sufficient maturing and holding phase is then required to achieve the desired core temperature in all of the products (per lbs (kg) 1.5-2 hours) or simply leave them overnight.

Country / Region specific HACCP guidelines should be followed.

Products	Core Temperature	Searing	Coloration
Pork neck, pork belly, veal shank, veal shoulder, duck/goose, meatloaf 4.4 lbs (2 kg), Spare Ribs	155°F - 162°F (68°C - 72°C)	low	middle
Loin of veal, loin of pork, roast gammon	136°F - 144°F (58°C - 62°C)	middle	light
Roast beef, leg of lamb, leg of venison, loin of venison	126°F - 136°F (52°C - 58°C)	middle	not suitable



Mixed loads with the same core temperature



Mixed loads with the same core temperature



Mixed loads with the same core temperature

3. The "braise" meat cooking process

The cooking process "braise" is suitable for all meat and poultry products that are traditionally cooked in a sauce or stock. An automatic holding phase also allows you to cook these products overnight.

3.1. The preparation

- › Place the seasoned and lightly oiled products such as, beef olives, goulash, or braised beef, in a 2 3/8" (60mm) deep granite enamelled container.
- › For a richer sauce, place some lightly oiled root vegetables mixed with tomato puree under your products.
- › Leave a small space between each product to allow for even browning. Vegetables that brown quickly, such as leek or celery, should be added later.
- › Coat the products in a little flour to help thicken the sauce.

Tip:

Pre-roasted vegetables can also be used to braise in the **SelfCookingCenter®** and will allow you to braise in a standard GN container.

3.2. The settings

3.2.1. The automatic searing

- › The browning level and intensity of searing is determined by selecting the searing level from low to high.
- › Quick browning seasoning, herbs, or marinades will produce a stronger coloration on meat. A lower coloration setting should be selected.



Braised beef with vegetables



Select meat



Select braise

roast	pan fried
roast with crackling	grill
overnight roasting	breaded
overnight soft cooking	braise

Product	Searing Level	Cooking Time
Cabbage rolls	low	Approx. 1 hrs.
Chicken in red wine	middle	Approx. 1 hrs.
Veal ragout, venison ragout, lamb curry, beef olives	middle	Approx. 2 hrs.
Braised beef, lamb shanks	middle	Approx. 4 hrs.
Osso bucco, ox tail, goulash	high	Approx. 2 hrs.

3.2.2. Preheating and loading

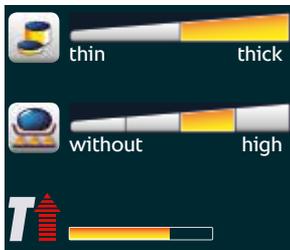
- > After the automatic "preheating" phase, the **SelfCookingCenter®** will notify you to "load". For hygiene reasons, the core probe should be inside the cooking cabinet during preheating and the food should also be well chilled before loading.
- > When braising goulash or ragout, place the core probe in more than one piece of meat to guarantee a better result.

3.2.3. Adding liquid

- > After the searing phase (20-30 minutes), you will be notified to add your stock, boiled wine, water, or sauce. This should be added cold.
- > Cover the products totally with liquid and then cover the container with another tray or lid.
- > Leek, spices, and seasonings should be added now to help retain flavors.

Tip:

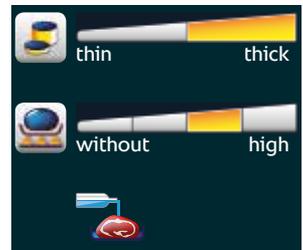
A pre-prepared jus or convenience sauce can be added before the searing phase. In this case, it will not be necessary to open the door. Select the "without" searing level.



Select searing level; preheat



Load, and place core temperature probe in product



Add liquid or skip add liquid

3.3. Braising "overnight"

The process "**braise**" allows you to cook your products **overnight**. Once the process has finished, you will be notified that your products are ready. If the door is not opened the process will automatically advance to the "**maturing and holding**" phase. This allows you to hold your product for up to 24 hours.

Tip:

Sauce should first be thickened after the process has finished. A little cold butter will provide a nice glaze and will also provide additional thickness.

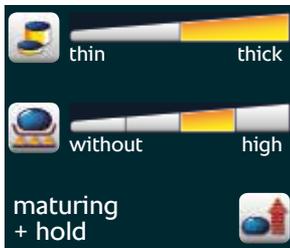
3.4. Mixed loads "overnight"

Different products that are the same size can also be cooked together in one load.

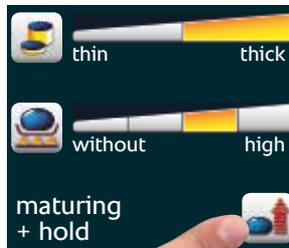
Product	Searing Level
Venison ragôut, lamb curry, pork goulash, osso bucco	middle
Ox cheeks, roulards, beef goulash, ox tail	high
Braised beef	middle

3.5. Automatic Finishing®

The **SelfCookingCenter**® automatically lowers the cabinet temperature to prevent products over cooking during the "**maturing + holding**" phase. Before serving, simply select the **Finishing**® button and your products will be heated to a defined service temperature (depending on load size 20-30 minutes).



Automatic Mmaturing + holding after cooking



Select Finishing® before service



Braised beef

4. The "overnight boiling" meat cooking process

The process "**overnight boiling**" is suitable for all meats that are typically cooked in a liquid. The holding function also allows you to cook your products overnight.

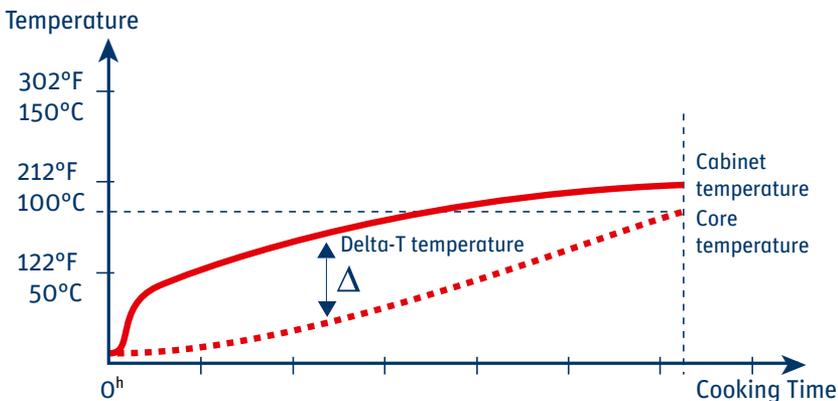
4.1. The preparation

- › Place your meat together with root vegetables and spices in a deep GN container (2 1/2" / 65mm) and fill this half way with water. This way you will also produce a rich and intensive stock.
- › Onions, leeks, and mushrooms can cause a discoloration to the meat.

4.2. The settings

4.2.1. Delta-T

- › The "**gentle**" setting should be selected for products that remain for prolonged periods (during the day or overnight) in the cooking cabinet. The cooking temperature is very low and cooks the food very slowly and gently. This setting produces a minimum amount of shrinkage.
- › The "**quick**" setting should be selected for products that are needed to be served quickly. The cooking temperature is much higher and cooking times will be reduced.



The Delta-T-temperature is the temperature difference between the core temperature and the cabinet temperature.

4.2.2. The degree of cooking

› Select your desired result from "rare" to "well done" or adjust the core temperature to the exact degree yourself.



› Due to the slow and gentle cooking method, a core temperature of up to 50°F (10°C) lower than traditional cooking methods is recommended.

Country / Region specific HACCP guidelines should be followed.

Product	Core Temperature	Delta-T	Cooking Time
Salted pork	158 - 162°F (70 - 72°C)	slow	Approx. 2 hrs.
Ham 7 lbs (3 kg)	158 - 162°F (70 - 72°C)	slow	Approx. 4 hrs.
Terrine 2 lbs (1 kg)	162 - 172°F (72 - 78°C)	slow	Approx. 1 hrs.
Boiled beef 4 lbs (2 kg)	172 - 180°F (78 - 82°C)	middle	Approx. 3 hrs.
Ox breast 7 lbs (3 kg)	180 - 185°F (82 - 85°C)	quick	Approx. 4 hrs.
Clarified stock 8 liters	185°F (85°C)	quick	Approx. 2 hrs.

Tip: Clarified stock

The **SelfCookingCenter**® offers the possibility to clarify stocks or bouillons overnight. Place the cold stock together with spices and clarification items in a deep GN container 2 1/2" (65mm). Then select a slow Delta-T setting and a core temperature of 185°F (85°C). Use the positioning helper to place the core probe in the middle of the liquid.



Boiled beef and root vegetables



Select meat



Select overnight soft cooking

4.2.3. Preheating and loading

- › After the automatic "preheating" phase, the **SelfCookingCenter**[®] will notify you to "load". For hygiene reasons, the core probe should be inside the cooking cabinet during preheating and the food should also be well chilled before loading.
- › With products of various sizes, place the core temperature probe in the smallest product. A sufficient maturing and holding phase is then required to achieve the desired core temperature in all of the products (per lbs (kg) 1.5-2 hours)
- › With very large joints, where the core temperature probe cannot reach the center, the **SelfCookingCenter**[®] will automatically calculate the necessary cooking time.



Select desired result, preheat, and load



Place the core temperature probe in product



Finished or...

4.3. Mixed load "overnight"

You can also cook various products of differing sizes together in one load. The desired degree of cooking should be the same for each product and the core temperature probe should be placed into the smallest joint. A sufficient maturing and holding phase is then required to achieve the desired core temperature in all of the products (per lbs (kg) 1.5-2 hours).

Country / Region specific HACCP guidelines should be followed.

Product	Core Temperature	Delta-T
Gammon, ham, poached veal	155 - 162°F (68 - 72°C)	slow
Ox tongue, boiled lamb shoulder, boiled beef	162 - 172°F (72 - 78°C)	slow
Ox breast, calf's head	172 - 180°F (78 - 82°C)	slow
Clarified stock	185°F (85°C)	slow



...automatic maturing and holding



Tender boiled beef

5. The "overnight roasting" poultry cooking process

The "overnight roasting" poultry cooking process is suitable for whole ducks, geese, and turkeys that you intend to serve later on in the same or following day, either individually or in large quantities. The poultry is automatically seared at the push of a button and then cooked very gently. This makes the meat particularly tender and succulent. The poultry is held automatically at the end of the cooking process. Before serving, there is an automatic coloration step to crisp up the skin as desired.

5.1. The preparation

Place the well-seasoned or marinated poultry on a stainless steel grid in a granite enamelled container or place it directly onto root vegetables. This will collect any meat juices and fat that emerges.

Tip:

Add other seasonings, apples, and etc. to the root vegetables that you normally use. You will then be able to boil the root vegetables with liquid and make a flavorful sauce from them. Add vegetables that brown quickly, such as leeks and celery, later.

5.2. The settings

5.2.1. Automatic searing

- › When you select the searing level from low to high, you determine the intensity of the searing and the desired level of browning. Cooking losses are minimized with low searing temperatures.
- › Poultry that has been treated with marinades, seasoning mixes that contain sugar, or products to enhance browning will brown faster and more intensively. You should select a lower browning level for these.
- › Searing at high temperatures will kill any germs that are on the surface, making your poultry hygienically safe, even at lower core temperatures.
- › Take in account of the subsequent coloration when you select the searing level. Select a low searing level since the coloration step will give your products more intense color, crispiness, and roasting smells.



Chicken with root vegetables



Select poultry



Select overnight roasting

Tip:

Select **"searing / without"** if you prefer to sear your poultry yourself. The **SelfCookingCenter®** will then move directly on to very gentle cooking. There is no searing phase and the process immediately starts to cook your poultry slowly and very gently.

5.2.2. The cooking level

Select your desired result (from rare to well done) or enter a specific core temperature in degrees. You can reduce the core temperature by long and gentle cooking.



Attention!

With poultry products, make sure that the core temperature reaches at least 162°F (72°C) and follow the HACCP regulations applicable in your country.

Product	Core Temperature	Searing	Time
Goose 11 lbs (5 kg)	162 - 167°F (72 - 78°C)	medium	Approx. 4 hours
Duck 6 lbs (2,5 kg)	162 - 167°F (72 - 78°C)	medium	Approx. 3 hours
Turkey 13 lbs (6 kg)	162 - 167°F (72 - 78°C)	medium	Approx. 5 hours

5.2.3. Preheating and loading

- > After the automatic **"preheating"** phase, the **SelfCookingCenter®** will notify you to **"load"**. For hygiene reasons, the core probe should be inside the cooking cabinet during preheating and the food should also be well chilled before loading.
- > With products of various sizes, place the core temperature probe in the smallest product. A sufficient maturing, and holding phase is then required to achieve the desired core temperature in all of the products (per lbs (kg) approx. 1.5-2 hours)



Select desired result



Preheat load and place core temperature probe in product



Automatic maturing + holding after cooking

5.2.4. The next step: coloration

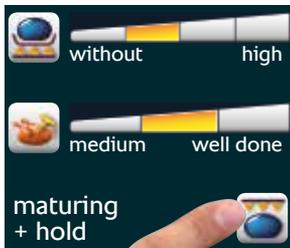
- › After the gentle maturing and reaching the maturing + hold phase, the **SelfCookingCenter®** suggests the option of automatically coloring your poultry at the push of a button. This will give your poultry intensive color and crispness.
- › If you have smaller poultry to crisp, you may want to select a slightly lower core temperature as these products can easily overcook.
- › With mixed loads of different types of poultry, remove any poultry that you do not want to crisp and then start the coloration process.
- › Remove any containers in which grease has collected and remove your root vegetables. This will prevent a significant smoke build-up during coloration.
- › After coloration, if your poultry still does not have the crispy skin or color that you want, you can set the coloration time to the minute by pressing the **"Continue with time"** button.

Tip:

If you are producing large quantities of poultry that you would like to serve at different times or on subsequent days, you have the option of removing and chilling your poultry or portions once you reach the maturing + hold phase. To serve, select the under **"Coloration"** cooking process under **Finishing®** and finish only those poultry products that you actually require. This makes the timing of your service easier to schedule and the food is ready to serve faster.

5.3. Mixed loads "overnight"

You also have the option of cooking different types and sizes of poultry at the same time in a mixed load. The cooking level should be the same, in this case, and you should always insert the core temperature probe into the smallest portion. Make sure that the hold phase is long enough (roughly 1.5 – 2 hours per lbs (kg)), ideally done overnight.



Select coloration



Select desired result



Crispy roast duck

6. Sous-Vide Cooking

The **SelfCookingCenter**® with the **Sous-Vide** option creates new possibilities for food production. Work flow is improved, production capacities are utilized better, and food quality is constantly maintained.

With Sous-Vide (vacuum cooking), foodstuffs are prepared, seasoned, and spiced before being cooked in a vacuum bag and then cooled immediately.

When needed, they are simply reheated in the vacuum bag, removed, and depending on the product, completed in a variety of ways.

6.1. Benefits of Sous-Vide Cooking

- › Excellent food quality with a longer shelf life
- › Natural taste, color, vitamins, and nutrients, remain intact
- › Reduction in shrinkage due to gentle cooking techniques
- › Efficient production and optimized daily work flow
- › Consistent and reproducible food quality

6.2. The Sous-Vide Option

The RATIONAL **SelfCookingCenter**® with the Sous-Vide Option is supplied with 2 core temperature probes. In addition to the standard core temperature probe, a thinner Sous-Vide probe with only one measuring point on the tip is supplied.

In order to achieve an optimal result, the tip of the Sous-Vide core temperature probe must reach the middle of the product.

The probes can be exchanged by means of a connector on the outside of the **SelfCookingCenter**®. When the Sous-Vide core temperature probe is connected, only the cooking processes that are suitable for Sous-Vide cooking can be selected.



Sous-Vide core temperature probe



Core temperature probe connector



Standard core temperature

6.3. The possible usages

- › Sous-Vide is the perfect solution to allow for a central production that can then deliver pre-cooked products to satellite kitchens. This eliminates expensive over production because satellite kitchens only use what is actually needed.
- › For "Room Service", single components or whole dishes can be kept cooled and single portions can be completed as and when needed. This way service and reception staff can provide guests with hot meals 24 hours a day.
- › Due to the gentle and healthy preparation, Sous-Vide is perfect for special dietary and nutritional requirements. The retention of natural aromas deliver a genuine flavor, and taste even without the use of additional salt.

6.4. The preparation

- › Place the well cooled (max. 43°F / 6°C) raw or seared products together with spices, marinades, and other flavor enhancing ingredients into a vacuum, Sous-Vide or shrink bag.
- › Raw onions, leeks, or garlic should be pre-blanching and alcohol should be boiled and cooled before being placed in the vacuum bag.
- › Roasts and braised dishes should be seared in advance and placed together with the meat residue in the vacuum bag.
- › Vacuum the products so that there is no air remaining in the bags (90% - 99%).

Tip:

Most unwanted bacteria are found on the surface of meats. Therefore, it is recommended to blanch or sear products before vacuuming. Country specific HACCP guidelines must be followed when choosing core temperatures.



Vacuumed raw vegetables



Beef olives with root vegetables



Portions of salmon with vegetables

6.5. The settings

"**Overnight boiling**" is suitable for all products that need to be cooked for long periods. A low Delta-T (see page 16) is suitable for a "**low-low**" method, in which the cooking temperature is only slightly higher than the core temperature.



overnight boiling

"**Steam à la carte**" is suitable for products that need a higher temperature 176 - 185°F (80 - 85°C) for a set amount of time. For example, fruit, vegetables, and desserts.



steam à la carte

In "**high-low**" method, products are cooked at a cabinet temperature of 136 - 154°F (58 - 68°C) until the core temperature is achieved. The "**steam**" mode is most suitable because you can individually enter your desired cooking and core temperatures.



6.6. Loading

- › For hygiene reasons, make sure that all products are refrigerated before loading (max. 43°F / 6°C).
- › Stick a closed structure foam strip on the place where you will later insert the core temperature probe. Ensure the bag is free from dirt and grease before sticking.
- › Insert the core probe through the foam strip and into the thickest part of the product.

Tip:

Ask our ChefLine® for suppliers of vacuum bags and foam strips.



Veal shank with herbs



Select meat

roast	pan fried
roast with crackling	grill
overnight roasting	breaded
overnight ft cooking	braise

Select overnight boiling

6.7. Application examples in the process "moist cooking"

Here you can find examples of products that are suitable for the "low-low" method and require a long cooking time.

Country / Region specific HACCP guidelines should be followed.

Product	Delta-T	Core Temperature	Cooking Time	Preparation
Roast pork	41°F (5°C)	151°F (66°C)	24 hrs.	sear in advance
Pork belly	41°F (5°C)	151°F (66°C)	12 hrs.	crust when finished
Lamb shoulder	41°F (5°C)	151°F (66°C)	36 hrs.	sear in advance
Breast of veal	41°F (5°C)	151°F (66°C)	12 hrs.	sear in advance
Veal shank	41°F (5°C)	151°F (66°C)	48 hrs.	sear when finished
Braised beef	41°F (5°C)	151°F (66°C)	48 hrs.	cook with sauce
Coq au vin	41°F (5°C)	162°F (72°C)	11 hrs.	cook with sauce
Octopus	41°F (5°C)	151°F (66°C)	36 hrs.	marinate in boiled red wine

Tip:

The process "grill à la carte" is perfectly suited to sear your products before vacuuming or after cooking. The coloration and time can both be adjusted to suit your individual preferences. Best results can be achieved on a preheated Grill and Pizza tray.

Important: The cooked products should be cooled to under 37°F (3°C) within 90 minutes in either a blast chiller or in ice water. To attain maximum shelf life of up to 21 days, the refrigeration temperature should not exceed 36°F (2°C).



Select desired result and preheat



Load and insert core temperature probe



Maturing and holding phase

6.8. Application examples in the process "steamed vegetables"

Here you can find examples of products that require a shorter cooking time with a higher temperature. (Cooking temperature between 176°F (80°C) and 185°F (85°C).

Tip:

Place fats, spices, and other flavor enhancing ingredients in the vacuum bag together with your products. This produces intensive flavor combinations for your product.

Product	Time	Flavors and Spices
Pineapple	1 hr.	brown sugar, rum, vanilla
Chicorée	1 hr.	orange juice, butter
Carrots	90 mins.	butter, ginger, sugar
Artichokes	2 hr.	olive oil, lemon juice, thyme
Celeriac	90 mins.	butter, vegetable stock
Pears	30 mins.	sugar, vanilla, pear schnapps
Rhubarb compote	45 mins.	sugar, vanilla, boiled white wine

6.9. Application examples in the cooking mode "steaming"

Here you can find examples of products that are suitable for the "high-low" method and require a shorter cooking time. (Cooking temperature between 136°F (58°C) and 155°F (68°C)).

Product	Core Temperature	Preparation
Roast beef 2 lbs (1 kg)	145°F (63°C)	sear in advance
Veal loin 2 lbs (1 kg)	147°F (64°C)	sear when finished
Loin of venison	147°F (64°C)	glaze when finished
Steak medium 0.7 lbs (300 g)	145°F (63°C)	sear when finished
Fish filet 0.7 lbs (300 g)	129°F (54°C)	vacuum with aromatic herbs
Goose liver	126°F (52°C)	marinate for 24 hrs. and cool
Duck breast	162°F (72°C)	score the skin

Country / Region specific HACCP guidelines should be followed.

7. Mixed loads with the "continue" function

The cooking processes in the **SelfCookingCenter®**, which contain an integrated "**continue**" function, are suitable for all large meat and poultry products that vary in size and require different degrees of cooking. Simply enter the lowest desired core temperature. All products should be loaded together and the core temperature probe placed in the product requiring the lowest temperature (e.g. roast beef 133°F (56°C)). Upon reaching the desired core temperature, remove the roast beef and place the core temperature probe in the product with the next lowest core temperature, such as veal shank 172°F (78°C). The settings can then be changed in the display.

Once the door has been closed, select the "**continue**" function. This step can be used repeatedly.



7.1. Mixed loads in the process "roast"

Ideal for all large joints that you wish to roast together.

Product	Core Temperature	Coloration
1. Roast beef	133°F (56°C)	middle
2. Veal loin	140°F (60°C)	middle
3. Loin of pork	149°F (65°C)	middle
4. Neck of pork	172°F (78°C)	high
5. Veal shank	172°F (78°C)	high

Country / Region specific HACCP guidelines should be followed.



Mixed load with different core temperatures



Repositioning of the core probe after the first product is finished



Close the door and select the continue function

7.2. Mixed loads with the "overnight moist cooking" meat cooking process

Ideal for all large joints that are typically cooked in liquid.

Product	Core Temperature	Delta-T
1. Poached veal filet	136°F (58°C)	68°F (20°C)
2. Gammon	154°F (68°C)	68°F (20°C)
3. Vitello tonnato	167°F (75°C)	104°F (40°C)
4. Boiled veal	172°F (78°C)	104°F (40°C)

7.3. Mixed loads in the process "roasted poultry"

Ideal for all poultry or poultry pieces that need to be nicely browned and crispy.

Product	Core Temperature	Coloration
1. Chicken breast	162°F (72°C)	Stage 4
2. Chicken legs	190°F (88°C)	Stage 4
3. Half chicken	190°F (88°C)	Stage 4
4. Whole chicken	190°F (88°C)	Stage 2

Tip:

Place some raw potatoes in a container under the whole roast chicken. The potatoes will absorb some of the dripping juices and will be ready at the same time.

7.4. Mixed loads in the process "poached poultry"

Ideal for all poultry and poultry pieces that are typically poached or cooked in liquid.

Product	Core Temperature
1. Poultry breast	162°F (72°C)
2. Turkey breast	167°F (75°C)
3. Galantine	172°F (78°C)
4. Chicken for salad	190°F (88°C)

Tip:

Mix spices and herbs together with your poultry, vegetables, and stock in a container. This produces the perfect complement to your meat.

Country / Region specific HACCP guidelines should be followed.

8. Mixed loads with iLevelControl

The **SelfCookingCenter®** cooking processes with **iLevelControl**, are suitable for all small products that are fried, steamed, or baked without a core temperature probe. In **iLevelControl** each rack is monitored separately and the cooking times can be adjusted to the second; this allows you to be able to cook products as and when required according to your orders. This flexibility allows you to adjust to individual guest requests, even during "rush hour".

8.1. Mixed loads in the process "steam à la carte"

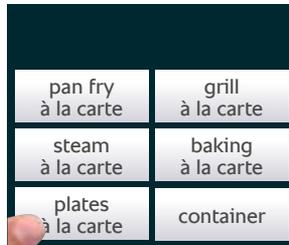
Ideal for all small products that would typically be steamed.

Product	Time	Accessory
Spinach	Approx. 3 mins.	GN perforated container
Sugar snap peas	Approx. 4 mins.	GN perforated container
Sliced carrots	Approx. 6 mins.	GN perforated container
Green beans, broccoli	Approx. 8 mins.	GN perforated container
Cauliflower, kohlrabi	Approx. 10 mins.	GN perforated container
Hot dogs	Approx. 10 mins.	GN perforated container
Boiled sausages	Approx. 13 mins.	GN-container / filled with water
Tiger prawns	Approx. 4 mins.	GN perforated container
Frozen seafood, fish filet	Approx. 6 mins.	GN-container 1 1/2" (40 mm)
Mussels	Approx. 8 mins.	GN-container 1 1/2" (40 mm)

Country / Region specific HACCP guidelines should be followed.



Select Finishing®



Select steam à la carte



Select cooking parameters

8.2. Mixed loads in the process "grill à la carte"

Ideal for all small products that would typically be fried or grilled.

Product	Time	Recommended Accessory	Tip
Toast	Approx. 3 mins.	Roasting and baking tray	
Bacon	Approx. 3.5 mins.	Roasting and baking tray	
Sausages	Approx. 4 mins.	Roasting and baking tray	lightly oiled
Fried eggs	Approx. 2 mins.	Multibaker	lightly oiled tray
Chicken breast	Approx. 9 mins.	Granite enamelled 20 mm	seasoned and oiled
Minute steaks	Approx. 2 mins.	Grill and pizza tray	seasoned and oiled
Steak medium 0.5 lbs (220 g)	Approx. 8 mins.	CombiGrill Grid	seasoned and oiled
Steak well done 0.5 lbs (220 g)	Approx. 10 mins.	CombiGrill Grid	seasoned and oiled
Duck breast pink	Approx. 8 mins.	Grill and pizza tray	skin side down
Lamb rack 0.7 lbs (300 g)	Approx. 9 mins.	CombiGrill Grid	seasoned and oiled
Large meat balls	Approx. 10 mins.	Granite enamelled 3/4" (20 mm)	
Schnitzel breaded, fresh	Approx. 6 mins.	Roasting and baking tray	lightly oiled
Schnitzel breaded, frozen	Approx. 11 mins.	Granite enamelled 3/4" (20 mm)	lightly oiled
Cordon bleu, frozen	Approx. 13 mins.	Granite enamelled 3/4" (20 mm)	lightly oiled
Wedges	Approx. 10 mins.	Roasting and baking tray	partially defrosted
Convenience pizza	Approx. 6 mins.	Grill and pizza tray	
Turkey strips	Approx. 5 mins.	Roasting and baking tray	marinated and oiled
Oven chips	Approx. 10 mins.	CombiFry®	partially defrosted

Tip:

The Grill and pizza tray is especially good for small products that require a short cooking time. The Grill and pizza tray should be preheated and can be left inside the **SelfCookingCenter®**.



Select Finishing®



Select grill à la carte



Select cooking parameters

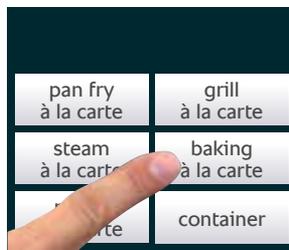
8.3. Mixed loads in the process "baking à la carte"

A large selection of bakery products on a breakfast buffet is the perfect start to the day for every guest. With the **SelfCookingCenter®**, you can provide your guests with freshly baked bakery products at any time. Here a just a few of the convenience bakery products that can be baked together in the setting "**baking à la carte**". Simply select your desired coloration from light to dark.

Product	Time	Recommended Accessory
Croissants	15-17 mins.	Roasting and baking tray
Danish	15-17 mins.	Roasting and baking tray
Nut Danish	15-17 mins.	Roasting and baking tray
Cherry turnovers	15-17 mins.	Roasting and baking tray
Mini apple turnovers	15-17 mins.	Roasting and baking tray
Mixed bread rolls	8-10 mins.	Roasting and baking tray
Mixed wholemeal rolls	8-10 mins.	Roasting and baking tray
Baguettes	12-15 mins.	Roasting and baking tray
Wholemeal baguettes	12-15 mins.	Roasting and baking tray
Ciabatta	13-15 mins.	Roasting and baking tray
Baked pastries	10-12 mins.	Roasting and baking tray



Select Finishing®



Select baking à la carte



Select cooking parameters

9. 3 core temperature probe option in practice

When it is not possible to prepare before service, the **SelfCookingCenter®** is used as a service appliance. With **iLevelControl**, all racks in the unit can now be used during service for grilling, roasting, or steaming.

With the 3 core temperature probe option, the normal core temperature probe can be exchanged for 3 core temperature probes when required. By changing the core temperature probe, you will automatically have access to all relevant **iLevelControl** applications.

Preparation:

Depending on the menu composition and the kitchen equipment available, it must be decided which application is most appropriate.

We are using roasting in our example.

The food for service is now prepared in the corresponding shopping carts:

Lamb 133°F (56°C)	Beef 129°F (54°C)	Beef 140°F (60°C)	Beef 154°F (68°C)
Fish 122°F (50°C)	Fish 60°C)	Duck 131°F (55°C)	Chicken 162°F (72°C)
Gratin 167°F (75°C)	Side dishes 6 min	Side dishes 8 min	1 min



This composition must be adapted to the relevant menu. So, for example, a shopping cart can be created for breakfast, one for the lunch menu, and another for the evening service. Of course, in addition to foods cooked by core temperature, foods cooked by time can still be stored as before.

Use during service:

The **SelfCookingCenter®** can now be preheated with **iLevelControl** and then used flexibly during service.

The various foods can now be dragged to the corresponding levels by drag & drop.

Once all three core temperature probes are in use, no other foods with core temperature can be selected. Time-controlled foods can still be placed however.

Once core temperature probe-controlled foods are ready and a probe becomes free, the foods with core temperature probes can once again be selected in the selection window.

Tip:

With the 3 core temperature probe option, please insert the core temperature probe as well as possible into the middle of the food product to ensure correct measurement.



10. Hygiene certificate

In order to produce flawless products with low temperature cooking, from a hygiene safety point of view, with particular regard to hospitals, etc., the following points should be followed:

All joints and meat preparations, including poultry, must be kept at a core temperature of +162°F (+72°C).

After cooking, the dishes should either be consumed immediately or cooled to below +50°F (+10°C) within two hours, with the aid of fast coolers, to prevent the germination of any spores which may exist.

With mixed loads, the temperature sensor should be inserted in the largest piece of meat, ensuring that smaller pieces are automatically kept to the required core temperature. When cooking stuffed poultry and other particularly large roasts, achieving the core temperature of +162°F (+72°C) may take several hours. You must make sure that this core temperature is maintained for at least five hours before the cooking process ends. In principle, we recommend that night cooking for stuffed poultry should last for at least ten hours.

For non-stuffed poultry and roasts, we recommend a minimum cooking time of eight hours. Because of the frequently higher level of germs in all cooked game dishes, we recommend selecting a core temperature of +185°F (+85°C) for ten minutes.

Country / Region specific HACCP guidelines should be followed.



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