TECHNIQUE

EQUATOR
COMBINATION OVENS GAS AND ELECTRIC

ELECTRONIC

MANUFACTURER'S INSTRUCTIONS

Part C: User manual

- WARRANTY -

To ensure the warranty on this equipment, we recommend that you comply with the MANUFACTURER INSTRUCTIONS in this manual.
If you can not undertake the required maintenance operations, our installation and service network is available to provide you with a personalised contract.

- WARNING -

- The product delivered to you complies with current standards. If any modifications are made the manufacturer can accept no responsibility whatsoever. The manufacturer can not be held responsible in the event of incorrect use of the appliance.

- These appliances are for professional use only and must be used by specialised personnel.

- In case of a change of gas or relocation, call an engineer approved by the manufacturer.
- Read the manual carefully before installation.
- Keep your manuals.

BONNET

N° 390 250

CONTENTS

GAS & ELECTRICS COMBINATION OVENS

ELECTRONIC

C) USER MANUAL

4. RECOMMENDATIONS

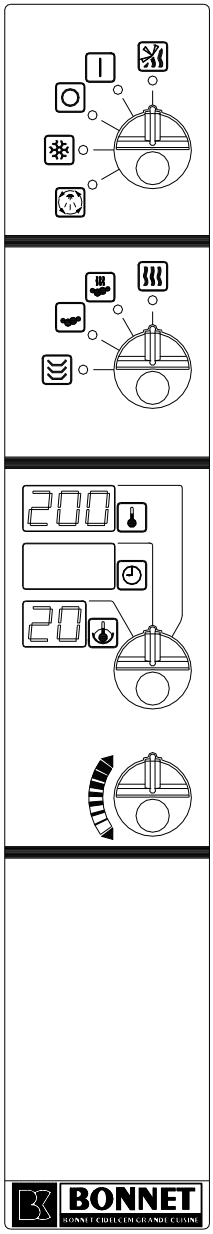
- These appliances are for professional use and should only be used by qualified personnel.
- Appliances can reach temperatures of up to 250°C. BE CAREFUL NOT TO BURN YOURSELF WHEN HANDLING THINGS INSIDE THE OVEN (plates, modules, filter, shaft...).
- The installation must be to current regulations and standards, in an area that is correctly ventilated.
- For Gas models the required fresh air flowrate for combustion is 2 m^3/h per kW of calorific consumption.
- The temperature of the door surface can be over 60℃. . BE CAREFUL NOT TO BURN YOURSELF.
- When loading or unloading items : the height of the highest level can reach 1,75 m. When manually unloading, HANDLE ITEMS REMOVED FROM THE OVEN CAUTIOUSLY. BE AWARE OF THE RISK OF SPILLAGE OF LIQUIDS WHEN MOVING HOT FOOD.
- Never try to block the steam chimney because the pressure in the appliance may rise with a risk of explosion.
- **When cleaning, never use high pressure sprays or hoses**.
- To ensure correct, long and safe operation of this appliance, maintenance should be carried out by qualified personnel twice a year (cleaning of injectors and venturi pipes, boiler check, gas leak inspection……).
- NEVER START THE OVEN WITHOUT THE VENTILATION SHAFT BEING LOCKED IN PLACE.
- In the minute immediately following the start of an electric oven it is best to ensure there are no sensitive electronic appliances nearby.
- Installation should be undertaken by a qualified engineer, as should any alteration to suit the type of gas to be used.
- **IMPORTANT:** Be careful when cooking certain dishes containing alcohol (Coq au vin, pears in wine, etc).The effects of heat on alcohol saturated steam in an airtight space can cause an explosion inside the oven without any warning: the brief over-pressurisation that results can cause irreversible damage to the appliance. This risk is even greater at the end of cooking, if alcohol is added to the food and the door closed to finish cooking.
- **The oven must be maintained carefully and EVERY DAY (see ″maintenance″ section). Fans, elements and sides especially must be kept clean, without accumulated mineral and grease deposits (calcium or other).**
- **When pre heating 20 level ovens the trolley must be in the oven.**
- **The warranty will not cover problems caused by failure to heed these recommendations.**

5. START-UP

This ovens are suitable for:

- Dry cooking at high temperature up to 250℃ (Vien noise, braising...).
- Combination steam and convection cooking at up to 210℃ (roasting, pastry-making, shellfish...).
- Steaming up to 98℃ (vegetables and poaching, vac uum packed cooking, defrosting...).

5.1. LAYOUT OF THE ELECTRONIC CONTROL PANEL



Dial 1: Switch on, Start cooking, Cavity cooling and automatic cleaning.

Dial 2: Select operating mode:
- Dry cooking (forced air at 0 to 250℃)
- Combination (forced air and steam at 30 to 210℃)
- Steam cooking (at 30 to 98℃)
- Pre set temperature

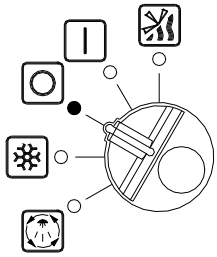
Dial 3: Set required temperature, cooking time or core temperature.

Dial 4: Adjusts the value of the setting selected using dial 3.

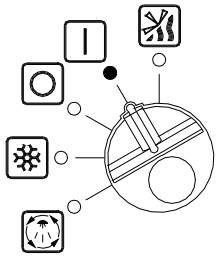
5.2 DETAIL OF CONTROL PANEL

DIAL 1 : GENERAL OPERATION

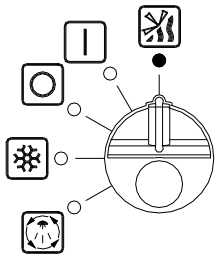
The adjacent lights indicate the selected position.



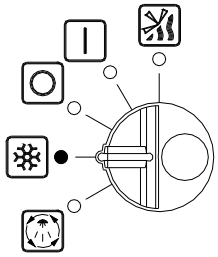
Position 0: Appliance stopped. The light opposite indicates the oven is turned on (normal standby position).



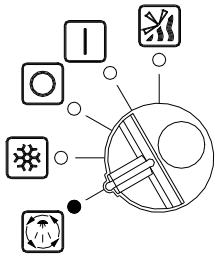
Start Position: The control panel is activated but the heat and ventilation are not on yet. It is possible to select cooking parameters.



Cooking start: The heat and ventilation come on if the door is closed, according to the selected parameters. The cooking time (if selected) starts counting down (flashing point in time indicator).



Oven cooling Position: Provides rapid cooling, control by use of this dial.
NOTE: Over 210℃, only the ventilation works. Water inje ction is only activated below 210℃.

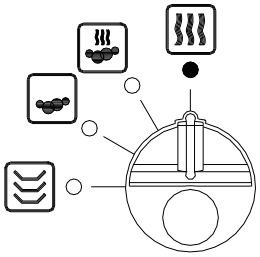


Cleaning cycle position: Use every day, when cooking is finished. The automatic cycle ensures optimal cleaning, in total safety and in a minimum of time.

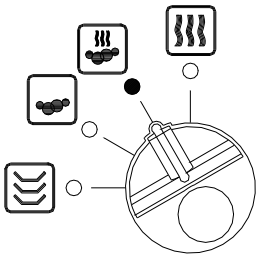
See section Maintenance of Equator oven.

DIAL 2: COOKING MODE

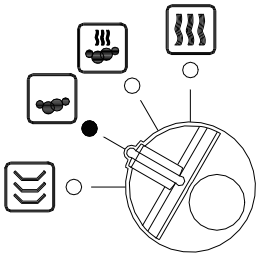
The adjacent lights indicate the selected position.



Dry Cooking position (0 to 250°C): Only the heat exchange operates. Use this cooking mode for Viennoise/pastry-making which should be dry (pâte à choux...).
Ventilation is alternated to help ensure perfect results.



Combination Cooking position (30 to 210°C): dry heat + Steam. Use for roasting, cooking, and pastry-making which requires humidity, shellfish, fish….
Ventilation is alternated to help ensure perfect results.



Steam Cooking position (30 to 98°C): Use for defrosting, cooking vegetables and fish, low temperature and vacuum packed cooking….

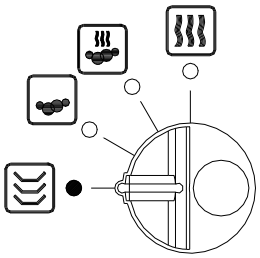
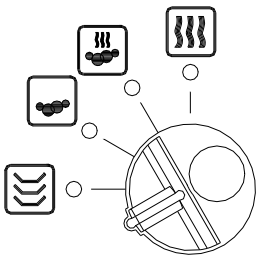
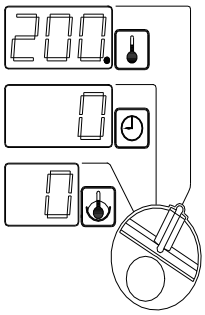


Plate regeneration Position: Laid out plates (and small portions) can be reheated without drying. In this position, temperature is pre-set to 120°C, but can be modified from 100 to 140°C.
The program includes a plate heating cycle to prevent condensation forming.



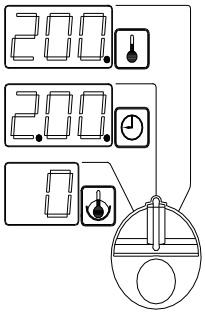
Wait Position: Stops the oven for a specified time. Use when programming to select a deferred start or to insert a break between two cycles to let the product recover.

DIAL 3: SELECTION OF ONE OF THE THREE MODES



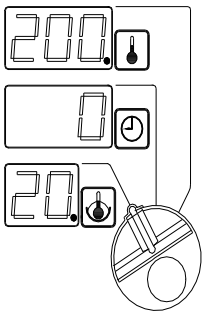
Manual mode: Cooking does not stop automatically. Control is manual. This mode avoids the need to enter a time unnecessarily, for example when pre-heating.

The illuminated dot in the right hand bottom corner indicates the current state. It is illuminated until the set temperature is reached.



Timer mode: Cooking will stop when the cooking time (selected with dial 3) has elapsed. An audible signal indicates that cooking has stopped.

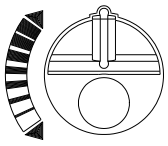
The illuminated dot in the right hand bottom corner indicates the current state. It is illuminated until the time has elapsed.



Core sensor Mode: Cooking will stop when the core temperature (selected with dial 4) is reached. An alarm sounds to indicate that cooking has stopped. **Note:** This signal lasts only 10 seconds.

The illuminated dot in the right hand bottom corner indicates the current state

DIAL 4: SET THE COOKING SETTINGS



Adjust the value of the setting selected using dial 3

<u>Display of ambient temperature.</u>

Normally the display indicates the actual temperature in the oven.
Moving this button displays the set temperature for 3 seconds.

Timer display

Normally this display indicates **the programmed time** at the start of cooking or the **time remaining** before the end of the cycle.

Pressing the dial displays **the set time** (0 to 99 hours) for 3 seconds.

Setting the time to 0 is the same as selecting manual mode (consequently this is not considered as an error). When a cycle is started the display indicates **elapsed time**.

Setting a time other than 0 has the effect of setting the core temperature to 0 When a cycle is started the display indicates the **remaining time**.

NOTE:

Below 10 hours the display format is: h.mm (e.g.: **3.05** (3 hours 15 minutes))

Above 10 hours the format is: hh.m with only the 10s of minutes shown (e.g. **10.5** is 10 hours 50 mins.)

Core temperature display

The display normally indicates the programmed core temperature. Before the cycle starts, a temperature sensor **must** be connected.

Pressing the dial displays **the set core temperature** (0°to 99℃).

Setting the core temperature to 0 is the same as selecting manual mode (consequently this is not considered as an error). When a cycle is started the display indicates **"--"** if **no probe** is connected and displays **actual core temperature** if a probe **is connected**.

A setting other than 0 has the effect of setting the timer to 0. When a cycle is started the display indicates **actual core temperature.**

The display indicates the core temperature as soon as the sensor is connected irrespective of programming.

NOTE:

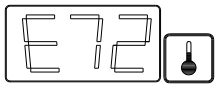
In ℉, the setting can be up to 199 (whilst setting the hundred is indicated by the decimal point). After validation (5 seconds having passed), and each time that the temperature exceeds 99℉, the display indicates " 1" alternating with "xx" every second.

Modifying settings

When the setting is displayed, turning the dial clockwise increases the setting, and anti clockwise decreases it. The possible variations are:

In manual mode	**In timer mode**	**In core sensor mode**
- On degree: from 0 to 105℃	- In minutes: from 0 to 1 hour	- One degree : from 0 to 99℃
- In 5 degrees: from 105℃	- In 5 minutes: from 1 to 4 hours	
	- In 15 minutes: from 4 to 20 hours	
	- In 30 minutes: from 20 to 99 hours	

5.3 FAULT INDICATOR



Faults are shown in the temperature display and by a beep. All faults stop the cooking cycle or prevent a cycle from starting.

PROGRAMMING FAULTS

- E01: Cooking selection set to 0.

THERMOCOUPLE FAULTS

- E62: Cavity thermocouple defect.
- E63: Core sensor thermocouple defect.

OTHER FAULTS

- E70: Max temperature exceeded inside the control panel.
- E71: Dialogue defect between relay card and control card.
- E72: Lack of flames (only on gas appliances).
- E73: Cavity temperature over 290℃.
- E74: Steam saturation inlet activated for more than 30 seconds in steam mode.
  (Nozzle of condenser fouled up, condenser supplied with hot water, or insufficient flowrate).

5.4 LAYOUT OF OPTION PACK "BANQUETING + RECIPES"

The Banqueting panel provides approximately 99 pre-recorded cooking programs (up to 99 programs each of 8 cycles).
Together with specific banqueting program.

There are two other functions built in that are essential for re-heating pre-prepared plated meals or containers of pre-cooked food:

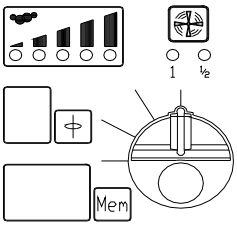
- A reduced ventilation speed, (see dial 5)
- Adjustable humidity (see dial 5)

A core sensor inlet is systematically supplied with this panel. A core sensor is recommended because for certain programs, one has to be used.

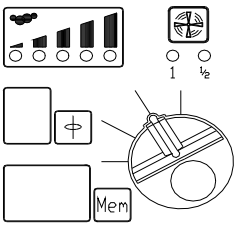
DIALS 1 TO 4

See section 12.1, for the functions of these top 4 dials.

DIAL 5: SELECTING OPTIONS

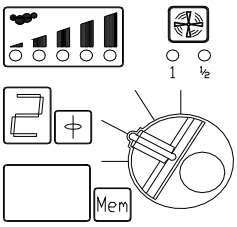


Provides two speed options. The lower speed (position ½ avoids drying products like rice, pasta, during the re-heating process.

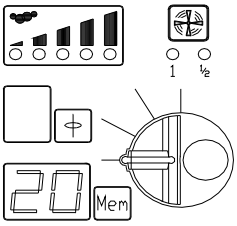


Allows the humidification to be adjusted to suit the products and load. Adjustment by percentage.

Note: The oven normally runs at maximum humidification (99%) The above adjustment allows this to be limited.

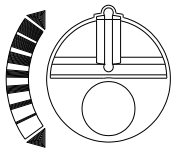


Displays the cycle number 1 to 8.



Displays the program number 0 to 99
The decimal point indicates that this location is programmed already, (No point indicates an empty location).

DIAL 6: SETTING OPTIONS



Changes the setting of the parameter selected with button 5.

Ventilation speed display

Turning this button illuminates the LED corresponding to maximum speed.
Turning it again illuminates the LED for reduced speed.

Humidity level display

Turning the button changes the humidity setting from 0% (No LED lit), 10% (1st LED lit), 30%, 50%,70% or 100%. Only one LED is lit at a time.

Adjustment can only be made in “Dry with humidification” and “Regeneration” modes. In “Dry” mode the display is blank (attempts to set it will give an error beep) In “Steam” mode it is locked at 100% (5th LED).

Cycle number display

All programs start with cycle 1.
The parameters of cycle 1 are indicated on the panel (Cooking mode, temperature, end of cooking mode, time or core temperature).

Clockwise rotation passes to the next cycle number. It is not possible to pass to next cycle if the current cycle is not fully specified. Rotation anticlockwise switches to the previous cycle.

The whole program can be displayed by switching successively through the cycles.

The program is memorised by turning the dial anticlockwise to display "P". The program number indicator flashes, indicating that the program has been memorised.

Program number display

Rotate this dial to select the programme required.

After several seconds:

- If the location is empty, the settings from the last program run are copied into this location. The decimal point illuminates to indicate that the settings have been memorised.
- If the program location is not empty, the recorded data is re-called for use: the program indicator number flashes for a few seconds, during loading.
- In either case, the cooking program can be started, or be modify before it is started using dial 1.

5.4.1 UNLOCKING PRE-RECORDED PROGRAMS

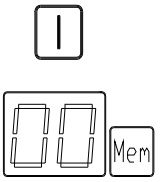
The pre-recording programs are protected to avoid involuntary modification or overwriting. They are not modifiable by default.

Should the Chef wish to modify these programs the default can be changed:

Procedure: Select the following:

Dial 1

Dial 5



Dial 3

Dial 3

Turn Dial 1 to

The temperature display indicates the modes:

002: No modification of parameters.
001: The parameters can be modified prior to cooking but can not be memorised.
000: The parameters can be modified and recorded (this mode is used to create the settings).

Change the setting using dial 4. Validate by turning dial 1 to the start up position.

Dial 1

***CREATING** a program*

- The access setting must be 000 (see previous section).
- Select the program number with dial 6.

Note: If the light to the right of the indicator comes on, this location is programmed. In this case refer to the program modification section.

- Record the cooking mode parameters, temperature, time, core temperature, % humidity, required ventilation speed cycle by cycle.
- When all the settings are adjusted gently turn dial 6 anti-clockwise until “P” is shown in the cycle number display.
- Wait until the indicator stops flashing.

***COPYING** a program*

- As above the setting must be 000 (see previous section).
- All programs from 0 to 99 can be copied select the required program wait for it to load (flashing stops).
- Select the destination number with dial 6 (the light on the right of indicator must be off).
- Wait for the decimal point to appear, copying is finish.

***MODIFICATION** of a program*

- Program access must be set to 000.
- Select the program to be modified with dial 6, wait for the indicator to stop flashing.
- Select the cycle to be modified with dial 5 and 6.
- Correct the parameter(s) (temperature, mode, core sensor, timer...), change to another cycle if further changes are required.
- When the programme has been completely corrected gently turn dial 6 anti-clockwise until “P” is shown in the cycle number display.
- Wait until the indicator stops flashing, the program is modifed.

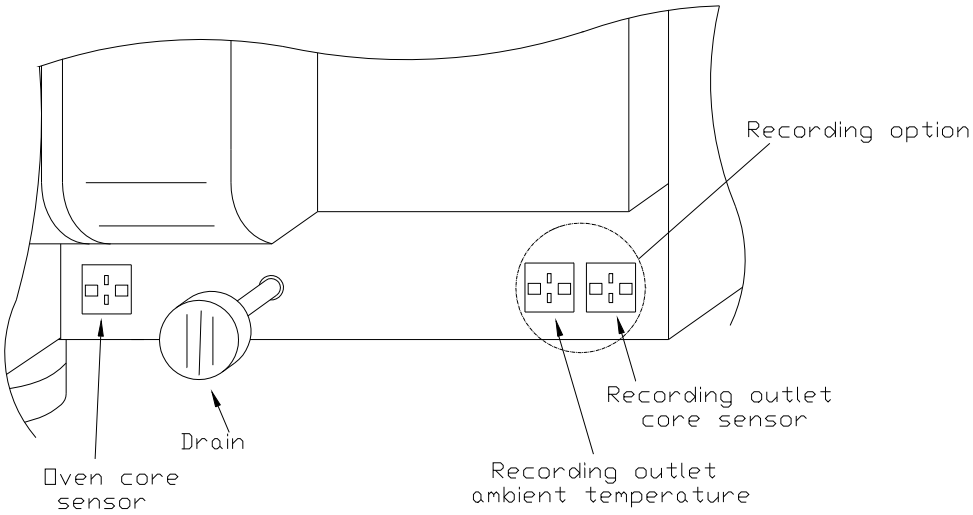
***DELETING** a program*

- With program access set to 000 (see section 5.4.1).
- Select the program to be deleted with dial 6.
- Wait for the flashing indicator to stop indicating that the programme has loaded.
- Set cycle 1 so that the required temperature and time or core temperature are all at zero.
- Turn dial 6 anticlockwise to display "P" .
- The indicator flashes. When the flashing stops, the light on the right of the program display goes out indicating that the program location is empty of cooking parameters.

Note: In 000 and 001 mode after a cycle has started changing any of the settings will affect the cooking program.
To lock a program so that it can not be changed after it has started reset to 002 mode.

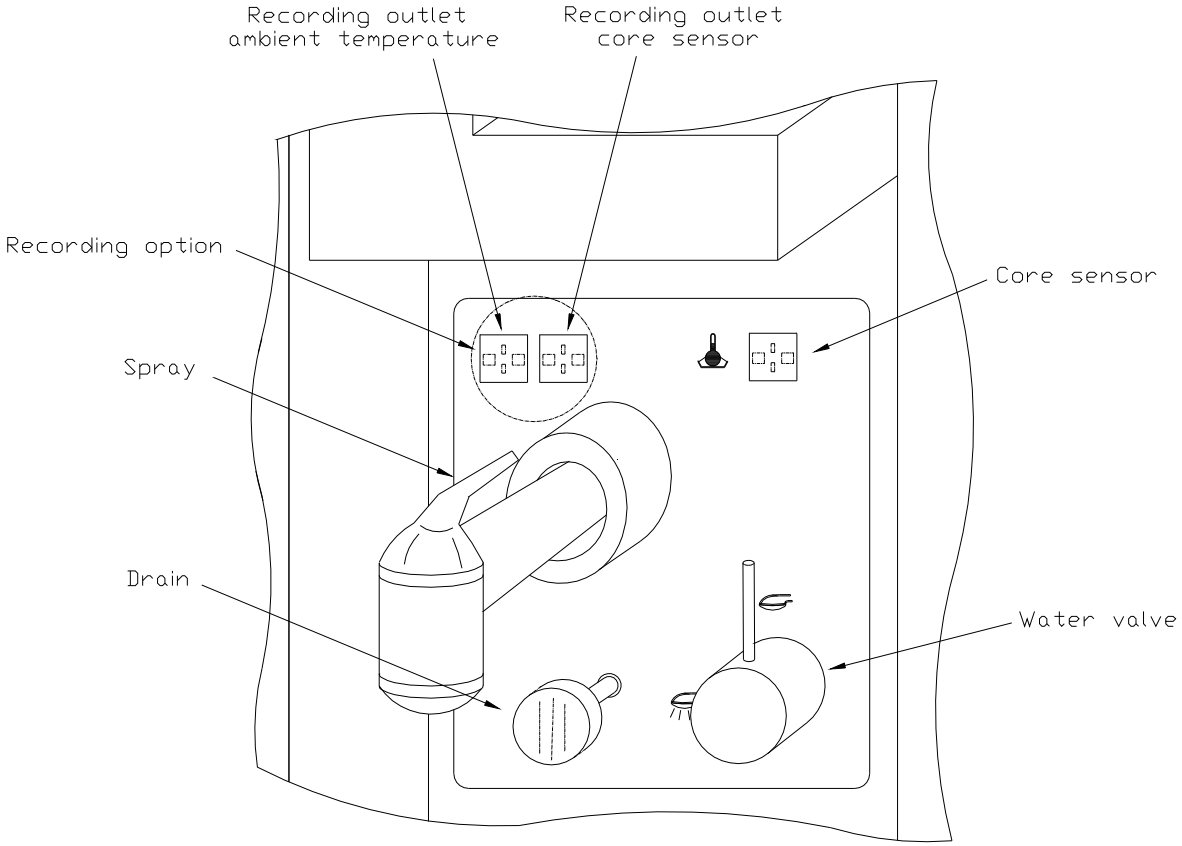
5.5 LAYOUT OF SPRAY, CORE SENSOR AND RECORDING

5.5.1 6 AND 10 LEVEL OVENS



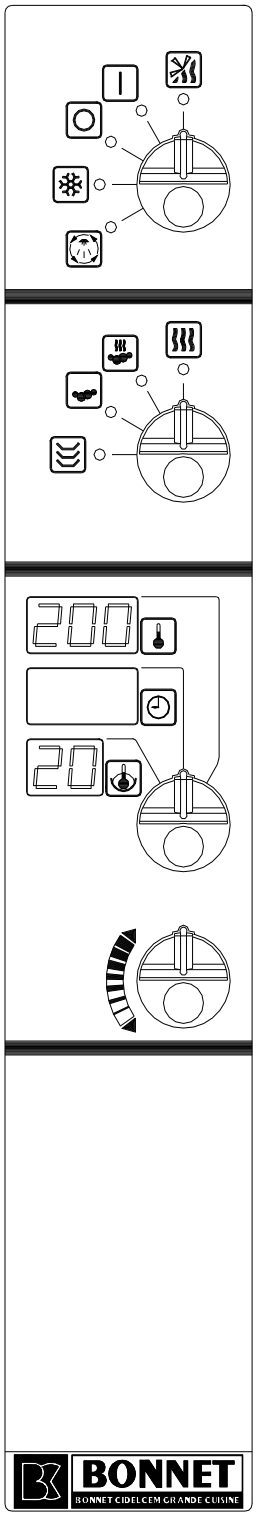
Option The optional retracting spay is located in the stand facia.

5.5.2 20 LEVEL OVENS



5.6 HOW TO USE THE CONTROL PANEL

5.6.1 STANDARD PANEL



To start a cooking operation:

Start the oven up (dial 1).

PRE-HEATING

Select a cooking mode (dial 2).

Select the oven temperature
(pre-heating or cooking).

Set the oven temperature (dial 4)

Start the heating (dial 1).

COOKING

Open the door, load the oven, close the door.

Select a cooking mode (dial 2).

Select a cooking temperature (dial 3).

Set the required temperature (dial 4).

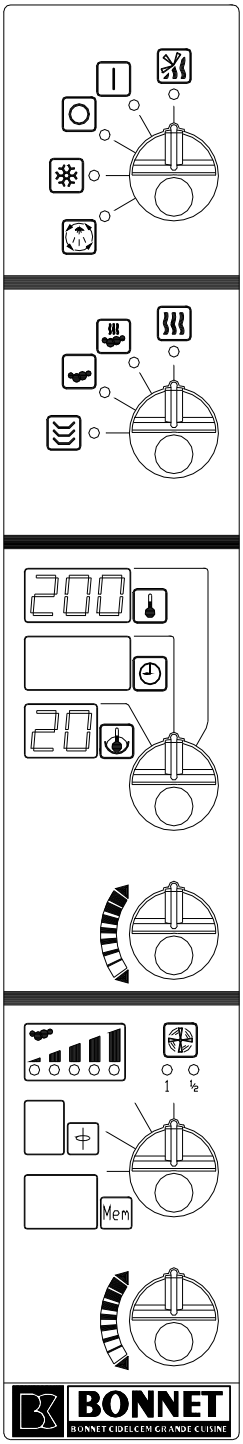
Select timer mode or core sensor (dial 2).

Enter a cooking time or core sensor (dial 4).

Start cooking (dial 1).

5.6.2 OPTION PACK "BANQUETING + RECIPES" PANEL

To start a cooking operation:



Turn the oven on (dial 1).

PRE-HEATING

Select a program mode (dial 5).

Select a program (dial 6). (see section 13 for program listing)

Start the heating (dial 1).

COOKING

Open the door, load the oven, close the door.

Select a cooking program (dial 6). (See section 13 for program listing)

Start cooking (dial 1).

Δ When cooking has finished the oven can be shut down without risk, but power to the should not be switched off as this will stop the cooling fan.

6. PRACTICAL TIPS FOR USE

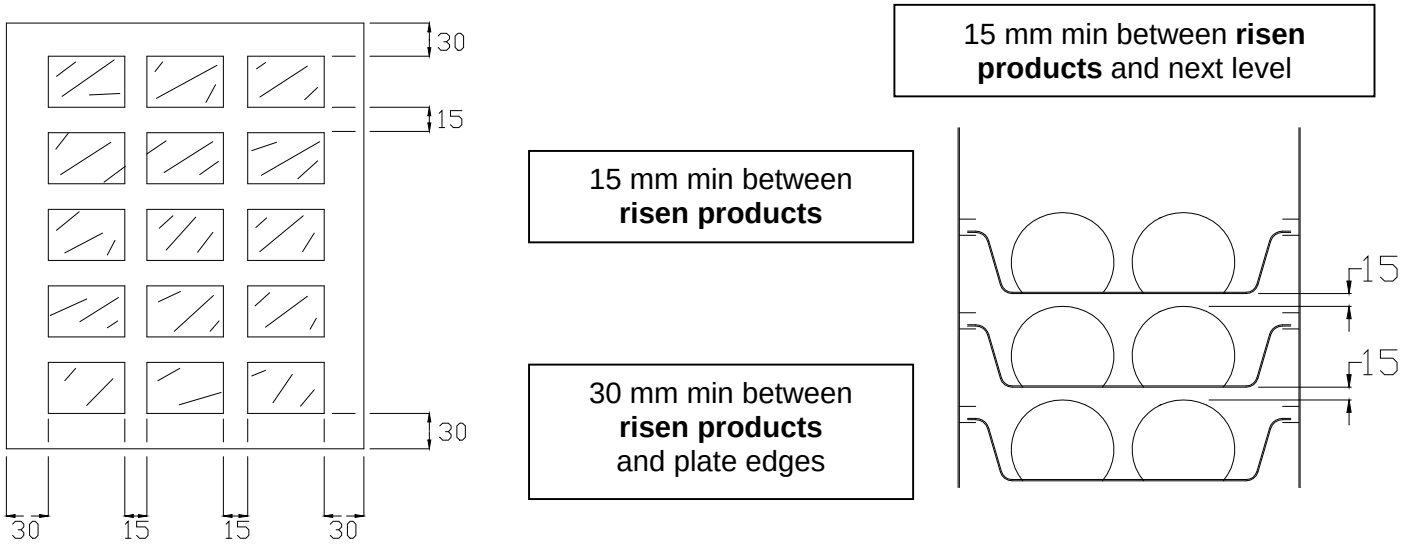
6.1 USE AND LOAD LIMITS

6.1.1 INTERIOR CAVITY CAPACITIES:

MODEL		6 GN 1/1	10 GN 1/1	20 GN 1/1	20 GN 2/1
Plates	GN 1/1 GN 2/1	6	10	20	40 20
Number of levels		6	10	20	20
Level spacing (mm)		80	80	64	64

IMPORTANT:

The number of levels that can be used for cooking and the number of items on one level depends on the following rules.



NOTE: With these rules in mind it may be necessary to reduce the number of shelves you use (using alternate shelves, for example), depending on the size of the items to be cooked.

WARNING: VARIATIONS BETWEEN PRODUCTS ON THE SAME LEVEL ARE DUE TO:

LOADING:

Consistent output requires good air circulation between product; so that when they have risen (after cooking), there must be enough space to allow for this.
Too much product can also lead to excess humidity.

TEMPERATURE:

- Pre-heating: The shorter the cooking time (less than 15 minutes), the more the pre-heating temperature will be the cooking temperature.
- Cooking: It is always better to cook at too low a temperature than at too high a temperature. In case of problems, gradually reduce the temperature by 10℃ at a time.

6.2 PRE-HEATING (20 level OVENS)

Irrespective of the proposed cooking mode the oven must be preheated with the trolley inside.

If the trolley is not available

- **Dry mode:** Adjust the temperature to that required, stop the oven when that temperature is reached then put the trolley in.

- **Combined mode:** INCORRECT Always preheat in dry mode (see above) Switch to combined only for the cooking cycle (steam production is instantaneous).

- **Steam mode / Injection ovens:** INCORRECT Always preheat in dry mode (see above) to 105℃ Switch to steam only for the cooking cycle (steam production is instantaneous).

- **Steam mode / Boiler ovens :** Preheat the boiler **only for the 1st operation of the day** switch off the oven or put the trolley in when the temperature reaches 80℃ (Steam inside the oven base).

NOTE: Failure to heed these recommendations will result in problems for which the manufacturer will not accept responsibility

6.3 PUFF PASTRY (Pies)

PRE-HEATING

• Select time setting and set time to 0 minute.	Dial 3 and 4	- position	
• Select dry mode	Dial 2	- position	
• Select temperature setting and set pre-heating temperature to 220℃	Dial 3 and 4	- position	

COOKING

- Open the door
- Load the oven and close the door
  (Cooking starts again automatically)

• Select temperature setting and set a temperature of 175℃	Dial 3 and 4	- position	
• Select time setting and set cooking time	Dial 3 and 4	- position	

ADVICE

Use the pre-recorded cooking programs, if you have a option pack panel.
After cooking, check the result and if necessary adjust for the next batch.
Depending on product quality, it may be better to cook puff pastry in combined mode to avoid drying, to favour the development and uniform coloration of the product (the oven will automatically reduce humidification during the cooking process).

6.4 VEGETABLES

PRE-HEATING

• Select time setting and set time to 0 minute.	Dial 3 and 4	- position	
• Select Steam mode	Dial 2	- position	
• Select temperature setting and set the maxi. temperature.	Dial 3 and 4	- position	

COOKING

- Open the door
- Load the oven and close the door
  (Cooking starts again automatically)

• Select time setting and set cooking time	Dial 3 and 4	- position	

ADVICE

Use the pre-recorded cooking programs, if you have a option pack panel.
After cooking, check the result and if necessary adjust for the next batch.
Most green deep-frozen vegetables and potatoes can be cooked more quickly in Combined mode, at a temperature of 105℃.
On the other hand, fresh vegetables, in small pieces, may require a reduced temperature (96℃) to conserve appearance and colour, all the more so when the quantity is small (up to 2.5 kg per 1/1 container).

6.5 FROZEN ROAST CHICKEN 1.2 kg

PRE-HEATING

- Select time setting and set time to 0 minute. Dial 3 and 4 - position 
- Select dry mode Dial 2 - position 
- Select temperature setting and set pre-heating temperature to 220℃ Dial 3 and 4 - position 

COOKING

- Open the door
- Load the oven and close the door
  (Cooking starts again automatically)

Cycle 1: Thawing / cooking

- Select combined mode Dial 2 - position 
- Select temperature setting and set temperature to 140℃ Dial 3 and 4 - position 
- Select time setting and set time to 30 minutes. Dial 3 and 4 - position 

Cycle 2: Browning
After the above (end of cycle alarm)

- Select dry mode Dial 2 - position 
- Select temperature setting and set temperature to 220℃ Dial 3 and 4 
- Select time setting and set time to 35 minutes. Dial 3 and 4 

ADVICE

Use the pre-recorded cooking programs, if you have a option pack panel.
After cooking, check the result and if necessary adjust for the next batch.
As the product is not homogeneous quality can vary, it is important to follow the advice given on loading.

6.6 BANQUETING (EXAMPLE OF PLATE RE-HEATING)

- ♦ Cook accompanying vegetables (Cauliflower, rice, pasta …) in containers, in advance, using classic cooking programs (see Section 7).
- ♦ When cooking is finished, lay up the plates and place them on grills, in a loader modules (essential accessory).
- ♦ Wrap the module (using plastic film). There are an extensive range of accessories especially for Banqueting : Module support moving table, with isothermal cover and loading/unloading trolley.
- ♦ Place the assembly in a cold room.
- ♦ Before service, bring out the pre-prepared plates, remove the module from the table /cover (or remove the plastic film) and load into the preheated oven. Use operation modes 90 to 95 (see section 5) for less than 10 minutes.
- ♦ Finish the plates (red meats…).
- ♦ Serve immediately or replace under the isothermal insulated cover.

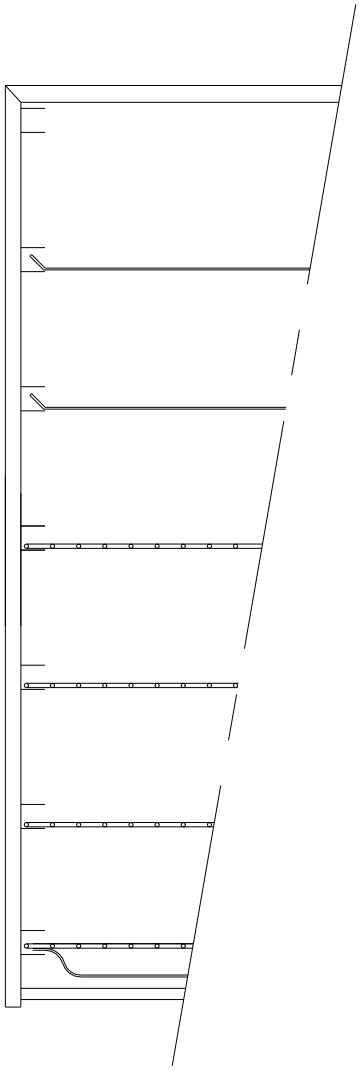
6.7 USE OF TRAYS

* PASTRY / VIENNOISE: use pastry trays
* ROASTING

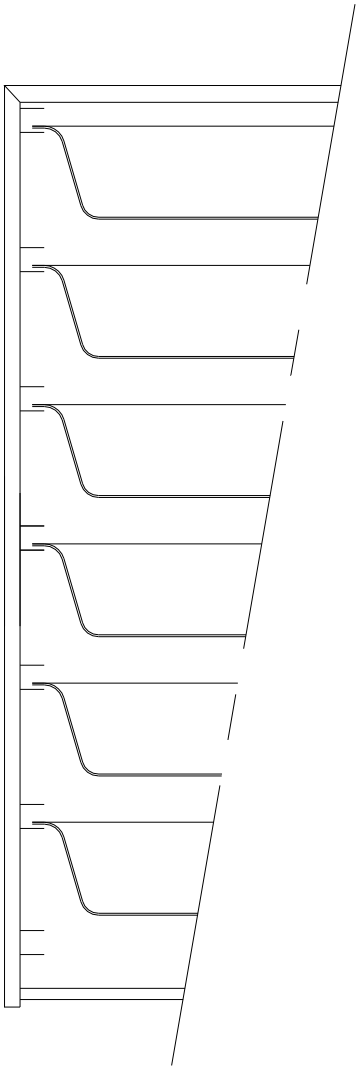
- Use **gastronorm containers** for meats cooked in sauce, braised meats ….
- For roasting, cook the food directly on the **grills** (chickens, roast beef, sausages...). In this case, put a 20mm deep **gastronorm container** on the next level down to collect cooking juices.

Positioning of Trays, Grills and Containers.

STAINLESS STEEL BAKING TRAYS OR GRILLS



ROASTING TINS OR GASTRONORM CONTAINERS



7. CAPACITIES AND COOKING TIME

Examples are given for information only and may vary according to the nature, the type and the volume of the item to be cooked, and depend on the load in the oven, the recipe and the users' taste. Assimilating the data will make handling of the appliance easier, because nothing can replace the chef's skill and practical experience.

Direct injection ovens do not pose any particular problems in terms of steam cooking provided that they are fully loaded.

When cooking delicate products in small portions or quantities however it may result in drying or colour alteration. In this case reduce the temperature to 92℃ to obtain perfect results. Reducing the temper ature in this way will only extend the cooking time by between 5 and 10% maximum.

⇨Option Pack "Banqueting + recipes" panel

Cycles 1 to 99 are pre-recorded under the appropriate Program number "Prog" (column 1). These can be personalised. See section "LAYOUT OF OPTION PACK "BANQUETING + RECIPES" for program modification.

8. WAYS TO OPTIMISE COOKING

8.1 CORE SENSOR

The core probe optional ensures perfect control of the degree of cooking and its repetition day after day whatever the size or volume.

The core temperature required will of course vary according to the food and the degree of cooking chosen.

WARNING:

Cooking does not end as soon as it is taken out of the oven.
Indeed, the core temperature continues to rise after removal and the higher the cooking temperature was the greater the rise will be.

Example:

If roast beef cooked in combined mode at 200℃ is t aken out of the oven when its core temperature reaches 40℃, it could rise to 57℃.

If the same roast, cooked on **low steam temperature** at 60℃ (final phase) is taken out of the oven when its core temperature reaches 52℃, the la tter will rise very little, up to 56℃.

PRODUCTS	CORE TEMPERATURE **REQUIRED**	CORE TEMPERATURE **WHEN TAKEN OUT OF OVEN**	
		Classic cooking according to table	Cooking at low temperature
Red meat			
Very rare	54	37	50
Rare	56	40	52
Medium rare	60	45	56
Medium	62	48	59
White meat			
Veal	72	58	69
Poultry	77	63	75
Fish			
Salmon - Tuna	75	75	75
White fish	80	80	80
Cooked pork – pate	67	65	65

NOTE: For optimum control of the core temperature (Degree of cooking):

For optimum control of the extent of cooking, appearance and weight loss, particularly for red meat, we recommend you **finish with a low temperature steam phase**. Set the temperature 8℃ above the required core temperature.

Example: Cooking roast beef:

First phase:	Browning	Dry air	210℃	For 15 minutes
Second phase:	Core cooking	Steam	60℃	until core T°= 5 2℃

The cooking time is extended to 1 hour 25 minutes.

8.2 LOW TEMPERATURE COOKING

To optimise certain types of cooking, the electronic control of Emeraude allows long cooking cycles at low temperature. The set temperature corresponds to the required core temperature.

The low temperature is essential for treating big pieces (suckling-pig, ham, large fish), often processed in sous vide sachets.

This type of cooking is particularly interesting for perfect control of the degree of cooking (very rare, rare, medium…), for appearance (exterior and sliced), for reduced weight loss, and better control of food hygiene.

The results are less dependent on the size of product being cooked.

But cooking at low temperature requires much longer cooking times.

LOW TEMPERATURE			
Products	**Mode**	**Cooking T°**	**Indicative time**
Red meat	Steam	55℃	6 h to 12 h
White meat Veal Pork and poultry	Steam	 72℃ 77℃	
Cooked pork - pate	Steam	67℃	
Fish Salmon - Tuna White fish	 Steam Steam	 75℃ 80℃	2 h to 4 h
Diverse County foie gras Fruits Potatoes	 Steam Steam Steam	 70℃ 90℃ 85℃	1 h to 1 h 30'

NOTE: Medium meat pieces (roasts, legs…)

It is possible to reduce the cooking times (from 2 to 3 times lower), for medium pieces, while partially retaining the advantages above, proceed according to the following table:

Products	**First phase BROWNING**	**Second phase COOKING**	**Third phase COOKING**
	Fan	Steam	Steam
Red meat	210℃ for 15 min	70℃ until core T°= 38℃	60℃ until core T°= 52℃
White meat	210℃ for 15 min	90℃ until core T°= 60℃	85℃ until core T°= 73℃

9. MAINTENANCE

9.1 ABOUT STAINLESS STEELS

A **stainless steel** is a type of steel designed to allow a thin protective film to form on the metal surface and to protect it against corrosion (Oxide film resulting from the chemical reaction of oxygen on the metal surface).

Any element disturbing the formation of this film, or making its partial destruction easier (Food deposits, overflows, stagnant liquids...) affects stainless steel resistance to corrosion.

If the composition of stainless steel allows it to resist certain chemical aggressions better than standard steel **do not imagine that stainless steel is indestructible.**

- 3 main factors of corrosion should be checked:

- The chemical environment. In general:	* Diverse brines (Salt concentration, Sauerkrauts …) * Chlorides, particularly in: - Cleaning products - Bleach.
- Temperature:	Any chemical environment has its aggression towards stainless steel considerably increased at higher temperature.
- Time:	The more important the contact time between stainless steel and the chemical environment is, the more perceptible the consequences of the corrosion will be.

The combination of these three factors can lead to the destruction of interior surfaces, even those of high quality stainless steel.

Note: when a stainless steel corrodes, it is extremely rare that it comes from the steel itself. Generally, inappropriate or badly used cleaning products, bad maintenance or extreme conditions of use are often the cause of the problems encountered.

WARNING

The manufacturer can not be held responsible for cases of corrosion encountered in these conditions and no warranty will then apply.

A list of the most frequent cases is given below, so that you can identify these possible causes and maintain your equipment's service life as long as possible.

9.2 THE MOST COMMON CAUSES OF CORROSION:

Floor cleaning

The cleaning of tiles (after work, or during regular service) is often carried out with very aggressive products. If the product is sprayed under pressure without caution, the splashes beneath the appliances cause corrosion of bottoms and panels.

Even worst, the vapour from these products, if the premises are not immediately and forcefully ventilated, fall on the equipment and can extend the corrosion to all surfaces.

Inappropriate cleaning products (Bleach, Acids, Soda)

If products, such as Bleach, acids or soda dilutions,... (all products not especially designed for use on stainless steels) are used, an irreversible attack occurs on the stainless steel surfaces.

Cleaning product applied at too high temperature

All cleaning products become more aggressive if applied to a hot surface. As a general rule, the temperature **must not be higher than 60℃,** not to attack the stainless steel in an irreversible way (Blackening of surfaces...).

Cleaning product not properly rinsed

If the interior surfaces once cleaned are not thoroughly rinsed in order to eliminate any trace of cleaning product, the latter, with time, will carry on its action and risk provoking corrosion.

Even worst, if this interior surface reaches temperatures higher than 60℃ (Inside an oven, a well, cooking-top...), the problems mentioned previously, will inevitably occur.

Stagnation of cleaning products

In the same way, any zone that can retain some cleaning products, particularly gutters, drains of combi ovens, taps,... must be rinsed thoroughly and abundantly. (Use a nylon brush to strengthen the rinse action with clear water).

Salt concentration

Salt, which is an ordinary element in cookery, often causes attacks (pinholes) in stainless steel. Spillage on the cooking surfaces must be cleaned immediately

Special case of boiling in a boiling pan:

Salting the water by throwing cooking salt into the tank, presents risk: The cooking salt, by setting at the bottom of the tank, may well, before dissolving, corrode the bottom in an irreversible way, if the operation is frequent.

Water should be stirred until the salt has completely dissolved, or table salt should be used.

Intensive use in brined environment

Certain products such as sauerkraut (acid juices), seafood (presence of salt), and generally speaking, brine should be given particular attention. In case of occasional use and standard equipment this does not pose problem, if they are thoroughly and systematically cleaned after each use.

In case of intensive treatment, cooking equipment (Cooking ovens, boiling pans...) should be chosen with steel specifically designed for this type of operation.

Mains water too chlorinated

At times certain water supplies have too high a chlorine content. In these cases, it is not rare to find the corrosion problems mentioned above. (Notably in the well of boiling pans, bratt pans, bain-marie,…).

Cleaning Aluminium or aluminised iron accessories

The presence of aluminium or aluminised iron in a chlorinated solution considerably increases attack against stainless steel.

Do not leave accessories such as basket filters or any aluminium ovenware in tanks of boiling pans, frying pans ... One night would be enough to attack stainless steel at the level of the contact points and on the surface of the product.

10. MAINTENANCE OF OVEN

10.1 MAINTENANCE OF EXTERIOR SURFACES

A minimum standard of cleanliness and maintenance is essential for metal surfaces to prevent dust, metallic particles and deposits of all kinds that may alter the protective film mentioned.

Washing with soapy water or a neutral non-abrasive detergent is all that is required. RINSE THOROUGHLY and wipe surfaces.

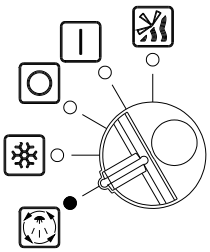
Never rub stainless steel with wire wool. If necessary use Scotch brite or equivalent product, following the polishing direction of the stainless steel surface.

10.2 MAINTENANCE OF INTERIOR SURFACES

The general rule is not to allow these substances to accumulate:

- Substances liable to become concentrated and very corrosive.
- Diverse mineral deposits contained in water, liable to lead to surface corrosion and reduced performance (fan imbalance, exchanger efficiency, ..).

CLEANING, DEGREASING - ONCE A DAY: Use of the automatic cleaning cycle.



Every day, after service, set dial 1 to the "Automatic cleaning" position.

⇨ If it is not at the ideal temperature for cleaning, the temperature indicator will flash and the oven will automatically heat or cool to this temperature. When the temperature is reached, the oven alarm informs you.

Always wait for the oven to ring before spraying with cleaning product.

⇨ When the oven rings:

- Open the door (without stopping the oven).
- Remove the right hand runner assembly or support module (option).
- Undo the ventilation shaft and pivot it by pulling it outwards (see diagram later).
- Spray the product on all rear sides then exposed.
- Reposition the shaft and lock it.
- Spray the product in the cavity and on the grease filter (option).
- Put the runners or module back in place.
- Spray them with cleaning product and the inside of the door.

Only use products that are intended for cleaning stainless steel surfaces in professional ovens.

- Close the door.
- The cleaning cycle will start automatically, and runs for 35 minutes. The time indicator displays the time to the end of the cycle.

- It is possible to undertake this cycle out of hours. Simply remember to not switch off the supply to the oven (Gas or / and electric).

⇨ **THOROUGHLY and CAREFULLY RINSE** the inside of the oven with a spray, in order to completely remove any residues and cleaning product.

DE-SCALING: Every day if necessary.

If there are mineral deposits (white deposits) due to hard water, inside the cooking chamber, these must be removed every day.

⇨ Totally repeat the above procedure using a descaler especially for de-scaling stainless steels. Spray the product on zones where minerals deposits build up (Fans, Elements, Sides).

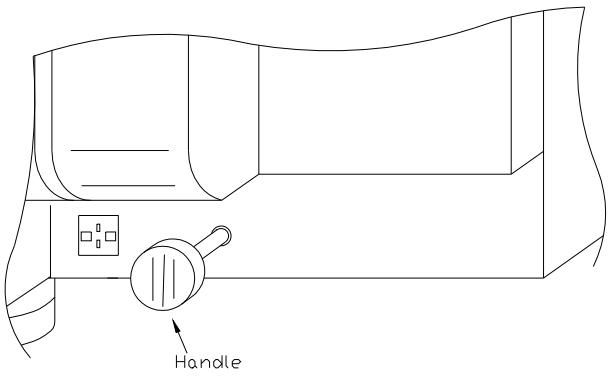
WARNING:

- NEVER CLEAN THE APPLIANCE WHEN IT IS STILL WARM, HOTTER THAN 60°C. Oven surfaces will be attacked instantly (dark colour, nearly black).
- Never use high pressure sprays or hoses: under no circumstances should the appliance be cleaned with a water jet.
- The warranty will not cover problems caused by failure to heed the above.

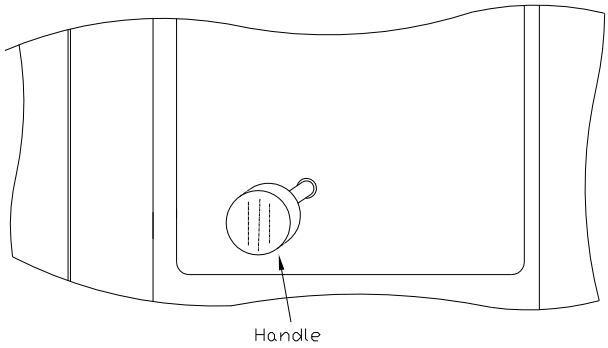
10.2 STEAM BOILER MAINTENANCE

WARNING: These operations require the power to be on (in steam mode).

6 and 10 level ovens



20 level ovens



DAILY USE

Every day when service is over pull the handle out completely and leave in this position for at least 4 minutes.

During this period the boiler is rinsed to remove any particules and calcium deposits in suspension.

The drain is also rinsed to remove any grease and cooking juices, Water may back up slightly into the cavity during this operation.

When complete push the handle back in.

BEFORE LONG PERIODS OF INACTIVITY (holidays)

If the unit will be out of service for a prolonged period the boiler should be drained to eliminate the risk of stagnant water.

Close the supply water.
Pull the handle out and wait about 4 minutes until water stops running to drain.
Push the handle back in.

WARNING: Before re-use follow the "daily use" operating instructions above before refilling the boiler.

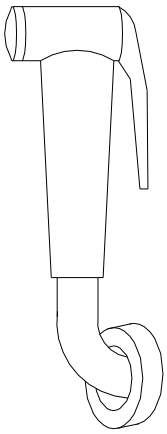
10.3 EQUIPMENT USED IN COOKING CORROSIVE PRODUCTS (seafood, sauerkraut)

Equipment used intensively and regularly in cooking corrosive products such as seafood or sauerkraut..., must be cleaned meticulously and systematically after each use.

10.4 KEEPING THE ELECTRICAL COMPARTMENT WELL VENTILATED

The electrical compartment is kept cool by air holes on the front right hand side of the appliance.
Once a week, check that the ventilation grill is kept clean and dust free by wiping it with a dry cloth.

10.5 USE OF THE RETRACTING SPRAY (OPTION)

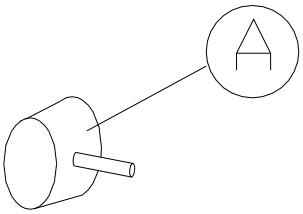


- The retracting spray, integrated into the stand or oven according to model, has a locking device, eliminating the need to pull on it all the time.

- When you unwind the hose, you can hear a ‘’click’’ each half-turn.

  - To lock the hose, release tension when you hear the click.

  - To retract the hose automatically, release tension when you do not hear the click.



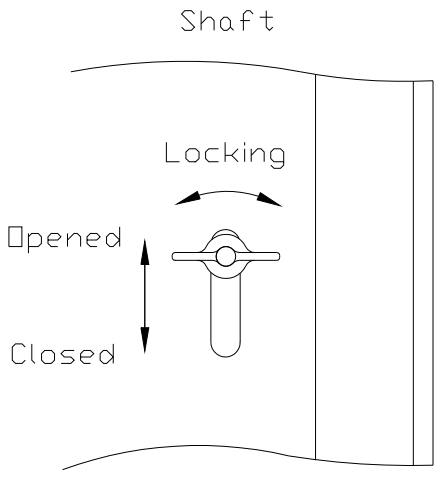
- Use:
  - Open the control valve "A".
  - Squeeze the spray handle.

NOTE: The spray can be ‘’locked’’ in the open position. Open the control knob a quarter turn to maintain the spray.

WARNING: After each use, close the control valve, in order not to leave the hose under pressure.

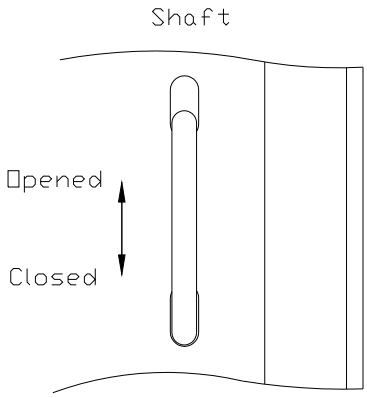
10.6 UNLOCKING THE HINGED VENTILATION SHAFT, AND ACCESS TO REAR SIDES

10.6.1. 6 AND 10 LEVEL OVENS



- Unscrew the butterfly nut a quarter turn
- Move the nut up
- Tighten the nut
- Move the shaft outwards.

10.6.2. 20 LEVEL OVENS



- Raise the handle.
- Pull the shaft towards you.

GUARANTEE

WARNING! NO WARRANTY IS UNCONDITIONAL

Our warranty only applies to normal usage, i.e. in strict compliance with the recommendations indicated in our service and maintenance notices.

It is also only valid if our technicians carry out the regular recommended service and/or inspection visits.

Subject to the above reservations, our appliances are normally guaranteed for a period of one year, running from their date of manufacture. In the event of breakdowns due to defects or to constructional errors either apparent or hidden, throughout the period of warranty our appliances are repaired at our cost, parts and labour included.

For the warranty to be effective our appliances should not have been modified nor repairs carried out with parts which are not original or approved by us, or by non-qualified personnel or those who have not been trained by us.

In the event of a breakdown or failure, the purchaser should inform us in writing as soon as possible of any defects attributed to our appliances. No attempt should be made to remedy the defect directly or via a third party.

Regular service inspections and maintenance by our engineers are an essential condition for correct and reliable operation of our equipment. Such service and maintenance operations can and must only be carried out by our technicians, who are not only fully qualified but trained to do so. They have the right tooling, original spare parts and are given regular training updates on the appliances. Periodic servicing is essential, it is carried out at a cost but guarantees reliable operation of our appliances.

The timing of service and maintenance is relative to the conditions of use. In the event of heavier conditions, it will be necessary to carry out certain operations more frequently.

WARNING: Damage caused by the connection of our appliances to a power supply which does not comply with the instruction plate (voltage, phase/neutral cycles...) or with the phase order (particularly important for three-phase motors, direction of ventilation, jacks...) shall in no case be covered by our warranty.

This is why it is recommended that the appliances are only connected when power is available and these things can be checked.

LEGEND				
	Column "Mode" :	S/M/V	means	3 cooking cycle : first Dry / second Combined / third Steam
	Column "°C" :	180°/150°	means	first cycle at 180°C / second cycle at 150°C
COOKING modes: D= DRY	Column "Time" :	15'/-	means	first cycle of 15mins / second cycle with core temperature
C= Combined	Column " core °C " :	-/60°	means	first cycle with time / second cycle with core temperature 60°
S= Steam		*Italic*		= Indicative values (not recorded in programs)

Prog.	PRODUCTS	CAPACITY					PRE-HEATING			COOKING			
		In Kg or pieces per plate:	GN 1/1	GN 2/1 electric	GN 2/1 gas	Usable levels		Mode	°C	Mode	°C	Time	°C core to select
1	Dry Pre-heating							D	220°			10'	
2	Combined Pre-heating							D	180°			10'	
3	Overheated Steam Pre-heating							D	110°			7'	
4	Steam Pre-heating							S	100°			7'	
5	Banqueting Pre-heating							D	130°			7'	
6													
7													
8													
9													
	CLASSIC ROASTING												
	BEEF :												
10	Rare Roast beef	2.2 kg roast / pan	3	6	4	1/2	1	D	220	C	180°	*10'/500g*	40°
11	Medium Roast beef	2.2 kg roast / pan	3	6	4	1/2	1	D	220	C	180°	*12'/500g*	45°
12	Braised beef	2.5 kg pieces / pan	3	5	4	1/3	2	D	180	C	140°	120'	
13	Deep-frozen Mincemeat	pieces / Grill	12	24	20		1	D	220	C	210°	15'	
14	Toulouse Sausages	pieces / grill	18	36	27		1	D	220	D	210°	30'	
15													
	VEAL :												
16	Cushion of veal	kg / pan	7	14	11	1/2	2	D	180	C	150°	120'	*75°*
17	Stuffed rolled veal	kg / grill	7	11	9	1/2	1	D	220	D/C	210°/150°	15'/90'	*-/60°*
18	Shin of veal	2.5 kg shin / pan	3	5	4	1/2	2	D	180	C	180°	90'	*75°*
19													
	PORK :												
20	Roast pork	kg / pan	6	12	9	1/2	1	D	220	C	170°	60'	*66°*
21	Collar of pork	kg / pan	6	12	9	1/2	2	D	180	C	150°	120'	*75°*
22	Ham	kg / pan	8	16	12	1/3	2	D	180	C	140°	180'	*75°*
23	Shin of pork	700g shin / pan	10	16	13	1/2	2	D	180	C	180°	60'	
24	Chop	pieces / grill	12	24	18		2	D	180	D	140°	60'	*68°*
25													

Prog.	PRODUCTS	CAPACITY					PRE-HEATING			COOKING			
		In Kg or pieces per plate:	GN 1/1	GN 2/1 electric	GN 2/1 gas	Usable levels		Mode	°C	Mode	°C	Time	°C core to select
	LAMB												
26	Loin of lamb	pieces / pan	4	8	6		2	D	180	D	150°	25'	*60°*
27	Leg of lamb	2 kg leg / pan	3	6	4	1/2	1	D	220	C	180°	60'	*60°*
	GAME :												
28	Loin of venison	pieces / pan	6	12	9		2	D	180	C	180°	45'	*60°*
29	Qaddle of hare	pieces(200g) / pan	4	8	6		1	D	220	D	210°	25'	*60°*
	POULTRY/ RABBIT :												
30	Roasted frozen chicken	1.2kg chicken / grill	6	9	9	1/2	1	D	220	C/D	140/220°	30/35'	
31	Roasted fresh chicken	1.2kg chicken / grill	6	9	9	1/2	1	D	220	D	220°	40'	
32	Chicken scalopes	pieces / pan	12	24	18		3	D	110	S/S	100/75	10/12'	
33	Margaret of duck	Margarets / grill	6	12	9		2	D	180	C	180°	20'	
34	Roasted duck	1.8 kg ducks / pan	4	8	6	1/3	1	D	220	D	200°	45'	
35	Leg of roasted rabbit	pieces / grill	10	20	15		1	D	220	D	200°	30'	
	DIVERSE												
36	Meat pate	kg / grill	6	12	9	1/2	2	D	180	C/D	180°/170°		50°/62°
37	Lasagnes	portions / pan	18	36	24		2	D	180	C/D	180°/220°	25/15'	
38													
39													
	LOW T° ROASTING	**(Quality cooking)**											
40	Rare roast beef	2.2kg roast / grill	3	6	6	1/2	1	D	220	S/V/V	210/70/60°	15'/-/-	-/38/52°
41	Medium roast beef	2.2kg roast / grill	3	6	6	1/2	1	D	220	S/V/V	210/70/65°	15'/-/-	-/42/55°
42	Stuffed roast veal	kg / grill	6	12	12	1/2	1	D	220	S/V	210°/100°	15'/-	-/66°
43	Roast pork	kg / pan	6	12	12	1/2	1	D	220	M/S	180°/120°	15'/-'	-/68°
44	Ham	kg / pan	8	16	16	1/3	2	D	180	V/V	100°/80°		50°/70°
45	Leg of lamb	2 kg leg / pan	3	6	6	1/2	1	D	220	S/V/V	210/100/70	15'/-/-	-/48/60°
46													
47													
48													
49													
	VEGETABLES												
50	Fresh cauliflower	kg / perforated pan	2,5	5	5		4	S	100	S	100°	20'	
51	Frozen cauliflower	kg / perforated pan	2,5	5	5		4	S	100	S	100°	40'	
52	Fresh green beans	kg / perforated pan	1,5	3	3		4	S	100	S	100°	25'	
53	Frozen green beans	kg / perforated pan	2,5	5	5		3	D	110	S	100°	35'	
54	Fresh Broccoli	kg / perforated pan	1,5	3	3		4	S	100	S	100°	20'	
55	Frozen peas	kg / perforated pan	2,5	5	5		3	D	110	S	100°	7'	
56	Fresh cut carrots	kg / perforated pan	2	4	4		4	S	100	S	100°	25'	

Prog.	PRODUCTS	CAPACITY				PRE-HEATING			COOKING			
		In Kg or pieces per plate:	GN 1/1	GN 2/1	Usable levels		Mode	°C	Mode	°C	Time	°C core to select
	VEGETABLES (cont.)											
57	Diced frozen carrots	kg / perforated pan	2,5	5		4	D	100	S	100°	35'	
58	Frozen spinach	kg / perforated pan	2,5	5		3	D	110	S	100°	30'	
59	Beetroot	kg / perforated pan	0,8	1,6		3	D	110	S	100°	5'	
60	Fennel	kg / perforated pan	2	4		4	S	100	S	100°	20'	
61	Diced Courgettes	kg / perforated pan	0,8	1,6		3	D	110	S	100°	13'	
62												
63												
64												
	POTATOES											
65	Steam potatoes	kg / perforated pan	3	6		3	D	110	S	100°	25'	
66	Roasted potatoes	kg / pan	3	6		1	D	220	D	220°	25'	
	RICE	(2 volumes of rice/vol.water)										
67	Pilaff rice	kg / pan	1	2		2	D	180	C	130°	27'	
	EGGS											
68	Hard-boiled eggs	eggs / perforated pan	40	80		3	D	110	S	100	10'	
69	Soft-boiled eggs	eggs / perforated pan	40	80		4	S	100	S	100°	5'	
	FISH and SHELLFISH											
70	Lobster 500 to 600g	500g pieces / perforated pan	3	6		3	D	110	S	100°	8'	
71	Steamed whole fish	kg / perforated pan	6	12	1/2	4	S	100	S/S	95°/78°	20'/-	-/70°
72	Steamed fish fillet	fillets / perforated pan	12	24		4	S	100	S	90°	10'	
73	Steak of steam fish	pieces / perforated pan	12	24		4	S	100	S	75°	10'	
74	Steamed mussels	kg / pan	2	4		4	S	100	S	80°	9'	
75	Fish pate	1.2 kg pate / grill	4	8	1/2	4	S	100	S	80°	105'	75°

Prog.	PRODUCTS	CAPACITY				PRE-HEATING			COOKING			
		In Kg or pieces per plate:	GN 1/1	GN 2/1	Usable levels		Mode	°C	Mode	°C	Time	°C core to select
	BREAD/PASTRY/DESSERTS											
76	Plate pizza	kg per plate (40 mm deep)	2	4		1	D	220	D	180°	20'	
77	Tarts	10 cm dia pieces / plate	15	30		1	D	220	D	200°	30'	
78	Fresh bread	Bread (50 to 100g) per plate	15	30		1	D	220	C	165°	30'	
79	Pre-cooked frozen long loaf	Pieces per plate	4	8		1	D	220	C	180°	7'	
80	Michette of bread	Pieces per plate	6	12		2	D	180	C/D	175°/180°	15/20'	
81	Frozen croissants	Croissants per plate	8	16		2	D	180	C	165°	20'	
82	Frozen pastries	Pastries per plate	16	24		1	D	220	D	175°	30'	
83	Vol au vent	Pieces per plate	28	42		2	D	180	D	175°	20'	
84	Caramel cream	Portions per perforated pan	24	48		4	S	100	S	85°	35'	
85	Puffs / Eclairs	Pieces per plate	15	30		2	D	180	D	165°	30'	
86	Genoese	In pan (40 mm deep)				2	D	180	D	160°	30'	
87	Puff pastry	Pieces	16	24		2	D	180	D	175°	30'	
88	Rolled cake	On pan (20 or 40 mm deep)				2	D	180	D	150°	15'	
89	Apple tart	portions per plate	15	30		1	D	220	D	200°	35'	
	REGENERATION											
90	Accompanying vegetable plates	Cycle 2 in ½ speed et				5	D	130	D/C	120°/135°	2'/3'	
91	Pasta and rice plates	injection rate at 50%.				5	D	130	D/C	120°/135°	2'/3'	
92	Slice meat plates	"				5	D	130	D/C	110°/115°	1'/5'	
93	Accompanying vegetable GN Pan	"				5	D	130	C/C	130°/130°	7'/9'	
94	Pasta and rice GN Pan	"				5	D	130	C/C	125°/125°	6'/9'	
95	Slice meat GN Pan	"				5	D	130	C/C	115°/110°	5'/8'	
97												
98	***Sprouting room (Frozen Pâtons)***	On ½ speed							D	28°	30'	
99												