First Choice Group

SPARE PARTS DIAGRAM FOR

zanolli

Bakery Oven
T2 Polis MC18
T3 Polis MC18
T4 Polis MC18
T6 Polis MC18

First Choice Group
Blakeney Way, Kingswood Lakeside
Cannock, Staffs, WS11 8LD
TEL: 01543 577778 FAX: 01543504141
Email: enquires@firstchoice-cs.co.uk
Web: www.firstchoice-cs.co.uk

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1. INTRODUCTION

The modular “TEOREMA POLIS” ovens represent the new way of making traditional pastry ovens.

They are designed and manufactured to demanding mechanical and electrical standards and are built to last.

“TEOREMA POLIS” has been designed having in mind the end user.

“TEOREMA POLIS” has a complete range to satisfy everybody’s needs.

Dr. Zanolli S.r.l. thank you for the preference given to our company. We at Zanolli can assure you that you have made a good choice as we have been making quality products for decades now and have never engaged in counterproductive penny-pinching in our selection of the best available materials.

2. HOW TO USE THIS MANUAL

⚠ This manual should be kept near to the equipment itself so that it can be quickly and easily consulted. The manual must travel with the equipment if it is moved to another owner, as the latter may not be considered complete or safe without it.

Please take note of the code and revision numbers which are behind the back cover. If this copy should get mislaid or destroyed, you can order another one by referring to the codes.

⚠ This manual is divided up into a number of chapters. All of these should be read by the installers, maintenance staff and the final user, both in relation to its **safe use** and in order to obtain the best results from this product.

Despite this we also give below some useful indications on how to look things up quickly in the various chapters.

⚠ The paragraphs with this symbol contain essential safety information. They must all be read both by the installers and by the final user and any of his staff who may use equipment. Dr. Zanolli S.r.l. shall not be held liable for any damage which may occur as a result of failure to observe the norms indicated in these paragraphs.

⊘ The paragraphs with this symbol contain important information which can be used to avoid damage caused to the equipment . It is the user's own interest also to read these paragraphs carefully.

Chapter 3 describes the field of use of the equipment and provides the characteristics and figures which may be needed when choosing, installing and using it. It should be used as a reference to check the use which is intended to be made of the equipment

corresponds to that for which it was designed, and whenever is necessary, to know an exact size value relating to the equipment.

Chapter 4 and 5 provide all the information necessary for the installation of the equipment. The manual is primarily written for specialised staff but may be read in advance also by the final user to prepare and set up the space and necessary for the proper working of the equipment.

Chapter 6 is for reference when the user wishes to clarify specific aspects of the control panel . It is not advisable to use this chapter as a way to learn how to use the equipment from scratch.

Chapter 7 is useful for the user who has to learn to use the oven. It guides the user through essential operations for switching on, use and switching off of the equipment in safety. To exploit all of the possibilities of the equipment the user should refer to chapter 6.

Chapter 8 provides all the information required for the cleaning of the equipment i.e. all those operations which have to be carried out by the user in order to ensure that the equipment continues to function safely (especially from the point of view of hygiene) and generally obtains the best result at all times.

Chapter 9 provides the information necessary for proper periodic and extraordinary maintenance, e.g. repairing or replacing parts of the equipment.

This chapter also has an exploded view of the equipment and list of spare parts to make ordering and replacing any damaged part easier.

⚠ These maintenance operations must be carried out by specialised staff.

3. SPECIFICATIONS

3.1. Identification of the product

This is the manual for the following baking modules from the Teorema Polis series:
T2 POLIS/MC18, T2 POLIS/MC28,
T3 POLIS/MC18, T3 POLIS/MC28,
T4 POLIS/MC18, T4 POLIS/MC28,
T6 POLIS/MC18 and T6 POLIS/MC28

3.2. Conformity to directives

The following baking modules:
T2 POLIS/MC18, T2 POLIS/MC28,
T3 POLIS/MC18, T3 POLIS/MC28,
T4 POLIS/MC18, T4 POLIS/MC28,
T6 POLIS/MC18 and T6 POLIS/MC28

bear the following compulsory mark: CE

which guarantees their conformity to the following European directives:
- 89/336 CEE electromagnetic compatibility
- 73/23 CEE low voltage

3.3.Envisaged use

The following baking modules:
T2 POLIS/MC18, T2 POLIS/MC28,
T3 POLIS/MC18, T3 POLIS/MC28,
T4 POLIS/MC18, T4 POLIS/MC28,
T6 POLIS/MC18 and T6 POLIS/MC28
have been designed to bake pastry products.

The baking modules:
T2 POLIS/MC18, T2 POLIS/MC28,
T3 POLIS/MC18, T3 POLIS/MC28,
T4 POLIS/MC18, T4 POLIS/MC28,
T6 POLIS/MC18 and T6 POLIS/MC28
are intended for professional use in the food industry and are exclusively intended to be used by qualified staff.

The operations envisaged in normal usage are the opening and closing of the doors, the loading and unloading of the products from the bedplates of the baking chamber, switching on, regulation, switching off and cleaning of the equipment.

3.4.Technical specifications

The following table shows the baking modules' technical specifications

	T2 POLIS MC18 (MC28)	T3 POLIS MC18 (MC28)	T4 POLIS MC18 (MC28)	T6 POLIS MC18 (MC28)	Units of measure -ment
Weight					Kg
External dimensions	34x125x87 (46x125x87)	34x166x87 (46x166x87)	34x125x147 (46x125x147)	34x166x147 (46x166x147)	cm
Baking chamber size	18x83x66 (28x83x66)	18x124x66 (28x124x66)	18x83x126 (28x83x126)	18x124x126 (28x124x126)	cm
Number of 60x40 baking sheets	2	3	4	6	n°
Electrical feed	three-phase or three-phase + neutral				
Voltage	230 or 400				Vac
Frequency	50 or 60				Hz
Current at 400V 50Hz	8.7	11.3	14.5	18.8	A
Current at 230V 50Hz	15	19.6	25.1	32.7	A
Maximum instantaneous current at 400 V	9.1	11.8	17.4	22.6	A
Maximum instantaneous current at 230 V	15.7	20.5	30.1	39.3	A
Total electrical power	6	7.8	10	13	KW
Electrical connection	plugless 4 or 5 lead cable				
Cable length	2				M
Section of lead wires	4		6 (400V) 10 (230V)		Mm^2
Baking chamber light					
Type	halogen				
Power	50				W
Baking control					
Temperature control	electronic thermoregulator				
Maximum temperature which can be set	370				°C
Thermostat safety temperature	400				°C
Power control	separate for oven roof and bedplate				
Ambient conditions					
Temperature	0 - 40				°C
Maximum humidity	95% without condensation				

4. INSTALLATION WARNINGS

⚠ **WARNING: These installation instructions are intended only for staff which is qualified for the installation and the maintenance of electrical and/or gas plant.**
Installation by any other person may cause damage to the equipment, persons, animals or things.

Furthermore, if it is necessary to make any modifications or additions to the electrical and/or gas plant, where the equipment is going to be installed, the person carrying out such alterations must obtain certification that the works have been carried out in accordance with the norms in force in that country.

4.1. Delivery checks

Unless otherwise agreed the products are carefully packed in a strong wooden crate with a blister sheet of nylon to protect them from shocks and humidity during forwarding and are delivered to the driver in perfect conditions.

We recommend, however, that packaging is checked on arrival of the goods, to ensure that there are no visible signs of damage. If there are any such signs, indicate their nature on the delivery note, which has to be signed by the driver.

Once the equipment is unpacked, check to see if it has suffered any damage. Also check that any parts which are delivered unattached to the equipment are present. If there has been any damage to the equipment and/or any parts are missing, do not forget that the forwarding company will accept complaints only up to 15 days from the delivery day and that dr. Zanolli S.r.l. will not be liable for damage suffered to its products during transport. We are nevertheless willing to help you in presenting your complaint.

⚠ If there is any damage do not attempt to use the equipment and call upon professionally qualified staff.

4.2. Choice of place of installation

The good, safe and long working of the equipment also depends on the place where it is installed, so it is advisable to carefully evaluate this before it is delivered. Install the equipment in a dry place which is easily accessible both as regards its use and its cleaning and maintenance. The area around the equipment must be free of encumbrances. In particular it is necessary to avoid obstructions to the cooling apertures. (Figure 15)
The equipment must in any case be installed at least 20 cm from the walls of the room and from other equipment.

⚠ Finally, it is necessary to ensure that the temperature and relative humidity of the place in which the equipment is installed must never exceed the maximum and minimum values indicated in the characteristics section (see 3.). In particular, if the maximum temperature and relative humidity are exceeded, the equipment may easily and unpredictably go out of order or be damaged in its electrical parts, thus creating a dangerous situation.

4.3. Electrical connection

⚠ Zanolli equipment are supplied with a cable for the electrical connection with earth lead. In observance of the current safety norms **it is compulsory to connect the earth wire (yellow-green) to an equipotential system, whose efficiency must be properly checked against the norms currently in force.**

⚠ Before making any connections ensure that the characteristics of the mains supply to which the equipment has to be connected correspond to the feed characteristics required by the equipment itself (see 3 and plate on equipment).

See (1) figure 5-3 for the exact position of the feed cable output.

The feel cable must end in a plug, which connects to an electrical feed panel with a corresponding socket and a differential magneto-thermal switch.

The plug-socket connection must be such that the earth is connected first and disconnected last and must be of the correct size for nominal current (see 3).
Suitable plugs and sockets are the industrial type CEE 17 of any which satisfy the European Norm EN 60309.

The terminal safety device must be set for total nominal current, the magnetic safety device must be set for the instantaneous maximum current (in the case of ovens it is a little above the nominal figure, in the case of machines it is the pick up current for the most powerful motor), while the different device must be set to the 30 mA current (see3).

dr. Zanolli S.r.l. shall not be liable for any damage which results from failure to observe the above mentioned norms.

5. INSTALLATION

5.1. Check list

There are no separately supplied parts.

5.2. Choice of the place of installation of the oven

Avoid obstructions to the cooling openings located on the right side of the module (Figure 5.1).

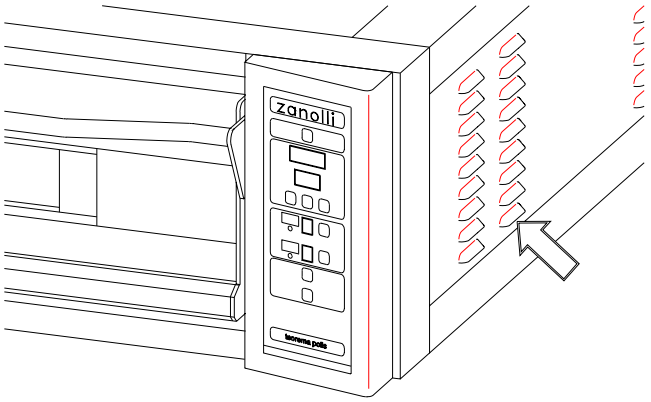


Fig. 5.1 - Cooling openings

In choosing the place to install the baking modules
T2 POLIS/MC18,
T2 POLIS/MC28,
T3 POLIS/MC18,
T3 POLIS/MC28,
T4 POLIS/MC18,
T4 POLIS/MC28,
T6 POLIS/MC18,and T6 POLIS/MC28 bear in mind that they might to be completed with the addition of other modules or accessories from the series (hood, proofer and so on).

5.3. Moving the module

When unloading and moving the module when it is packed, use a fork-lift or transpallet which has a capacity at least equal to the weight of the module, and insert the forks into the space provided in the lower part of the packing.

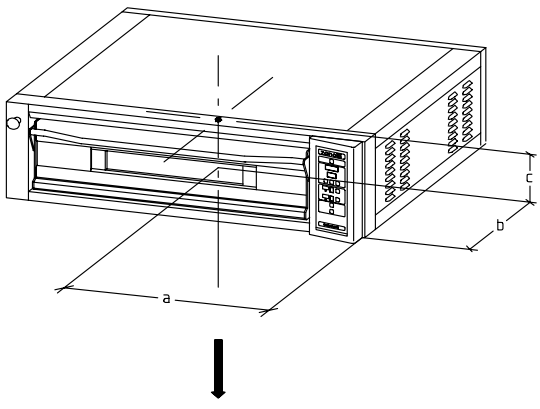


Fig. 5.2 - Centre of gravity

When moving a module which is not packed, insert the forks in the upper chamber.

It is also possible to transport the module by means of the two hooks which are accessible from the openings in the top part.

⚠ In any case, to avoid unforeseen movements, take note of the position of the centre of gravity (Figure 5.2 and table 5.1).

	a cm	b cm	c cm
T2 MC 18	70	42	17
T2 MC 28	70	42	23
T3 MC 18	90	42	17
T3 MC 28	90	42	23
T4 MC 18	70	74	17
T4 MC 28	70	74	23
T6 MC 18	90	74	17
T6 MC 28	90	74	23

Table 5.1 - Centres of gravity

⊘ In addition, to avoid damage to the module, insert some protective material between the forks and the module itself.

5.4. Mounting the module

Put the modules one above the other one in the right order (proofer or base, baking module, hood) and fix by means of the supplied hooks and screws.

5.5. Connecting the steam outlet

The steam outlet should be connected through the duct on the hood (see instructions).

⊘ Avoid long horizontal stretches, as they may cause accumulation of condensation and possible dripping.

⊘ Do not connect extractors, as they could cause a too low pressure which would end up, removing heat from the cooking chambers, even with the valves completely closed.

For the exact connection position see Figure 5.3.

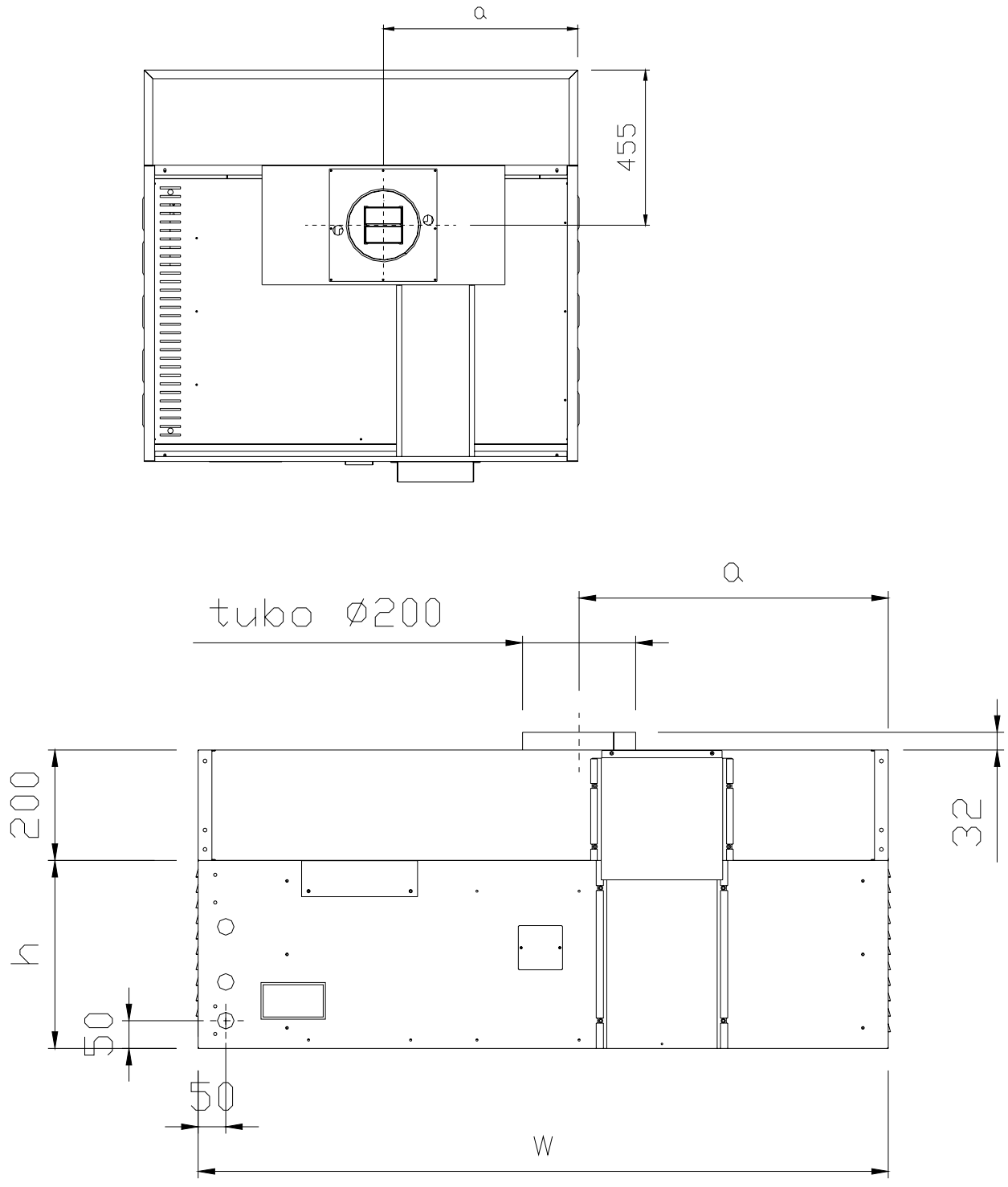


Fig. 5.3 - Position of electrical cable input, steam outlet and plate

	a cm	h cm	w cm
T2MC18	56	34	125
T2MC28	56	46	125
T3MC18	76	34	166
T3MC28	76	46	166
T4MC18	56	34	125
T4MC28	56	46	125
T6MC18	76	34	166
T6MC28	76	46	166

5.6. Checks before start up

Turn on the main switchboard.

Turn on the (1/0) switch , program a temperature over 200°C , set both the power regulators  at 9 and turn on the  (Start/stop) switch.

Check that the current to each phase is that indicated in chapter 3 , for the corresponding feed voltage.

Set the both power regulators  at 5 and check that their lights go on and off at intervals.

Turn off the switches  (start/stop) and  and the main switch, placed on the switchboard.

6. CONTROL PANEL

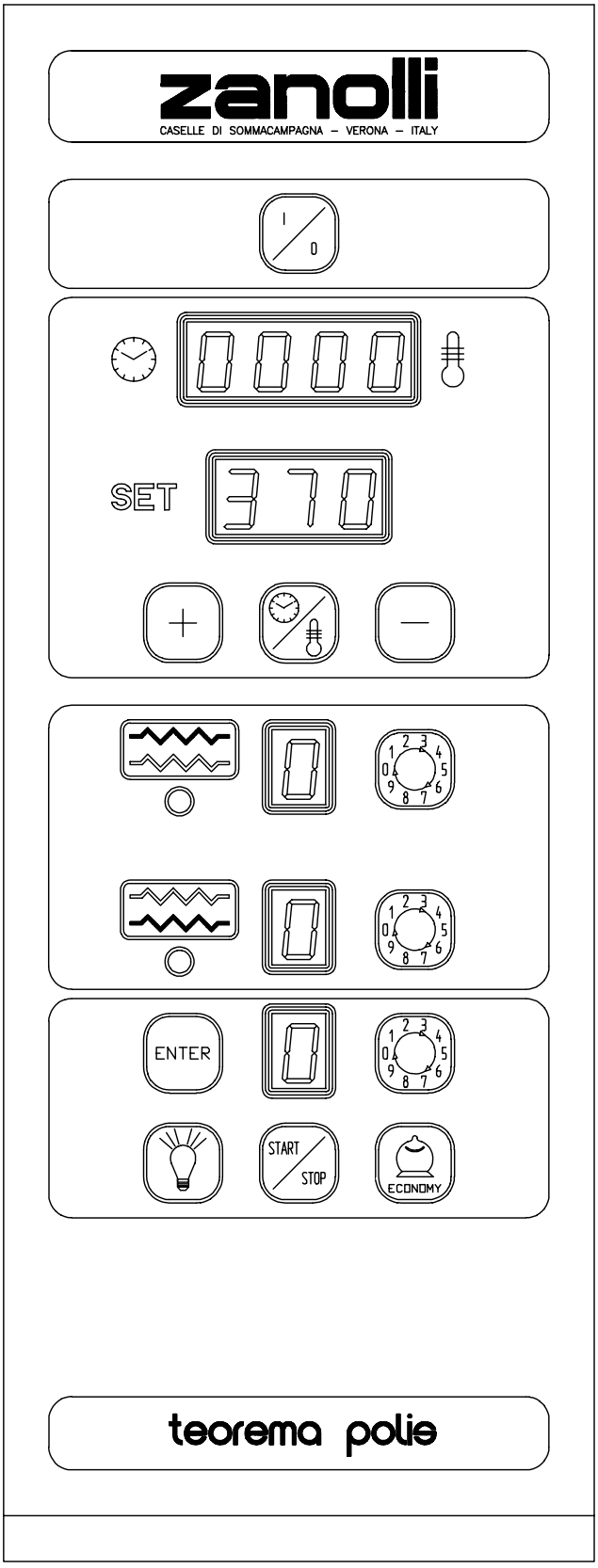


Fig. 6.1 Control panel

6.1 DESCRIPTION OF CONTROLS

Fig.6.1 shows the control panel with all controls:

- General system on/off button
- Oven temperature and time display
- Set temperature display
- Program setting increase button
- "Timer" - "Oven temperature" – Clock setting" display button -
- Program setting decrease button
- Upper element power setting indicator
- Upper element control display
- Upper element power sequential increase button
- Lower element power setting indicator
- Lower element control display
- Lower element power sequential decrease button
- Timer programming button
- Baking cycle display
- Baking cycle increase button
- Oven light on/off
- Baking start/stop button
- Economy button
- Light switch for suction hood

7. FUNCTIONS

7.1. SYSTEM FUNCTIONAL STATES

7.1.1. Standby on/off button

When on standby the panel is powered but no system function is enabled. The general remote switch is disabled and the message OFF is displayed on the set display SET 370 on the control panel along with the current time on the 0000 display with flashing seconds dot (between the second and third figure, ½ second on, ½ second off).
All buttons on the panel are disabled except for the button (system on) and the key, pressure on which will bring the system to clock setting mode (see “programming” section).
Pressing the button, the system comes on, the last SET temperature programmed is displayed on the set display SET 370, and the cycle used prior to switching the oven off is displayed on the display.

7.2. SETTINGS

7.2.1. Set temperature setting SET 370

To set the SET temperature use the + and − buttons until the desired baking temperature appears on the SET 370 display.

7.2.2. Upper and lower element setting

Pressing the buttons varies the time the oven heating elements remain on. Each time the button is pressed increases this value by 1 unit, up to a maximum of 9 units. Further pressure returns the value to 0.

NB. Each unit on the two displays corresponds to 5 seconds element on time. For the remaining units the elements remain off. The total duration of the cycle is 45 seconds.

The on time of the two elements can be varied at any time, even during the baking cycle. The upper elements during the first part of the cycle while the lower ones come on during the second.
For example, setting the upper elements to 6 and the lower ones to 5 gives the following result:

	5	10	15	20	25	30	35	40	45
Upper	ON						OFF		
Lower	OFF				ON				

Note that with this setting, for the first 20 seconds only the upper elements are on, so the oven uses half the total power. Over the next 10 seconds both the upper and power elements are on, with the oven using full power. In the remaining 15 seconds, on the lower elements are on, so the oven once again uses half its available power.

7.2.3. Economy button

Pressing the economy button sets power values to pre-set levels (upper 5 and lower 3) with the following result:

	5	10	15	20	25	30	35	40	45
Upper	ON					OFF			
Lower	OFF						ON		

Note that with this setting, in the first 25 seconds only the upper elements are on, with the oven using half power. Both elements are off for the following 5 seconds. In the remaining 15 seconds only the lower elements are on and so the oven once again uses only half power. This means that throughout the cycle the oven never uses more than half power and for 5 seconds power consumption is zero.
A similar result can be obtained through manual power settings, if the sum of upper and lower times is less than or at most equal to 9.

7.2.4. Start/Stop button

Pressing the start/stop button starts the baking cycle according to the previous setting.

7.2.5. Oven light button

Pressing the oven light button switches on the light in the oven. Press again to switch it off.

7.2.6 Light switch for suction hood - Light switch for steam generator

The light switch for suction hood control is placed on the side part of the control panel, on the upper side (Pos.1 of Fig. 7.1). Push this switch on position 1 to start the suction hood. Push this switch on position 0 to stop it.

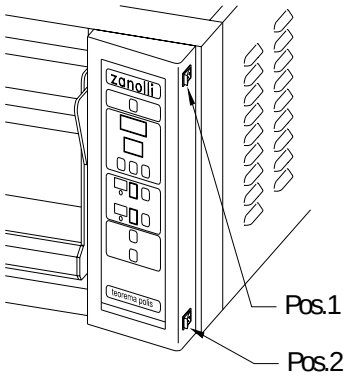


Fig 7.1

Always on the side part of the control panel, but at the bottom, you find the light switch that starts and stops the steam generator, if the oven is equipped with this accessory (see Pos.2 –Fig. 7.1).

7.3. PROGRAMMING

7.3.1. Clock and day setting

The time and day can only be set with the system on standby, that is to say when the SET display "OFF".
Pressing the key and holding it for 3 seconds displays the time on the display with the two figures corresponding to the hour flashing. The correct hour can be set using the + and − keys. To memorise the new hour setting and pass on to setting minutes, press the key again. The minutes start flashing and can be set in the same way as the hours. Before pressing again, set the day of the week using the upper element power sequence button . This displays the number corresponding to the day on the upper element control display .

For example:
1=MONDAY
2=TUESDAY
3=WEDNESDAY
4=THURSDAY
5=FRIDAY
6=SATURDAY
7=SUNDAY

Press ⏲ again to memorise the new time and day. When set, the dot between hours and minutes begins to flash and the day display disappears.

7.3.2. Baking cycle programming

To program the baking cycle the oven must be on. Press the general system on/off button ⏻. The message “OFF” disappears from the SET 170 display and set temperature is displayed in its place.
In this condition, after selecting the desired cycle using the baking cycle button ◔ and once the desired number for the cycle to memorise appears on the 0 display, press the timer programming button ENTER and hold it for at least 3 seconds.

The displays show the following:

-Oven temperature and time display	0000	Prog
-Set temperature display	SET 170	Cic
-Upper element control display	0	Off
-Lower element control display	0	Off
-Baking cycle selection display	0	No. of cycle

After 2 seconds, baking parameters can be modified according to needs.

The displays show the following:

- Oven temperature and time display	0000	Off

- Set temperature display	SET 370	Prev. set.
- Upper element control display	0	Prev. set.
- Lower element control display	0	Prev. set.
- Baking cycle selection display	0	No. of cycle

Parameters that may be modified are:
1) Set temperature, by means of the ⊕ and ⊖ buttons;
2) Values corresponding to upper and lower power, by means of the relative controls ,
3) The baking Timer; this parameter can be displayed on the 0000 display by pressing the button, and subsequently modified by means of the ⊕ and ⊖ buttons.

If the Set temperature is to be modified the button should be pressed top display the relative value on the SET 370 display. It can be modified by means of the ⊕ and ⊖ buttons.
Once the required values have been set, the can be memorised by pressing the button, and the panel returns to its enabled state.

7.3.3. Auto switch-on programming

To program automatic ignition the oven must be on. Press the general system on/off button . The message “OFF” disappears from the SET 370 display and set temperature is displayed in its place.
Press the button and hold it for at least 3 seconds. This displays four horizontal slashes “----“ on the 0000 for setting timed ignition. Set the correct hour in the first two spaces using the ⊕ and ⊖ keys. To memorise the new hour setting and pass on to setting minutes, press the key again. The minutes start flashing and can be set in the same way as the hours.
Before pressing again, set the day of the week using the upper element power sequence button . This displays the number corresponding to the day on the upper element control display 0.

For example:
1=MONDAY
2=TUESDAY
3=WEDNESDAY

4=THURSDAY
5=FRIDAY
6=SATURDAY
7=SUNDAY

Pressing again memorises the time and day of the week on which the oven will automatically switch on. Once set and memorised, the display returns to displaying the current time and the dot between the hours and minutes flashes. The dot following the minute display remains lit indicating that a time has been set for automatic switch-on.
To permit automatic switch-on the oven must be on standby (system general switch ON and temperature setting displayed on SET display.
To be sure that the system has correctly memorised the setting, check that the dot to the lower right of the display is on.

7.3.4. Timer setting

While the oven is operating, that is to say when the elements have been enabled by pressing the button, the timer can be started at any time by means of the button. The display shows the timer value in hours and minutes that decreases with the flashing dot between the two figures. The value that appears on the display can be modified using the + and − keys and begins counting 2 seconds after setting.
At the end of the set time an alarm sounds for 10 seconds and the display shows 4 zeros that flash until the oven is switched off by means of the START/STOP button, or the timer function is refreshed by pressing twice.
While the timer is active either the remaining time or the actual temperature of the oven can be displayed on the display by pressing .

7.4. ALARMS

7.4.1. OVERTEMPERATURE ALARM

If due to malfunction the internal temperature of the oven exceeds 400°C the system will immediately stop the current cycle.
The remote general switch is disabled along with all oven functions.
The message “OFF” disappears from the SET 370 display and is replaced by the message “ALLO”.
To reset the alarm and reset the system, press ⏻.
If the oven is reactivated before temperature has fallen below 400°C the alarm will trigger again.
In any case have the oven checked by a qualified maintenance technician to rectify the cause of the problem before using the oven again.

8. THE USE OF THE OVEN

8.1. Preparations for use

If the equipment has just been installed or has not been for a number of days, before using it for food products, it is necessary to clean it thoroughly in accordance with the indications in chapter 9, to remove residual factory dirt, accumulations of dust or any other substances which could contaminate food products.

8.2. Switching on the control panel

Turn on the switch : the control panel comes on and settings can be made while the baking chamber is still off.

8.3. Settings

Set the required temperature using the + and − buttons

Set the power of the heating elements for the oven roof and bedplate with the switch .

8.4. Starting baking

At this stage turn on the switch and after a short time you will see that the temperature in the baking chamber starts to rise. If you have set the maximum temperature the oven will reach this in 40-45 minutes.

8.5. Loading the oven

⚠ Warning - when the chamber is at its working temperature the glass and metal parts of the door and some of the surrounding sections reach temperatures which are dangerous for the human body. These parts are identified with the symbol ,which warns of the risks.

8.6. PROGRAMMING

8.6.1. Programming the clock

The programming of the clock can be carried out only when the equipment is in position 1 (with the display reading OFF). When you press the temperature button and keep it pressed down for at least 3 seconds the displays show the time figures flashing.

Using the + and − buttons the user can change the time as he wishes. To put the new hour setting into memory press (within 5 seconds) the temperature/time button a second time and the display relating to the hour will stop flashing (value memorised).The flashing shifts to minutes which can be changed by following the same procedure as for the hours.

Pressing the temperature/time button to memorise the new minutes value, you will fix all four displays which will thus show the memorised time new value (N.B. the value of the seconds will always be set a naught) and the luminous point for the second starts to flash.

After memorising this, the displays go off again. If by change the current should go off during the programming (at the moment of switching on again) the system will display the last value which was in memory.

8.6.2.Programming temperature setting

Programming the temperature setting can be done in whatever the system finds itself (except of course when it is OFF). The temperature setting can be changed simply by using the ⊕ and ⊖ buttons.

Putting the new set value into memory is done by the system automatically after 10 seconds from the last pressing of the one of the above buttons, or on pressing the button .

By pressing one of the two buttons ⊕ and ⊖ for more than 2 seconds the increase or decrease of the setting will no longer be by one, but by about 9 units per second.
This is designed to speed up large changes in the values.

If by change there should be a failure of current during the programming of the system (at the moment of switching on again) the display will show the last memorised value.

8.6.3. Programming on time for the oven roof and bedplate resistors

Programming the on times for the oven roof and bedplate resistors can be done when the equipment is in any state, except 0 and OFF.
By pressing the oven roof and bedplate button you change the value show on the display increasing the value by one unit until 9 units are reached when, on a further press of the button, the display returns to 0.

8.6.4. Programmed switching

By pressing the button and keeping down for at least 3 seconds four lines will appear on the D2 display to confirm switch on programming mode.

Within 5 seconds (programming time-out) press one of the buttons ⊕ or ⊖. Immediately in the place of the four lines ---- four figures will appear with the first two flashing.

Each press on the ⊕ and ⊖ buttons will increase or decrease the hour (the flashing figure) of one unit, while the remaining figures for the minutes remain still at “00”.

When the desired hour has been reached it is memorised in the system by pressing the button ⏲ once again.

This procedure will fix figures for the hour (memorised now in the system) and the display for the minutes will start to flash.
As was the case for the setting of the hours, the minutes can be set by pressing the ⊕ and ⊖ buttons. Each time a button is pressed the minutes increase or decrease by one (the numbers are flashing), while the hour numbers remain fixed on what has already been set. Once the minutes are at the desired number press the buttons ⏲ for a third time to memorise it.

This last operation will fix all the numbers and the dip-point between the hours and the minutes will start , indicating that the time is active. After about 5 seconds the display will once again show the present time.

8.7. General indications for good baking

It is not possible to say exact times and temperatures for food products in general given the enormous variations they are subject to.

As regards in particular pastry products and similar the cooking time and the temperature depend on the shape and thickness of the dough and the quantities of the ingredients added to it.

We therefore advise that a few test runs are made, especially if you have never worked with this model of oven before, starting out with a temperature of 250° C and keeping in mind the following points:

1) generally with lower temperatures a better quality and more digestible product is obtained, the oven is not subjected to particular stresses and lasts longer, though the cooking times become longer;

2) with higher temperatures it is more difficult to obtain even baking but the baking times are reduced;

3) just after loading the oven, a fall in the temperature of the oven of as much as 20-30 ° C is normal. This should not be considered a limitation of the oven but as a useful indication that at the beginning of baking the water in the raw dough is evaporating and taking up a large quantity of heat. It is, however , always possible to set a higher temperature so that the oven reaches the desired temperature on loading. In any case if the oven is used within the limits of its maximum capacity the temperature will start to rise again towards the end of the baking time;

4) the oven has a maximum production capacity expressed **indicatively** in the characteristics in Kg of product per hour (chapter 3.) . If this production capacity is exceeded the temperature of the baking chamber will fall even beyond 20-30°C.
In such a case the excess quality should be removed and you should wait until the desired temperature has returned before any further loading.

5) if you keep the steam outlet valve completely closed, the steam comes out under the loading door and the products (in particular in the case of pizzas) may remain too moist. If you open the valve completely the products dry out too much and the oven has a lower yield. When cooking pizzas you should therefore try opening the valve to a third.

8.8. Switching off

At the end of each working day switch off the  switch.

During long periods of idleness (e.g. closures for holidays) it is advisable to switch off the main switch on the electrical feed panel.

8.9.Cleaning

⚠ At the end of each working day (or more frequently, if possible) it is necessary to carefully clean the cooking surface and all the parts of the oven which come into contact with the food being cooked to avoid that any food substances go off and contaminate either the working environment or later products to be cooked.

Cleaning is to be carried out in accordance with the instructions in chapter 9.

9. CLEANING

⚠ Cleaning should be carried out with the equipment switched off and at room temperature and after having switched off its electrical supply with the button on the feed panel.

9.1. Cleaning of any visible glass and stainless steel parts

⚠ Glass is particularly sensitive to sudden changes in temperature which can cause it to shatter into fragments. **Do not handle the glass or bring it into contact with water until it is at room temperature.**

⊘ It is also not advisable to use abrasives (abrasive sponges and such like) as they may in the long term diminish the shine of stainless steel parts and of glass.
It is better to wash the various removable parts before the food residues are dry.

9.2. Cleaning of any refractory part

Use a brush to remove cooking residues from the refractory surfaces in the ovens. If there are any residues stuck to the refractory surfaces remove them carefully with a spatula.

⚠ Do not use any liquids, especially detergents, since the refractory material is porous and it is not possible to rinse it to ensure it is not contamined by foods in contact with these surfaces.

⊘ You should also not use clearing instruments which are too abrasive as the refractory material is fragile and could easily get chipped or even break.

9.3. Cleaning the oven’s baking chamber

Use a soft damp sponge to clean the stainless steel or aluminium plate baking chamber, if necessary with a light, non abrasive detergent, being careful that it does not splash onto any refractory surfaces.

If there are substantial deposit of grease or fat, remove them carefully beforehand with a spatula.

⊘ Do not use abrasive detergents or corrosive materials, as it could dull the stainless steel and would quickly remove the aluminium-coated steel’s protective layer, causing it to become rusty in a short time.

⚠ Do not use jets of water as they could penetrate the switchboard and damage to create a danger of electrocution and/or sudden start ups of the equipment.

9.4. Cleaning the external surface

Use a soft damp sponge to clean, if necessary with a light non abrasive detergent, the external surfaces made of stainless steel and/or coated steel.

⊘ Do not use abrasive detergents or corrosives, as they could cause the stainless steel and the coatings to become dull in the long term, and thus cause the steel sheets to become rusty.

⚠ Do not use jets of water as they could penetrate the switchboard and damage to create a danger of electrocution and/or sudden start ups of the equipment.

10. MAINTENANCE

⚠ **WARNING: These use and maintenance instructions are intended only for staff which is qualified for the installation and maintenance of electrical and gas equipment. Maintenance by other person may cause damage to the equipment, person, animals or things.**

⚠ In the majority of cases it is necessary to remove the fixed guards in order to carry out repairs and checks. This also renders the voltage cables accessible. **Before carrying out any maintenance operations check that the equipment's feed cable plug is disconnected from the switchboard. Put the plug in a place where the maintenance operator can easily ascertain, during all of the work done with the guards removed, that it has been disconnected.**

10.1. ORDINARY MAINTENANCE WORK

10.1.1. Light replacement

Disconnect the plug from the electrical feed panel.

⚠ The light is located in a part of the oven which has no heat insulation. This means that the external closing of that space reaches high temperatures when the oven is working.
Replacing the light should therefore be carried out only when the oven is cold, or using protective gloves.

Unscrew the screws which attach the light holder supports to the wall of the oven and remove the external door to the light space. Since the lamp holder is fixed to this door be careful not to jerk the electrical wires.

The light bulb should be replaced with one of equal power (75W E27).
Remount the light door being careful the wires are in the right position.

10.2. Electrical diagram

Figure 10-3 shows the electrical set up at 400 Vac. Figure 10-4 shows the electrical set up at 230 Vac.

10.3. Adjustment for different feed voltages

⚠ WARNING! to adapt the equipment to work at different feed voltages from that indicated on the initial set up label, three alterations have to be made:
1) to the cabling for resistor wires.
2) to the cabling for the feed to the control panel
3) the removal of the old label and the application of a new one.
Carry out all three alterations with care as otherwise the equipment may be unsafe.

10.3.1. The cabling for the resistor wires

Disconnect the plug from the electrical panel. Remove the guard from the switchboard and disconnect all the wires from the remote-control switches' resistors and reconnect them depending on the voltage.

10.3.2. The cabling for the feed to the control panel

Detach the BLUE wire from the lower remote-control switch and reconnect it depending on the voltage.

10.3.3. Application of new label

Remove the old label from the plate at the back of the equipment, clean the area with a cloth dampened with petrol and attach the new label.

10.4. Exploded views and spare parts list

Please contact us if more complex work has to be done or if there are broken parts.

In any case, in order to simplify the search for the causes of breakdowns and any replacement of damage parts we give below a list of spare parts and exploded views which show each of the listed parts.

The exploded views are of the cooking module T4 POLIS MC18 but the indications are also valid for the other version.

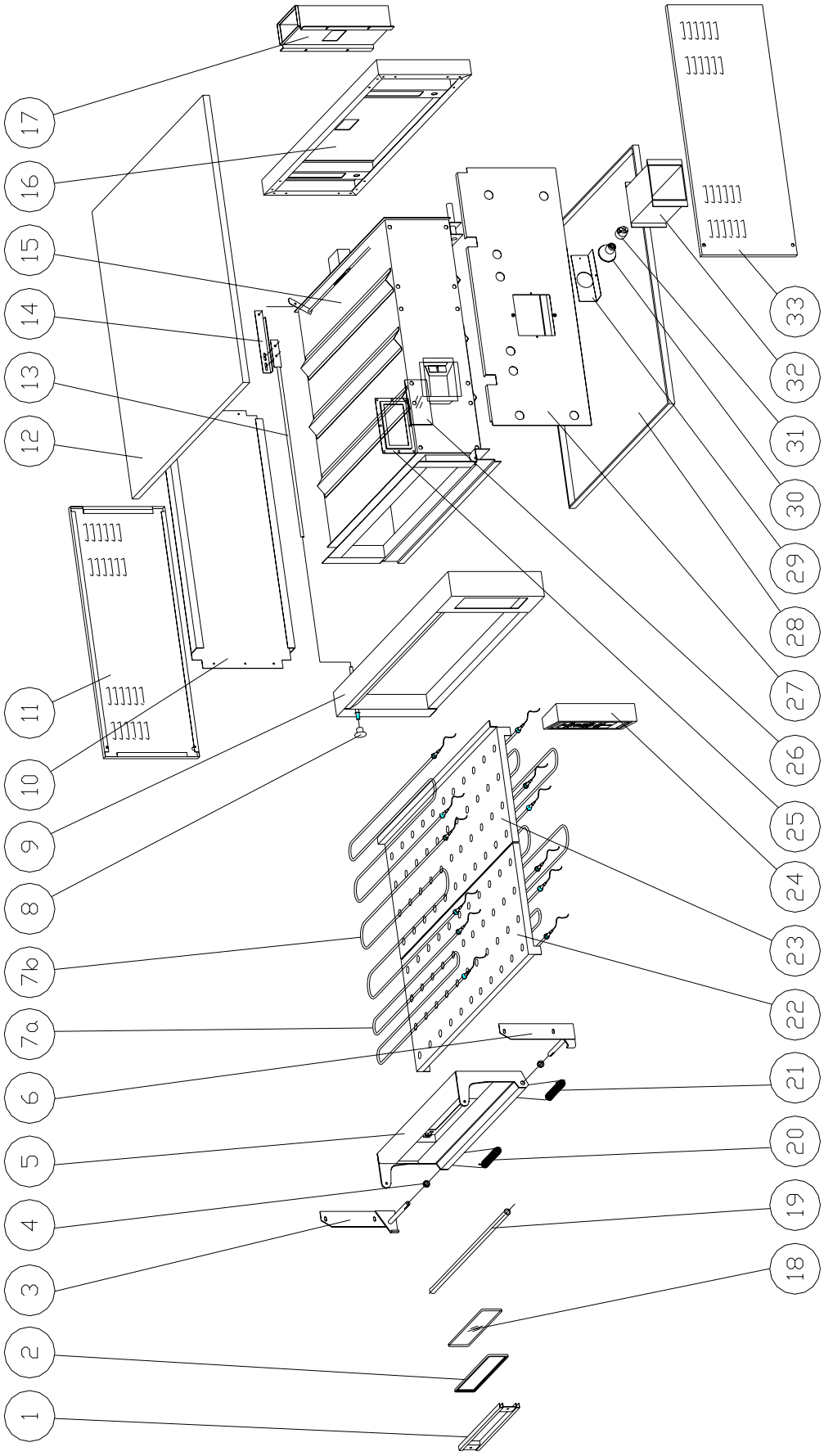


Figure 10-1 Exploded view

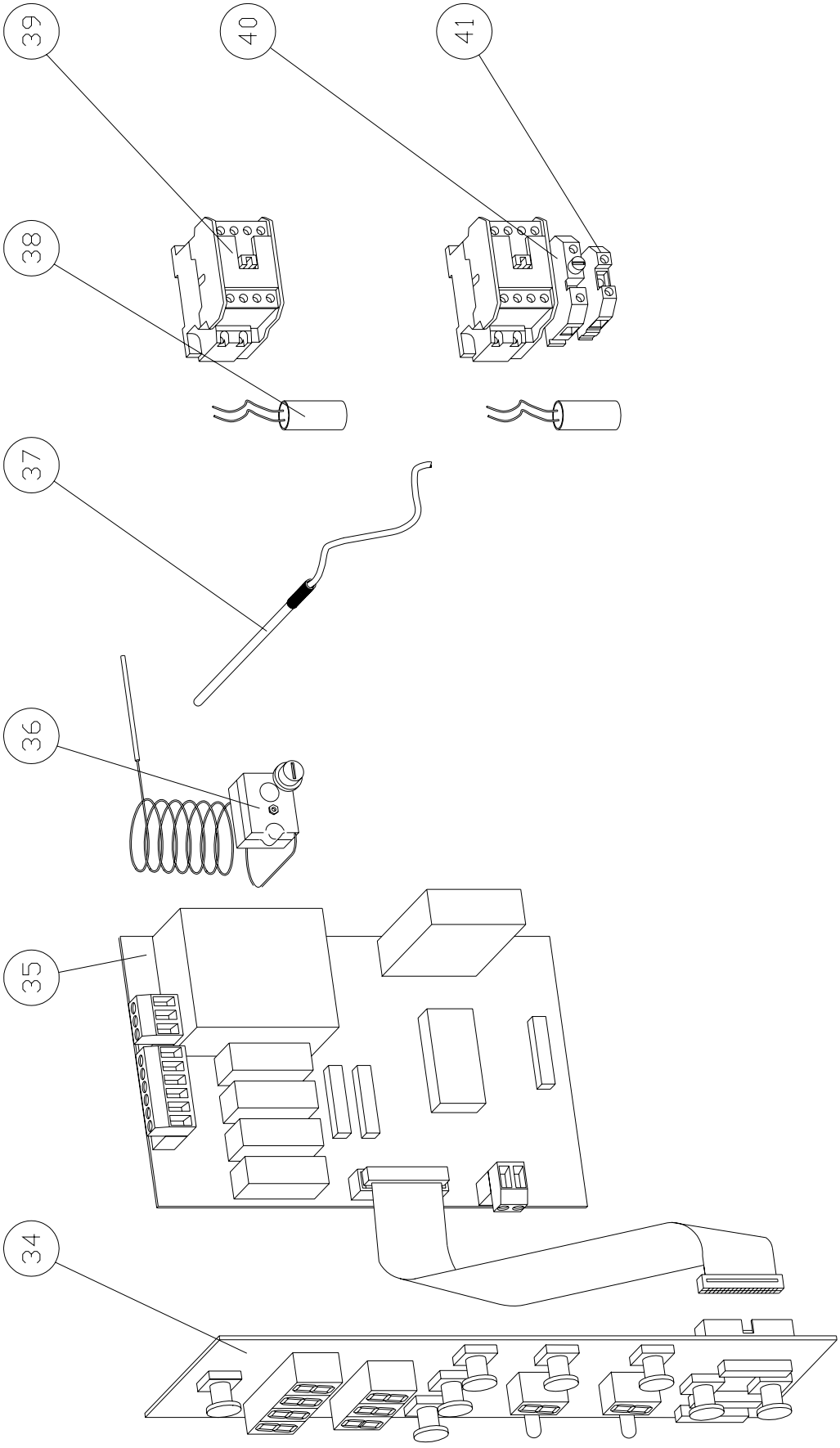


Figure 10-2-Exploded view of electrical parts

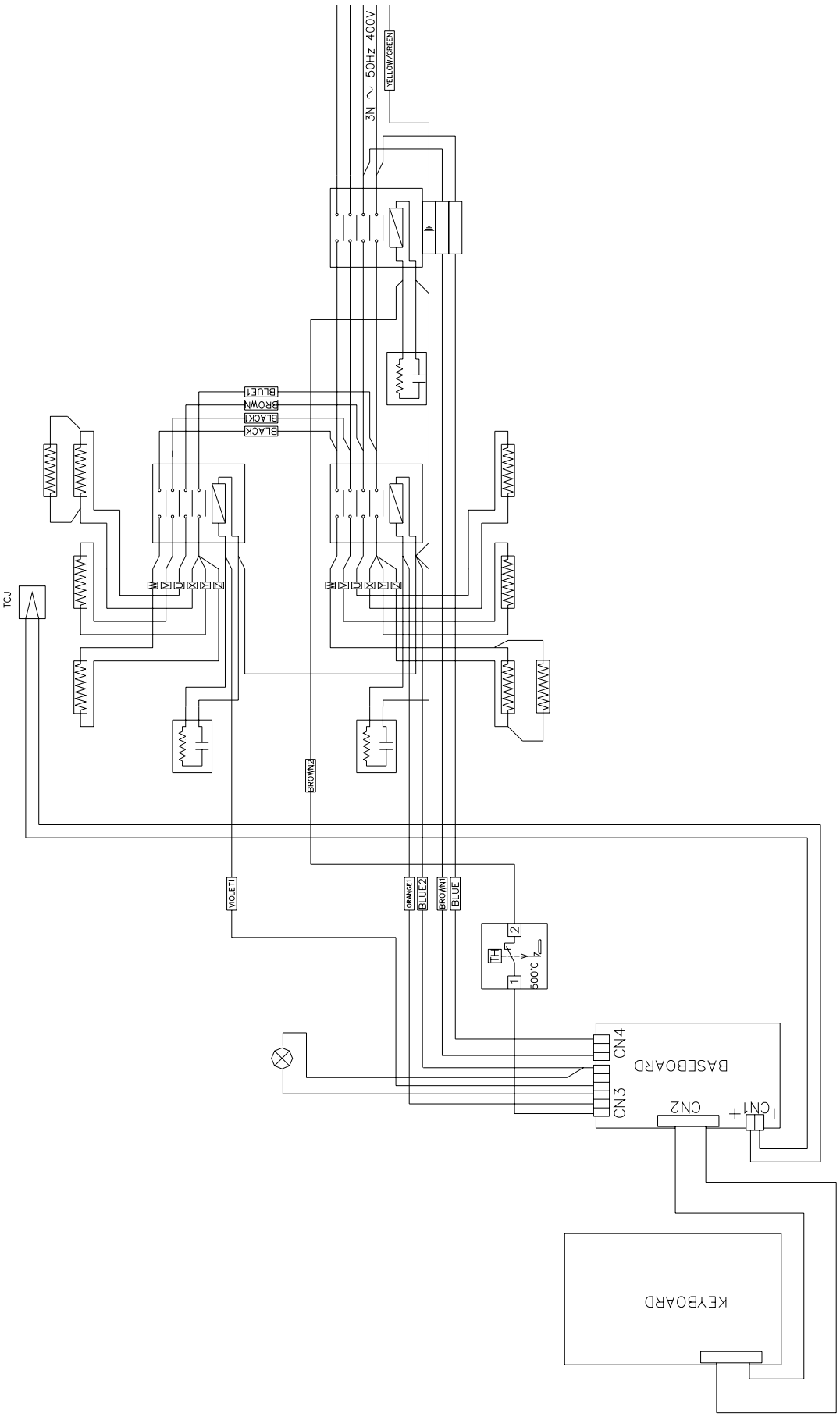


Figure 10-3. Electrical diagram (400V)

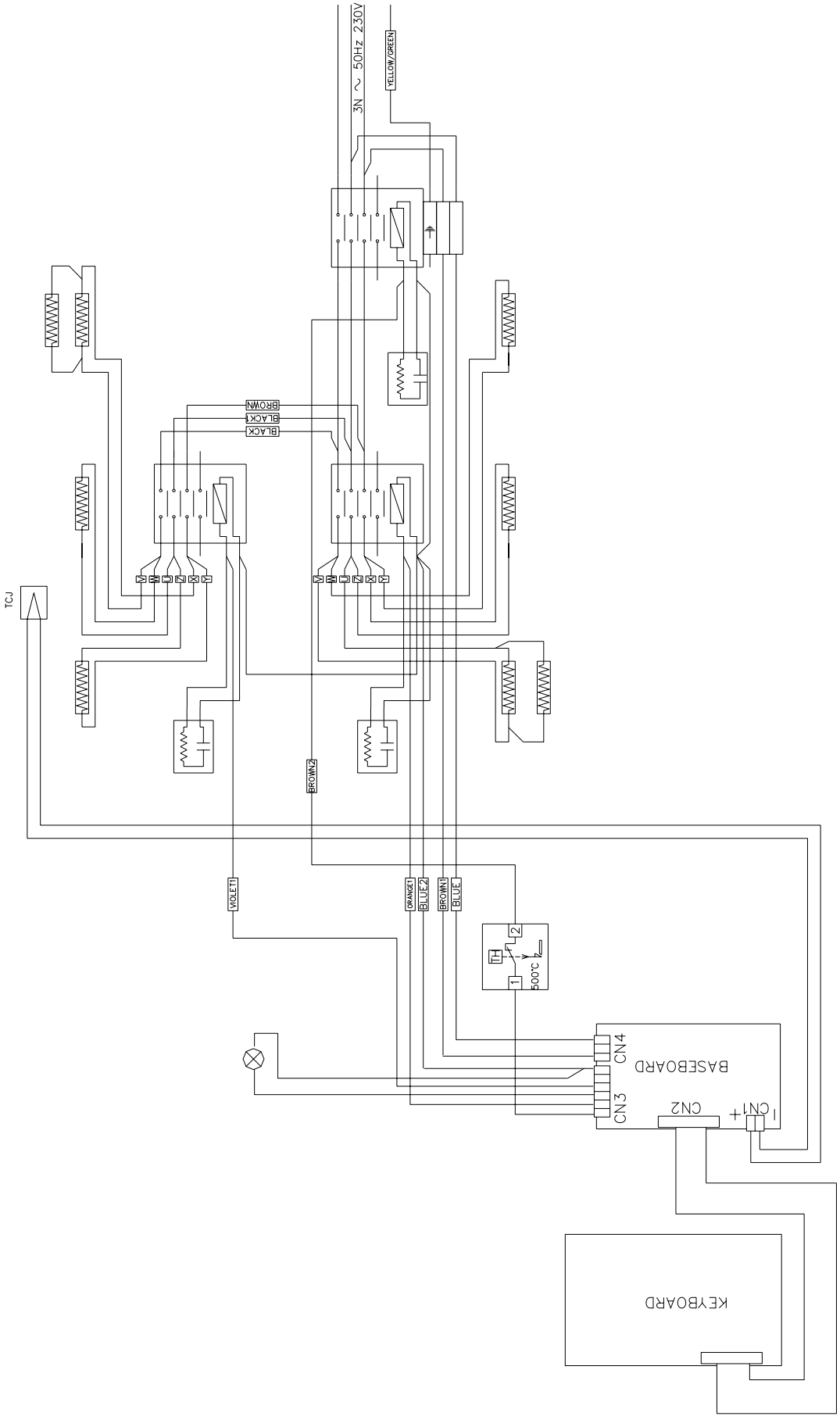


Figure 10-4. Electrical diagram (230V)

N°	Description	Codes			
		T2 POLIS MC18	T3 POLIS MC18	T4 POLIS MC18	T6 POLIS MC18
1	GLASS RESTRAINING FRAME	CARP0110	CARP0111	CARP0110	CARP0111
2	GLASS SEAL	GUAR0010	GUAR0010	GUAR0010	GUAR0010
3	LEFT HINGE	SUPP0206	SUPP0206	SUPP0206	SUPP0206
4	BUSH	BOCC0006	BOCC0006	BOCC0006	BOCC0006
5	DOOR	PORT0162	PORT0164	PORT0162	PORT0164
6	RIGHT HINGE	SUPP0207	SUPP0207	SUPP0207	SUPP0207
7a	FRONT HEATING ELEMENT	RESI0068	RESI0069	RESI0068	RESI0069
7b	REAR HEATING ELEMENT	RESI0051	RESI0052	RESI0051	RESI0052
8	KNOB	MANI0009	MANI0009	MANI0009	MANI0009
9	FRONT FINISHING FRAME	FIAN0149	FIAN0151	FIAN0149	FIAN0151
10	RESTRINING PANEL	CARP0486	CARP0486	CARP0488	CARP0488
11	LEFT GUARD	FIAN0228	FIAN0228	FIAN0230	FIAN0230
12	TOP PANEL	CARP0506	CARP0507	CARP0508	CARP0509
13	BUTTERFLY VALVE CONTROL ROD	ASTA0007	ASTA0007	ASTA0015	ASTA0015
14	BUTTERFLY VALVE CONTROL ADJUSTER	CARP0248	CARP0248	CARP0248	CARP0248
15	BODY OF COOKING CHAMBER	CAME0081	CAME0082	CAME0083	CAME0084
16	REAR PANEL	FIAN0153	FIAN0155	FIAN0153	FIAN0155
17	FLUE	TUBO0046	TUBO0046	TUBO0046	TUBO0046
18	DOOR GLASS	CRIS0025	CRIS0028	CRIS0025	CRIS0028
19	DOOR HANDLE	MANI0057	MANI0058	MANI0057	MANI0058
20	LEFT DOOR SHUT SPRING	SPRI0009	SPRI0009	SPRI0009	SPRI0009
21	RIGHT DOOR SHUT SPRING	SPRI0010	SPRI0010	SPRI0010	SPRI0010
22	FRONT BEDPLATE	PLAM0012	PLAM0015	PLAM0012	PLAM0015
23	REAR BEDPLATE	PLAM0013	PLAM0016	PLAM0013	PLAM0016
24	CONTROL PANEL MOUNT	CART0128	CART0128	CART0128	CART0128
25	LIGHT HOUSING GLASS FRAME	CARP0046	CARP0046	CARP0046	CARP0046
26	LIGHT HOUSING GLASS	CRIS0006	CRIS0006	CRIS0006	CRIS0006
27	RESTRINING PANEL	CARP0491	CARP0491	CARP0493	CARP0493
28	BOTTOM PANEL	CARP0506	CARP0507	CARP0508	CARP0509
29	SUPPORTO LAMPADA ALOGENA	CARP0515	CARP0515	CARP0515	CARP0515
30	HALOGEN LAMP	LAMP0037	LAMP0037	LAMP0037	LAMP0037
31	LAMP HOLDER	LAMP0038	LAMP0038	LAMP0038	LAMP0038
32	LAMP COLDIND BOX	CARP0495	CARP0495	CARP0495	CARP0495
33	RIGHT GUARD	FIAN0224	FIAN0224	FIAN0226	FIAN0226
34	PUSH-BUTTON PANEL	ELET0149	ELET0149	ELET0149	ELET0149
35	BASE CARD	ELET0148	ELET0148	ELET0148	ELET0148
36	500°C SAFETY THERMOSTAT	TERM0005	TERM0005	TERM0005	TERM0005
37	J PROBE	TERM0020	TERM0020	TERM0020	TERM0020
38	ANTIJAMMING DEVICE	ELET0116	ELET0116	ELET0116	ELET0116
39	CONTROL SWITCH	ELET0002	ELET0002	ELET0002	ELET0002
40	FUSE PORT	ELET0047	ELET0047	ELET0047	ELET0047
41	EARTH PORT	ELET0053	ELET0053	ELET0053	ELET0053

Table 10.5 - List of spare parts (MC 18)

N°	Description	Codes			
		T2 POLIS MC28	T3 POLIS MC28	T4 POLIS MC28	T6 POLIS MC28
1	GLASS RESTRAINING FRAME	CARP0110	CARP0111	CARP0110	CARP0111
2	GLASS SEAL	GUAR0010	GUAR0010	GUAR0010	GUAR0010
3	LEFT HINGE	SUPP6013	SUPP6013	SUPP6013	SUPP6013
4	BUSH	BOCC0006	BOCC0006	BOCC0006	BOCC0006
5	DOOR	PORT6035	PORT6036	PORT6035	PORT6036
6	RIGHT HINGE	SUPP6014	SUPP6014	SUPP6014	SUPP6014
7a	FRONT HEATING ELEMENT	RESI0068	RESI0069	RESI0068	RESI0069
7b	REAR HEATING ELEMENT	RESI0051	RESI0052	RESI0051	RESI0052
8	KNOB	MANI0009	MANI0009	MANI0009	MANI0009
9	FRONT FINISHING FRAME	FIAN0207	FIAN0208	FIAN0207	FIAN0208
10	RESTRINING PANEL	CARP0774	CARP0774	CARP0773	CARP0773
11	LEFT GUARD	FIAN0229	FIAN0229	FIAN0231	FIAN0231
12	TOP PANEL	CARP0506	CARP0507	CARP0508	CARP0509
13	BUTTERFLY VALVE CONTROL ROD	ASTA0007	ASTA0007	ASTA0015	ASTA0015
14	BUTTERFLY VALVE CONTROL ADJUSTER	CARP0248	CARP0248	CARP0248	CARP0248
15	BODY OF COOKING CHAMBER	CAME0085	CAME0086	CAME0087	CAME0088
16	REAR PANEL	FIAN0209	FIAN0210	FIAN0209	FIAN0210
17	FLUE	TUBO0075	TUBO0075	TUBO0075	TUBO0075
18	DOOR GLASS	CRIS0025	CRIS0028	CRIS0025	CRIS0028
19	DOOR HANDLE	MANI0057	MANI0058	MANI0057	MANI0058
20	LEFT DOOR SHUT SPRING	SPRI0009	SPRI0009	SPRI0009	SPRI0009
21	RIGHT DOOR SHUT SPRING	SPRI0010	SPRI0010	SPRI0010	SPRI0010
22	FRONT BEDPLATE	PLAM0012	PLAM0015	PLAM0012	PLAM0015
23	REAR BEDPLATE	PLAM0013	PLAM0016	PLAM0013	PLAM0016
24	CONTROL PANEL MOUNT	CART0129	CART0129	CART0129	CART0129
25	LIGHT HOUSING GLASS FRAME	CARP0046	CARP0046	CARP0046	CARP0046
26	LIGHT HOUSING GLASS	CRIS0006	CRIS0006	CRIS0006	CRIS0006
27	RESTRINING PANEL	CARP0771	CARP0771	CARP0772	CARP0772
28	BOTTOM PANEL	CARP0506	CARP0507	CARP0508	CARP0509
29	SUPPORTO LAMPADA ALOGENA	CARP0515	CARP0515	CARP0515	CARP0515
30	HALOGEN LAMP	ELET0226	ELET0226	ELET0226	ELET0226
31	LAMP HOLDER	LAMP0037	LAMP0037	LAMP0037	LAMP0037
32	LAMP COLDIND BOX	LAMP0038	LAMP0038	LAMP0038	LAMP0038
33	RIGHT GUARD	FIAN0225	FIAN0225	FIAN0227	FIAN0227
34	PUSH-BUTTON PANEL	ELET0149	ELET0149	ELET0149	ELET0149
35	BASE CARD	ELET0148	ELET0148	ELET0148	ELET0148
36	500°C SAFETY THERMOSTAT	TERM0005	TERM0005	TERM0005	TERM0005
37	J PROBE	TERM0020	TERM0020	TERM0020	TERM0020
38	ANTIJAMMING DEVICE	ELET0116	ELET0116	ELET0116	ELET0116
39	CONTROL SWITCH	ELET0002	ELET0002	ELET0002	ELET0002
40	FUSE PORT	ELET0047	ELET0047	ELET0047	ELET0047
41	EARTH PORT	ELET0053	ELET0053	ELET0053	ELET0053

Table 10.6 - List of spare parts (MC 28)

11. DECOMMISSIONING AND DEMOLITION

Before proceeding with the decommissioning disconnect the electrical supplies to the equipment and any other connections there may be and then move the modules using suitable means such as: forklift trucks, hoists, etc... keeping in mind the position of the centres of gravity (see table 5.1) indicated in the chapter INSTALLATION (5).

The ovens are made up of the following materials: stainless steel, coated steel sheets, glass, ceramic material, rock wool and electrical parts.

For the purposes of demolition therefore the materials have to be separated in observance with the norms in force in the place where the machine is being dismantled. In any case do not dispose of into the environment.