



	Built-in ovens	
<p>© Electrolux Home Products Italy S.p.A. Corso Lino Zanussi, 30 I - 33080 Porcia -PN- Tel. +39 0434 394850 Fax +39 0434 394096</p>	<p>Publication no. 599 70 43-32 EN</p>	<p>SPECIFIC MANUAL KRONOS LEVEL 2 (OVC1000)</p>
<p>SOI Edition: 04.2008 - Rev. 00</p>	<p>Version Pyro Italy 1 New Demo</p>	

CONTENT

1	INTRODUCTION	3
1.1	Purpose of this Manual	3
1.2	ESD - Electrostatic Discharge and its effect on the components	3
2	TECHNICAL CHARACTERISTICS	4
2.1	SOFTWARE	4
2.2	TIMES	4
2.3	AUTOMATIC SWITCH-OFF	4
2.4	DIMENSIONS	4
2.4.1	MINIMUM INTERNAL DIMENSIONS OF KITCHEN CABINET	4
2.4.2	NET DIMENSIONS OF OVEN CAVITY	4
2.5	POWER RATINGS	5
2.5.1	Power ratings oven	5
3	CONTROL PANEL	6
3.1	CONTROLS	6
3.2	DISPLAY	8
4	COOKING FUNCTIONS	9
5	SPECIAL FUNCTIONS	12
5.1	RAPID HEATING	12
5.2	FUNCTION REQUIRING A TWO-KEY COMBINATION	12
5.3	OVEN LIGHT FUNCTION	12
5.4	ENERGY SAVING FUNCTION (residual heat)	13
5.5	Pottery removal function	13
5.6	DEMO FUNCTION	13
5.6.1	General description:	13
5.6.2	Button sequence for activation / deactivation:	13
5.6.3	Indications on the display:	14
5.6.4	Active charges:	14
5.6.5	Description:	14
5.6.6	To activate the function:	14
5.6.7	To deactivate the function:	14
6	ERROR CODES	15
7	OVEN BASIC WIRING DIAGRAM	16

1 INTRODUCTION

1.1 Purpose of this Manual

The purpose of this Manual is to integrate the information provided in the Kronos Theory Manual OVC1000, in the Kronos Troubleshooting Manual, in the Access Plus Accessibility Manual and in the Pyrolytic Ovens Manual.

As well as the technical characteristics, this specific Manual also contains specific information relative to this version of the electronic control system

1.2 ESD - Electrostatic Discharge and its effect on the components

The interface for the control unit is not fitted with an internal device to protect against electrostatic discharge. When effecting repairs, therefore, the service engineer must check for stabilization of the potential on the oven casing (i.e. discharge any static electricity by touching the oven casing) in order to prevent the possibility of overload, which might damage the control unit. The same care is necessary when handling control units supplied as spare parts (i.e. not yet fitted to the oven), which must be removed from the protective bag in ESD only after stabilizing the potential (i.e. discharging any static electricity) and only then installed in the appliance.

Important! The theory behind the process of electrostatic charge and discharge is not discussed in this Manual. The tangible effects are considered to be more important. However, the effects are felt frequently when touching a metal handle and feeling the electrostatic discharge in the form of a minor shock.

But what happens when stabilization of the potential takes place with semi-conductor components (i.e. components on a circuit board, such as integrated circuits, microprocessors etc.)?

Stabilization of the potential takes place across the internal structure of the component. This does not necessarily lead to the immediate destruction of the component; Subsequent malfunctions across damaged internal connections may be more harmful, and these occur only as a result of overheating or current overloads.

It is true that almost all sensitive semi-conductor components (such as MOS circuits) have been improved by the addition of protective measures, but the internal structures of these components are today smaller than, for example, ten years ago, which tends to increase their sensitivity to the previous levels).

IMPORTANT!

Which components are susceptible to damage by static electricity during repairs?

All circuit boards featuring control and command accesses (door switches, food probes etc.), bare tracks and microprocessors, as well as any other circuits with free access.

EXAMPLES:

- Programmers with access to the food probe and the door switch.
- Programmers whose control processors are accessible (due to their high costs, the protective systems are only partial).
- W.O.E.C. control units.
- S.O.E.C. control units.
- C.H.E.C. control units.
- KRONOS control units
- R.H.E.A. control units.

2 TECHNICAL CHARACTERISTICS

2.1 SOFTWARE

This level 2 version of "Kronos" - Basic Italy 1 New Demo - features the software version k2c37162, which is indicated as shown below:

C37 0162

N.B.: The last three digits of the software code (the number shown on the display), in this case "162", indicate the level of modification, and may vary; however the control units remain interchangeable with the previous having same number.

2.2 TIMES

Time indication	24 hours
Maximum cooking time	23 hours 59 minutes
Minute-minder	23 hours 59 minutes

2.3 AUTOMATIC SWITCH-OFF

The automatic switch-off function operates as follows:

Temperature setting	Automatic switch-off
30-115°C	After 12 hours
120-195°C	After 8 hours 30 minutes
200-245°C	After 5 hours 30 minutes
250-280°C	After 3 hours

2.4 DIMENSIONS

2.4.1 MINIMUM INTERNAL DIMENSIONS OF KITCHEN CABINET

Column height	580 mm
Undercounter height	593 mm
Width	560 mm
Depth	550 mm

2.4.2 NET DIMENSIONS OF OVEN CAVITY

Height	335 mm
Width	395 mm
Depth	400 mm
Net volume	53 l

2.5 POWER RATINGS

2.5.1 Power ratings oven

Upper heating element	800 W
Lower heating element	1000 W
Upper + lower heating element	1800 W
Single grill heating element	1650 W
Double grill heating element	2540 W
Rear heating element (circular)	2000 W
Oven light	40 W
Cooling fan (tangential)	25 W
Oven fan (convection)	25 W
Oven maximum power rating	2520 W
Voltage (50Hz)	230 V

3 CONTROL PANEL

3.1 CONTROLS

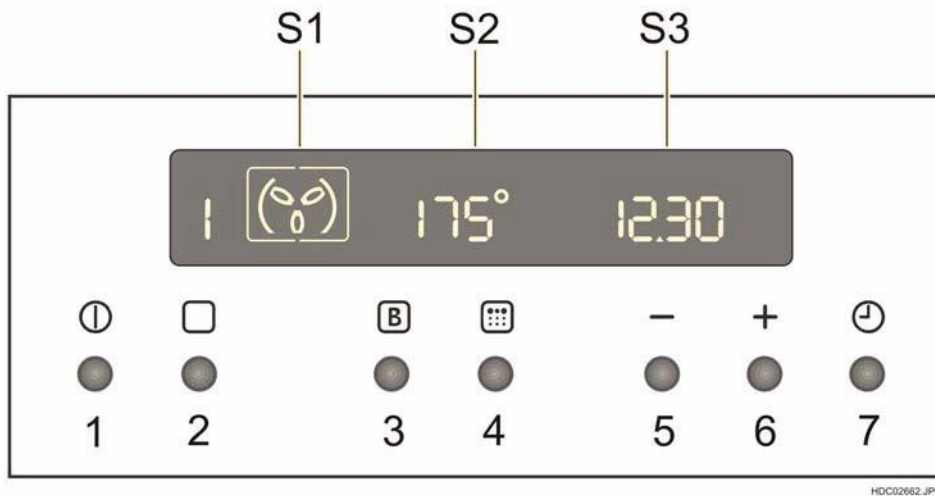


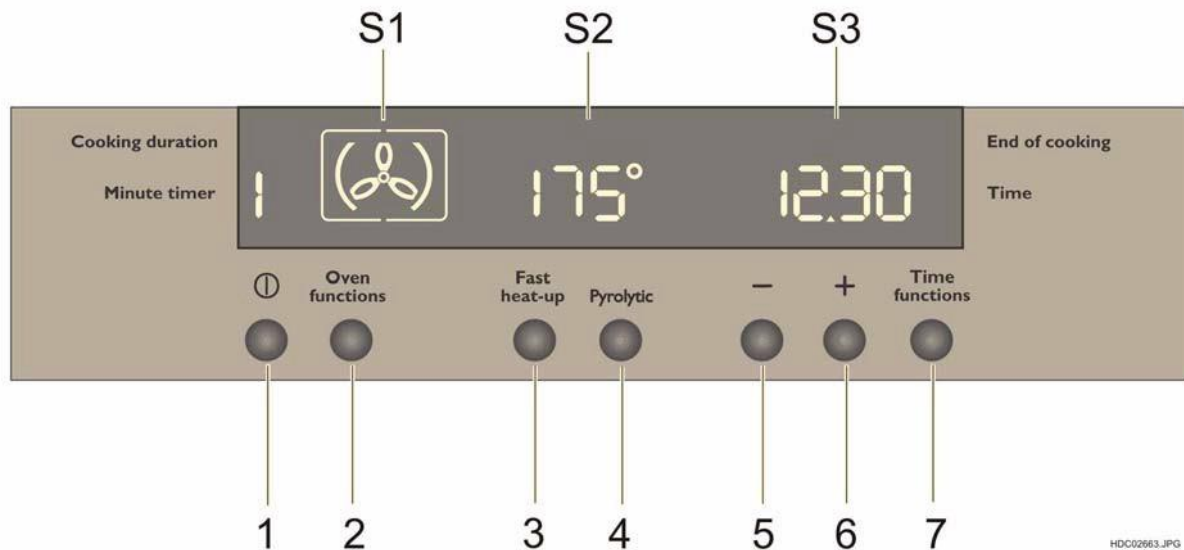
Fig. 1

- 1 - Button ① "ON/OFF" to switch the oven ON and OFF
- 2 - Button □ "FUNCTION" to select the cooking functions of the oven
- 3 - Button B "RAPID HEATING" to select the rapid oven heating function
- 4 - Button ④ "PYROLYSIS" to set a cleaning programme with pyrolysis
- 5 - Button - "BACK" to decrease the temperature and time
- 6 - Button + "FORWARD" to increase the temperature and time
- 7 - Button ⌚ "CLOCK" to set the "minute-minder", "end of cooking", "cooking time" functions and the time of day.

S1 - Cooking functions


S2 - Temperature display

S3 - Time display



HDC02663.JPG

Fig. 2

- 1 - Button  "ON / OFF" To switch the oven ON and OFF
- 2 - "Oven functions" button to select the oven cooking functions
- 3 - "Fast heat-up" button to select the rapid oven heating function
- 4 - "PYROLYSIS" button to set a cleaning programme with pyrolysis
- 5 - "-" "BACK" button to decrease the temperature and time
- 6 - "+" "FORWARD" button to increase the temperature and time
- 7 - "Time functions" button to set the "minute-minder", "end of cooking", "cooking time" functions and the time of day

S1 - Cooking functions

S2 - Temperature display

S3 - Time display

3.2 DISPLAY

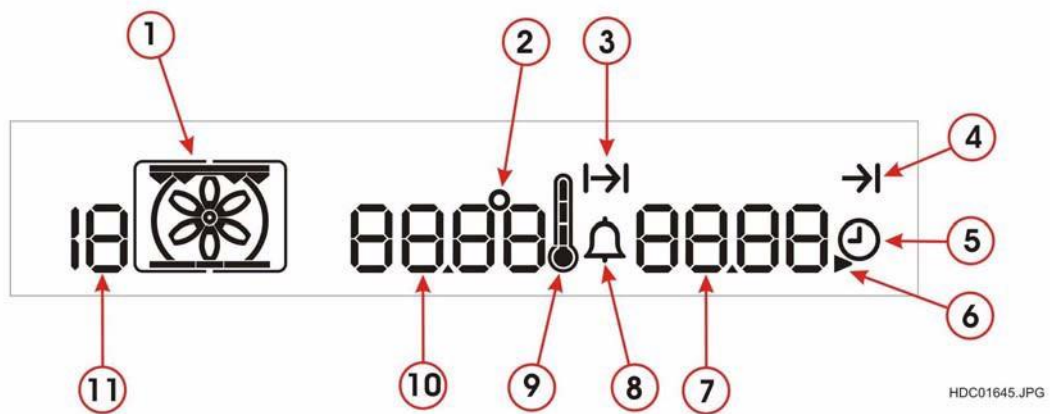


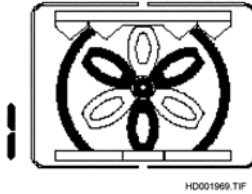
Fig. 3

- | | |
|-------------------------------|--|
| 1 - Cooking functions | 7 - Time |
| 2 - Degrees centigrade symbol | 8 - Minute-minder symbol |
| 3 - Cooking time symbol | 9 - Thermometer |
| 4 - End of cooking symbol | 10 - Temperature |
| 5 - Clock symbol | 11 - Cooking functions / Demo indication |
| 6 - Clock arrow | |

4 COOKING FUNCTIONS

This version of pyrolytic oven has the following 10 cooking functions, which can be selected in the sequence listed below:

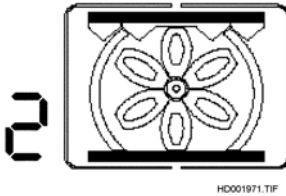
Fan cooking



Elements activated:
Oven light
Circular heating element
Convection fan

Pre-set temperature: 175°C
Temperature range: 30-250°C

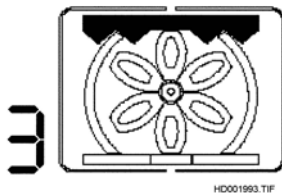
Traditional cooking



Elements activated:
Oven light
Upper heating element
Lower heating element

Pre-set temperature: 200°C
Temperature range: 30-285°C

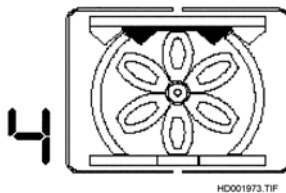
Large grill



Elements activated:
Oven light
Grill heating element
Upper heating element

Pre-set temperature: 250°C
Temperature range: 200-250°

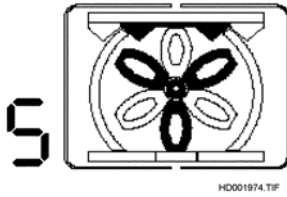
Grill



Elements activated:
Oven light
Grill heating element

Pre-set temperature: 250°C
Temperature range: 200-250°C

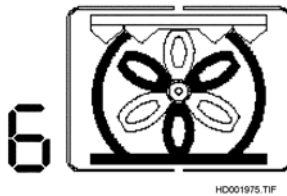
Grill + Fan



Elements activated:
Oven light
Grill heating element
Convection fan

Pre-set temperature: 180°C
Temperature range: 30-250°C

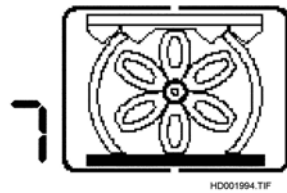
Pizza



Elements activated:
Oven light
Circular heating element
Lower heating element
Convection fan

Pre-set temperature: 175°C
Temperature range: 30-250°C

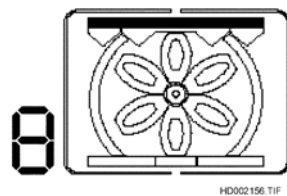
Bottom panel



Elements activated:
Oven light
Lower heating element

Pre-set temperature: 250°C
Temperature range: 30-250°C

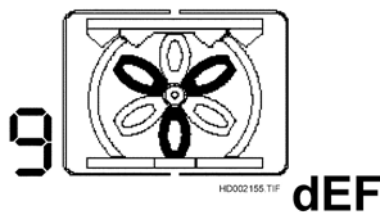
Top panel



Elements activated:
Oven light
Upper heating element

Pre-set temperature: 250°C
Temperature range: 30-250°C

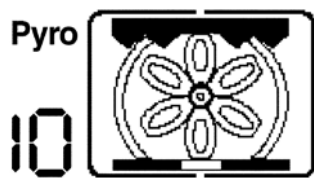
Defrosting



Elements activated:
Oven light
Convection fan

Pre-set temperature: 30°C

Pyrolytic



Elements activated:
Oven light
Upper heating element 100%
Grill heating element 80%
Lower heating element 20%

2 pyrolysis programmes: P1 duration 2
:00 hours

P2 duration 2:30 hours

For further information please see Service Manual no. 599360764 chapter 3.6.3.

5 SPECIAL FUNCTIONS

5.1 RAPID HEATING



Elements activated:
 Oven light
 Grill heating element
 Lower heating element
 Convection fan

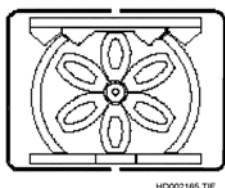
The figure illustrates the elements that are effectively in operation when the RAPID HEATING function has been selected, although the display indicates only the first function selected.

5.2 FUNCTION REQUIRING A TWO-KEY COMBINATION

FUNCTION	KEY COMBINATION			
	1° KEY	POSITION (Ref. fig. 1 and 2)	2° KEY	POSITION (Ref. fig. 1 and 2)
Child safety function		(2)		(5)
"Beep" when key is pressed		(2)		(6)
Demo Function 1st step (*)		(7)	--	--
Demo Function 2nd step (*)		(7)		(5)

(*) NOTE: The Demo function activates firstly pushing button for 2 seconds and then pushing simultaneously button and button . The action of the first button and the action of the key-combination are confirmed by an acoustic signal.

5.3 OVEN LIGHT FUNCTION



Automatic switch-off: after 3 minutes

5.4 ENERGY SAVING FUNCTION (residual heat)

Duration	20% of the set cooking time
Activation:	Min. cooking time > 15 min.
Maximum time of residual heat:	20 minutes

5.5 Pottery removal function

When the cleaning function with pyrolysis is selected, the cleaning programme setting is shown on the display (see fig. 4) and alternatively the indication of pottery removal from the oven before using the pyrolysis programme (see fig. 5).

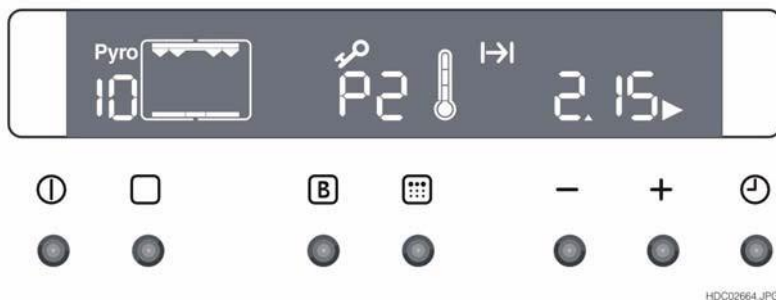


Fig. 4

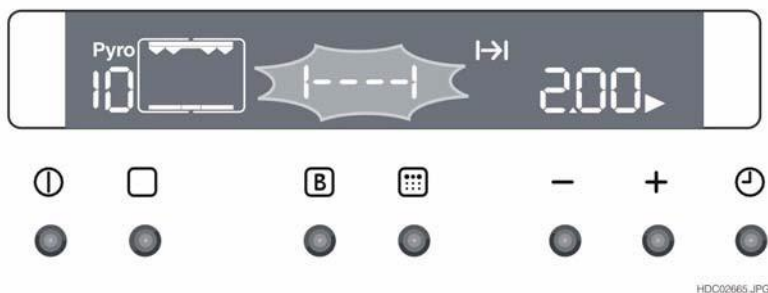


Fig. 5

Pushing the Pyrolysis button, the cleaning programme will start and the “pottery removal” indication will appear.

5.6 DEMO FUNCTION

5.6.1 General description:

- Activation only when connected for the first time to the mains power supply (before setting the clock).
- Deactivation only when the appliance is off.

5.6.2 Button sequence for activation / deactivation:

- 1) Put the OVEN in off state (stand by).
- 2) Press On/Off until the display turns on and returns to stand by modus and emits a beep.
- 3) Press simultaneously “CLOCK” (7) and “-“(5) keys for 5 seconds
- 4) If the display is switched ON now the CLOCK symbol appears ON, to indicate that the “Demo Mode” is ACTIVE.
- 5) TOD- Indication (Symbol and arrow) is shown permanently on non-OFF-STATE
- 6) To deactivate the demo mode follow the same procedure

5.6.3 Indications on the display:

- The activation of the demo function is displayed through the clock digits constantly on when the appliance is switched on (Oven set on demo function) and through the symbol

“  “ on.

5.6.4 Active charges:


The heating elements (grill, upper, bottom and circular elements) are not operating; the low power charges are operating (including the turnspit motor and convection fan).

- When the demo function is activated the setting of the clock and the time 12:00 is requested every time the appliance is turned on (when using the oven in a show room).

5.6.5 Description:

This function is available for a demonstration of the oven functions in stores and shops without having absorption of the power charges, except for fans and oven lamp.

This function can be activated only when the oven is connected to the mains power supply and the digits “12:00” and the

symbol“  “are blinking on the display.

5.6.6 To activate the function:

1 - Press the “Clock” button (button no. 7 Fig. 1 and 2) for about 2 seconds. You will hear a sound for a short time.

2 - Press simultaneously the “Clock” button (button no. 7 Fig. 1 and 2) and the “-” button (button no. 5 Fig. 1 and 2) until a second “Beep” sounds and the digits “12:00” remain constantly on.

When the oven is switched on and the demo function is activated the

symbol “

 “ will remain on

constantly and all functions can be selected.

5.6.7 To deactivate the function:

Repeat the steps in point 1 and 2 as for the activation when the oven is in stand-by; the request to set the time of the day is displayed.

6 ERROR CODES

The KRONOS system performs some internal auto-diagnosis, and if it detects an operation inconsistency, it displays the error codes.

The error code is showed on the display as indicated in the figure 5.

The various error codes are listed in the table below:

ERROR CODE	ERROR CAUSE
F03	EEPROM Memory on control unit
F04	Temperature range of oven sensor exceeded (for more than 5 seconds)
F05	Temperature safety level exceeded > 350°C on normal ovens > 530°C on pyrolytic ovens (for more than 10 seconds)
F08	Communication interrupted between control unit and power board
F09	Software compatibility between control unit and power board
F10	Triac faulty (on power board)

Example of error code (F05):

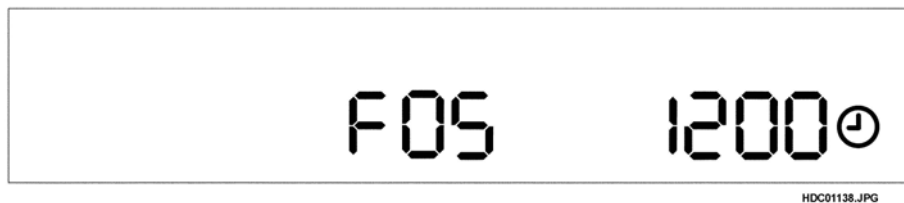
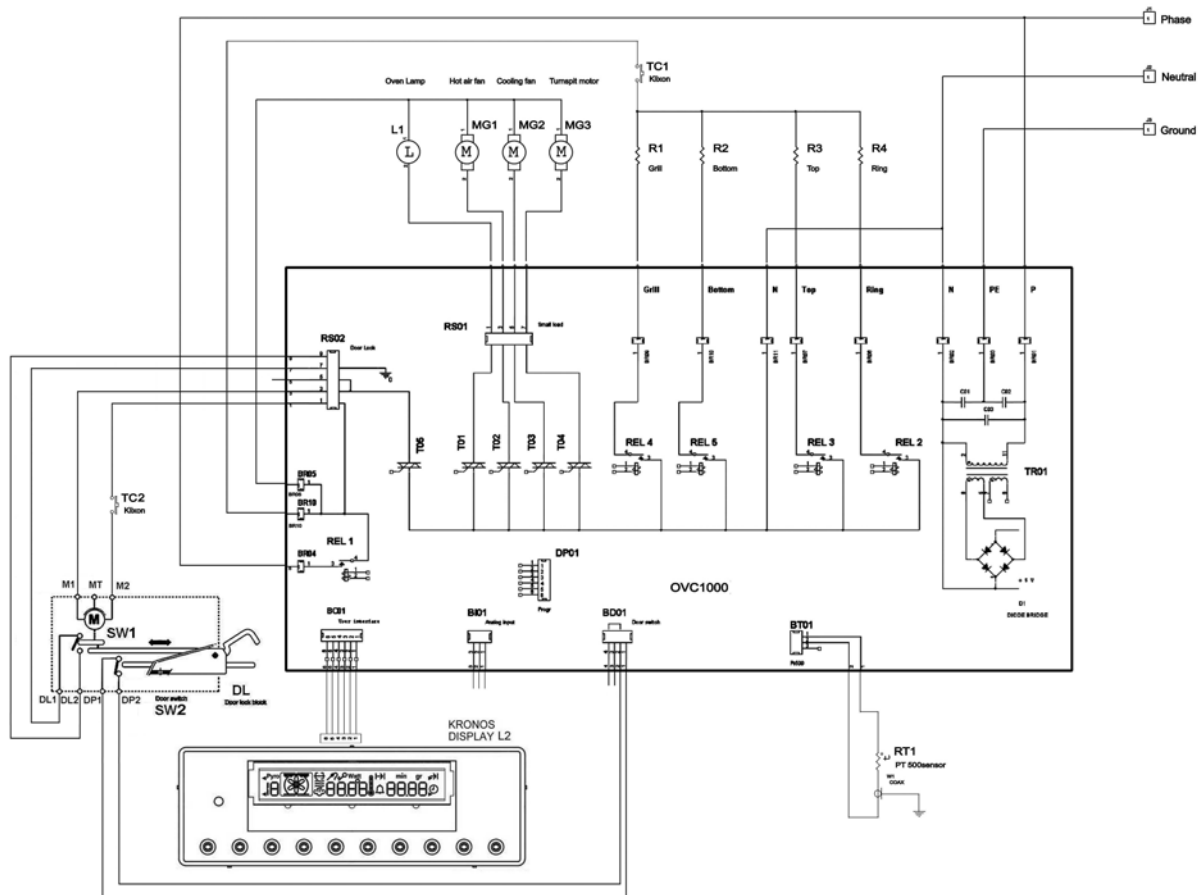


Fig. 5

7 OVEN BASIC WIRING DIAGRAM



HDC01081.JPG

Fig. 6

KEY

DISPLAY L2	- CONTROL UNIT KRONOS LEVEL 3	REL2	- CONVECTION HEATING ELEMENT CONTROL RELAY
DL	- DOOR LOCK ASSEMBLY	REL3	- UPPER HEATING ELEMENT CONTROL RELAY
Ground	- MAINS (EARTH)	REL4	- GRILL HEATING ELEMENT CONTROL RELAY
L1	- OVEN LIGHT	REL5	- LOWER HEATING ELEMENT CONTROL RELAY
MG1	- CONVECTION FAN	RL	- DROP RESISTOR FOR FAN (DOUBLE SPEED)
MG2	- COOLING TANGENTIAL FAN	SW1	- DOOR LOCK HOOK MICROSWITCH
Neutral	- MAINS (NEUTRAL)	SW2	- DOOR MICROSWITCH
Phase	- MAINS (PHASE)	TC1	- SAFETY THERMOSTAT
RT1	- PT500 OVEN SENSOR	TC2	- DOOR LOCK THERMOSTAT
R1	- GRILL HEATING ELEMENT	TO1	- OVEN LIGHT CONTROL TRIAC
R2	- LOWER HEATING ELEMENT (BOTTOM)	TO2	- CONVECTION FAN CONTROL TRIAC
R3	- UPPER HEATING ELEMENT (TOP)	TO3	- COOLING TANGENTIAL FAN CONTROL TRIAC
R4	- CONVECTION HEATING ELEMENT (CIRCULAR)	TO4	- COOLING TANGENTIAL FAN CONTROL TRIAC (DOUBLE SPEED)
OVC1000	- POWER BOARD	TO5	- DOOR LOCK CONTROL TRIAC
REL1	- SAFETY MAIN RELAY	TR01	- LOW VOLTAGE TRANSFORMER