

**Dear customer,**

Congratulations on the purchase of your new HOUNÖ oven.  
You are now the owner of one of the leading oven products on the market.

All HOUNÖ products are subjected to intensive product development, which ensures that the products always offer the latest technology and the most up-to-date and energy-saving methods of preparation.

Furthermore, the HOUNÖ products are entirely up-to-date with the latest developments/technology in terms of

- ERGONOMICS AND SAFETY
- SIMPLE AND LOGICAL OPERATION
- ELEGANT AND FUNCTIONAL DESIGN
- RELIABILITY AND SERVICE

To ensure that our customers get an optimum and reliable product, all HOUNÖ units are passed through an extensive test programme in which all functions are subjected to a continuous and extreme load.

Before you start using the oven and its many automatic functions, we recommend that you study the manual thoroughly so as to ensure optimum cooking results. The preset programs and a number of special features such as ClimaOptima, Cook & Hold and Delta-T (optional extras on some models) will ease the daily work in the kitchen. Furthermore, by going through the manual, you will obtain a better understanding of the advanced technology and feel safer while using the oven. You will find further information and useful tips on our website [www.houno.com](http://www.houno.com).

**Terms of warranty**

The oven cabinet and the technical parts of your new HOUNÖ oven are covered by a 12-month factory warranty. However, the heating elements in the oven compartment and the steam generator are guaranteed for 24 months. The period of warranty takes effect from the date of installation.

**The warranty does not include....**

We especially draw your attention to the fact that the factory warranty does not cover glass parts such as oven door glass, lamp glass and incandescent lamps, nor does it cover sealing such as door gaskets, gaskets for heating elements, etc.

Furthermore, the factory warranty does not apply in the case of

1. defects that are due to the fact that installation has not been carried out in accordance with the HOUNÖ Installation & Service Manual at present in force (electricity, water/drain, exhaust).
2. defects and interruptions of operation that are the result of the oven not being handled/operated as specified in the user's manual.

If you utilise all the technological facilities of this oven, you are guaranteed perfect results with a minimum of resources.

Yours sincerely,

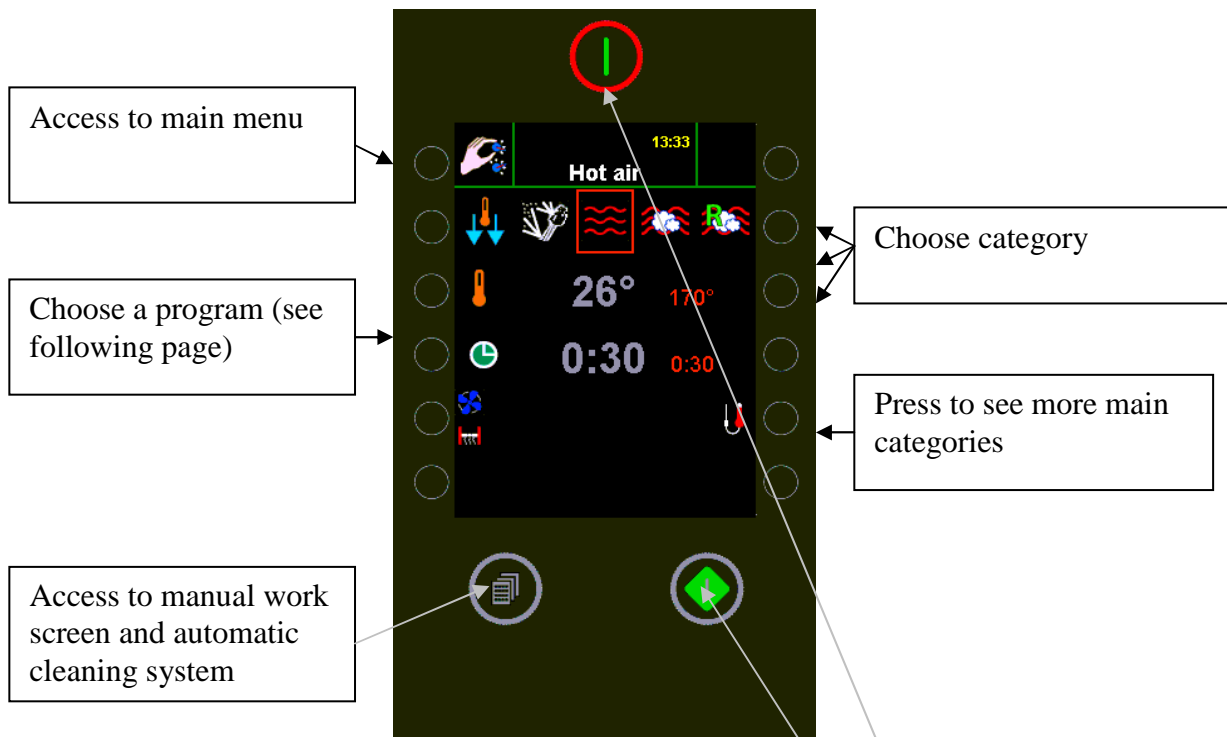
**HOUNÖ A/S**

## Table of contents

Start program	3-4
Manual work screen	5
Fan and exhaust and setting of humidity	6
Cleaning program	7
Combi steaming, 1-2-3	8
Cooling	9
Proving and preheating	10
Time and date	11
Preset programs	12
Entering and changing program	13
Selecting program or category	14
Entering/changing text in program	15
Selecting/changing category	16
Editing steps – adding, changing, deleting steps	17
Saving changes to program	18
Main menu and setting of timer start	19
Main menu, presetting values (time and temperature)	20
Main menu, changing set-up / locking functions with code	21
Cleaning	22-23
<b>Optional extras:</b>	
USB key - functions	24
Multipoint core temperature probe	25
CombiClean, automatic cleaning system	26
ClimaOptima	27
Insufficient cleaning detergent and rinsing agent – replacing canisters	28
Energy counters	28
HACCP library	29
HACCP diagram	30
<b>Recommendations and programs/recipes:</b>	
How to achieve perfect baking and roasting results	31
Baking of bread dough and deep frozen bread	32
Programs/recipes	33-42

For further information on the functions and user interface of the oven, see Service & Installation Manual.

# Start program 1 of 2

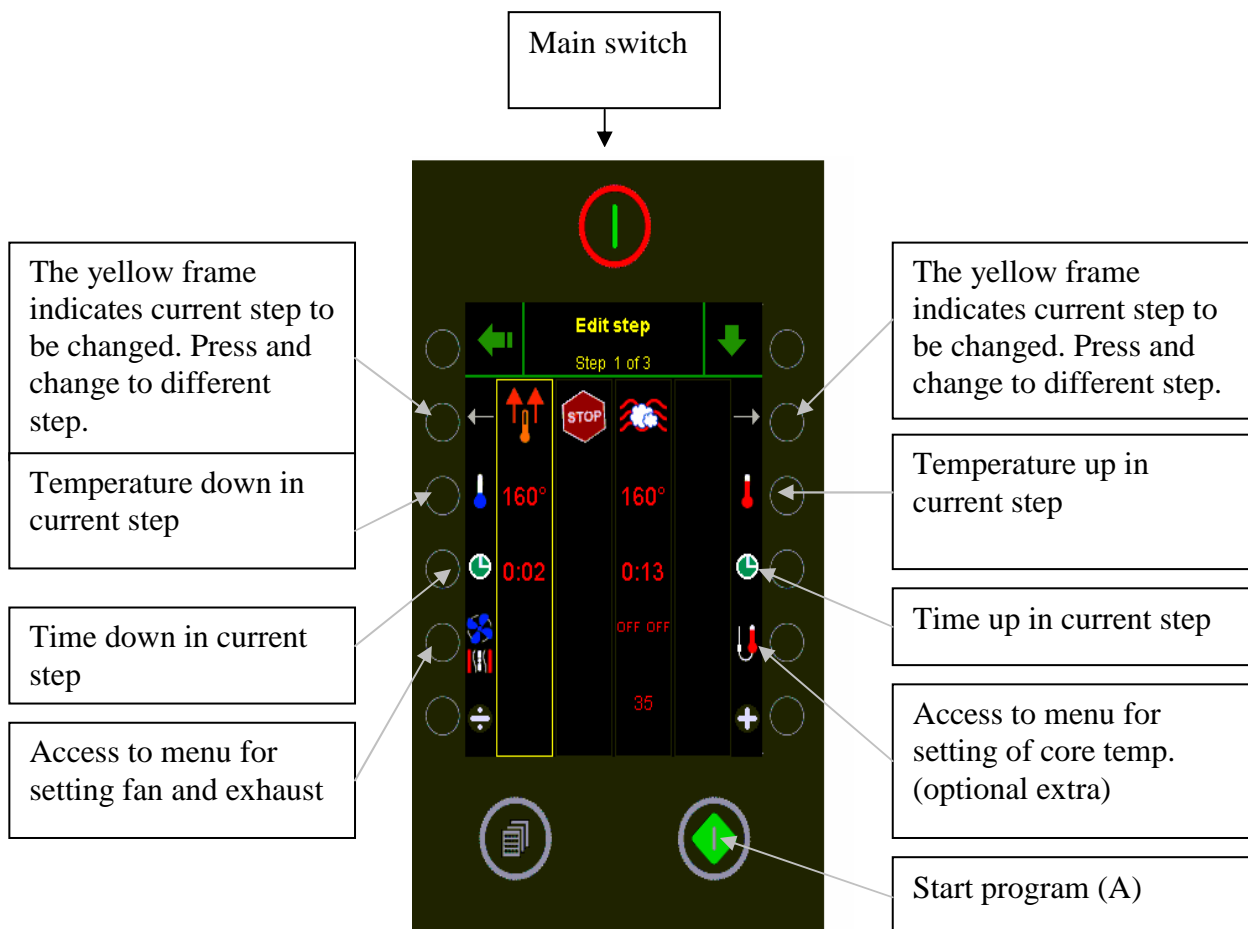


The operation panel is so designed that the modes are activated by pressing the keys next to the symbols or digits (6 keys on either side).

The read circle with the green line at the top of the panel is the main switch.

The green square with the white line at the lower right-hand corner is ON/OFF.

# Start program 2 of 2

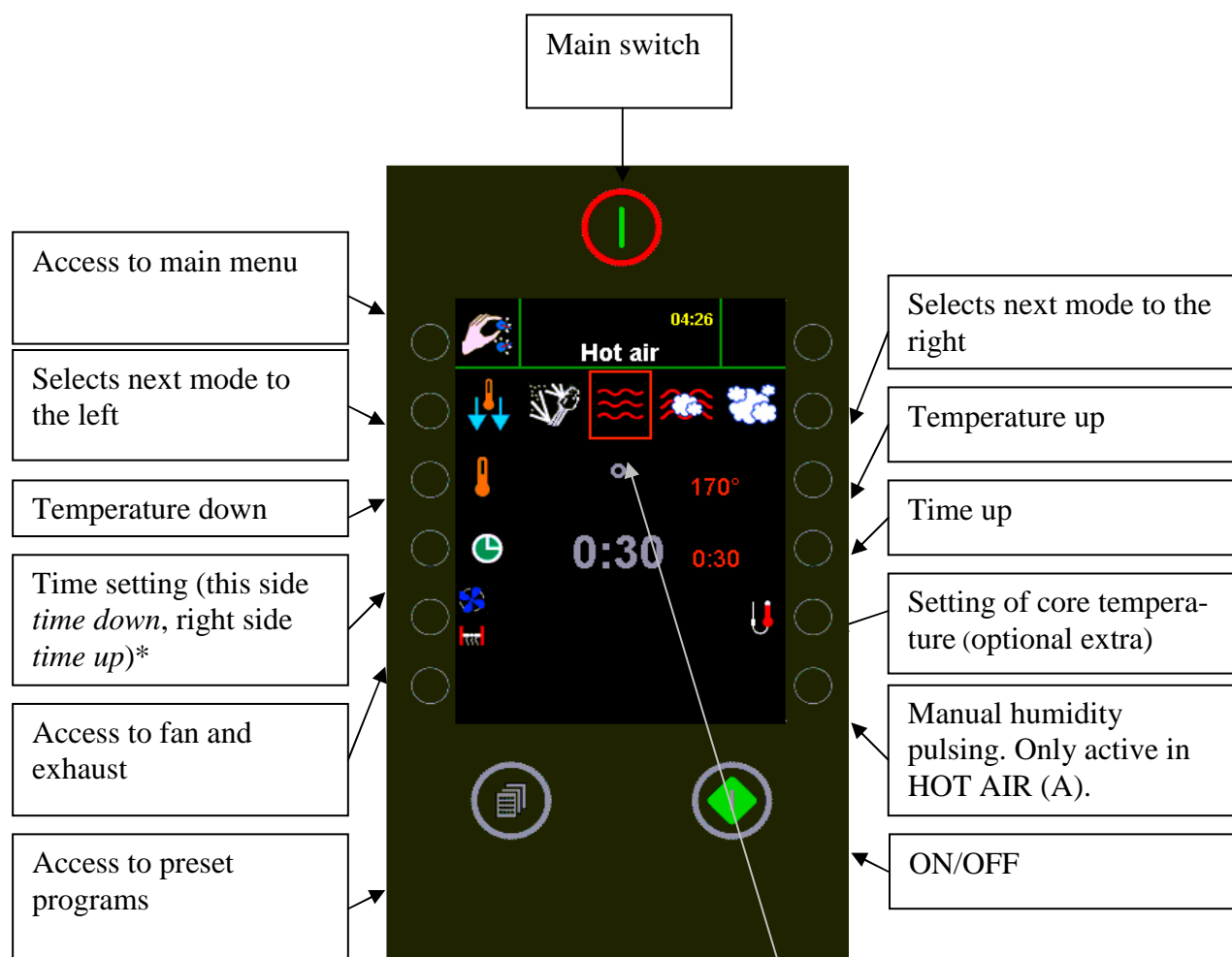


If TIME, TEMPERATURE and MODE are OK, press (A). Program starts.

**Note:** Most programs have a PREHEATING or PRESTEAMING mode followed by STOP and an alarm signal. This means that the products should not be loaded into the oven until this step is completed and the alarm sounds. Open door – load oven – close door. the program continues

Regarding permanent changes to programs, see table of contents.

## Manual work menu



The white digits next to the symbols for TEMPERATURE and TIME show the actual oven temperature and the actual time remaining. When there is one minute left, the computer counts down from 59 seconds. The alarm sounds when time is up.

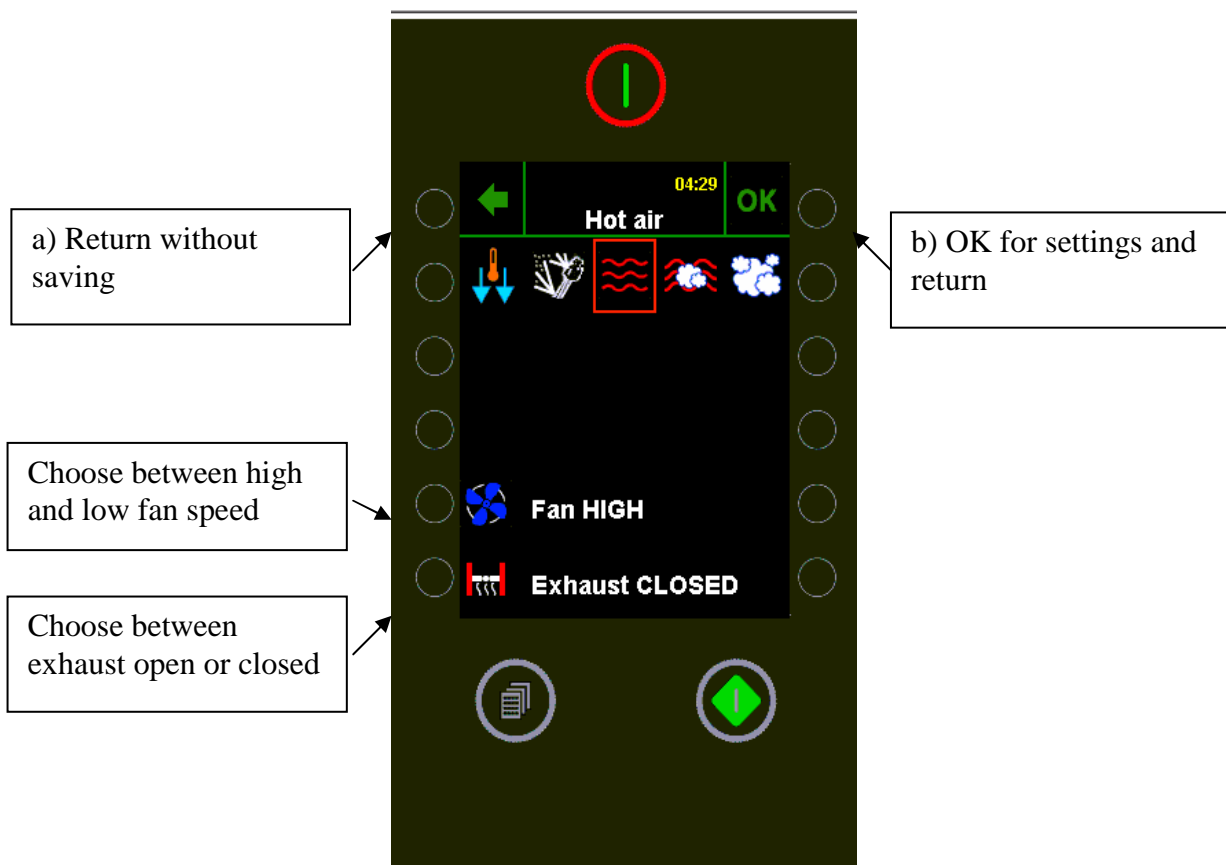
When the oven is on (a program or mode has been activated – the square flashes), it is still possible to set TIME, TEMPERATURE, FAN and EXHAUST.

Note that the fan wheel is reversible. This means that the wheel can run leftwards as well as rightwards with a small interval when changing direction.

(A) has two functions: After the start in HOT AIR, you can add humidity manually by pressing the key. If you press the key before the start in manual HOT AIR, a sub-menu appears in which it is possible to set the humidity pulsing in seconds (1 – 99 seconds).

\* Continuous operation is achieved by pressing the left-hand key until the time indication disappears completely.

## Fan and exhaust



Fan and exhaust can be activated before and after start.

Low fan speed is recommended for puff pastry, Danish pastry, cakes, sweet biscuits, etc. You may add 1 or 2 minutes' baking time when using low fan speed.

Open exhaust is recommended for bread and pastry, roasting of pieces of meat and to achieve a grill effect.

- a) Return to work screen without storing settings of fan and exhaust, if any.
- b) Accept settings of fan and exhaust and return to work screen.

## Cleaning program

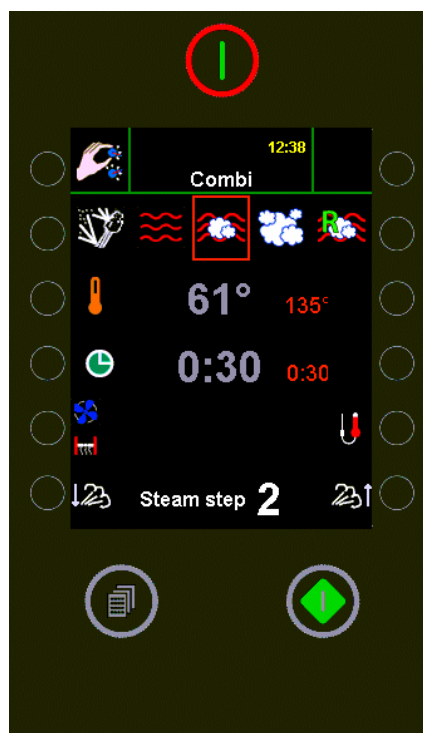


Manual cleaning program lasting 30 minutes.

The alarm sounds when detergent should be added.

If the oven chamber is very soiled, apply combi steam 3 at 100°C for 30 minutes before starting the program.

## Combi steaming steps 1, 2 and 3



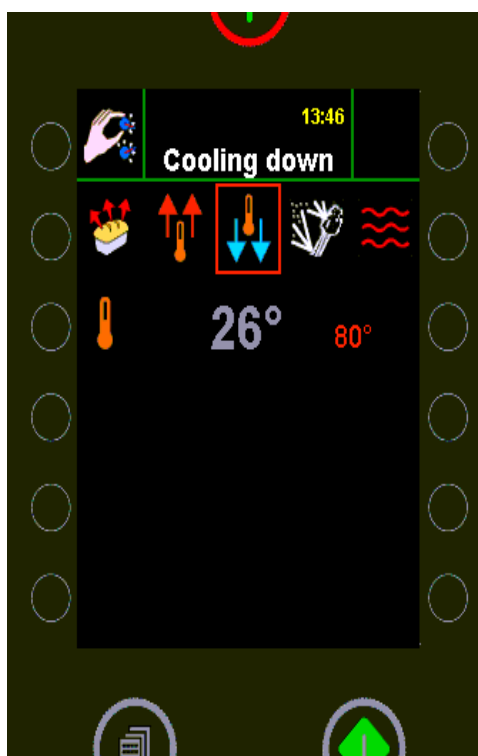
### Recommendations for combi steaming:

- Combi steaming 1: Ordinary steaming of meat and poultry. The humidity content is approx. 25%, and the crust of the meat becomes as brown as if HOT AIR was applied.
- Combi steaming 2: For the braising of pieces meat, as the first step of a program. The pores of the meat are rapidly closed, which keeps the meat juicy. Humidity content: approx. 50%.
- Combi steaming 3: Can be used as a steaming program at 100°C. The humidity content will be almost 100% in the course of a few minutes, possibly a little longer if the oven chamber is filled with e.g. meat and potatoes

If you need to change the humidity content in the steps, please contact your oven supplier.



## Cooling

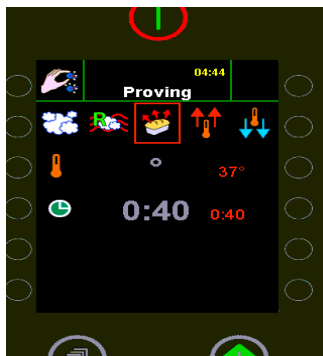


Cooling is activated in either of the following ways:

- Oven door closed. Use water to speed up cooling process. Alarm sounds when the temperature is reached.
- Oven door open. Fan wheel draws in air to speed up cooling process. Program stops when temperature is reached. No alarm.

It is recommended to set the cooling mode at 20°C below the required working temperature.

## Proving/preheating



The computer is set to maintain a humidity level of 80% which is the optimum level for all products that need to be proved before they are baked.

Recommended settings of temperature and time:

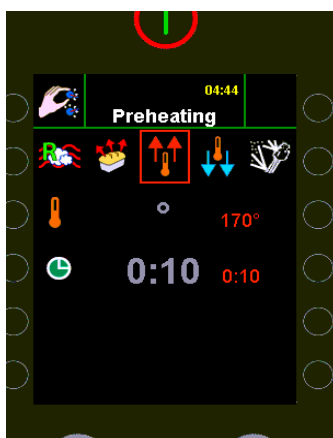
Loaves of 400 – 800 g: Low temperature and long proving time (32°C, 45 min.).

Rolls/baguettes of 60 – 200 g: High temperature and short proving time (36°C, 25 min.).

We call your attention to the preset "semiautomatic bread program", in which the bread is proved and baked in the same process (models KPE, CPE and BPE).

Please note the distinction between prebaked (additional baking only) and preproved (thawing, proving and baking).

PREHEATING can be set for 0 – 15 minutes.



Note that the countdown does not start until the selected oven temperature is reached.

PREHEATING ensures that the oven chamber is thoroughly heated.

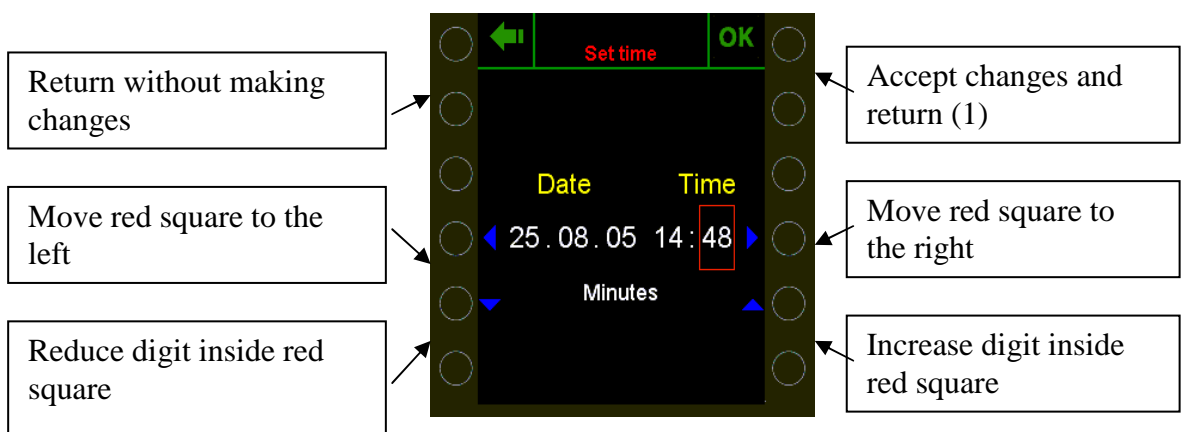
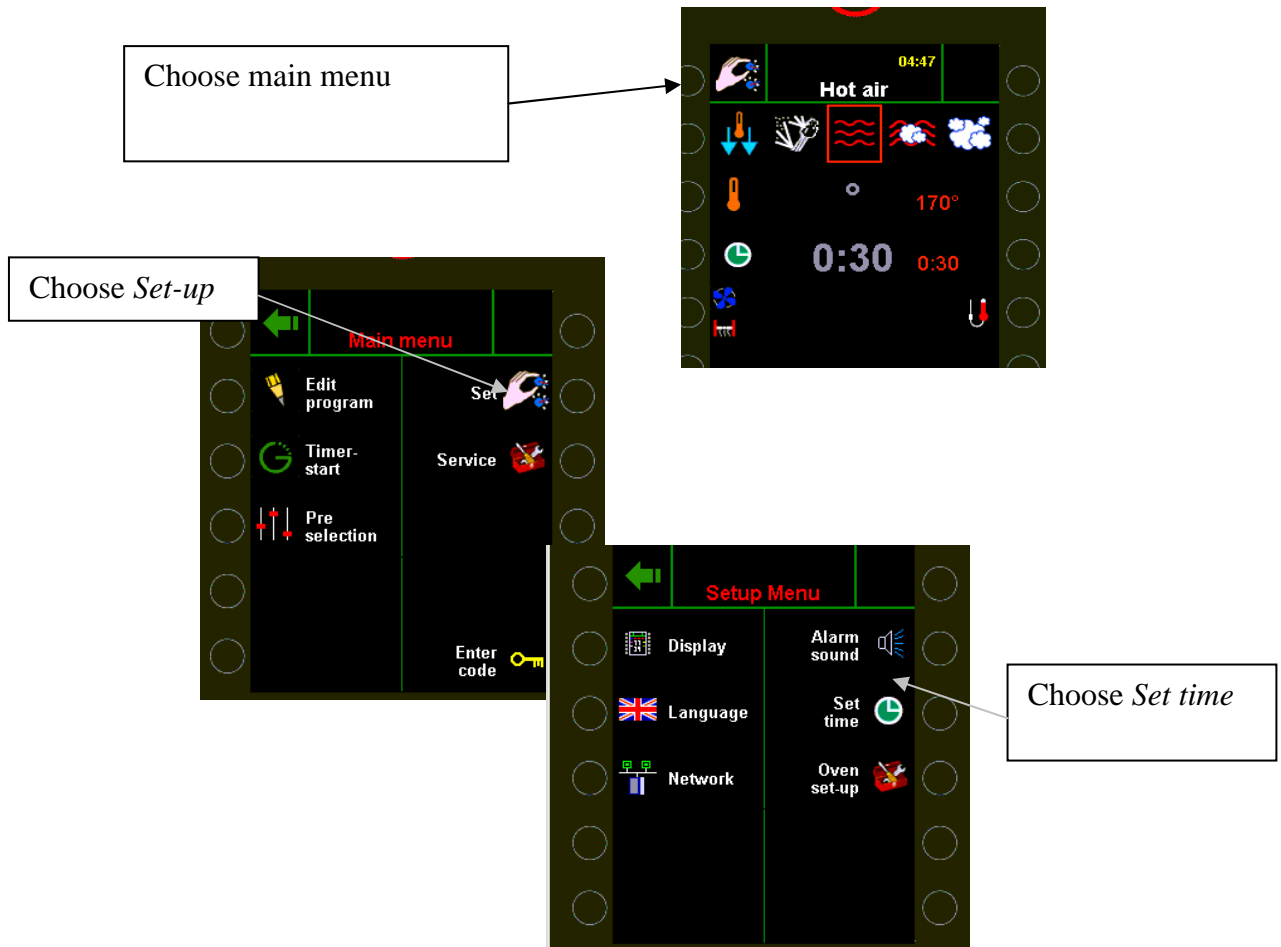
If the oven is cold, 2 - 5 minutes' preheating is recommended (models 2.10 and 2.14 require 15 minutes' preheating)

If the oven is hot, 0 – 2 minutes' preheating is recommended.

Preheating at a temperature which is approx. 50°C higher than the desired working temperature is recommended.

**NOTE:** When the oven door is opened for loading, the oven chamber loses 30-50% of the heat.

# Time and date



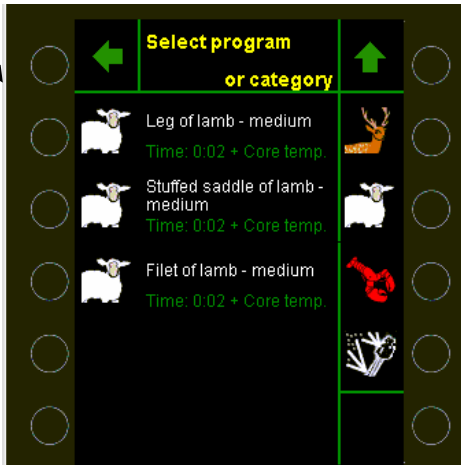
(1) When you press OK, the oven restarts automatically.

# Preset programs

Press key to the right of ON/OFF



Return



Arrow indicates that there are more main categories than those shown.

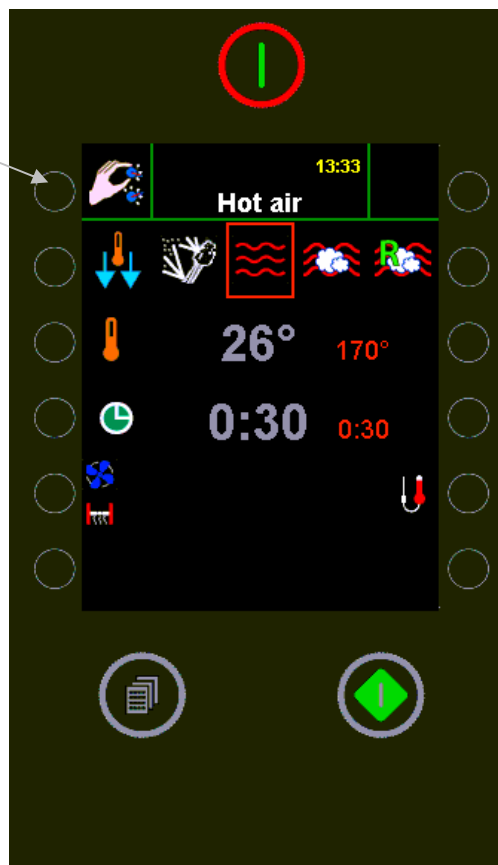
Choose main category



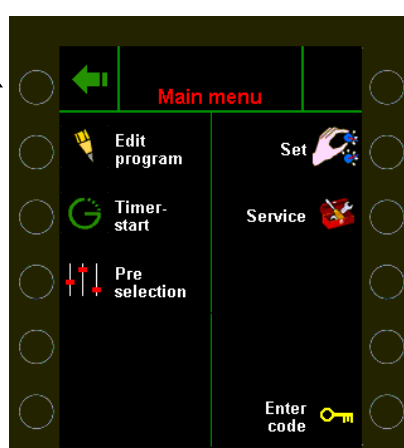
Press again to scroll through the programs of the category (there are more categories than the 5 listed to the right)

## Entering and changing program

Press for access to main menu

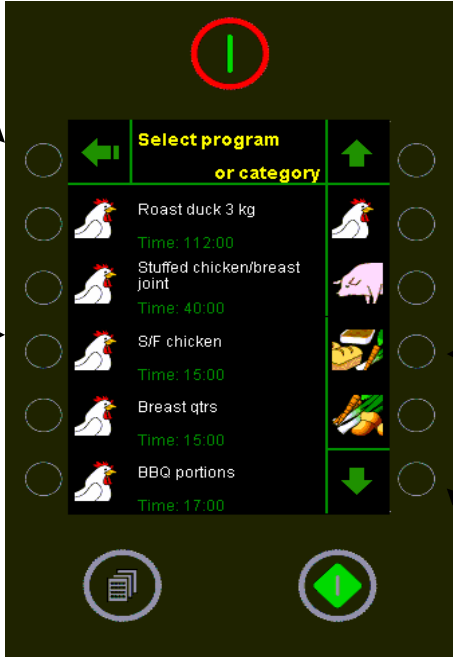


Press for access to making new programs or changing existing ones



If, when one of the functions in the main menu is activated, a screen appears asking for a code, press 876412.

# Selecting program or category



**Select program or category**

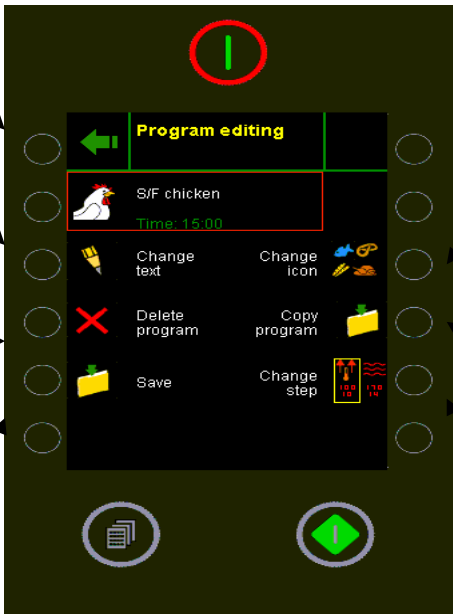
- Roast duck 3 kg  
Time: 112:00
- Stuffed chicken/breast joint  
Time: 40:00
- S/F chicken  
Time: 15:00
- Breast qtrs  
Time: 15:00
- BBQ portions  
Time: 17:00

Return to previous screen

Choose program

Choose main category

Arrow indicates that there are more main categories than those shown



**Program editing**

S/F chicken  
Time: 15:00

- Change text
- Change icon
- Delete program
- Copy program
- Save
- Change step

Return to previous screen

Change text in selected program

Delete program

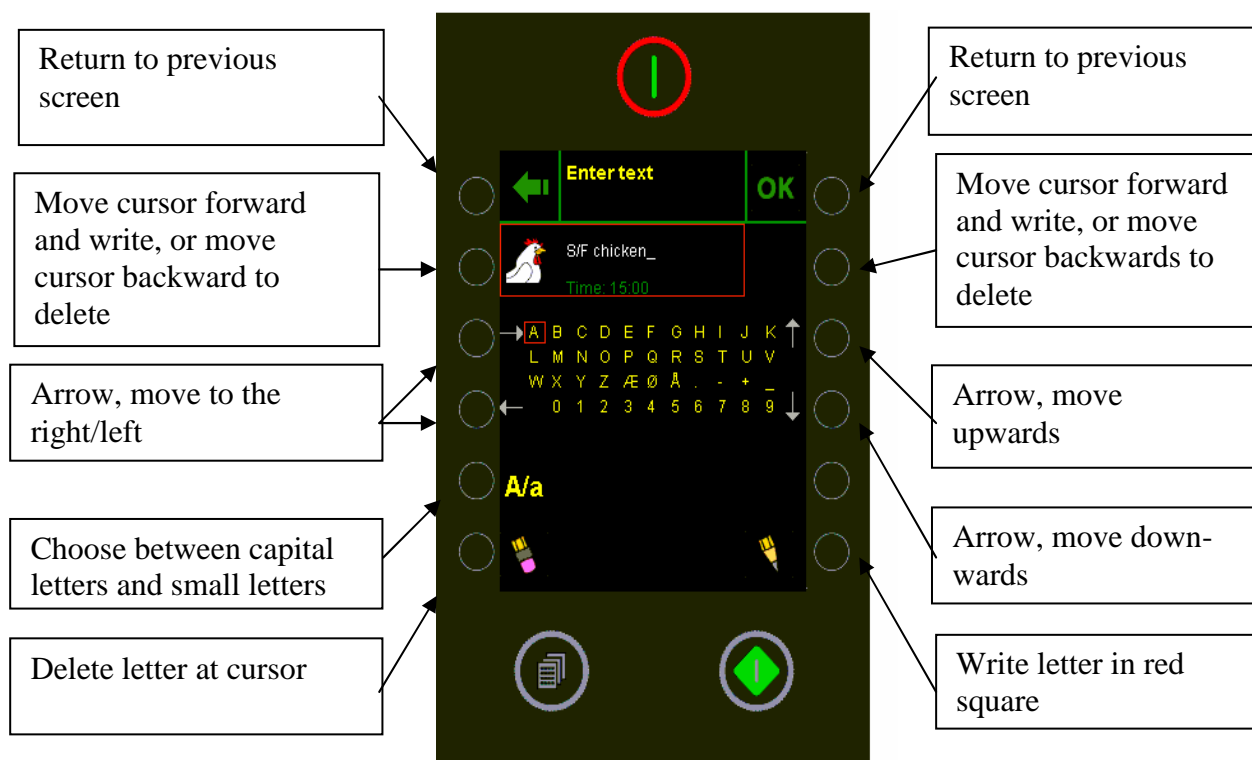
Save changes

Change icon

Copy program

Change steps

## Entering/changing text in program



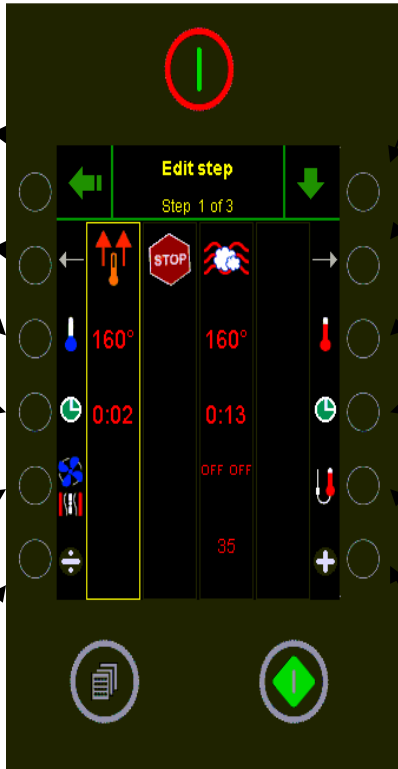
If you are often entering new programs or changing existing ones and want an overview of all programs, we recommend that you order CombiNet. Contact your oven supplier for price indication.

# Selecting/changing category





## Editing steps – adding, changing, deleting steps



Return to previous screen

Move on to next step to be edited

Temperature down in current step

Time down in current step

Access to menu for setting fan and exhaust

Active in ClimaOptima. Reduce humidity content in current step

Down to submenu to add, change or delete step

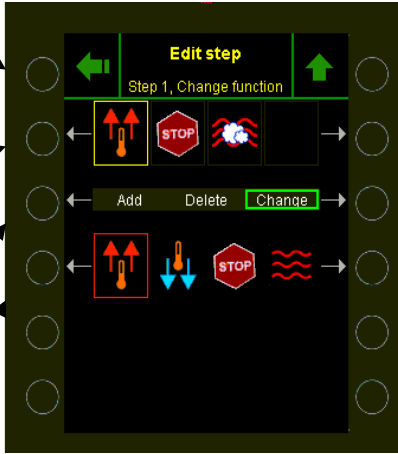
Move on to next step to be edited

Temperature up in current step

Time up in current step

Possibly setting of core temperature probe in current step

Active in ClimaOptima. Increase humidity content in current step



OK and return

Change between steps (1)

Choose action: ADD, DELETE, CHANGE (2)

Choose mode

(3) Move to upper screen to adjust time, temp., etc.

Change between steps (1)

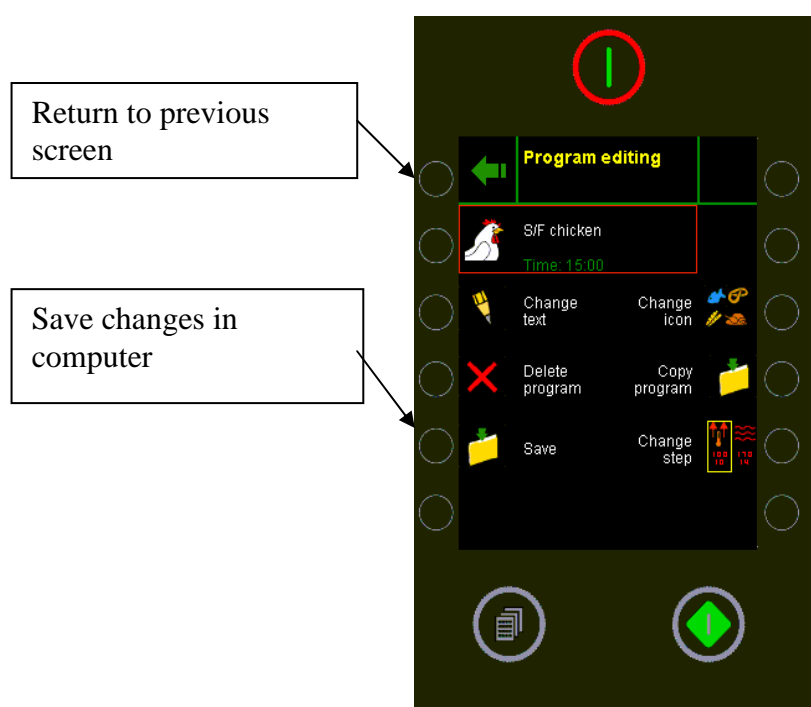
Choose action: ADD, DELETE, CHANGE (2)

Choose mode

OK for change (active in DELETE and ADD)

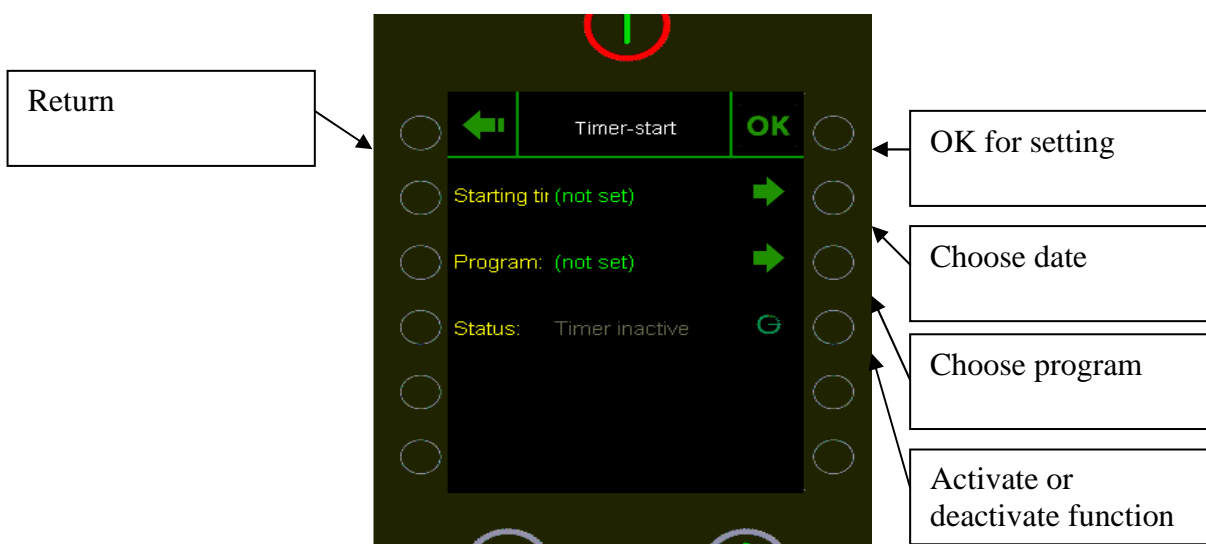
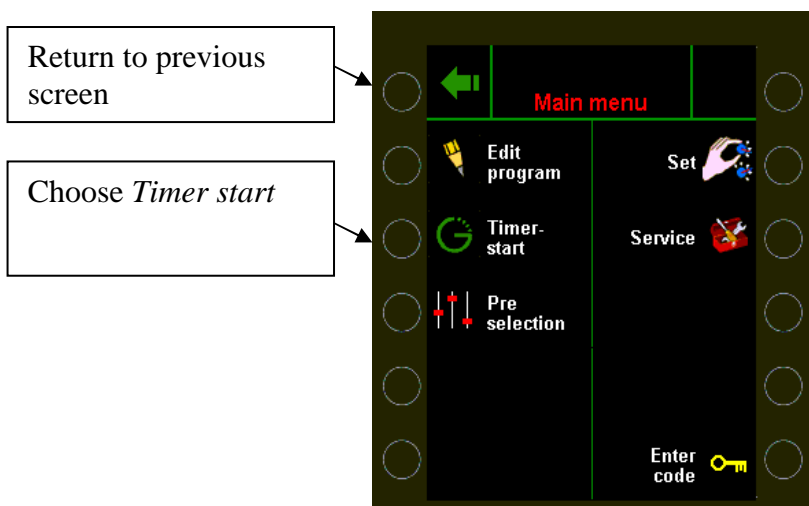
- (1) The yellow square indicates which step should be edited or where a new step should be added.
- (2) "DELETE" deletes the step in the red square (1)  
"CHANGE" changes the step in the yellow square (2)  
"ADD" adds where the GREEN line is. If to the left, the new function becomes step 1; if to the right, the new function becomes the last step.
- (3) When the change has been made, use the upwards pointing arrow in the upper right-hand corner to set time, temperature, etc in the new/changed step.

## Saving changes to program



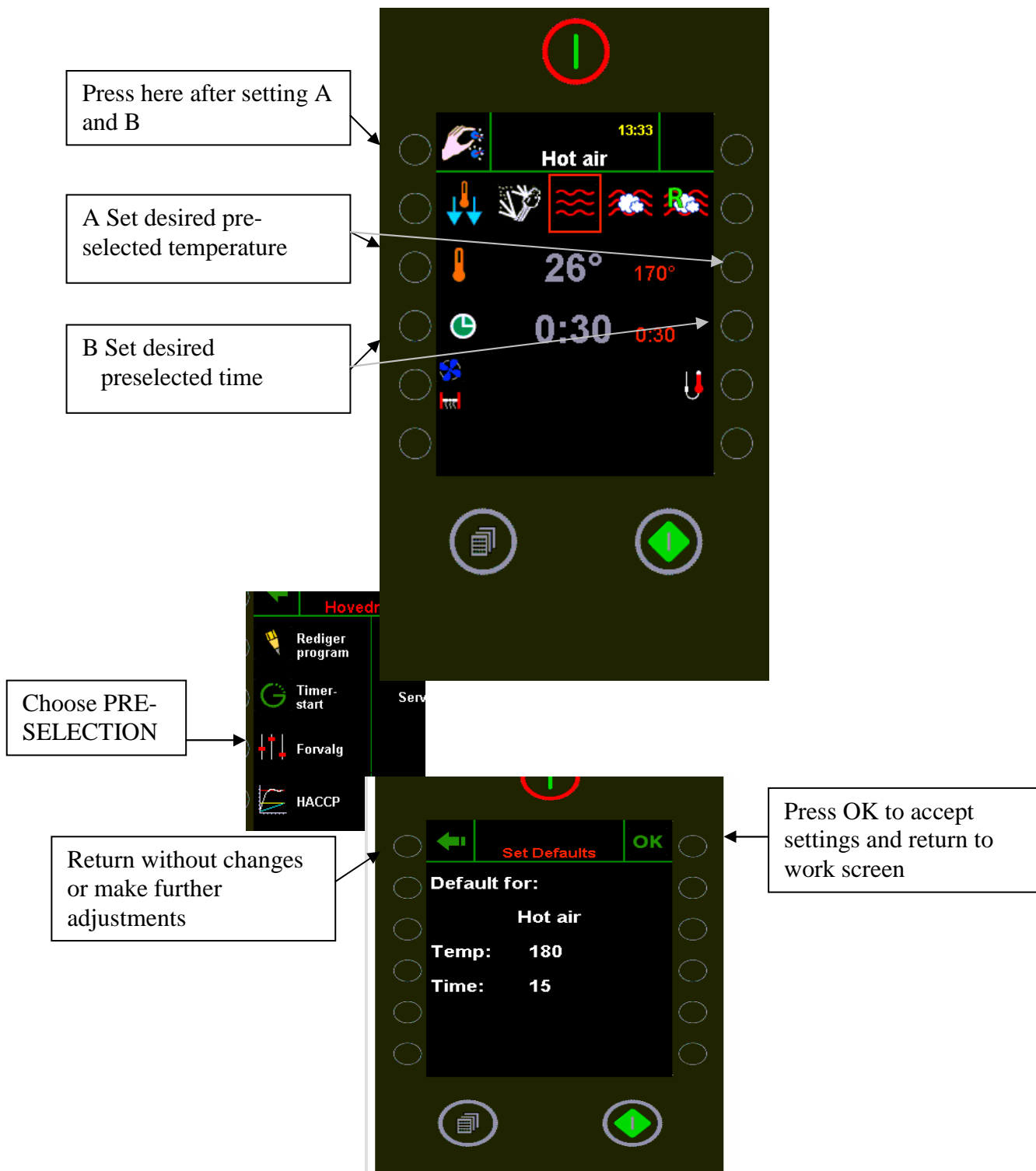
The program cannot be started from this screen. To start the program, press return twice (return to work screen).

# Main menu and setting timer start



When the timer has been set, press OK to return to the main menu.  
 Turn off the oven with the main switch. The oven restarts automatically when the set date/time is reached (set only the date disregarding month and year).  
 You can activate the timer and not turn off the oven until you finish in the evening.

Main menu, presetting values (time and temperature)



Press here after setting A and B

A Set desired pre-selected temperature

B Set desired preselected time

Choose PRE-SELECTION

Return without changes or make further adjustments

Press OK to accept settings and return to work screen

Hot air 13:33

26° 170°

0:30 0:30

Rediger program

Timer-start

Forvalg

HACCP

Set Defaults OK

Default for:

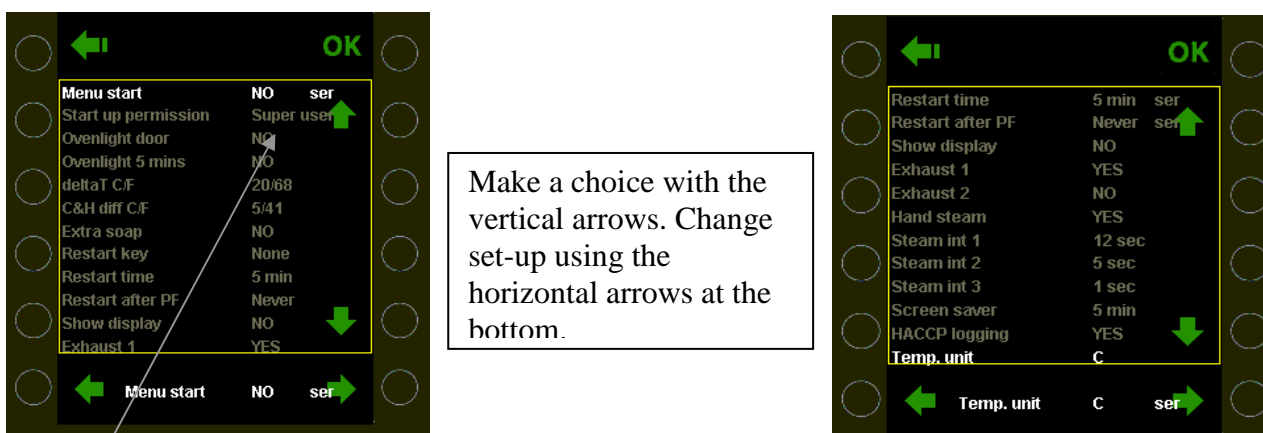
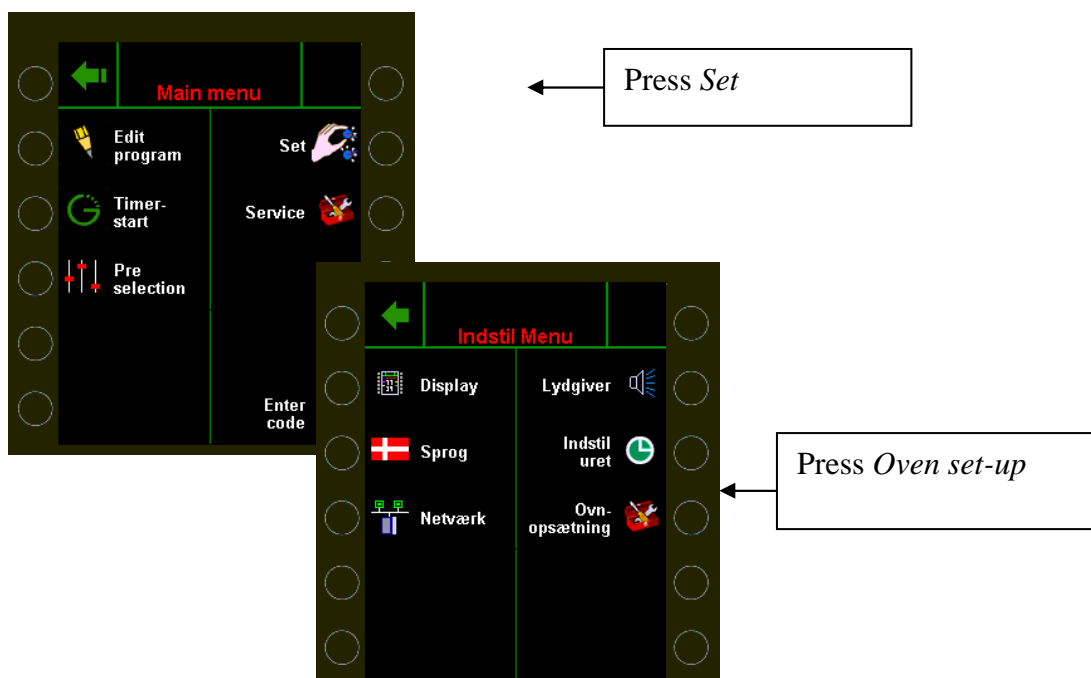
Hot air

Temp: 180

Time: 15

You can make changes to the preset temperature and time in all modes. Core temperature, fan/exhaust and ClimaOptima (humidity content) cannot be set in this menu.

# Main menu, changing set-up / locking functions with code



Incorrect changes to the set-up of the oven may have a serious effect on its reliability in service. Contact your oven supplier for technical support before making any changes.

If you wish to "lock" the possibility of changing programs and other important settings, START UP PERMISSION can be changed from SUPERUSER to USER by pressing the right or left arrow at the bottom. If you do so, everything else but TIMER START and possibly HACCP is locked in the MAIN MENU. All locked functions can be reactivated by entering the SUPER USER code: **876412**. After entering the code and confirming, remember to change from USER back to SUPER USER in the oven set-up.

## Cleaning

Daily cleaning of the oven is recommended for hygienic reasons and to avoid interruptions of operation.

The design of the HOUNÖ ovens allows quick and easy cleaning. The oven chamber is made of all-welded stainless steel, which makes it splash proof. You will therefore find the easy-to-use handshower, which is located behind the front panel, very suitable for interior cleaning.

The door sealing is easy to remove, which ensures quick and efficient cleaning under and around it.

Furthermore, the flat front panel makes exterior cleaning simple and efficient.

To give the oven an extra shine, we recommend HOUNÖ steel oil which is available from your oven supplier (0.5 litre: part No. 045650 – 5 litres: part No. 045654).

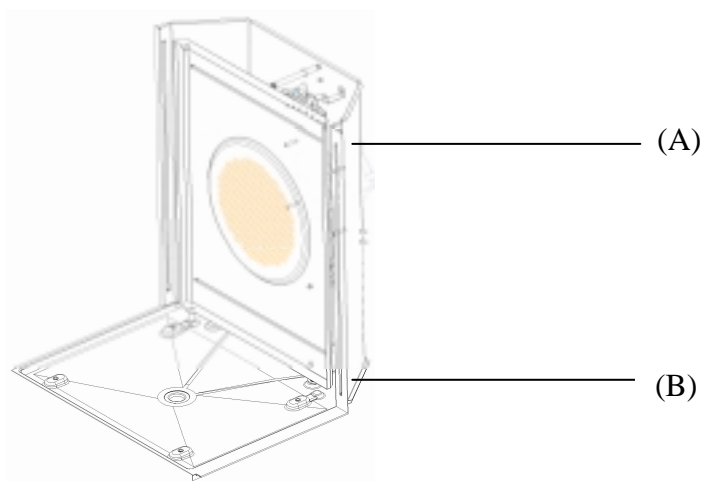
### Oven chamber

Use CombiClean, program 1 – 4, with or without additional detergent.

### Cleaning behind filter housing

For thorough cleaning of the oven chamber, move the filter housing so that it becomes possible to clean round the fan and heating elements.

Loosen the 2 screws (A) and (B) on the filter housing, turn the filter housing and clean behind it. The filter housing can be dismantled entirely by lifting it upwards till it is clear of the pin at the bottom and then tipping it.

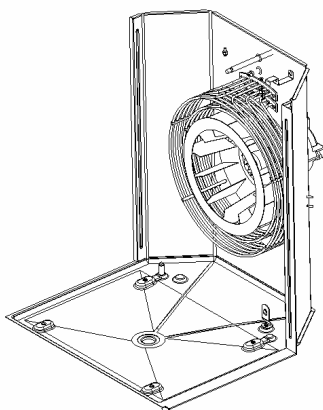


### Cleaning of jet heads

The jet head should be dismantled and cleaned regularly according to how often the combi steaming and ClimaOptima modes are used. The easiest way to clean the jet head is to let it soak in scale remover. All ovens are supplied with an additional jet head.

If the oven is equipped with the automatic cleaning system, CombiClean, there will be two jet heads. The additional jet head will be located to the right of or above the first one. This jet head should also be checked/cleaned regularly.

Please note the position of the jet heads. The jet head for combi steaming/ClimaOptima should be located horizontally with the notch facing upwards. The jet head for CombiClean should be located horizontally with the notch facing downwards.



### Exterior cleaning

Wash the oven cabinet on the outside with soapy water and dry with a soft and damp cloth.

After drying, apply HOUNÖ STEEL OIL (follow directions on the packaging). The steel oil is available from your oven supplier (0.5 litre: part No. 045650 – 5 litres: part No. 045654) and is only for external use.

**Note!** The exterior of the oven must never be flushed with a water hose or high-pressure cleaner as this may damage the electronic components.

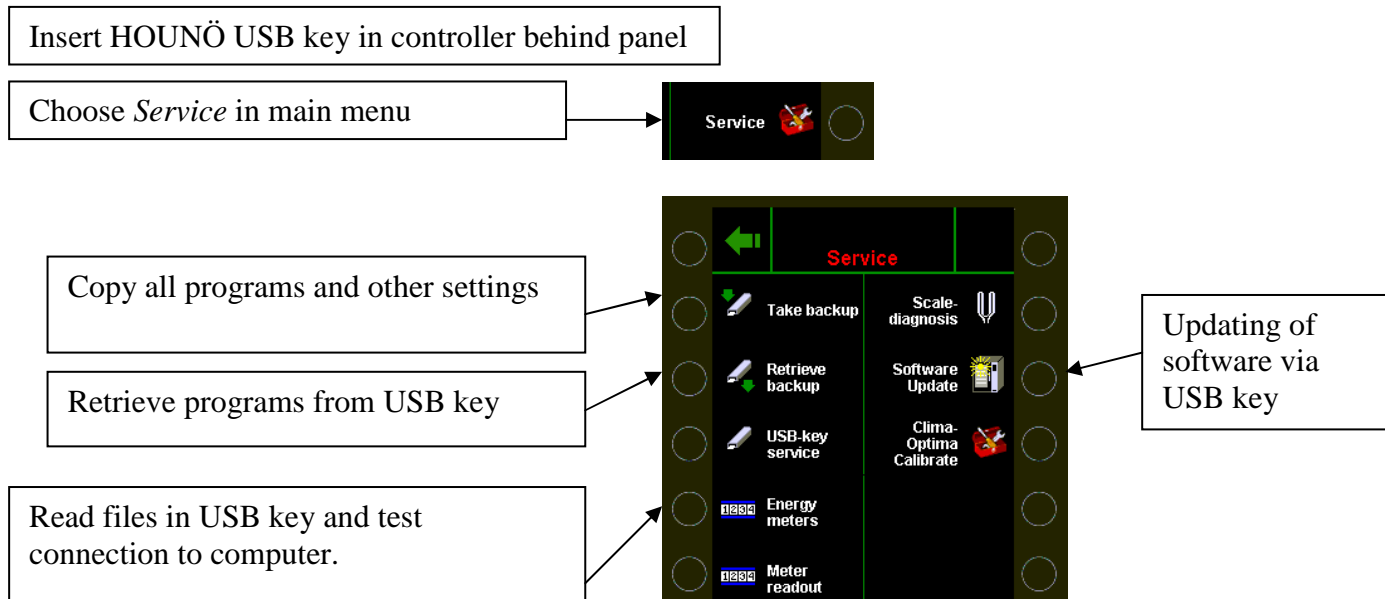
### Cleaning of exhaust valve

The exhaust valve (steel plug that opens and closes the damper) should be checked once a week.

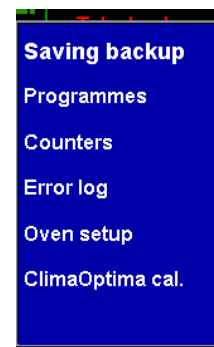
Remove the valve, clean thoroughly with a brush and detergent, rinse with water, dry, and fit again. It is very important to avoid the forming of a layer of fat on the valve, as the fat might affect the valve's ability to function.

## USB key functions (optional extra)





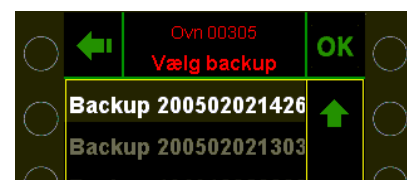
To take a backup, press *Take backup* (not shown). The files to be saved appear briefly. Wait for SERVICE menu to reappear.



To retrieve the programs in the USB key, press *Retrieve from backup* (not shown). If the same USB key is used for more than one oven, the serial No. of the oven in question will appear on the screen (the serial No. is printed on the approval plate located in the lower left-hand corner of the oven frame).



Choose backup file:  
 Explanation to digits: year(2)/month(2)/date(2)/hour(4)  
 (The screens shown differ from this explanation)  
 After choosing the backup file, press OK. Restart computer.

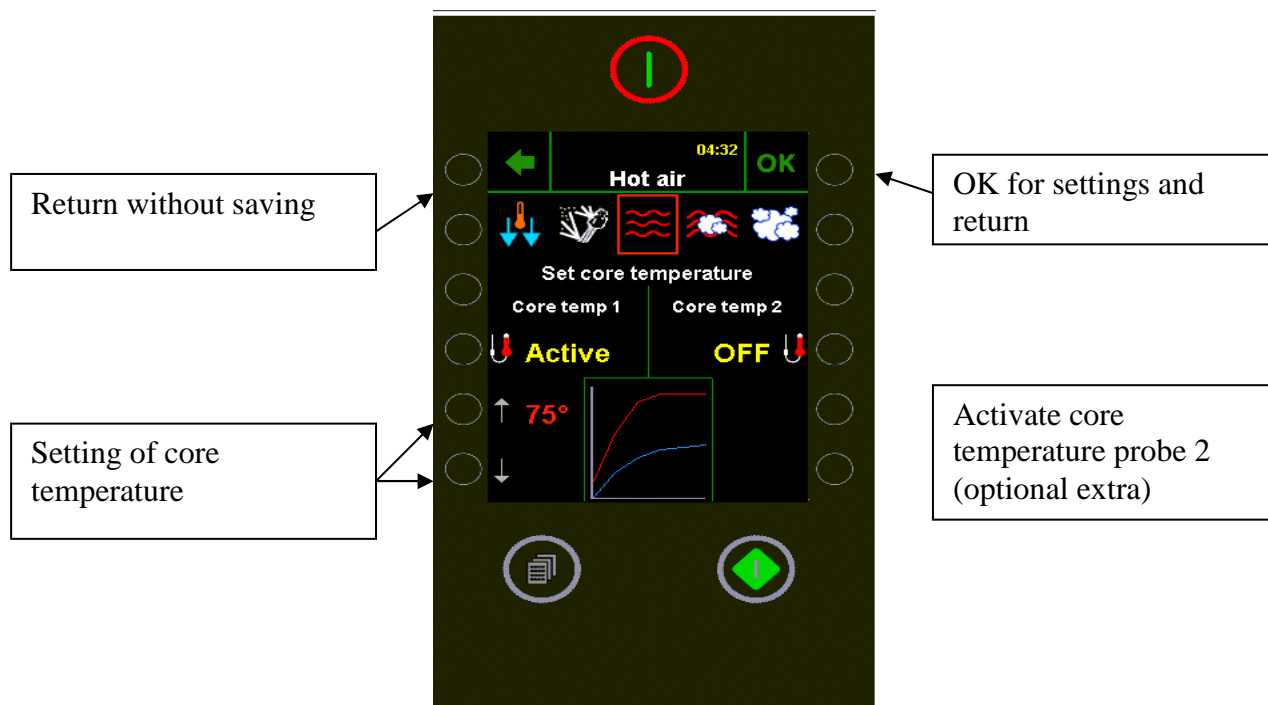
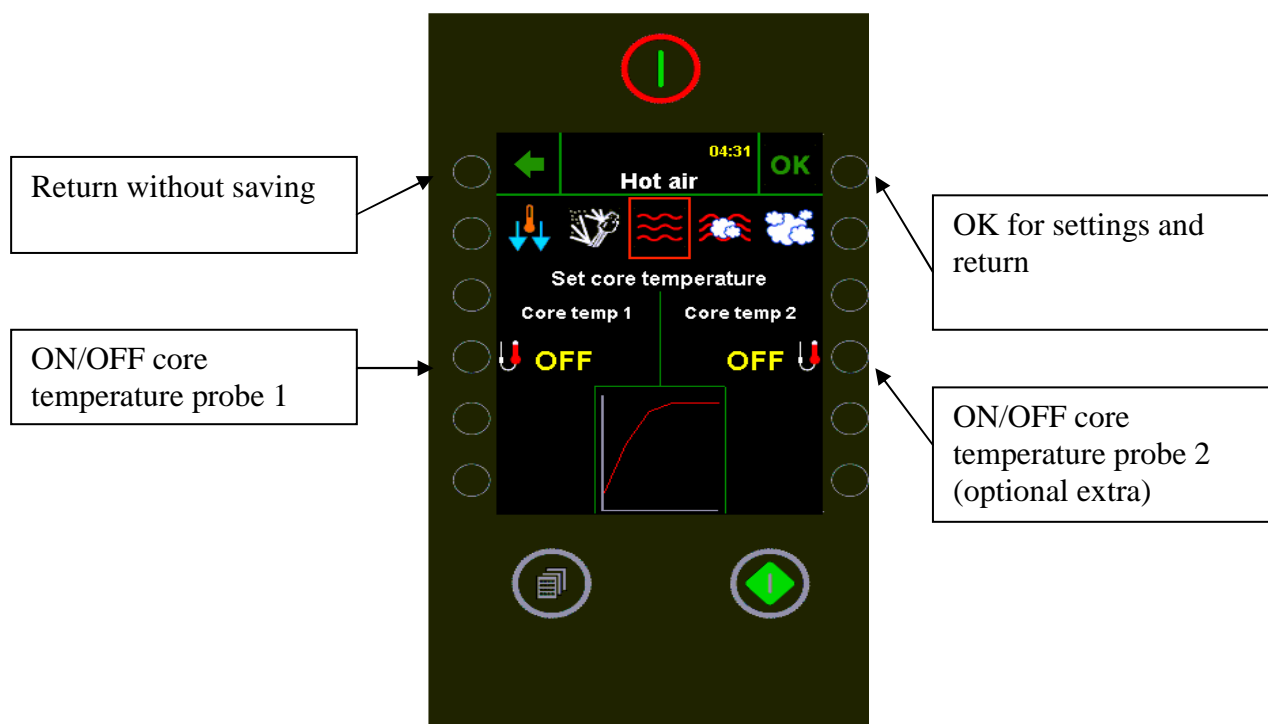


Software updating  
 Contact your oven supplier



# Multipoint core temperature probe



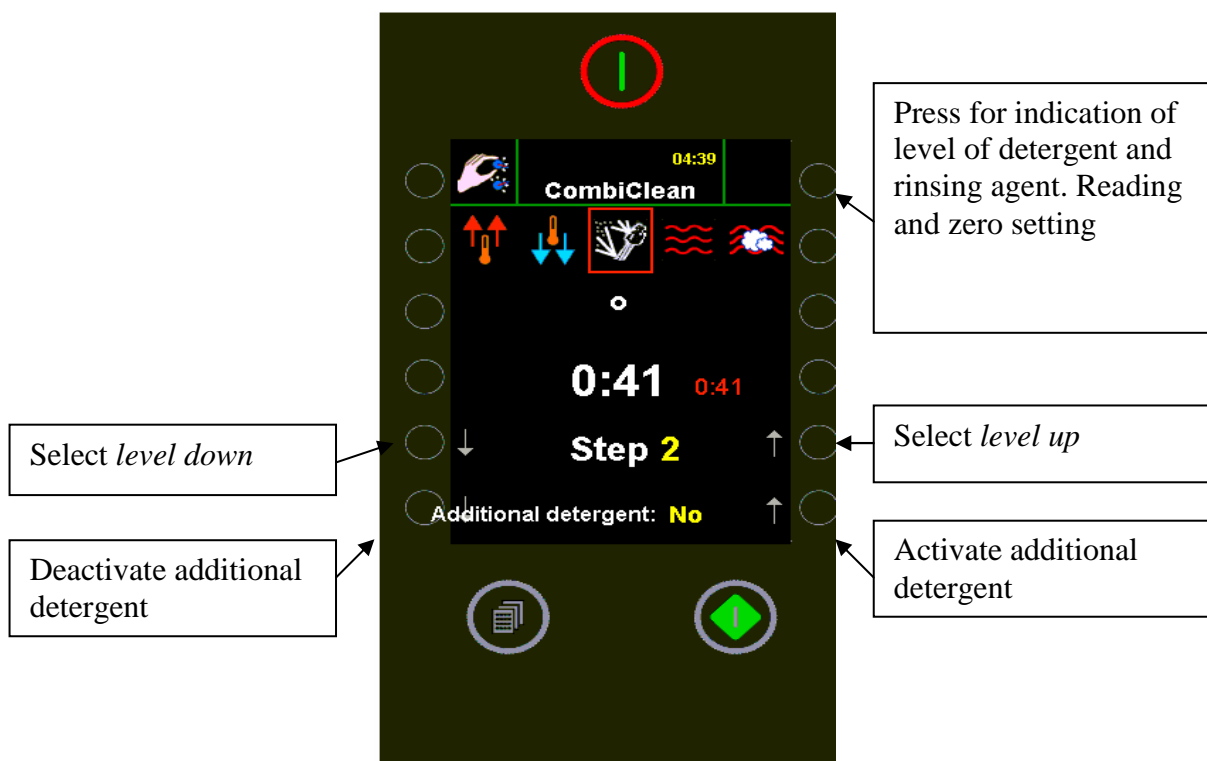


The graph illustrates the difference between oven temperature and core temperature. The graph is fixed and does not change when you set the core temperature. Core temperature probe 1 is red and core temperature probe 2 (optional extra) is blue.

#### Cooking with core temperature probe 2

The temperature in the product determines which of the two probes first reaches the desired core temperature. When one of the probes reaches the core temperature, an alarm sounds and a message appears in the display. Take out the product and deactivate the probe (OFF). Close the door and the oven continues until the second probe reaches the desired core temperature.

## CombiClean, 5 steps and adding additional detergent (optional extra)



Check the level of detergent and rinsing agent by pressing the uppermost key on the right side. Remove the strainer from the bottom of the oven chamber. Insert wash arm. Fit retainer on wash arm. Close oven door. Choose program: 0 is 2 minutes' rinsing with water – 1 is light cleaning and 4 is very thorough cleaning. You can add additional detergent, if necessary.

We recommend the use of CombiClean every day.

If the oven is too hot (above 100°C), use the cooling mode.

We recommend that you use CombiClean every day. It may be necessary to use a soft brush/sponge and detergent to remove cakes of burned food from the oven chamber.

Start the cleaning program when you go home in the evening. When the program is over, the oven automatically switches to an energy-saving standby function.

Do not forget to clean the other mechanical parts of the oven (see "Cleaning").

Recommended consumption of water, detergent and rinse aid for step 4, without additional detergent:

Models: 1.06, 1.08, 1.10, 1.12, 2.10

Water: 17 – 49 l

Detergent: 0.1 – 0.6 l

Rinse aid: 0.05 – 0.10 l

Models: 1.16, 1.20, 2.10

Water: 22 – 88 l

Detergent: 0.15 – 0.90 l

Rinse aid: 0.1 – 0.15 l

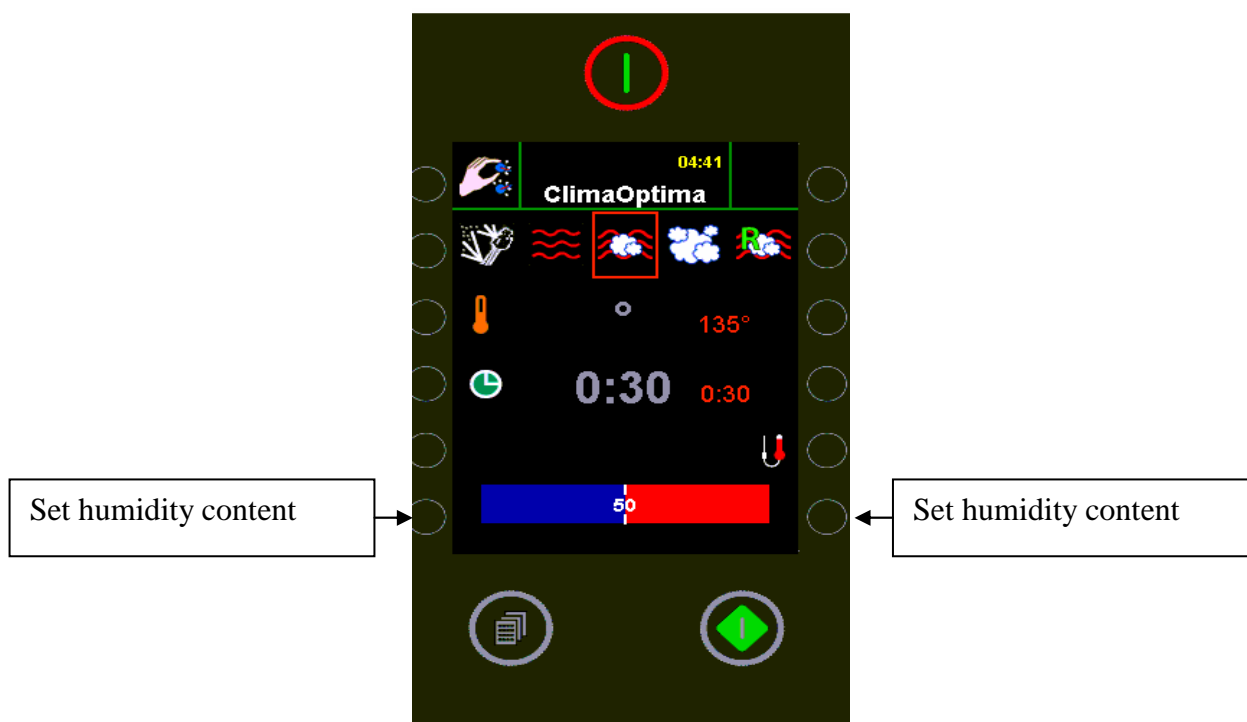
Steps 1 and 2 are used after **steaming/roasting at low temperatures**.

Steps 3 and 4 are used after **the roasting of meat**.

Additional detergent at steps 3 and 4 are used after **the roasting of meat at temperature above 180°C**.

**If the oven is not connected to a soft water plant, CombiClean cannot function properly.**

## ClimaOptima (optional extra)



**When using ClimaOptima correctly, you minimise shrinkage and enhance the appearance and taste of the products.**

Blue bar: Actual amount of humidity in oven chamber  
 White figures Humidity set  
 If bar is all red, oven chamber contains 0% humidity.  
 If bar is all blue, oven chamber contains 100% humidity.

**If the oven is not connected to a soft water plant, CombiClean cannot function properly.**

ClimaOptima offers you the possibility of adding up to 100% humidity to the oven chamber (temperature range: 70 – 250°C). The computer automatically operates according to the desired humidity content by adding or removing humidity.

Many products contain a rather large amount of water and therefore give off a great deal of humidity during preparation. Therefore, the oven chamber often contains 15 – 50% natural humidity.

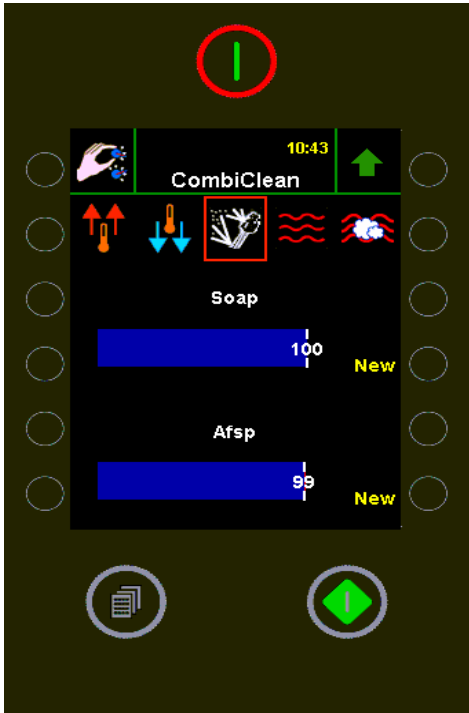
Preheating with the desired humidity content for 5 minutes is recommended.

For quick preparation, we recommend the following combination: 190°C – 70% humidity  
 Despite the short time of preparation, products such as marinated pieces of meat, fresh vegetables and bread are treated very gently

To produce a gravy when braising meat, apply 70 – 80% humidity at 145 – 165°C.  
 For poaching fish, poultry and vegetables, apply 70 – 95% humidity at 70 – 120°C.  
 For steaming potatoes, rice, pasta, meat, etc., apply 100% humidity at 100°C.

# Insufficient cleaning detergent and rinsing agent – replacing canisters (optional extra)

Before activating CombiClean by pressing ON/OFF, you can check the supply of detergent and rinse aid by pressing the key in the upper right-hand corner (green arrow).

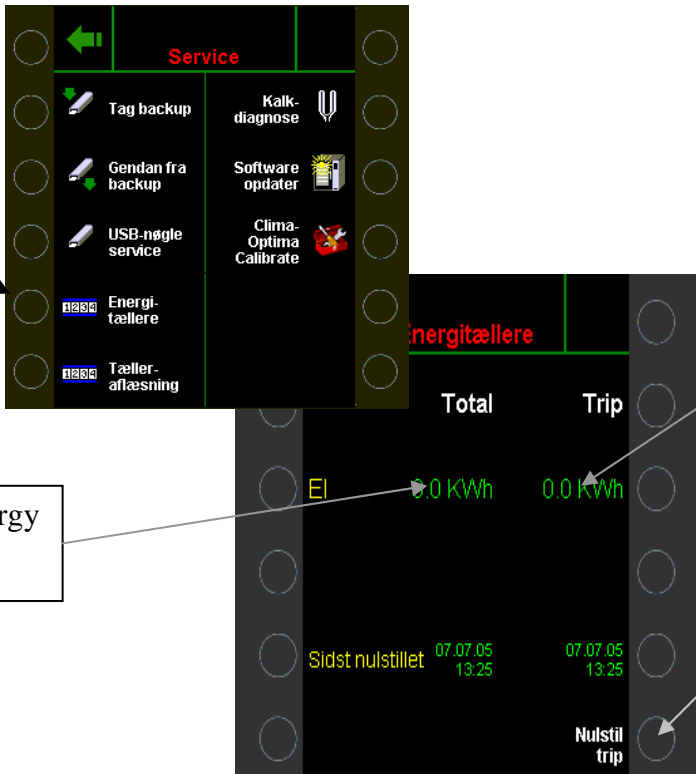


Press to return to work screen

When the canister for detergent is replaced, reset detergent by pressing *new*.

When the canister for rinsing agent is replaced, reset rinsing agent by pressing *new*.

# Energy counter (optional extra)



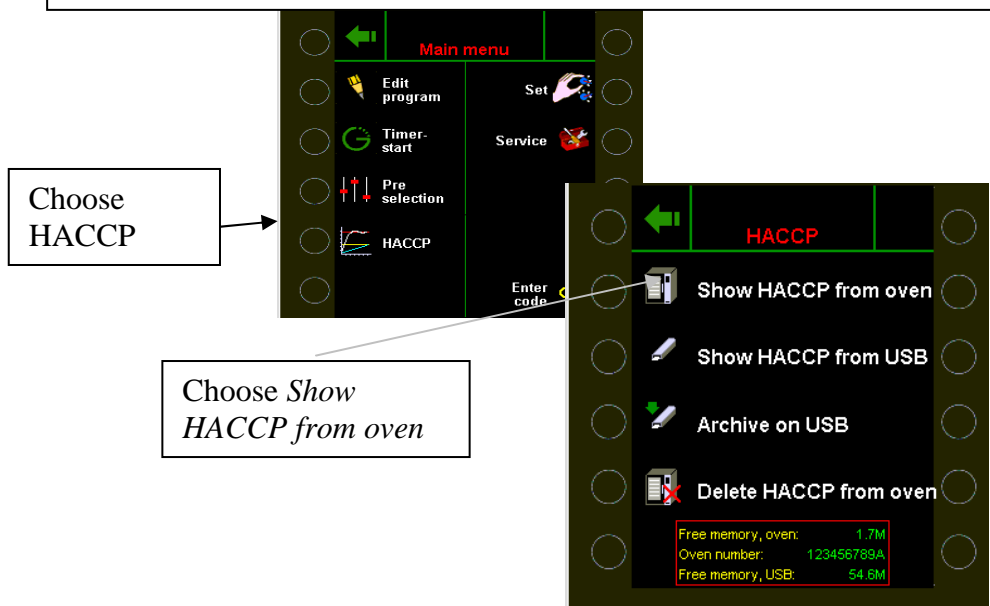
Press *Energi* counters

Read total energy consumption

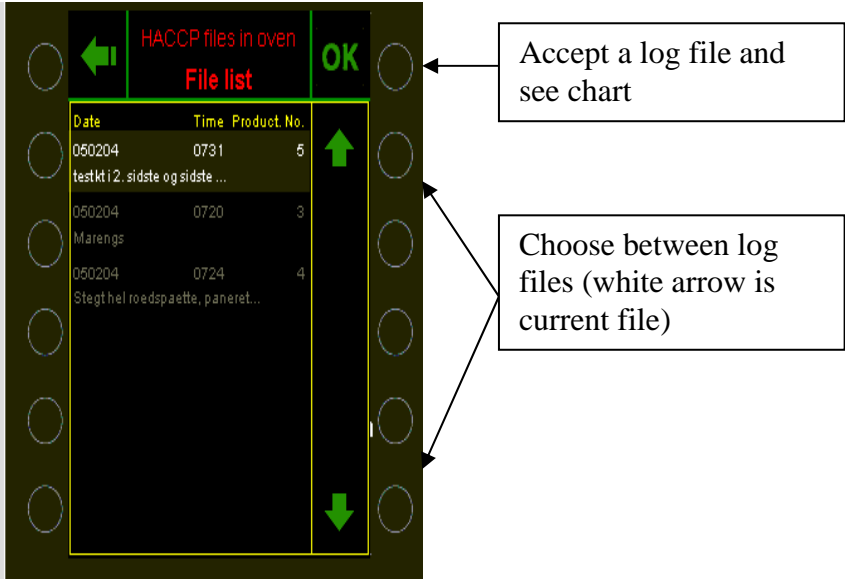
Read energy consumption since last reset of trip counter

Reset trip counter

# HACCP library (optional extra)



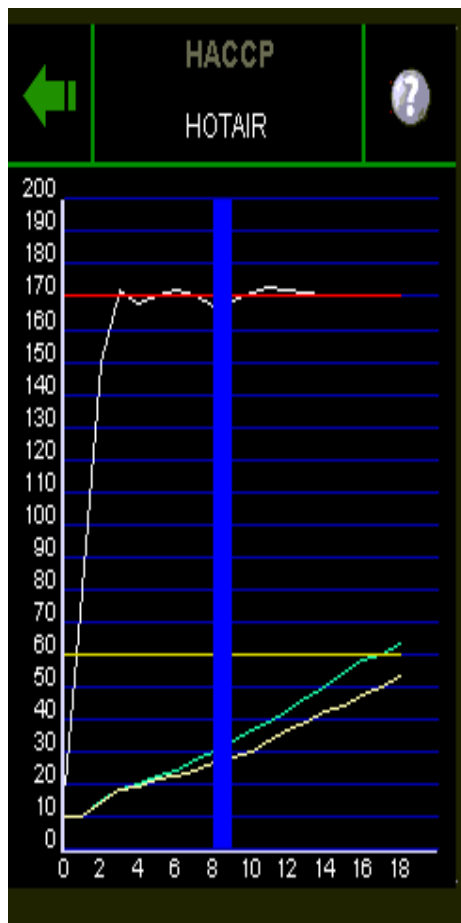
In the following menus, choose YEAR – MONTH – DATE using arrows to the right. Press OK when the correct setting is found.



The library can hold approx. 1000 log files. You will be notified when the memory is full so that you can empty the memory with the USB key or through COMBINET (both are optional extras). If nothing is done, the computer will automatically start to overwrite the oldest files.

# HACCP diagram (optional extra)

Return to previous screen



Explanation of colours used

Vertically:	Degrees
Horizontally:	Minutes
Red line at 170:	Temperature that has been set.
White, curved and winding line:	Current oven temperature.
Wide, vertical blue line at 8:	Shows that the oven has been open for approx. 30 seconds.
Light blue, curved line:	Shows the core temperature measured by the left core temperature probe (probe No. 1).
White, curved line:	Shows the core temperature measured by the right core temperature probe (probe No. 2).

## HOW TO ACHIEVE PERFECT BAKING AND ROASTING RESULTS

A HOUNÖ oven gives you optimum possibilities of achieving good baking/roasting results. Below are a few pieces of advice on baking and roasting in your HOUNÖ oven.

If your baking/roasting results leave something to be desired, if, for instance, "uneven" baking/roasting occurs, follow these recommendations:-

### **Preheating**

It is important always to preheat the oven. The first time you heat the oven after it has been turned off for more than 4 hours, it must be preheated at **250°C for 20 minutes or at 30°C above the desired working temperature** (using the PREHEATING mode).

It is also important that the products to be cooked all have the same temperature when they are placed in the oven. When baking frozen products, the oven should be preheated for an extra long period of time and it might be a good idea to leave the products at room temperature for 5 - 10 minutes before they are placed in the oven.

### **Tip**

Each time you cook a full oven load during the day, you should preheat the oven for 0 – 2 minutes at 250°C (using the PREHEATING mode). The oven should also be preheated after an interval between baking/roasting.

### **Fan speed**

It is recommended always to use **high fan speed**. High fan speed ensures the best and most even distribution of heat in the oven. Only in the case of light or delicate products is the occasional use of low fan speed recommended.

### **Loading the oven**

1. It is recommended that canteens and baking sheets are placed in the rack as follows: the first one in the middle, the second one above the first one, the third one below the first one, the fourth one above the second one, etc.
2. The products on the sheets should all have the same height. A loaf next to a cake may result in uneven baking. **Different types of product should be placed on different sheets/trays.**

The sheets/trays should not be overloaded, the air must be able to circulate freely around the products.

## BAKING of bread dough and deep-frozen bread

Baking makes large demands on a convection oven because the products are widely different. Bread dough products and some preproved bake-off products should first be proved in a proving cabinet. Most preproved products should be taken directly from the freezer. The temperature of bread dough products when they are placed in the oven is approx. 30°C, while the temperature of prebaked products is often -10°C.

Obviously, frozen products have a considerable effect on the temperature in the oven chamber. It is therefore important that the oven is preheated to a temperature that is considerably higher than the working temperature. For full oven loads of frozen products, we recommend that the oven is preheated at a temperature which is 30% higher than the desired production temperature.

If low fan speed is used, baking times should be increased by at least 1 min.

The following are recommended settings:

### **Preproved Danish pastry**

Take directly from freezer and bake in a preheated oven. Bake for 18 min. at 165 – 190°C with the exhaust open.

### **Preproved bread / classic bake-off**

Thaw for at least 2 – 3 hours covered in plastic or in a plastic bag, or in a refrigerator overnight. Should raise two or three times its size and be baked in a preheated oven for 18 – 28 min. at 165 – 190°C with the exhaust open. If the oven chamber is only half full or less than half full, use low fan speed.

### **Ordinary bread dough**

Should raise two or three times its size in a proving cabinet or at room temperature covered with plastic. Optimum temperature is 30 – 37°C, or prove in a refrigerator (3-5°C) for 12 – 24 hours. The lower the temperature, the longer the proving time. If the dough is “soft/moist”, the products may raise too much.

### **Prebaked rolls**

Take directly from freezer and bake in a preheated oven for 11 min. at 175-190° with the exhaust open.

### **Prebaked loaves**

Thaw for at least 3 – 6 hours covered with plastic or in a plastic bag, or in a refrigerator overnight, and bake in a preheated oven for 11 min. at 175-190°C with the exhaust open.

### **Prebaked rye bread**

Thaw for at least 12 hours covered with plastic or in a plastic bag, or in a refrigerator overnight, and bake in a preheated oven for 25 – 30 min. at 155 – 165°C with the exhaust open.

**You may also contact your bake-off supplier for specific instructions.**



## Recommended Programs

The following recipes are for ovens equipped with the modes ClimaOptima and Steaming. To the right is a conversion table which enables you to use the recipes in all HOUNÖ ovens.

For further inspiration, see the recipes on our website: [www.houno.com](http://www.houno.com)

<b>ClimaOptima 0 %</b>	<b>Hot air with exhaust open</b>
<b>ClimaOptima 30 – 60%</b>	<b>Combi 1</b>
<b>ClimaOptima 70 – 90%</b>	<b>Combi 2</b>
<b>ClimaOptima 100%</b>	<b>Combi 3</b>
<b>Steaming</b>	<b>Combi 3</b>

**Note: Most programs have a PREHEATING OR PRESTEAMING mode followed by STOP. This means that the products should not be loaded into the oven until this step is completed.** Find program – press start – wait for alarm signal – open door – load oven – insert multipoint core temperature probe, if any – close door. The program continues automatically.

\*(This value refers to the estimated amount of humidity that the products give off during the below programs)

Veal & Beef		Mode	%	C	Min.	CT	Remarks
Tournedos, medium	1	Preheating		250	1		Apply special browning fat to meat and tray. Use baking sheets, grilling sheets, enameled iron sheets *20%
	2	Stop					
	3	Hot air / exhaust open		250		57	
Fillet with flank, 4-6 kg, medium	1	Preheating		160	2		*50%
	2	Stop					
	3	ClimaOptima	60	135	20		
	4	ClimaOptima	20	150		57	
	5	Hot air		185		62	
Tenderloin, roasted whole, 1½-3 kg, medium	1	Preheating		210	2		Salting 5-10 g per kg, 6-24 hrs before roastig reduces shrinkage by an additional 2-3% *30%
	2	Stop					
	3	ClimaOptima	30	185		60	
Roasted pieces of meat, medium	1	Preheating		250	1		Salting 5-10 g per kg, 6-24 hrs before roastig reduces shrinkage by an additional 2-3% *30%
	2	Stop					
	3	Hot air / exhaust open		250		59	
Braising, 3-6 kg, well-done	1	Preheating		160	2		*60%
	2	Stop					
	3	ClimaOptima	70	135		65	
	4	ClimaOptima	40	165		75	
Joint of beef or veal, 3-6 kg, with lard, well-done	1	Preheating		140	2		*50%
	2	Stop					
	3	ClimaOptima	80	110	20		
	4	ClimaOptima	40	135		50	
	5	ClimaOptima	20	165		70	
	6	Hot air / exhaust open		195	15		
Long-time roasting, 10 hours, Meat with lard and fat, well-done	1	ClimaOptima	100	110	30		*50%
	2	ClimaOptima	30	80	180		
	3	ClimaOptima	30	70	370		
	4	ClimaOptima	0	220	20		
Long-time roasting, 10 hours, trimmed meat, medium	1	ClimaOptima	40	100	30		*50%
Braised knuckle of veal	1	Preheating		180	2		*60%
	2	Stop					
	3	ClimaOptima	60	165		60	
	4	ClimaOptima	20	100		70	
Roastbeef, 2-5 kg, medium	1	Preheating		160	2		Salting 5-10 g per kg, 6-24 hrs before roastig reduces shrinkage by an additional 2-3%. *40%
	2	Stop					
	3	ClimaOptima	30	135		57	

Sirloin in puff pastry	1	Preheating		180	2		*50%		
	2	Stop							
	3	Hot air		150		50			
	4	Hot air / exhaust open		180		60			
Steamed brisket of veal and beef, 1–4 kg, well-done	1	Steaming		100	8		*60%		
	2	Stop							
	3	Steaming		100		80			
	4	Steaming		80	45				
Lasagne	1	ClimaOptima	30	145		85	*60%		
	2	ClimaOptima	0	185	10				
Minced meat dishes	1	ClimaOptima	40	165		80	*60%		
	2	ClimaOptima	0	185	10				
Pâté in tins of 1000 g each	1	ClimaOptima	30	80		75	*60%		
	2	ClimaOptima	0	100	10				
		<b>Pork</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Neck of pork and rib roast with lard, 2-5 kg, well-done	1	ClimaOptima	100	100	30		*50%		
	2	ClimaOptima	60	165		78			
	3	Hot air / exhaust open		195	20				
Roasted saddle of pork, 2-5 kg	1	Preheating		175	2		*40%		
	2	Stop							
	3	ClimaOptima	30	165		75			
Neck of pork without lard, 2-4 kg, well-done	1	Preheating		195	2		*50%		
	2	Stop							
	3	ClimaOptima	30	165		78			
	4	ClimaOptima	20	70	45				
Ham with knuckle, 8-10 kg, well-done	1	Steaming		100	8		*50%		
	2	Stop							
	3	Steaming		100	120				
	4	ClimaOptima	60	135		75			
	5	ClimaOptima	20	185	20				
Ham roast without lard, 2-3 kg, well-done	1	Preheating		185	2		*30%		
	2	Stop							
	3	ClimaOptima	60	165		85			
Roasting of pork chops, 140-200 g	1	Preheating		250	1		Add special browning fat to meat and tray. Use silicone-coated baking sheets, enameled cast iron trays or specially designed grilling trays. *30%		
	2	Stop							
	3	Hot air		225		16			
Spareribs, basic preparation	1	Steaming		100	8		Spice/marinate		
	2	Stop							
	3	Steaming		100	45				
Spareribs, finishing (presteamed, marinated)	1	Preheating		200	2		*30%		
	2	Stop							
	3	ClimaOptima	65	170	30				
Braising, 2-3 kg, well-done	1	Preheating		160	2		*60%		
	2	Stop							
	3	ClimaOptima	60	135		65			
	4	ClimaOptima	70	165		80			
Suckling pig roasted whole, 20-23 kg, well-done	1	ClimaOptima	60	100	240		Use HOUNÖ rack for suckling pig which is available for model sizes 1.16 and 1.20. *40%		
	2	ClimaOptima	20	70	210				
	3	Hot air / exhaust open		250	30				

<b>Delta-T roasting</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min</b>	<b>CT</b>	<b>Remarks</b>
Delta-T, medium	1	Preheating		210	2		For whole roasts. Perfect program for production during the night. The meat is kept hot indefinitely at the last stage (Co&Ho). Recommended time of preparation before last stage is 60/90 minutes (medium/well done). Optimum tenderness of the meat is achieved. Shrinkage is reduced by approx. 10-15 % as compared to traditional roasting methods. The meat can be taken directly from the oven.
	2	Stop					
	3	ClimaOptima	20	185	10		
	4	Cooling		40			
	5	ClimaOptima Delta-T	30			62	
	6	Hot air / low fan speed / Cook & Hold				60	
Delta-T, well-done	1	Preheating		210	2		For whole roasts. Perfect program for production during the night. The meat is kept hot indefinitely at the last stage (Co&Ho). Recommended time of preparation before last stage is 60/90 minutes (medium/well done). Optimum tenderness of the meat is achieved. Shrinkage is reduced by approx. 10-15 % as compared to traditional roasting methods. The meat can be taken directly from the oven.
	2	Stop					
	3	ClimaOptima	20	185	10		
	4	Cooling		40			
	5	ClimaOptima Delta-T	30			80	
	6	Hot air / low-fan speed / Cook & Hold				60	
<b>Poultry</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Chicken, 1000 g	1	Preheating		210	2		*60%
	2	Stop					
	3	ClimaOptima	60	180	10		
	4	ClimaOptima	40	190	15		
	5	ClimaOptima	0	205	7		
Chicken, 1400 g	1	Preheating		190	2		*60%
	2	Stop					
	3	ClimaOptima	60	165	30		
	4	Hot air / exhaust open	0	190	10		
Chicken, 1700 g	1	Preheating		190	2		*60%
	2	Stop					
	3	ClimaOptima	60	165	30		
	4	ClimaOptima	0	190	10		
Foie gras terrine	1	Cooling		55			
	2	Stop					
	3	Hot air / low fan speed		65		45	
Chicken pie, 1000 g, in tin	1	Preheating		180	2		*60%
	2	Stop					
	3	ClimaOptima	60	160		75	
Duck roast, 3000 g	1	Preheating		185	2		*50%
	2	Stop					
	3	ClimaOptima	50	145	80		
	4	ClimaOptima	25	170	30		
<b>Fish</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Steamed fish, 60-130 g	1	Steaming		70	8		
	2	Stop					
	3	Steaming		70		60	
Fish terrine	1	Preheating		100	2		*70%
	2	Stop					
	3	ClimaOptima	60	120		65	
Roasted plaice, breaded	1	Preheating		250	2		Apply special browning fat to fish/tray. Use silicone-coated baking sheets, enameled cast iron trays or specially designed grilling trays.
	2	Stop					
	3	ClimaOptima	0	225	16		

Steamed salmon, whole fillet, 1-3 kg	1	Steaming		70	8		Use flat trays and baking paper. Place fish on skin side. After steaming, remove skin and carefully remove dark fat from the back of the fish with a spoon.
	2	Stop					
	3	Steaming		70		60	
Grilled fish, 80 g	1	Preheating		250	2		*20%
	2	Stop					
	3	Hot air / exhaust open		225	7		
<b>Vegetables</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Steamed potatoes, 70-120 g	1	Steaming		100	8		Max. 8-9 kg, perforated container
	2	Stop					
	3	Steaming		100	40	98	
Baked potatoes	1	ClimaOptima	60	165		98	*60%
Cream potatoes	1	Preheating		180	2		*60%
	2	Stop					
	3	ClimaOptima	50	150	65		
French fries, Farmfrites Superfarm Service+ (9x9 mm)	1	Preheating		250	2		Use special GN wire basket. Tip: Shake the basket 1 time during the preparation process.
	2	Stop					
	3	ClimaOptima	20	230	7		
French fries, Farmfrites Superfarm Service+ (7x7 mm)	1	Preheating		250	2		*20%
	2	Stop					
	3	ClimaOptima	20	230	5		
Steamed rice (parboiled)	1	Steaming		100	8		Use deep GN container and flat GN container as cover.
	2	Stop					
	3	Steaming		100	25		
Danish rice porridge	1	Steaming		100	8		Add sugar, salt and perhaps other spices and stir before adding milk. Use flat GN container as cover. 2 kg rice per 90 mm GN.
	2	Stop					
	3	Steaming		100	105		
<b>Bread &amp; Pastry</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Danish pastry, 85-100 g, bake-off	1	Preheating		210	2		The distance between the sheets should be 130 mm equalling the distance between every other runner. *40%
	2	Stop					
	3	Hot air		175	13		
	4	Hot air / exhaust open		180	5		
Danish pastry, mini, 40-75 g, bake-off	1	Preheating		180	2		The distance between the sheets should be 130 mm equalling the distance between every other runner. *40%
	2	Stop					
	3	Hot air / exhaust open		170	18		
Prebaked bread, 500-700 g, bake-off	1	Preheating		220	2		*30%
	2	Stop					
	3	Hot air / exhaust open		180	11		
Baquettes, 250 g, bake-off	1	Preheating		230	2		*20%
	2	Stop					
	3	Hot air		180	9		
Prebaked rye bread, 1100 g, bake-off	1	Preheating		190	2		*40%
	2	Stop					
	3	Hot air / exhaust open		160	25		

Semi-automatic bread program	1	Proving		32	45		
	2	Hot air / low fan speed		185	24		
	3	Hot air / exhaust open		185	10		
Bread, 60 g	1	Preheating		240	2		*40%
	2	Stop					
	3	Hot air / low fan speed		180	10		
	4	Hot air / exhaust open		180	5		
Bread, 4-600 g	1	Preheating		230	2		*30%
	2	Stop					
	3	Hot air		180	24		
	4	Hot air / exhaust open		200	4		
Puff pastry	1	Preheating		190	2		*50%
	2	Stop					
	3	Hot air / exhaust open and low fan speed		160	20		
<b>Desserts</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Crème brûlée, in portions of 1½ dl	1	Cooling		75			
	2	Stop					
	3	Hot air / low fan speed		75	80		
Meringue	1	Preheating		100	2		
	2	Stop					
	3	Hot air / exhaust open and low fan speed		95	80		
Genoise	1	Preheating		220	2		*30%
	2	Stop					
	3	Hot air / low fan speed / exhaust open					
<b>Shellfish</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Lobster, steamed	1	Steaming		100	8		
	2	Stop					
	3	Steaming		100	15		
Mussels, steamed	1	Steaming		100	8		
	2	Stop					
	3	Steaming		100	15		
Prawns, steamed	1	Steaming		100	8		
	2	Stop					
	3	Steaming		100	10		
<b>Game</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Fillet of venison, trimmed, 1-2 kg, medium	1	Preheating		190	2		*30%
	2	Stop					
	3	ClimaOptima	20	180		59	
Saddle of venison, larded, 3-5 kg, medium	1	Preheating		190	2		*50%
	2	Stop					
	3	ClimaOptima	40	160	10		
	4	ClimaOptima	60	165		57	
Haunch of venison	1	Preheating		190	2		*50%
	2	Stop					
	3	ClimaOptima	60	165		57	

<b>Lamb</b>		<b>Mode</b>	<b>%</b>	<b>C</b>	<b>Min.</b>	<b>CT</b>	<b>Remarks</b>
Leg of lamb, boneless, medium	1	Preheating		190	2		*50%
	2	Stop					
	3	ClimaOptima		60	165	57	
Stuffed venison of lamb (boneless), medium	1	Preheating		180	2		*50%
	2	Stop					
	3	ClimaOptima		60	150	55	
	4	ClimaOptima	0	185		60	
Fillet of lamb, trimmed, medium	1	Preheating		180	2		*30%
	2	Stop					
	3	ClimaOptima	20	180		59	

## Baking

Recommended values (from the HOUNÖ library of recipes 1985 – 2002)

Product	Operating mode	Processing time in minutes	Temperature °C	Remarks and tips
Rolls*	Hot air	15-20	170-180	Manual humidity for the first 10 sec., 40-50 g/ea.
Loaves*	Hot air	25-35	160-180	Manual humidity for the first 10 sec., 650 g/ea.
Buns*	Hot air	15-20	160-170	Manual humidity for the first 15 sec., 40 g/ea.
Baguettes, prebaked	Hot air, possibly exhaust open	10-12 / 2-4	170-180	No humidity pulsing
French loaves/ baguettes	Hot air, possibly exhaust open	15-20 / 2-5	170-180	Manual humidity for the first 10-20 sec.
Danish pastry**	Hot air, possibly exhaust open	10-50 / 5-7	170-180	Different sizes
Marble cake	Hot air	50-70	160-170	In a baking tin
Madeira cake	Hot air	50-80	150-160	In a baking tin
Vanilla biscuits	Hot air	7-10	160-170	
Puff pastry	Hot air	20-25	160-180	½ fan speed
Chou (cream puff)	Hot air	20-30	160-180	½ fan speed
Almond cake	Hot air	8-12	170	
Meringue	Hot air, possibly exhaust open	120-140	80	½ fan speed
	*) Dough products that are not prisen/prebaked by the manufacturer should prove/rise for approx. 15 - 40 min. depending on the product. Frozen products should be defrosted to +5°C before proving.			
	**) Danish pastry products based on bread dough should prove for 15-20 min., whereas certain bake-off products can be baked directly from the freezer. Frozen dough products should defrost longer.			

## Vegetables

Recommended values (from the HOUNÖ library of recipes 1985 – 2002)

Product	Operating mode	Processing time in minutes	Temperature °C	Remarks and tips
Potatoes	Steaming/100% ClimaOptima/Combi 3	30-40	100	Fresh. Different sorts of potatoes require different steaming times.
Potatoes	Hot air + exhaust open	15	100	Pre-boiled
Fried potatoes	Steaming/100% ClimaOptima/Combi 3	15	230	Pre-boiled and sliced - add oil
Baked potatoes	Steaming/100% ClimaOptima/Combi 3	60	185	
Carrots	Steaming/100% ClimaOptima/Combi 3	25	100	Fresh, whole, medium-sized
Small carrots	Steaming/100% ClimaOptima/Combi 3	18	100	Deep-frozen, add spices while frozen
Cauliflower	Steaming/100% ClimaOptima/Combi 3	20	100	Stalks, fresh
Broccoli	Steaming/100% ClimaOptima/Combi 3	15	100	Fresh
Broccoli	Steaming/100% ClimaOptima/Combi 3	18	100	Deep-frozen
Broccoli	Steaming/100% ClimaOptima/Combi 3	2-3	100	Blanching
Beans	Steaming/100% ClimaOptima/Combi 3	10	100	Deep-frozen
Brussels sprouts	Steaming/100% ClimaOptima/Combi 3	20	100	Frozen
Spinach	Steaming/100% ClimaOptima/Combi 3	8	100	Fresh
Celery	Steaming/100% ClimaOptima/Combi 3	20	100	Deep-frozen, add spices while frozen
Leeks	Steaming/100% ClimaOptima/Combi 3	15	100	Fresh
Rice	Steaming/100% ClimaOptima/Combi 3	30	100	Parboiled. 1 part of rice to 1½ part of cold water
Pasta	Steaming/100% ClimaOptima/Combi 3	25	100	Pour pasta into cold water. 1 part of paste to 1½ part of water*
Eggs	Steaming/100% ClimaOptima/Combi 3	8	100	Soft-boiled, perhaps stacked in egg trays
Eggs	Steaming/100% ClimaOptima/Combi 3	12	100	Hard-boiled, perhaps stacked in egg trays

\* The steaming time is reduced if preheated water is used.



## Meat Courses

Recommended values (from the HOUNÖ library of recipes 1985 – 2002)

Products	Operating mode	Processing time in minutes	Temperature °C	Remarks and tips
<b>Beef tenderloin</b>	Hot air + Combi 1 or ClimaOptima 20-40%	5 / 15	200 / 140	Fresh, whole fillet of beef. Add spices before cooking
<b>Roastbeef</b>	Hot air + Combi or ClimaOptima 40%	20 / 25	180 / 140	Add spices before cooking
<b>Joint of beef</b>	Steaming + Combi 2 + Hot air or ClimaOptima 100% + ClimaOptima 50%	15-20 / 70-90 / 20-25	100 / 140-150	Well-hung
<b>Roast veal</b>	Steaming + Combi 2 + Hot air Or ClimaOptima 100% + ClimaOptima 50%	10-15 / 60-70 / 15-20	160-190	Add spices and lard before cooking
<b>Roast pork</b>	Steaming + Combi 2 + Hot air or ClimaOptima 100% + ClimaOptima 30%	10 / 60 / 25	100 / 180 / 190	Neck with lard. Add spices before cooking
<b>Pork chops</b>	Hot air + exhaust open	15	225	Fresh
<b>Schnitzel</b>	Hot air + exhaust open	15	225	Fresh
<b>Meat balls</b>	Combi 1 / ClimaOptima 50%	15	165	Pre-fried in pan, 75 g
<b>Minced-meat dishes</b>	Steaming + Combi 1 + Combi 1 or ClimaOptima 60% in all steps	10 / 45 / 20	100 / 160 / 175	Approx. 2 kg in aluminium tin
<b>Liver pâté</b>	Hot air + exhaust open	45	170	250 g and 500 g aluminium tins placed in water bath
<b>Cured saddle of pork</b>	Combi 1 or ClimaOptima 60%	50-60	180	
<b>Smoked ham</b>	Combi 1 or ClimaOptima 60%	80	175	Apply mustard + clayed sugar
<b>Ham in puff pastry</b>	Hot air or ClimaOptima 20%	15 / 90	160 / 180	Exhaust open or closed
<b>Pickled neck</b>	Steaming / Combi 3 / ClimaOptima 100%	60	100	Fresh, without bones
<b>Liver</b>	Hot air or ClimaOptima 20%	6 / 6	235	Fresh, sliced - add oil
<b>Gratin</b>	Combi 1-2 or ClimaOptima 60%	45	185	
<b>Frankfurter</b>	Steaming / Combi 3 / 100% / ClimaOptima	18	80	
<b>Veal fricassée</b>	Hot air	30	170	Fresh
<b>Omelette</b>	Hot air + exhaust open	30		Apply fat to container

## Poultry, Fish and Game

Recommended values (from the HOUNÖ library of recipes 1985 – 2002)

Product	Operation mode	Processing time in minutes	Temperature °C	Remarks and tips
<b>Chicken</b>	Combi 1 + Hot air w. exhaust open or ClimaOptima 60% + ClimaOptima 0%	20-25 / 10-15	160 / 185	Fresh, thawed, 1000 g
<b>Chicken</b>	Combi 1 + Hot air w. exhaust open or ClimaOptima 60% + ClimaOptima 0%	35-45 / 10-15	180 / 220	Frozen, 800 g
<b>Chicken legs</b>	Combi 1 + Hot air w. exhaust open or ClimaOptima 60% + ClimaOptima 0%	15 / 5	160 / 185	Fresh, thawed
<b>Duck</b>	Combi 1 + Hot air w. exhaust open or ClimaOptima 60% + ClimaOptima 0%	50-60 / 50-60	170-180	Fresh or thawed, 3000 g
<b>Goose</b>	Combi 1 + Hot air w. exhaust open or ClimaOptima 60% + ClimaOptima 0%	90-120 / 15-20	160-185	Fresh or thawed
<b>Turkey</b>	Combi 1 + Hot air w. exhaust open or ClimaOptima 60% + ClimaOptima 0%	80-100 / 10-20	160-185	4000 g, perhaps covered with lard
<b>Flatfish</b>	Hot air	12-18	175-185	Fresh, cover with oil
<b>Greenland Halibut</b>	Steaming / Combi 3 / ClimaOptima 100%	10-20	70-75	Fresh
<b>Trout</b>	Steaming / Combi 3 / ClimaOptima 100%	10-15	70-75	Fresh
<b>Turbot</b>	Steaming / Combi 3 / ClimaOptima 100%	8-12	70-75	Fresh
<b>Cod</b>	Steaming / Combi 3 / ClimaOptima 100%	12-18	70-75	Fresh
<b>Mussels</b>	Steaming / Combi 3 / ClimaOptima 100%	15-20	75-80	Fresh
<b>Saddle of venison</b>	Combi 1 or ClimaOptima 50%	25-23	180-200	Fresh, possibly covered with lard or oil
<b>Haunch of venison</b>	Steaming + Hot air + Combi 1 or ClimaOptima 100% + ClimaOptima 50%	15 / 20 / 30-40	170-180	Fresh, possibly covered with lard or oil
<b>Leg of lamb</b>	Steaming + Combi 1 + Hot air or ClimaOptima 100% + ClimaOptima 50%	20 / 25 / 30-40	170-180 / 140-160 / 160	Without bones, add spices
<b>Meat loaf</b>	Combi 1 or ClimaOptima 60%	15-20	220	Fresh, add spices
<b>Vacuum-packed meat/poultry</b>	Steaming / Combi 3 / ClimaOptima 100%	10-15	70-85	Without bones