



INSTALLER'S MANUAL

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ATTENTION

The manufacturer reserves himself the right to modify the present manual without the obligation to up to date the previous editions.

DATA TAG

DALLA CORTE s.r.l Via Broglio, 24 20158 Milano Italy	Serial n°	ANNO 2007
	I. 13,5	0.15 MPa
	Maximum water pressure 0.6 Mpa	
	MOD. <u>20.03 EVOLUTION</u> 400 V 3N ~ Hz 50 – 60 230 V 3 ~ 230 ~ WATT. IPX2	

ATTENTION

End user must set up electrical, water and drain systems in advance, to ensure a correct installation. Installer can not modify systems set up in advance by the end user (see chapter "End User Set Up Procedures" in the Use and Maintenance Manual enclosed with each unit.)



ACCESSORIES LIST

- A** Set of filter holders with spouts + 1 filterholder for two with spout
- B** Complete set of flexible hoses for connection to water system
- C** Two sets of filter baskets
- D** Set of shower screens
- E** Group brush
- F** Box of 120 cleaning tablets for group head

ATTENTION

This machine is to be used exclusively in the type of operation it was designed for. Any other use will be considered improper and therefore unreasonable. Manufacturer will not be responsible for possible damages arising from improper, incorrect or unreasonable use of the equipment.

INSTALLER'S GUIDELINES

Carefully read instructions and guidelines contained in this manual and in the "USE AND MAINTENANCE MANUAL", as they supply important directions concerning installation and operation of the unit.

Verify that all systems in care of the end user and necessary for the installation, as per instruction on the "USE AND MAINTENANCE MANUAL", are in place.

Verify that the total capacity of the electrical circuit on the premises is enough to handle the maximum load of the machine, as indicated on the data tag applied to the unit.

Should the power cord be replaced for any reason, use only a type with specs recommended by the manufacturer.

Machine can be operated safely only if properly grounded.

Machine must be filled only with cold drinkable water. Maximum water line pressure should be 0.6 Mpa. In addition, use of any electrical appliance requires certain precautions:

- Do not operate machine while hands or feet are wet
- Do not operate machine while barefoot
- Do not allow children and not properly trained personnel to use the machine
- Do not clean machine by spraying water on it
- Do not leave machine on while unattended

INSTALLATION

ATTENZIONE

Perform installation in accordance with local laws and regulations, and follow the instructions provided below. Manufacturer can not be held responsible for damages to humans, animals or objects caused by an incorrect installation.

This machine must be not installed in area where a water propulsion jet is present.

Machine's installation, using and maintenance must be made only by qualified staff .

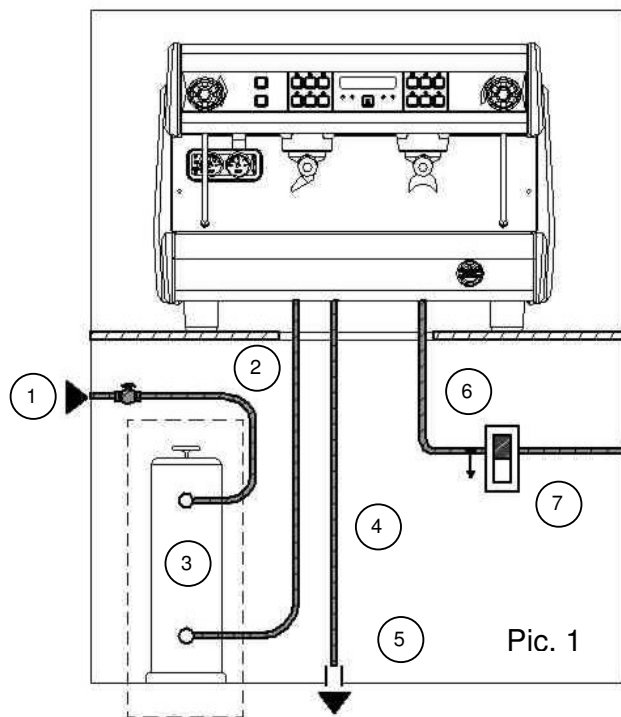
The ambient temperature must be at least 10 °Degrees C and a maximum of 25 °Degrees C .

Verify integrity of the unit after removing packaging material. If any doubt exists about its integrity, abort installation. Packaging material should be kept away from children as it may represent a danger. Place the machine on a suitably strong counter top and adjust the feet of the unit until it is perfectly fixed

ATTENTION

Machine weighs over 30 kg; therefore it should be lifted by two or more people

Before connecting the machine, make sure the capacities of the electrical and water hookups are enough to handle the requirements of the machine as indicated on its Data Tag.



LEGEND

1. Cold water tap
2. Flexible water hoses
3. Water softene (optional)
4. Drain hose
5. Floor sink
6. Electric cord
7. Circuit breaker / Powere switch hose

ELECTRICAL SYSTEM

Machine is provided with power cord without plug. Connect machine to electrical circuit, using a sectional connector allowing omni-polar disconnection of unit from circuit. Insure that the leads of such connector are distanced at least 3 mm from each other.

The operation described here above can be performed in two ways:

- Connection to electrical circuit via suitable connector



- Connection to electrical circuit via approved plug, which must be accessible after installation, with machine in operating mode.

To connect the power cord of the machine to the circuit of the building, each lead going to the main switch of machine should be identified according to its symbol (N=Neutral, 1=Phase 1, 2=Phase 2, 3=Phase 3, grounding symbol for yellow/green lead), so as not to invert wiring and cause malfunctions.

Connect electrical cord to circuit as per Pic. 1

To avoid dangerous overheating, the power cord should be completely unwound.

If the power cord is damaged must be replaced by a new one supplied by the factory or by an authorized assistance center.

If the capacity of the circuit on the premises does not match the machine's requirements as per its Data Tag, replace connections inside the electrical box of the machine and on the power cord according to the following instructions.

WATER SYSTEM CONNECTIONS

The minimum and maximum input pressure necessary for the proper functioning of the machine must be respectively 0.05 MPa and 0.6 MPa.

Connect flexible hoses as per Pic. 1. Use the power cord you will find on the machine's equipment.

Don't use the old cables.

Verify that there are no snags on bends in the flexible hoses.

Securely tighten threaded nuts of flexible hoses

SYSTEM WITH WATER SOFTENER

Softener is recommended in locations where water has over 10 French degrees of total hardness, since it will prevent buildup of calcium deposits inside the machine. The quality of the coffee will also be improved. The softener should be installed in an easily accessible location for maintenance, near a floor sink.

SYSTEM WITHOUT WATER SOFTENER

If a water softener is not necessary, the installation of a 1-pic.1 in-line filter cartridge is recommended to avoid damages to the pump caused by possible impurities in the water supply.

Let water run from the tap into a bucket for a few minutes prior to connecting the machine to the water line, to remove any impurity of new installations.

ATTENTION: Let water run from the tap into a bucket for a few minutes prior to connecting the machine to the water line, to remove any impurity of new .

DRAIN SYSTEM

Connect flexible drain hose to nipple on drain pan of machine, located under the drip tray, and insert the other end in floor sink 5-fpic.1.

Verify that the inclination of the drain hose is enough to allow a quick drain from the drain pan of the unit.

INITIAL SETUP

Perform following instructions with the help of the controls description diagram found on page 13.

Check all connections first, and then proceed with the setting up of the machine.

Open water tap 1-pic 1; verify that there are no leaks through the flexible hoses 2-pic 1.

Turn on circuit breaker 7-pic. 1 and turn main switch of machine 1-pic.1 clockwise.

Verify that LED-10 turns on.



Immediately afterwards, boiler filling starts and Led 7 turns on; when boiler is filled up Led 7 (L) turns off. Verify that LED-8 (boiler heating LED) also turns on. It means the machine is heating

HEATING

While the boiler is heating, the coffee group heads do not operate nor heat up. However, it is possible to reserve heating of the group heads by pushing the button P7 for 10 seconds on each of the groups required for operation. The alternating blink of LEDs 3 - 6 will confirm the reservation.

When the boiler reaches operating temperature, the group heads will start heating. When all reserved group heads reach operating temperature, the machine will give out an acoustic signal to confirm it is ready for use.

GROUP DOSES PROGRAMMING

The procedure to program doses of buttons P1-P2-P4-P5 (if this feature is enabled in the IMPOST menu) is the following:

- Turn off machine using main switch 1
- Press button P1 of group nr. 1 and at the same time turn main switch of machine back on. Release button P1 only when the LED on button P3 of each group head starts blinking
- Start dispensing coffee from group nr. 1 by pressing button P1 (short espresso). When desired quantity of coffee is obtained, press button P1 again to stop dispensing and memorize this quantity in the CPU
- Repeat step above to program dose of button P4 (long espresso). Buttons P2 and P5 are programmed the same way, by using the double filter basket instead of the single
- By programming the doses on group nr. 1, the same parameters are automatically copied on the remaining groups as a default
- If different doses are desired for the remaining groups, program them individually by following the same procedure above for group nr. 1.
- During programming of the group doses it is also possible to program the two hot water buttons. Press either button to begin dispensing hot water, press again when the desired quantity of water is obtained to stop dispensing and memorize this quantity in the CPU.
- When finished programming, keep pressing button P3 of group nr. 1 until all LED's of buttons P3 stop blinking and machine returns to normal operational mode.

MACHINE OPERATION

All instructions for daily operation of the machine are included in the "USE AND MAINTENANCE MANUAL"



MACHINE ADJUSTMENTS

This espresso machine has a series of adjustable parameters to optimize its functions and coffee extraction.

Only qualified personnel specifically trained by the manufacturer may perform parameter adjustments

Parameter programming may be accessed through the use of the remote programmer supplied to all authorized dealers

Connect the remote control to the cable inside the machine, on the right upper side

The programmer will display (main menu)

S	E	T	-	V	I	S	U	A	L	-	-	-
A	L	A	R	M	S	-	-	T	E	S	T	-

Pushing **↑** will display

-	-	-	-	I	T	A	L	I	A	N	O	-	-	-	-
R	E	L	E	A	S	E	-	N	.	-	-	7	.	0	1

LANGUAGE SELECTION

The default language (ITALIANO) will blink. Using **▶** or **◀**, choose desired language and press OK to confirm.

It will display

S	E	R	I	A	L	-	N	°	-	0	0	0	0	0	0
A	D	R	E	S	S	-	N	°	-	-	-	-	0	1	-

Insert the serial number of the machine and confirm the address n.01 (only in some special cases it will be modified in 02 etc.) The display will revert to the main menu, with SET blinking by default. With **▶** or **◀** select desired item on the menu (chosen item will blink) and push OK to confirm selection.

SET MENU

Pushing OK while SET is blinking on the main menu will give access to the boiler and group heads temperature parameters submenu.

-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-
S	E	T	T	I	N	G	-	-	-	-	D	O	S	E	S

TEMPERATURES will blink by default. Push **OK** to enter temperature programming

B	O	I	L	E	R	-	-	-	S	E	T	-	-	-	-
-	-	-	-	1	2	0	,	0	°	C	-	-	-	-	-

The default is 120 Degrees C. Range is between 110° Degrees C to 125° Degrees C

Push **▶** or **◀** to change desired boiler temperature and press **OK** to confirm.

After confirmation the display shows

B	O	I	L	E	R	-	D	E	L	T	A	-	T	-	-
-	-	-	-	2	,	0	°	C	-	-	-	-	-	-	-

The thermal Delta is the temperature variation allowed before the heating element activates. Therefore, the lower the value, the lower thermal modification will be allowed.

The default is 2 Degrees C. Range is between 1° Degrees C to 5° Degrees C

Push **▶** or **◀** to change thermal Delta of the boiler and press **OK** to confirm

After confirmation the display shows

G	R	O	U	P	-	-	N	.	1	-	S	E	T	-	-
-	-	-	-	9	5	,	0	°	C	-	-	-	-	-	-

The default is 95° Degrees C. Range is between 80° Degrees C to 110° Degrees C

Push **▶** or **◀** to change desired group temperature and press **OK** to confirm

After confirmation the display shows



G	R	O	U	P	-	-	N	.	2	-	S	E	T	-	-
-	-	-	-	-	9	5	,	0	°	C	.	-	-	-	-

The default is 95 °Degrees C. Range is between 80° Degrees C to 110° Degrees C

Push ► or ◀ to change desired group temperature and press **OK** to confirm

You can set the 3rd and 4th group only if you have started them up in the SETTING MENU

Push ► or ◀ to change desired group temperature and press **OK** to confirm

After confirmation the display shows

-	-	D	E	L	T	A	-	T	O	T	A	L	-	-	-
-	-	-	-	-	4	,	0	°	C	.	-	-	-	-	-

This is the thermal Delta for the group heads.

The default is 4 °Degrees C. Therefore, higher is the value, higher is the thermal stability of the groups.

Push ► or ◀ to change the groups thermal Delta and press **OK** to confirm

After confirmation the display shows

-	-	E	X	T	R	A	-	S	E	T	-	-	-
-	-	-	-	-	2	,	0	°	C	.	-	-	-

This parameter increases the temperature of the group heads, if necessary, whenever they are inactive for over 10 minutes (the manufacturer does not recommend a particular setting for this parameter, as it varies depending on quality of coffee used and case-by-case scenarios)

The default is 2° Degrees C. Range is between 0° Degrees C to 6° Degrees C

Keep pressing the OK button until the display exits the TEMPERATURES menu and displays

-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-
S	E	T	T	I	N	G	S	-	-	-	D	O	S	E	S

From the main menu, push ► or ◀ until SETTINGS blinks and press **OK** to access the settings submenu

-	G	R	O	U	P	-	N	.	x	-	O	N	-	-
-	-	-	-	-	-	-	2	-	-	-	-	-	-	-

This parameter sets the electronic board to match the number of group heads mounted on the machine (manufacturer sets up this parameter)

After confirmation the display shows

A	U	T	O	F	I	L	L	-	B	O	I	L	E	R	-
-	-	-	-	-	3	-	M	I	N	.	-	-	-	-	-

This parameter sets the timeout of the boiler auto-filling mechanism and is usually modified depending on the size of the boiler (recommended value: 4 minutes for 2-group machines, 6 minutes for 3 or 4-group machines)The default is 3 minutes

After confirmation the display shows

-	-	O	N	-	-	C	O	F	F	E	E	-	-	-
-	-	-	-	5	-	S	E	C	.	-	-	-	-	-

This parameter activates the heating element in the group head each time the head is used to lay out coffee, to avoid cooling down of the head after a few seconds (recommended value is 5 seconds)

The default is 5 seconds, the field range is between 0 seconds to 20 seconds.

Push ► or ◀ to change this parameter and press **OK** to confirm

After confirmation the display shows

-	-	-	D	O	S	E	S	-	P	R	O	G	-	-	-
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

YES (the default) will blink

If YES is confirmed it is possible to proceed to programming of the doses of the group heads, while by choosing NO this function is locked out. Push ► or ◀ to change this parameter and press **OK** to confirm

After confirmation the display shows

-	M	A	N	U	A	L	-	C	O	F	F	E	E	-	-
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

YES (the default) will blink



If YES is confirmed, the free dose button (P 3) on each group head will operate, while by choosing NO this function is locked out and only the programmable doses buttons operate
Push ► or ◀ to change this parameter and press **OK** to confirm

After confirmation the display shows

C	A	S	H	-	-	C	O	N	N	E	C	T	I	O	N
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

NO (the default) will blink. By confirming YES , the machine will be allowed to start working with the cash system. ATTENTION : by confirming YES without cash system available, the machine will not lay out either coffee and tea

Push ► or ◀ to change this parameter and press **OK** to confirm.

After confirmation the display shows

-	-	G	R	I	N	D	E	R	-	-	-	-	-	-	-
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

NO (the default) will blink. By confirming YES, the machine will be allowed to start working with the GCS system. ATTENTION : by confirming YES without any connection between the machine and the grinder, the machine will emit some acoustic alarm signals while it will lay out coffee. They will not be visualized in the alarm list

Push ► or ◀ to change this parameter and press **OK** to confirm.

If No is confirmed ,the display shows STEAM

If YES is confirmed ,the display shows

-	-	-	-	%	-	G	R	I	N	D	I	N	G	-	-
-	-	-	-	-	-	5	-	%	-	-	-	-	-	-	-

This parameter sets the erogation time range allowed within which the erogation itself is considered correct referring to the lay out time already setted .Default is 5 %. Range is between 5 % to 20 %

Push ► or ◀ to change this parameter and press **OK** to confirm. After confirmation the display shows

U	P	D	A	T	E	-	-	G	R	I	N	D	I	N	G
-	-	-	-	-	-	-	1	0	-	-	-	-	-	-	-

By setting this parameter you can choose how many erogations of coffee you need before updating the regulation of the grinder. Default is 10. Range is between 5 to 50

Push ► or ◀ to change this parameter and press **OK** to confirm.. After confirmation the display shows

-	-	-	S	T	E	A	M	-	-	-	-	-	-	-	-
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

NO (the default) will blink. Push ► or ◀ to change this parameter and press **OK** to confirm.

If NO is confirmed the displays shows PIN NUMBER.

If YES is confirmed the display shows

-	T	E	M	P	.	-	-	-	S	T	E	A	M	-	-
-	-	-	-	4	5	.	0	°	C	-	-	-	-	-	-

This parameter controls the milk temperature . Default is 45° Degrees C .Range is between 45° Degrees C to 70° Degrees C

Push ► or ◀ to change this parameter and press **OK** to confirm.. After confirmation the display shows

-	-	-	P	I	N	-	-	N	U	M	B	E	R	-	-
-	-	-	-	-	-	0	0	0	0	-	-	-	-	-	-

Set this parameter to create the setting up access code.

Without knowing it you can only enter in the visual and alarm menu

Keep pressing the OK button until the display exits the SETTING menu and displays

-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-
S	E	T	T	I	N	G	S	-	-	-	D	O	S	E	S

push ► or ◀ until **DOSES** blinks and press **OK** to access the settings submenu DOSES



Without the GCS system the display shows

C	O	F	F	E	E	-	G	R	O	U	P	-	N	.	1
		s	1	-	=	-	-	1	5	0	-	-	-	-	-

S1 (single short coffee) blinks , push ➡ or ⬅ to increase or decrease the value(default is 150)
Press **OK** to confirm

C	O	F	F	E	E	-	G	R	O	U	P	-	N	.	1
		s	2	-	=	-	-	3	0	0	-	-	-	-	-

S2 (double short coffee) blinks, push ➡ or ⬅ to increase or decrease the value(default is 300)
Press **OK** to confirm

C	O	F	F	E	E	-	G	R	O	U	P	-	N	.	1
		s	3	-	=	-	-	1	9	0	-	-	-	-	-

S3 (single long coffee) blinks, push ➡ or ⬅ to increase or decrease the value(default is 190)
Press **OK** to confirm

C	O	F	F	E	E	-	G	R	O	U	P	-	N	.	1
		s	4	-	=	-	-	3	6	0	-	-	-	-	-

S4 (double long coffee) blinks, push ➡ or ⬅ to increase or decrease the value(default is 360)
Press **OK** to confirm

C	O	F	F	E	E	-	G	R	O	U	P	-	N	.	2
		s	1	-	=	-	-	1	5	0	-	-	-	-	-

S1 (single short coffee) blinks , push ➡ or ⬅ to increase or decrease the value(default is 150)
Press **OK** to confirm. Repeat for each group until the display shows

-	-	T	E	A	-	-	-	G	R	O	U	P	-	-	-
S	1	=	-	3	.	0	-	-	S	2	=	-	6	.	0

S1(single hot water dose)blinks, push ➡ or ⬅ to increase or decrease the value(default is 3.0) Press **OK** to confirm. S2 (double hot water dose) blinks , push ➡ or ⬅ to increase or decrease the value(default is 6.0) Press **OK** to confirm.

Keep pressing the OK button until the display exits the DOSES menu and displays

-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-
S	E	T	T	I	N	G	S	-	-	-	D	O	S	E	S

With the GCS system the display shows

-	-	G	R	.	1	-	-	-	S	e	l	.	1	-	-
Q	1	=	-	1	5	0	-	-	t	1	=	-	-	2	0

The display shows: Q1 dose from the selection 1 to the group 1 (single short coffee) using Grinder 1
You are not allowed to modify these parameters by using the serial palmer.

Press **OK** to confirm , the display shows

-	-	G	R	.	1	-	-	-	S	e	l	.	1	-	-
Q	1	=	-	1	5	0	-	-	t	2	=	-	-	2	0

The display shows : Q1 dose from selection 1 to the group 1 (single short coffee)using the Grinder 2

Press **OK** to confirm , the display shows

-	-	G	R	.	1	-	-	-	S	e	l	.	2	-	-
Q	1	=	-	3	0	0	-	-	t	2	=	-	-	2	0

The display shows : Q1 dose from selection 2 to the group 1 (double short coffee)using the Grinder 1

Press **OK** to confirm , the display shows

-	-	G	R	.	1	-	-	-	S	e	l	.	2	-	-
Q	2	=	-	3	0	0	-	-	t	2	=	-	-	2	0

The display shows : Q2 dose from selection 2 to the group 1 (double short coffee)using the Grinder 2
Going on this way you will visualize all doses parameters referred to the installed groups until the display wil show TEA GROUP as already shown in the "WITHOUT GCS SUBMENU"

Sel 1 = single short coffee

Sel 2 = double short coffee



Sel 3 = single long coffee
 Sel 4 = double long coffee
 Q1 = parameter referring to Grinder 1
 Q2 = parameter referring to Grinder 2

Keep pressing the OK button until the display exits the DOSES menu and displays

-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-
S	E	T	T	I	N	G	S	-	-	-	D	O	S	E	S

Pushing **↑** will display

S	E	T	-	-	V	I	S	U	A	L	-	-	-
A	L	A	R	M	S	-	-	-	T	E	S	T	-

VISUAL MENU

From the main menu, push **→** or **←** until VISUAL blinks and press **OK** to access the settings submenu

Without GCS

-	-	-	-	C	O	U	N	T	E	R	S	-	-	-	-
-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-

COUNTERS (the default) will blink.

Push **→** or **←** to select **COUNTERS** and press **OK** to confirm.

After confirmation the display shows

G	r	1	>	S	H	O	R	T	-	C	O	F	F	E	E
-	-	-	-	0	0	0	0	0	0	-	-	-	-	-	-

Push **↓** to scroll down the submenu and display number of doses dispensed by group 1

-	-	T	O	T	A	L	-	-	G	R	.	1	-	-	-
-	-	-	-	0	0	0	0	0	0	-	-	-	-	-	-

Pushing **↓** will display

R	E	S	E	T	-	-	-	C	O	U	N	T	E	R	S
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

Pushing **↓** will display Select YES to reset counters and confirm.

Scroll down to display number of doses dispensed by the other groups until it displays

T	O	T	-	-	S	U	P	P	L	I	E	S	-	-	-
-	-	-	-	-	0	0	0	0	0	-	-	-	-	-	-

Pushing **↓** will display

R	E	S	E	T	-	-	-	C	O	U	N	T	E	R	S
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

NO (the default) will blink. Select YES to reset all counters and confirm

After confirmation the display shows

T	E	A	-	S	H	O	R	T	-	D	O	S	E	-	-
-	-	-	-	-	0	0	0	0	0	-	-	-	-	-	-

Pushing **↓** will display

T	E	A	-	L	O	N	G	-	-	D	O	S	E	-	-
-	-	-	-	-	0	0	0	0	0	-	-	-	-	-	-

Pushing **↓** will display

-	T	O	T	A	L	-	O	F	-	T	E	A	S	-	-
-	-	-	-	-	0	0	0	0	0	-	-	-	-	-	-

Pushing **↓** will display

R	E	S	.	T	E	A	-	C	O	U	N	T	E	R	-
-	-	-	Y	E	S	-	-	-	-	-	N	O	-	-	-

NO (the default) will blink. Select YES to reset tea counters and confirm

After confirmation the display shows

-	-	-	-	C	O	U	N	T	E	R	S	-	-	-	-
-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-



With GCS

C	O	U	N	T	E	R	-	G	R	I	N	D	I	N	G
-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-

COUNTERS (the default) will blink.

Push ➡ or ⬅ to select **COUNTERS** and press **OK** to confirm.

After confirmation the display shows

G	r	1	>	S	H	O	R	T	-	C	O	F	F	E	E
-	-	-	-	-	0	0	0	0	0	0	-	-	-	-	-

Scroll down the menu as before until it displays

C	O	U	N	T	E	R	-	G	R	I	N	D	I	N	G
-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-

Push ➡ or ⬅ to select **GRINDING** and press **OK** to confirm.

G	R	I	N	D	E	R	-	1	-	-	0	-	-	-	0
G	R	I	N	D	E	R	-	1	-	-	0	-	-	-	0

First parameter shows quantity of dispensed coffee.

The second one shows the quantità of dispensed coffee out of the proper erogation range (both for Grinder 1 and Grinder 2)

Push ▼ to scroll down the submenu until the display shows:

C	H	E	C	K	-	-	G	R	I	N	D	I	N	G	.
-	-	1	>	-	-	-	0	-	-	-	-	0	-	-	-

Push ▼ to scroll down the submenu

C	O	U	N	T	E	R	-	G	R	I	N	D	I	N	G
-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-

Push ➡ or ⬅ to select **TEMPERATURE** and press **OK** to confirm.

After confirmation the display shows

T	.	-	B	O	I	L	E	R	-	P	R	O	B	E	-
					1	2	0	.	0	°	C				

Pressing ▼ to scroll down the submenu to visualize the temperature of the boiler and the groups

By pressing OK the display shows

C	O	U	N	T	E	R	-	G	R	I	N	D	I	N	G
-	-	T	E	M	P	E	R	A	T	U	R	E	S	-	-

By pressing ▲ you go back to the main menu

S	E	T	-	-	V	I	S	U	A	L	-	-	-		
A	L	A	R	M	-	-	-	-	T	E	S	T			

TEST MENU

This menu is reserved to the manufacturer and the technical service to test and verify the proper functioning of the machine.

On the main label , with ➡ or ⬅ ,choose **TEST**

S	E	T	-	-	V	I	S	U	A	L	-	-	.		
A	L	A	R	M	S	-	-	-	T	E	S	T			

By pressing OK you enter the menu TEST and you see

R	E	L	E	A	S	E	-	N	.	-	-	4	.	0	1
*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*



This writing is referred to the text of the display of the palmer, the 2 lines are alternating, showing the software release of the palmer and cyclically all the possible alphanumeric characters.

By pressing **↓** we go to the test of the buttons of the control panel and of the buttons of the palmer.

-	-	-	-	K	E	Y	-	P	0	0	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

By pressing any button you see its identification on the first line(from P01 to P06 buttons of group keyboard, P07 cups-heater button, P08 and P09 hot water buttons, from P10 to P14 palmer buttons), while in the second line only for the group buttons you see the number of the group corresponding to the pressed button

By pressing **↓** you test the functioning of the volumetric counters

-	-	-	-	F	L	O	W	M	E	T	E	R	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

By pressing OK, you test the functioning of V.C. n° 1 and on the display of the palmer you see the value of the impulses ,which rises if everything works properly; pressing OK again, you stop the function

-	-	-	-	F	L	O	W	M	E	T	E	R	-	-	-
-	-	-	-	1	)	-	-	-	0	0	-	-	-	-	-

By pressing OK again, you check V.C. n° 2 ,and so on until V. C. n° 4

It is also possible to check the V.C. by pressing the button P1 corresponding to the group whose V.C. you need to check .

By pressing **↓** you can control the functioning of the temperature probes

-	T	.	P	R	O	B	E	-	B	O	I	L	E	R	-
-	-	-	-	1	2	1	.	0	°	C	-	-	-	-	-

By pressing **→** you see the probes n° 1, 2, 3 and 4 one after the other

-	T	.	P	R	O	B	E	-	G	R	.	-	1	-	-
-	-	-	-	9	4	.	8	°	C	-	-	-	-	-	-

Note :The temperatures of the probes shown on the screen will range from 70° to 140°C

By pressing **↓** you check the entrances of the controlling board

-	A	U	T	O	F	I	L	L	-	I	N	P	U	T	-
-	-	-	-	-	-	-	-	O	N	-	-	-	-	-	-

If you see ON ,the probe of the boiler level touches water, if you see OFF the probe does not touch water

By pressing **→** you check the probe of the security level

S	A	F	E	T	Y	-	L	E	V	.	I	N	P	U	T
-	-	-	-	-	-	-	O	N	-	-	-	-	-	-	-

If you see ON the probe of the boiler level touches water , if you see OFF the probe does not touch water

By pressing **→** you check on the transformer which feeds the solenoid valves

-	2	4	v	o	l	t	s	-	-	I	N	P	U	T	-
-	-	-	-	-	-	-	O	N	-	-	-	-	-	-	-

If you see ON this means that the toroidal transformer works properly and delivers the correct tension

By pressing **↓** you check the functioning of all the reles of the electronic board and the corresponding peripherals (ex. motorpump, cups-heater, boiler, solenoid valves and heating elements of the groups.

Initially you see :

-	-	-	-	R	E	L	A	Y	-	1	-	-	-	-	-
-	-	-	-	-	-	-	O	F	F	-	-	-	-	-	-

By pressing OK, OFF becomes ON and the motorpump starts working. By pressing OK again, you go back to the OFF status

By pressing **→** you go to R2 = rele of the cups-heater

-	-	-	-	R	E	L	A	Y	-	2	-	-	-	-	-
-	-	-	-	-	-	-	O	F	F	-	-	-	-	-	-

By pressing OK, OFF becomes ON and the heating element of the cups-heater starts working. By pressing OK again you go back to the OFF status

By pressing **→** you go to R3= contactor of the boiler



-	-	-	R	E	L	A	Y	-	3	-	-	-	-
-	-	-	-	-	-	O	F	F	-	-	-	-	-

By pressing OK, OFF becomes ON and the heating elements of the boiler start working. By pressing OK again you go back to the OFF status

By pressing → you go to R4= solenoid valve of the boiler autolevel

-	-	-	R	E	L	A	Y	-	4	-	-	-	-
-	-	-	-	-	-	O	F	F	-	-	-	-	-

By pressing OK, OFF becomes ON and the autolevel solenoid valve starts working. By pressing OK again you go back to the OFF status

By pressing → you go to R4= solenoid valve of group 1

-	-	-	R	E	L	A	Y	-	5	-	-	-	-
-	-	-	-	-	-	O	F	F	-	-	-	-	-

By pressing OK, OFF becomes ON and the solenoid valve of group 1 starts working. By pressing OK again you go back to the OFF status R6= group 2, R7= group 3, R8= group 4

By pressing → you go to R4= solenoid valve of the hot water

-	-	-	R	E	L	A	Y	-	9	-	-	-	-
-	-	-	-	-	-	O	F	F	-	-	-	-	-

By pressing OK, OFF becomes ON and the solenoid valve of hot water starts working. By pressing OK again you go back to the OFF status

By pressing → you go to TRIAC 1= static relay of command of the heating element of group 1

-	-	-	T	R	I	A	C	-	1	-	-	-	-
-	-	-	-	-	-	O	F	F	-	-	-	-	-

By pressing OK, OFF becomes ON and the heating element of group 1 starts working. By pressing OK again you go back to the OFF status

By pressing → you go to TRIAC 2, TRIAC 3, TRIAC 4 (if they have been installed)

By pressing → you go to RELAY STEAM = solenoid valve of the MCS – Milk Control System (if it has been installed)

-	-	R	E	L	A	Y	-	S	T	E	A	M	-	-	-
-	-	-	-	-	-	O	F	F	-	-	-	-	-	-	-

By pressing OK, OFF becomes ON and you check the functioning of the steam solenoid valve. By pressing OK again you go back to the OFF status

By pressing ▼ you check the state of the internal data memory and the control board EEPROM

-	-	-	-	E	E	P	R	O	M	-	-	-	-	-
-	-	-	-	P	A	S	S	-	-	-	-	-	-	-

If you see PASS on the screen, it means that the control board is OK

By pressing ▼ you check the connection between the control board and the panel of command

-	S	E	R	I	A	L	-	L	I	N	E	-	1	-
-	-	-	-	-	P	A	S	S	-	-	-	-	-	-

If you see PASS on the screen, it means that the connection is OK, if you see FAILURE it means that there is not connection

By pressing ▼ you check the connection between the control board and the interface (if it has been installed) for the CASH SYSTEM, the GCS SYSTEM, the MCS SYSTEM

-	I	N	T	E	R	F	A	C	E	-	C	A	R	D	-
-	-	-	-	-	P	A	S	S	-	-	-	-	-	-	-

If you see PASS on the screen it means that the connection is OK

By pressing → you check the proper functioning of the cash system

-	K	I	R	K	-	I	N	T	E	R	F	A	C	E	-
-	-	-	-	-	P	A	S	S	-	-	-	-	-	-	-

If you see PASS on the screen it means that the connection is OK



By pressing → you check the proper functioning of the GCS – grinder control system

-	-	-	-	G	R	I	N	D	E	R	-	-	-
-	-	-	-	-	P	A	S	S	-	-	-	-	-

If you see PASS on the screen it means that the connection is OK

Keeping on pressing ON for 10 seconds ,you go out of the menu “test” , the machine makes a general reset and goes back to its normal functions starting with the heating phase.

ALARMS MENU

Push ► or ◀ to select ALLARMI from the menu and press **OK** to confirm

After confirmation, any alarm messages stored in the CPU's memory board since the last reading are displayed. If no alarm occurred and was stored in memory, the display shows

-	-	-	-	A	L	A	R	M	-	-	-	-	-
-	E	M	P	T	Y	-	M	E	M	O	R	Y	-

Press **OK** to exit the ALLARMI submenu and go back to the main menu

S	E	T	-	-	V	I	S	U	A	L	-	-	-
A	L	A	R	M	-	-	-	-	T	E	S	T	-

ALARMS ADMINISTRATION

In addition to storing the programs of all above described functions, the electronic board of this espresso machines also controls their proper execution.

The incorrect execution of any of these functions triggers an alarm, recorded in the alarms menu.

The available alarms are:

- **Loss of memory data**

LED's of all buttons P6 turn on and machine emits 3 beeps. To cancel the alarm turn the main switch of machine off and back on. This alarm could be triggered due to strong spikes in the power supply. In case of memory loss, machine will operate with factory (default) parameters.

- **Transformer**

Total machine lockup, LED's 7 and 8 turn on and machine emits a continuous beep. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses the lack of load from the safety transformer, therefore all solenoid valves stop operating.

- **Auto-fill system**

Boiler lockup, LED # 7 blinks and machine emits 3 beeps. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses that the auto-fill probe contact remains open beyond the time-out time (programmed in the setting menu)

- **Safety level**

Boiler lockup. LED # 7 blinks, LED # 8 turn off and machine emits 3 beeps. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses that the safety probe (long probe) contact remains open for over 30 seconds.

- **Temperature probe BOILER**

Boiler lockup, LED # 8 blinks and machine emits 3 beeps. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses that the readings of the temperature probe boiler are out of range

- **Temperature probe Group 1**

Group 1 lockup, LED # 6 of group 1 blinks and machine emits 3 beeps. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses that the readings of the temperature probe in group 1 are out of range

- **Temperature probe Group 2**



Group 2 lockup, LED # 6 of group 2 blinks and machine emits 3 beeps. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses that the readings of the temperature probe in group 2 are out of range.

- **Temperature probe Group 3**

Group 3 lockup, LED # 6 of group 3 blinks and machine emits 3 beeps. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses that the readings of the temperature probe in group 3 are out of range.

- **Temperature probe Group 4**

Group 4 lockup, LED # 6 of group 4 blinks and machine emits 3 beeps. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board senses that the readings of the temperature probe in group 4 are out of range

- **Flowmeter Group 1**

LED of dispensing button being used blinks. To stop dispensing, press button P3 of group 1. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board cannot receive any readings from flowmeter of group 1 during coffee dispensing.

- **Flowmeter Group 2**

LED of dispensing button being used blinks. To stop dispensing, press button P3 of group 2. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board cannot receive any readings from flowmeter of group 2 during coffee dispensing.

- **Flowmeter Group 3**

LED of dispensing button being used blinks. To stop dispensing, press button P3 of group 3. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board cannot receive any readings from flowmeter of group 3 during coffee dispensing.

- **Flowmeter Group 4**

LED of dispensing button being used blinks. To stop dispensing, press button P3 of group 4. To cancel the alarm turn the main switch of the machine off and back on. This alarm is triggered when the electronic board cannot receive any readings from flowmeter of group 4 during coffee dispensing.

- **Timeout on Group 1**

LED # 3 on group 1 blinks and machine emits 1 beep. To cancel alarm press button P3 of group 1. This alarm is triggered when button P3 of group 1 is used to dispense coffee continuously for over 4 minutes.

- **Timeout on Group 2**

LED # 3 on group 2 blinks and machine emits 1 beep. To cancel alarm press button P3 of group 1. This alarm is triggered when button P3 of group 1 is used to dispense coffee continuously for over 4 minutes.

- **Timeout on Group 3**

LED # 3 on group 3 blinks and machine emits 1 beep. To cancel alarm press button P3 of group 3. This alarm is triggered when button P3 of group 3 is used to dispense coffee continuously for over 4 minutes.

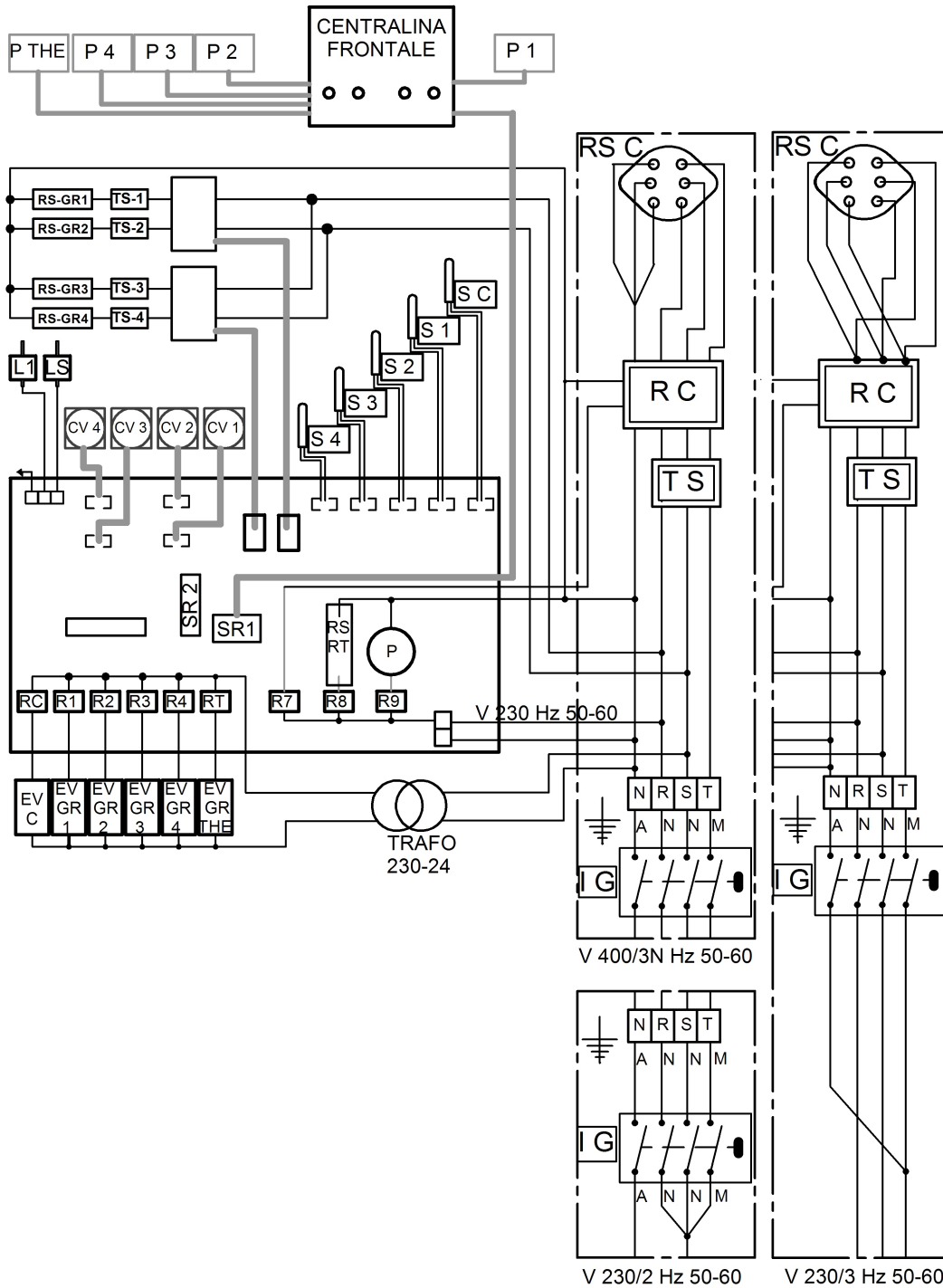
- **Timeout on Group 4**

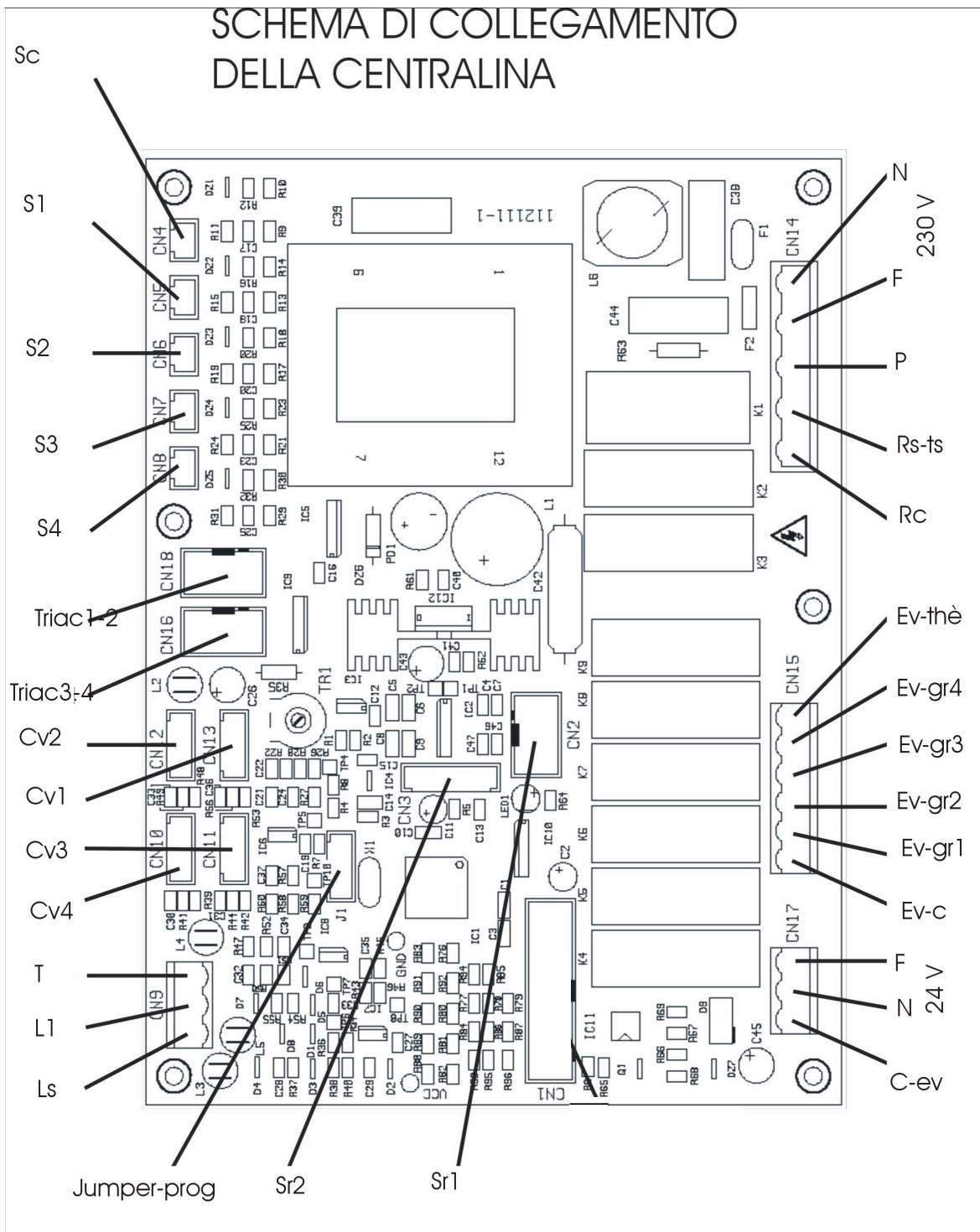
LED # 3 on group 4 blinks and machine emits 1 beep. To cancel alarm press button P3 of group 4. This alarm is triggered when button P3 of group 4 is used to dispense coffee continuously for over 4 minutes.

PARAMETERS RANGE

- Set Boiler 110 – 125°C step 0.1 °C
- Set Group 1 80 – 110°C step 0.1 °C
- Set Group 2 80 - 110°C step 0.1 °C
- Set Group 3 80 - 110°C step 0.1 °C
- Set Group 4 80 - 110°C step 0.1 °C
- Boiler Delta T 1 - 5°C step 1 °C
- Extra-set 0 - 5°C step 1 °C
- On Coffee 0 - 20 sec
- Time-out autofill 1 - 6 min

WIRING DIAGRAM

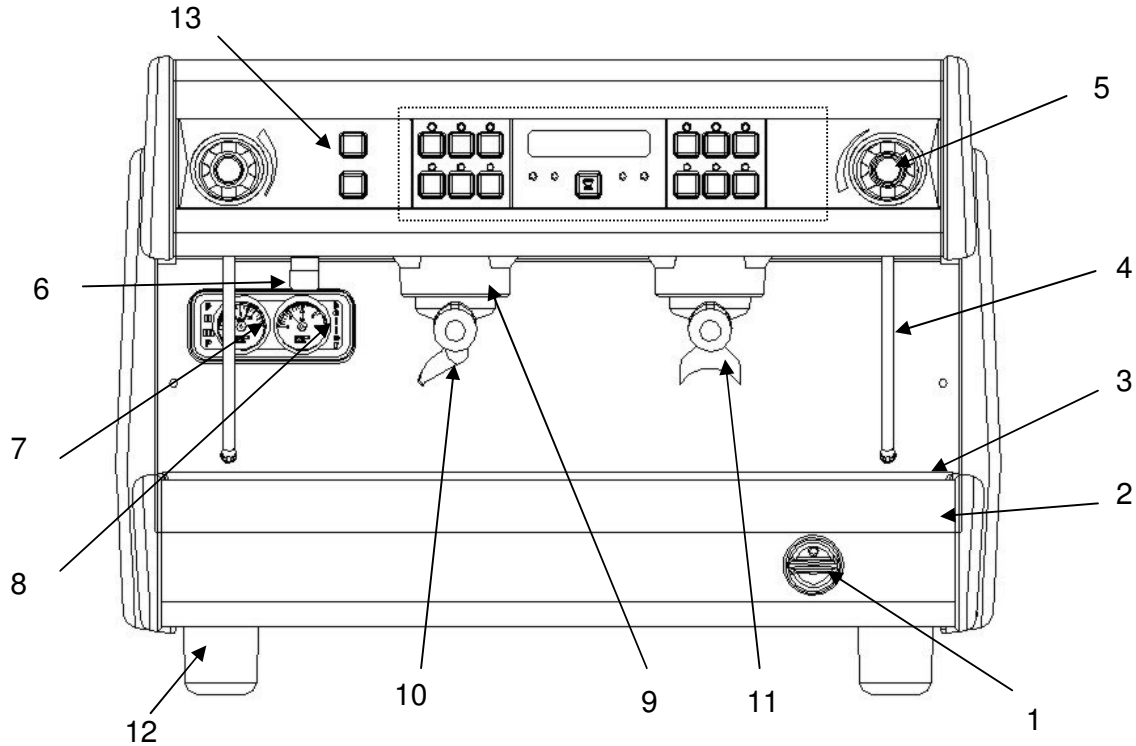
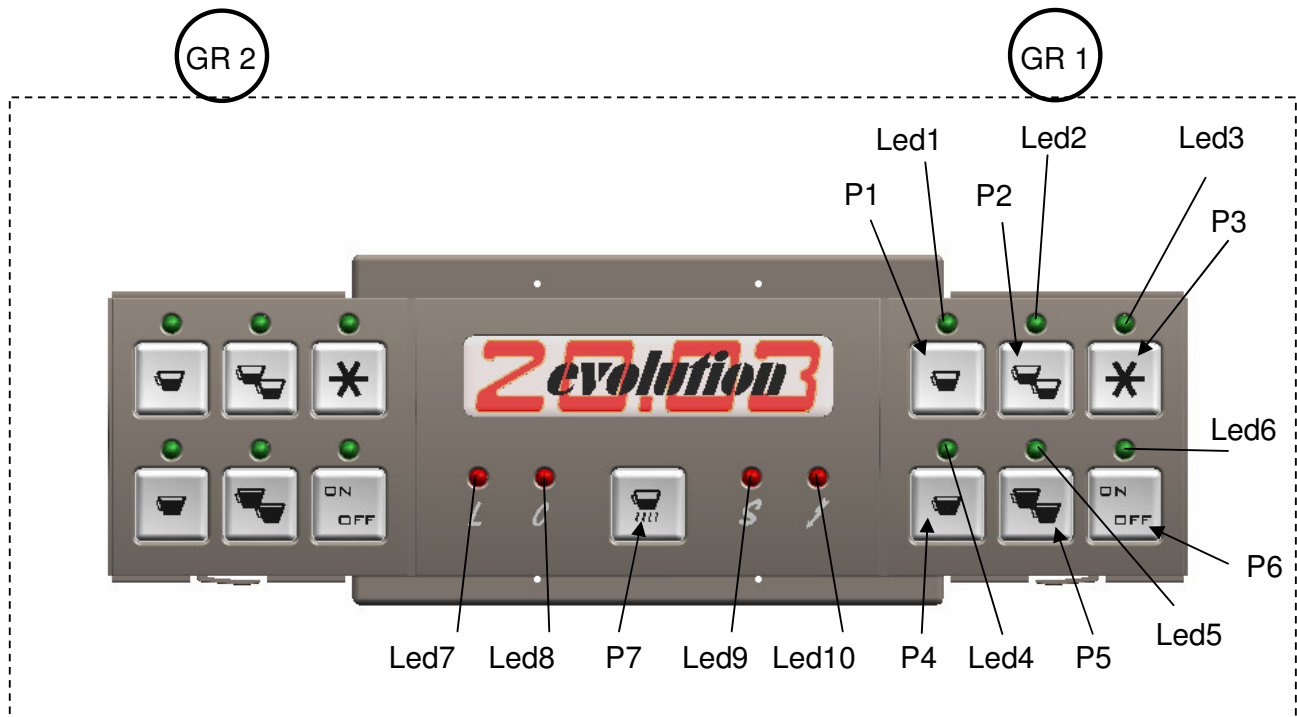






LEGEND WIRING DIAGRAM

Trafo	Transformer to all solenoid valves
Ts	Boiler safety thermostat
Rc	Boiler heater switch
Rs-c	Boiler heating element
P	Pump motor
Rs-st	Cup warmer heating element
R-a	Auto-fill relay switch
R-the	Hot water solenoid relay switch
R1	Group 1 solenoid relay
R2	Group 2 solenoid relay
R3	Group 3 solenoid relay
R4	Group 4 solenoid relay
R5	Pump motor relay
R6	Cup warmer heating element relay
R7	Boiler heater switch relay
Ev-c	Auto-fill solenoid valve
Ev-gr1	Group 1 solenoid valve
Ev-gr2	Group 2 solenoid valve
Ev-gr3	Group 3 solenoid valve
Ev-gr4	Group 4 solenoid valve
Ev-the	Hot water solenoid valve
Rs-gr1	Group 1 heating element
Rs-gr2	Group 2 heating element
Rs-gr3	Group 3 heating element
Rs-gr4	Group 4 heating element
Ts1	Group 1 safety thermostat
Ts2	Group 2 safety thermostat
Ts3	Group 3 safety thermostat
Ts4	Group 4 safety thermostat
Triac 1-2	Control Triac groups 1 and 2
Triac 3-4	Control Triac groups 3 and 4
P1	Group 1 touchpad
P2	Group 2 touchpad
P3	Group 3 touchpad
P4	Group 4 touchpad
L1	Boiler auto-fill probe
Ls	Boiler safety probe
Cv1	Group 1 flowmeter
Cv2	Group 2 flowmeter
Cv3	Group 3 flowmeter
Cv4	Group 4 flowmeter
Sc	Boiler temperature probe
S1	Group 1 temperature probe
S2	Group 2 temperature probe
S3	Group 3 temperature probe
S4	Group 4 temperature probe
Sr1	Front electronic board connector
Sr2	Serial connector
C-ev	Solenoid valve (neutral)





LEGEND

1	Main switch
2	Drip tray
3	Drip tray grill
4	Steam wand
5	Steam valve
6	Hot water spigot
7	Water pressure manometer
8	Boiler pressure manometer
9	Dispensing group head
10	One-cup filter holder
11	Two-cup filter holder
12	Adjustable foot
13	Hot water dispensing buttons
P1	Dose button – One short coffee
P2	Dose button – Two short coffees
P3	Free dose and/or Stop button
P4	Dose button – One long coffee
P5	Dose button – Two long coffees
P6	Group head On/Off button
P7	Cup heater On/Off button
Led1	Button P1 LED
Led2	Button P2 LED
Led3	Button P3 LED
Led4	Button P4 LED
Led5	Button P5 LED
Led6	Button P6 LED
Led7	Auto-fill LED
Led8	Boiler LED
Led9	Cup heater LED
Led10	Line LED (indicates power on)