

**INSTRUCTION
AND OPERATION
MANUAL**

ESPRESSO COFFEE MACHINE

IBERITAL EXPRESSION

SERIE: 2 / 3 GROUPS

TABLE OF CONTENTS

IMPORTANT INDICATIONS

1.- INSTRUCTIONS FOR THE USER (TURN ON)

- 1.1.- Description
- 1.2.- Preparation. Turn on
- 1.3.- Programming the dose
- 1.4.- Hot water output
- 1.5.- Steam output
- 1.6.- Daily cleaning operations
- 1.7.- Water softener
- 1.8.- Display operation
- 1.9.- Display alarms and warning signals

2.- INSTRUCTIONS FOR THE TECHNICIAN

- 2.1.- Description of the internal components
- 2.2.- Water connection
- 2.3.- Electrical connection
- 2.4.- Feed unit
- 2.5.- Boiler
 - 2.5.1.- Spring loaded safety valve
 - 2.5.2.- Pressure eliminating valve
 - 2.5.3.- Optical level control and automatic level device
 - 2.5.4.- Valve unit
- 2.6.- Motor pump

3.- PRODUCT CERTIFICATIONS

IMPORTANT: READ CAREFULLY THE CONTENTS OF THIS MANUAL AS IT CONTAINS IMPORTANT SAFETY INFORMATION REGARDING THE INSTALLATION, USE AND MAINTENANCE OF THE APPLIANCE.

Read this manual before turning on the machine.

- 1) Keep this manual in a safe place for any eventual future consultation.
- 2) After unpacking, check that the machine is complete in all its parts.

The packaging (plastic bags, carton packing, nails, etc) must not be left within reach of children as they are potentially dangerous items.

- 3) Before connecting the machine make sure that the values rated on the data plate (20) (located at the left side) correspond to those of the mains supply.

The installation of the appliance must respect the local safety standards in force and must be carried out, following the manufacturer's instructions, by technically qualified persons authorized by IBERITAL DE RECAMBIOS, S.A.

The manufacturer accepts no responsibility for situations caused by or arising from the incorrect installation of this appliance.

The safety of the machine can only be assured when it is correctly grounded to an efficient earth connection, which has been carried out in conformity with the local safety standards and regulations in force.

It is important that this fundamental safety measures must be verified, in case of doubt have the system checked by a technically qualified person.

The manufacturer accepts no liability for damage caused by an incorrect or missing earth connection.

Check that the current carrying capacity of the system is sufficient to cover the needs of the maximum power consumption of the appliance, which is indicated in the data plate. In case of doubt contact a technically qualified person who should also check that the cross section of the cables used in the system are suitable to the maximum power consumption of the appliance.

The use of multiple adapters, patch cords and extensions are inadvisable.

Should the situation occur where the use of the above mentioned items is unavoidable then only use single or multiple adapters and extensions which conform to the local safety standards and regulations in force and take care not to exceed the maximum current carrying capacity marked on the simple adaptors and extensions and maximum power consumption marked on the multiple adapters.

- 4) This appliance must be used exclusively for the purpose for which it has been made; this means for making coffee and supplying hot water and steam for making hot drinks. Any other use is to be considered improper and therefore dangerous.

The manufacturer accepts no liability for damage caused by or situations arising from the improper use of the appliance.

- 5) When using this machine there are several fundamental rules that must be observed such as:
- never touch the machine when you have wet or damp hands or feet.
 - never use the machine with bare feet
 - do not install the machine in places where cleaning is carried out using water jets.
 - never pull or jerk the power cable when removing it from the main socket.
 - do not allow the machine to be exposed to atmospheric agents (rain, sand, ice, etc.)
 - do not leave the machine in places where the temperature is below 0 °C without first having emptied the boiler and the hydraulic piping of water.
 - do not allow the machine to be used by children, incapable persons, or any body who have not read this manual.
 - never remove the cover of your machine for repairing or pushing the reset safety switch. Only Official technicians are authorized by the manufacturer to remove the cover and reset the machine.
- 6) Before carrying out any maintenance operations make sure that the machine is disconnected at the mains either by tripping the circuit breaker.
- 7) For all cleaning operations follow the indications laid out in this manual.
- 8) In case any anomalies or irregular running, switch off the machine to attempt personal maintenance operations. Contact a technically qualified person authorized by IBERITAL.

Any eventual repair work should be carried out by the manufacturer or by an authorized after sales service center using original spare parts.

If the above is not respected the safety of the machine could be dangerous.

The connection to the mains must be carried out using a circuit breaker that conform to the local safety standards and regulations in force.

- 9) During the installation the machine must be provided with a suitable automatic circuit breaker which leaves a gap equal to or greater than 3 mm between its contacts.
- 10) In order to avoid dangerous overheating make sure that the power cord is completely extended throughout its length.
- 11) The power cable must not be replaced by the user, if damage to the cable is noticed, disconnect the machine from the mains and contact a technically qualified person authorized by IBERITAL.
- 12) Whenever the machine is not to be used for extended periods make sure it is disconnected from the mains.

In order to guarantee the continued efficiency of the machine and its correct functioning it is indispensable that the manufacturer's instructions be followed and the periodic maintenance be carried out by professionally qualified person.

In particular it is recommended that the safety devices of the machine be periodically checked.

Do not allow naked hands or other parts of the body to come close to the coffee dispensing spout or the hot water or steam jets.

The water and steam escaping from the jets is extremely hot and cause burns.

The water jets, steam jets and the filter bowl are extremely hot during normal working conditions. They must therefore be used with care and only gripped by the handles.

Make sure that the coffee cups are free of water before placing them on the cup warning shelf.

Only crockery which is specific to this machine should be placed on the cup warning shelf. In case of doubt, contact your sales center.

The placing of any other objects is therefore to be considered improper and dangerous.

TECHNICAL SPECIFICATIONS:

- * Electronic volume counter dosage (four different doses + Continuous).
- * Automatic water filled up of the boiler.
- * Motor and rotary pump pressure.
- * Manometer for the boiler pressure and pump pressure.
- * Electronic temperature control of the heating element.
- * Two steams outlet pipes in stainless steel.
- * One hot water outlet pipe.
- * Heating element 3800 W / 5000 W (2 GR. and 3 GR.)
- * Easy location of the boiler drained-out tap.
- * Electronic CPU's for two groups.
- * Starter relay 20A / 25A / 30A.

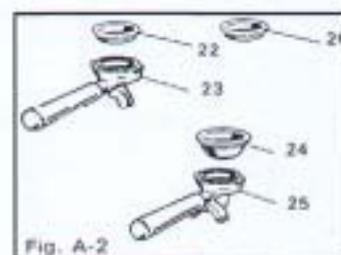
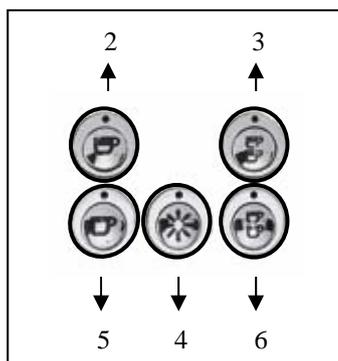
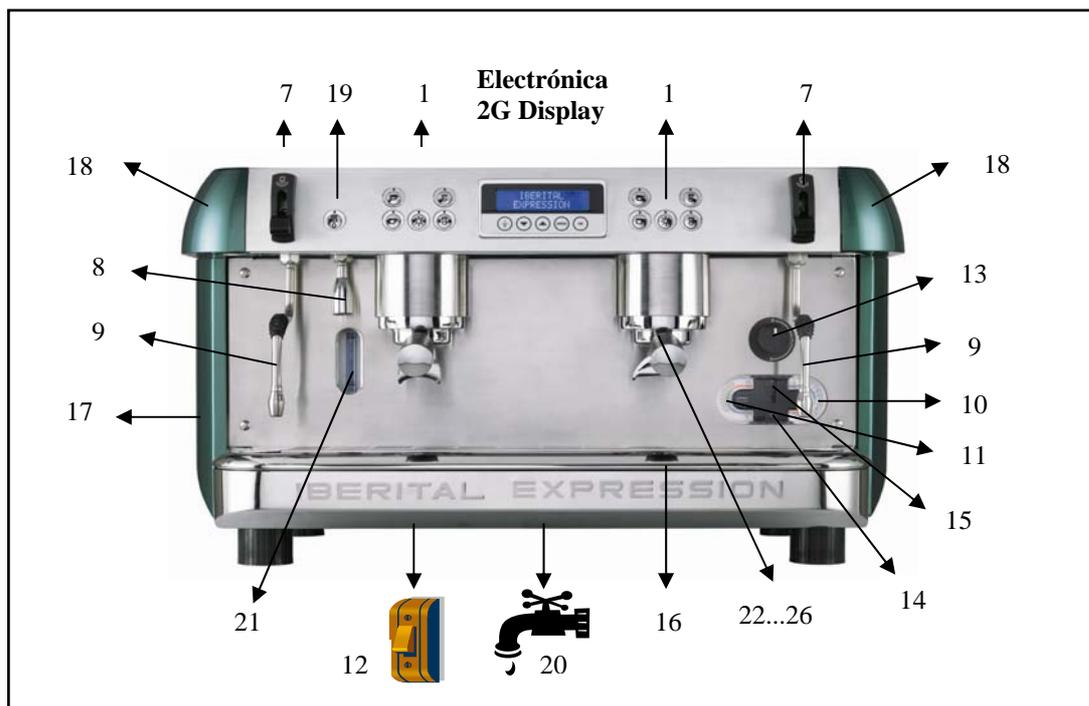
DIMENSIONS			
Models	Wide	High	Long
2 Groups	568 mm	455 mm	783 mm
3 Groups	568 mm	455 mm	953 mm

Important: Specifications are subject to change without notice. Contact the nearest IBERITAL representative for any question related to the new specifications.

1.- INSTRUCTIONS FOR THE USER (TURN ON)

1.1.- DESCRIPTION

1) Coffee feed control buttons CPU	14) ON/OFF red light
2) Feed button, one espresso coffee	15) Element working. Green light
3) Feed button, two espresso coffees	16) Trip tray
4) Non-stop coffee feed button	17) Data plate
5) Feed button, one large coffee	18) Detachable modular lateral panels
6) Feed button, two large coffees	19) Hot water button
7) Steam valve control	20) Water stopcock (Not included. Must be installed by an official city plumber).
8) Hot water jet	21) Boiler water level indicator
9) Steam jet	22) Filter one coffee
10) Pump pressure gauge	23) Filter holder, one coffee
11) Boiler pressure gauge	24) Filter two coffees
12) Mains switch (Non included. Must be installed by an official city technician).	25) Filter holder, two coffees
13) Three way power switch: OFF, 1= (ON) (Automatic water fill-up ON) 2= Control (heating element ON).	26) Cleaning filter (blind)



1.2.- PREPARATION - TURN ON

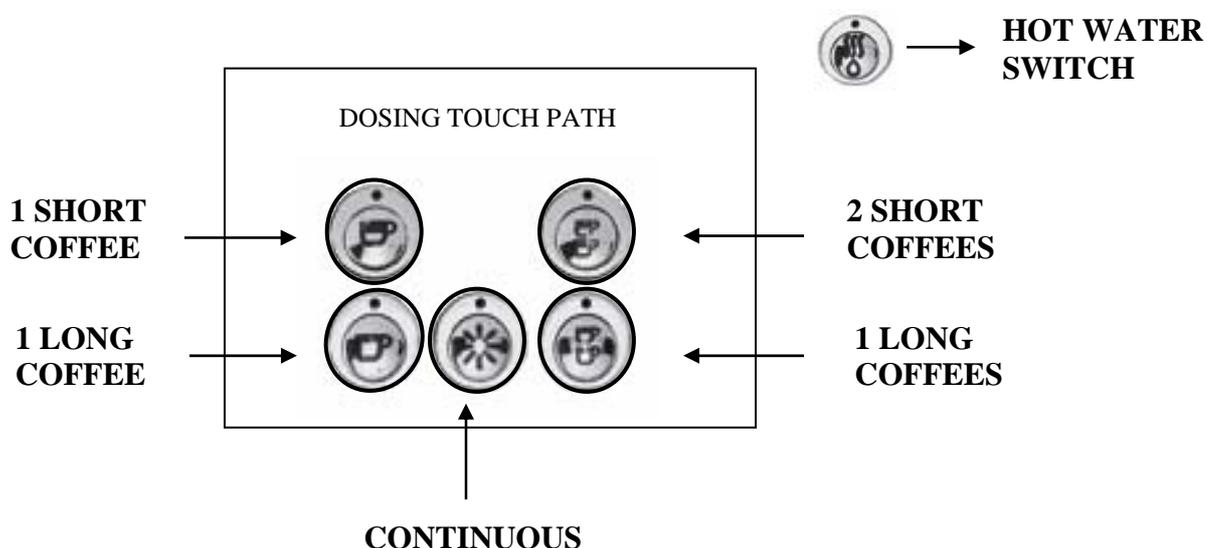
- a) Turn on the water stopcock (14) at the mains.
- b) Switch on the power at the mains (17).
- c) Turn the switch (18) to the position 1 and wait for the automatic water level control to finish filling up the boiler.
Only for 3 groups espresso machine: In case the automatic fill up control would stop and the lights of the push buttons would flicker, turn the switch (18) off and immediately turn the switch (18) on to the position 1 another time, and wait for the automatic water control to finish filling up the boiler.
- d) Turn the switch (18) to the position 2.

Wait for the operating pressure, indicated on the pressure gauge (11) (0,8-1bar). The green light (15) will turn off .

The machine is heated by electricity.

1.3.- PROGRAMING THE DOSE

I. TOUCH PATH PERFORMANCE



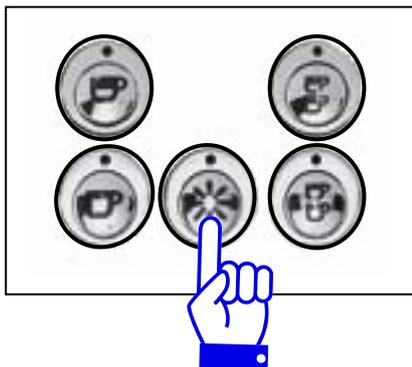
Important: The two touch path have electric signal with any of the two positions (1 and 2) of the On-Off switch.

In the position 1, the automatic fill up is working, but the touch path cannot make any coffee (erogation).

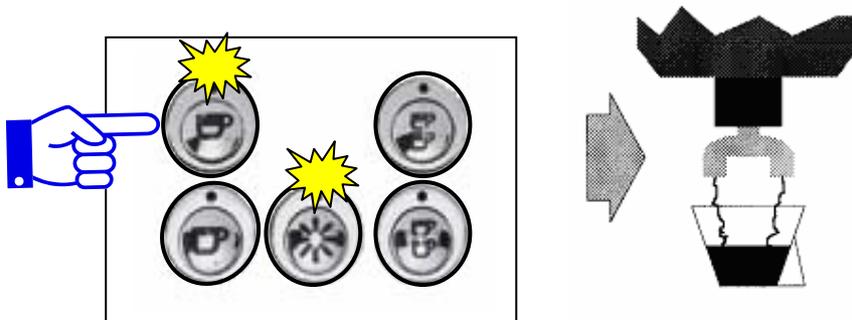
In the position 2, it is possible to do coffees (erogations). But it is recommended to begin doing coffees (erogations) when the machine is warm.

II. ADJUSTING THE TOUCH PATH DOSING.

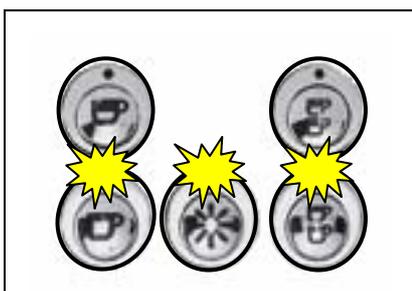
Press the continuous button of the right hand group (group 1) during 5 seconds and the continuous LED will light on.



In this moment, the adjustment process of the 4 selections can begin:
Press **1 short coffee** button, and when you will have the dosing desired press another time the **1 short coffee** button. Now, you can continue with all the other selections. At the end, you have to wait until the continuous LED will go out.
After this process, all the group are programmed automatically.



In the selections already adjusted, when you are programming any other selections, the LEDs are gone out. At any time, you can adjust another time one selection already adjusted.



▪ **HOT WATER ADJUSTMENT.**

Enter in the adjusting touch path dosing, pressing the continuous button  during 5 seconds of the GROUP 1 (left) touch path. The continuous LED will light.

In case you have selected in the TECHNICAL'S MENU the option of MIXED TEA without pump:

1. Press the HOT WATER button. In this moment, you will have hot water from the boiler coming out.
2. Once you have got the dose wanted, press again the hot water button to stop.
3. The hot water adjustment has been recorded.

In case you have selected in the TECHNICAL'S MENU the option of MIXED TEA with pump:

1. Press the HOT WATER button. In this moment, you will have hot water and cold water MIXED coming out.
2. Press the hot water button. In this moment, you will have hot water coming out.
3. Once you have got the dose wanted (1st press + 2nd press), press again the hot water button to stop.
4. The hot water mixed adjustment has been recorded.

NOTE: At the same time there is a manual regulator beside the water mixer solenoid.

If during the adjustment of a dosing any of the LEDs are winking, the adjustment will not be memorized. Please check the volumetric counter, in case there would be any dust from the water supply.

1.4.- HOT WATER OUTPUT

Place a cup or other receptacle under the hot water jet (8). Push the button (19) to start the hot water feed, release this button to stop it.

1.5.- STEAM OUTPUT

Point the steam jet (12) towards the drip tray (19).

Turn the control (8), to discharge the condensation, until steam escapes from the opening.

Place the steam jet (12) into the recipient containing the liquid which is to be heated. Turn the control (8) to release the steam. To obtain a frothy cappuccino keep the jet level with the top of the cold milk, this will create froth.

When the liquid has reached the desired temperature, stop the steam feed by turning the control (8) on the contrary.

Slide the recipient out from under the steam jet (12). Point the steam jet (12) towards the drip tray (19).

Briefly turn the control (8) to the right, to discharge any residue which has remained in the steam jet (12). Clean the outside of the steam jet (12) with a damp clothe or sponge.

1.6.- DAILY CLEANING OPERATIONS

Cleaning the spray filters

Every evening or at least once a day it is necessary to carry out the following:

Rinse the filters and filter bowls in hot water every evening or at least once during the day. Further still allow them to soak overnight in water which is initially hot in order to dissolve the fat deposited by the coffee.

Clean the spray jets and gaskets of the lower feed unit as follows:

- press the coffee feed button.
- place the filter holder (23) or (25), fitted with the cleaning blind filter (26), into the feed unit.
- Grip the filter holder at the end of the handle; rotate the filter holder to and through in order to allow the hot water to have a rinse effect on the unit.
- Clean the gasket of the lower feed unit group using a soft cloth or a sponge.
- Clean the steam jets and cappuccinator using URNEX milk frother and steam jets cleaner.

Cleaning the groups

- a) Substitute the normal filter (22) or (24) with the cleaning filter (blind) (26).
- b) Place a couple of spoonfuls of detergent (bags of 20 gr. - Code 3852 URNEX – NSF approved) into the cleaning filter (blind) (26).
- c) Place the filter holder into the feed unit.
- d) Switch on the unit and leave it working for several seconds (15-20").
- e) Stop the unit by pressing the feed button a second time; during the decompression of the unit the hot water and detergent will clean the feed group.
- f) Repeat point (e) several times.
- g) Rinse the unit and without the filter holder into the feed unit push any feed button to clean any residual detergent.

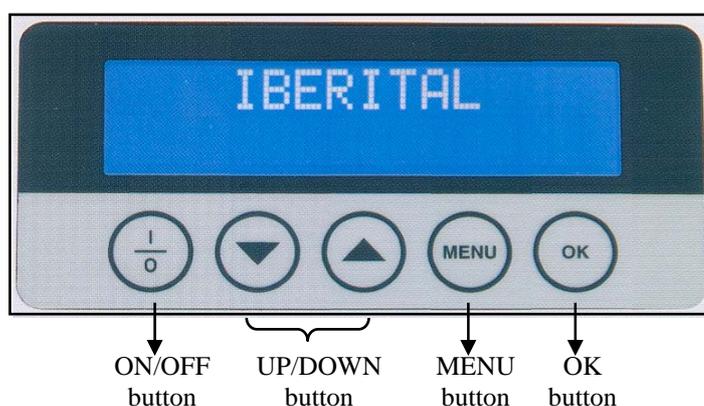
Cleaning the outer shell of the machine

The external paneling of the machine should be cleaned with hot (not boiling) soapy water and then rinsed thoroughly, using a soft cloth or a sponge. Do not use abrasive substances as these could scratch the surface of the panels.

1.7.- WATER SOFTENER

The water softener eliminates calcium from the water therefore preventing the build up of inlays. The water softener degenerates through use and must be regenerated. Regeneration is the procedure which returns them to the original state. The presence of inlays in the boiler, through lack of regeneration, will nullify all guarantees in force. (Water softener is not included).

1.8.- DISPLAY OPERATION (OPTIONAL)



The display has two lines of 16 characters.

- Position **OFF**: When the display is in the **OFF** position, shows “TIME” and “OFF”.
- Position **ON**: Push the button **I/O** and the display will show the boiler temperature °C, **TIME**, and the **name recorded**.

Display USER’S MENU: When the general switch is in the position **2** and the display is **ON** (the display shows the name recorded), then press the **MENU** button during 15 seconds and will enter in the **USER’S MENU**.

Display TECHNICAL’S MENU: When the general switch is in the position **2** and the display is **OFF** (the display shows OFF and TIME), then press the **MENU** button during 15 seconds and will enter in the **TECHNICAL’S MENU**.

IMPORTANT: One you are inside any **MENU**, pressing the **MENU** button will advance in all the menu options. Pressing the **OK** button will confirm the **MENU** option, and at the same time will confirm any change.

1.8.1.- DISPLAY USER'S MENU

- Auto **ON-OFF** weekly program.

When the display shows the word "**CLOCK ADJUSTS**", press the button "**OK**".

It is very important to adjust DAY / TIME, because this information will be used for the electronic box in the option of auto ON – OFF WEEKLY PROGRAM.

Clock adjust

HH. MM. xxxxxxxx

HH: Hour
MM: Minutes
xxxxxxx: Week day

Press the   buttons to adjust **HOUR** and confirm with the OK button, then adjust the **MINUTES** and the **DAY**. After confirming the **DAY**, you will enter automatically in the adjustment of the **AUTO ON / OFF WEEKLY** program:

Auto On/Off
AAA: hh. mm

AAA: ON
OFF
hh: Hour ON / OFF
mm: Minutes ON / OFF

Press the   buttons to adjust **HOUR** and confirming pressing the OK button, same with the **MINUTES**, the **OFF** time, and the **CLOSE ON DAY**. After the last confirmation you will enter in the next menu option:

IMPORTANT: In order to name this option disable, select with the   buttons a dash (--) in any option **ON-TIME** (hh.mm), **OFF TIME** and the **CLOSE ON DAY**.

Counters

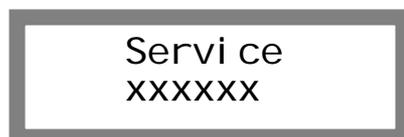
In this option we can read all the coffees mode and the liters of water wasted.

- Press the **OK** button to enter and the display will show:

Li ters
xxxxxxx

Showing the number of liters of water wasted until now.

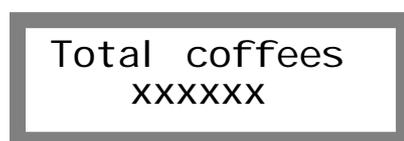
- Press the **MENU** button and the display will show:



Service
XXXXXX

Showing the number of cycles until now (total pushing dosing selections made).

- Press the **MENU** button and the display will show:



Total coffees
XXXXXX

Showing the total number of coffees made until now.

- Press the **MENU** button and the display will show:



zzzzz GR:
XXXXXX

zzzzz: 1 espresso, 1 coffee, etc.

GR: Group 1/2/3
xxxxx: N° of coffees

Showing the coffee's number of any dosing selection for each group.

If we continue pressing the **MENU** button, the display will show all the number of coffees of any dosing selection.

Pressing the **I/O** (ON/OFF) button at any time, you will leave the **TECHNICAL'S MENU**, and the display will show "**OFF**".

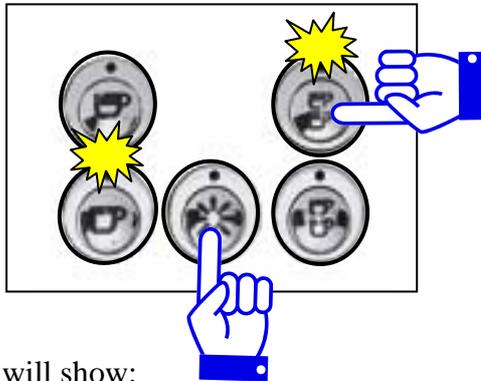
*DO NOT FORGET TO PUSH THE **I/O** (ON/OFF) BUTTON AGAIN IN ORDER TO LEAVE THE MACHINE IN THE ON POSITION (heating and ready for working).*

WASHING CYCLE

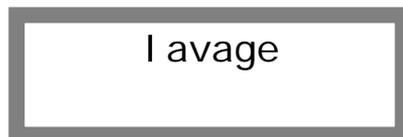
This procedure beans of coffee and last all the pipes and parts in the group.

1. Put a blind filter in the filter holder of the machine with a couple of spoonfuls of detergent (bags of 20 g).
2. The machine has to be in the on position (main switch position 2).

3. Press (in any of the touch paths) the “CONTINUOUS”  button and the “2 SHORT COFFEES (ESPRESSOS)” at the same time; the LED’S of the “1 LONG COFFEE” and “2 SHORT COFFEES (ESPRESSOS)” will light.



And the display will show:



Following the machine will proceed 7 times this cycle:

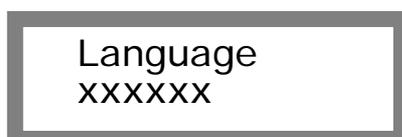
- 15 seconds brewing
- 2 seconds stand-by

At the end of the “WASHING CYCLE” the machine will come back to the beginning **MENU**. The “WASHING CYCLE” can be done with all the groups at the same time.

1.8.2.- DISPLAY TECHNICAL’S MENU

REMEMBER: In order to enter in the TECHNICAL’S MENU, the display has to be in the **OFF** position (the display will show “OFF”). If the display is in the **ON** position, press the **I/O** (ON/OFF) button, to pass to the “**OFF**” position.

- Once you are in position **OFF**, press the **MENU** button during 15 seconds and then you will enter in the **TECHNICAL’S MENU**.



You can select the language (English, French, German, Spanish) pressing the   buttons. Once you have selected the language, press the **MENU** button and you will pass to the following option:

Temp / Time vis.
enable / disable

The display will show the option: UPPER LINE OF THE DISPLAY WITH **TEMPERATURE AND TIME**. Pushing the   buttons, we will select **DISABLE** or **ENABLE** this option.

- In case “**ENABLE**” is selected, press the **MENU** button in order to pass to the following option:

Name 2
xxxxxx

The display will show the “Name 2” (lower line of the display) where you will begin in the 1 position of the line (Line length: 16 characters). Press the   buttons to select any of the characters (black space, !, “, #, \$, %, &, etc.) and press the **OK** button to confirm that character, and passing to the following line position.

Once you have finished all the line positions, press the **MENU** button to pass to the following option.

Line rotation 2
Disable/Enable

The display will show the option of “Line 2” (lower line) with a rotation movement or not; press the   buttons to select **ENABLE** or **DISABLE** and press **MENU** button to pass to the following option.

- In case “**DISABLE**” is selected, press the **MENU** button and pass to the following option:

Nombre 1
xxxxxx

Where you can program the “Name 1” that will appears in the upper line of the display. You will begin in the 1 position of the line (line length: 16 characters). Press the   to

select any of the characters (black space, !, “, #, \$, %, &, etc.) and press the **OK** button to confirm that character, and passing to the following line position.

Once you have finished all the line positions, press the **MENU** button to pass to the following option.



The display will show the option of “Line 1” (upper line) with a rotation movement or not; press the   buttons to select **ENABLE** or **DISABLE** and press **MENU** button to pass to the following option:

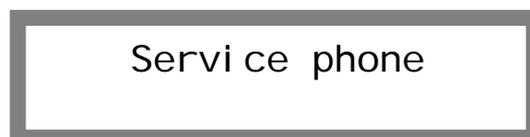


Where you can program the “Name 2” (lower line of the display) in the same way as described for “Name 2”.

Once you have finished all the line positions, press the **MENU** button and pass to the following option:



The display will show the option “Line 2” (lower line) with a rotation movement or not; press the   buttons to select **ENABLE** or **DISABLE** and press **MENU** button to pass to the following option:



The display shows the phone number that it will appears in case any alarm or warning advise happened. You will begin in the 1 position of the line. Press the   buttons to select the number and confirm with the **OK** button.

Once you have finished this procedure, press the **MENU** button in order to pass to the following option:

Chrono function
Disable/Enable

The display will show the “CHRONO FUNCTION” (brewing time per group), press   to select **DISABLE** or **ENABLE**.

The brewing time will be displayed every time we select a dosing; if this option is **DISABLE**, the display will show the dosing selection.

Once you have finished this procedure, press the **MENU** button to pass to the following option:

Doses setting
Disable/Enable

The display will show the “DOSES SETTING”. **If you select ENABLE** you will be able to program dosing in any option (1 short coffee – espresso, 1 long coffee, etc). **If you select DISABLE**, you will not be able to program dosing, and you will have always the same settings. Press the   buttons to **DISABLE** or **ENABLE** this option.

Once you have finished this procedure, press the **MENU** button in order to pass to the following option:

Continuous key
Disable/Enable

The display shows THE CONTINUOUS option. The “continuous”  doses will work if this option in “**ENABLE**”.

Once you have finished this procedure, press the **MENU** button in order to pass to the following option:

Mixed tea
XXXXXX

XXXXXX with pump / without pump

The display will show the “MIXED TEA-WATER” option. If you select “WITH PUMP”, you will have the water mixed hot-cold. If you select “WITHOUT PUMP”, you will have hot water only.

Once you have finished this procedure, press the **MENU** button to pass to the following option:

Steam boiler GR
0/1/2

OPTION NO AVAILABLE

** The option "STEAM BOILER GR" is not available. This option will be with "0" (no available).*

Once you have finished this procedure, press the **MENU** button in order to pass to the following option:

Prebrewing
Disable/Enable

The display will show the "PREBREWING" (pre-infusion) option. Press   buttons to DISABLE or ENABLE this option. If you select "ENABLE", press the **MENU** button. The display will show:

Pre-brew. ON
1 espresso xxxx seg

The display will show the "PRE-INFUSION ON" time for any dosing selections (1 espresso, 1 coffee, etc.). Press the   buttons to select "ON" time (from 0,1 s. . till 5 s., by 0,1 s.). Press **MENU** button so select the other options.

Finally, press **MENU** button to pass to the following option:

Pre-brew. OFF
1 espresso xxxx seg

The display will show the "PRE-INFUSION OFF" time for any dosing selections (1 espresso, 1 coffee, etc.). Press the   buttons to select "OFF" time (from 0,1 s. . till 5 s., by 0,1 s.). Press **MENU** button so select the other options.

Once you have finished this procedure, press the **MENU** button to pass to the following option:

Probe sensi ti vi ty
 hi gh/mi d/l ow

The display will show “PROBE SENSITIVITY” for the boiler water level. Press   To select low 150 KΩ / mid 400 KΩ / high 1 MΩ .

Once you have finished this procedure, press **MENU** button to pass to the following option:

Servi ce ci cl es
 xxxxxxxx

The display will show the “SERVICE CICLES” option. Press   to select the number of cycles (number of times that you have pushed a dosing button).

Once you have finished this procedure, press **MENU** button to pass to the following option:

Heating type xxxxxxxx	xxxxxxxx	Pressure Swi tch On / off PID
--------------------------	----------	-------------------------------------

The display will show the HEATING CONTROL SYSTEM of the machine.

- **Pressure Switch.** Boiler temperature control through the boiler pressure by a pressure switch. The IBERITAL EXPRESSION **NEVER** has to have the option of “*Pressure Switch*”. In this case the machine will not stop heating.

IMPORTANT: THE IBERITAL EXPRESIÓN MODEL NEVER HAS TO HAVE THE OPTION “Pressure Swi tch”. THIS MODEL CONTROLS THE BOILER TEMPERATURE WITH A TEMPERATURE PROBE.

- **On / Off:** Boiler temperature control through a temperature probe, with histeresis 0,5°C, 1°C or 2°C. (Temperature variation GAP).
- **PID:** Boiler temperature control through a temperature probe, with variation of the algorithm constants: Kp, Ki, Kd.

The values of these constants (Kp, Ki, Kd) will depend on the heating element power, boiler size and heating dispersion degree of the boiler.

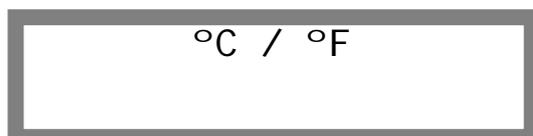
If we determine **T° Set**, as the boiler temperature we would like in a regular performance.

1. If during the heating phase or the regular performance, the boiler temperature values are oscillating highly to the **T° Set**, and as the time pass there is not any improvement, I would be necessary to reduce the value of the proportional constant: **Kp**.
2. If during the regular performance, the boiler temperature values are oscillating highly to the **T° Set**, and with a oscillation period very long and with some picks values not improving as time pass. It would be necessary to reduce the value of the integrative constant: **Ki**.
3. If during the heating phase or the regular performance, the boiler temperature values are oscillating highly and over the **T° Set**, but improving as time pass. It would be necessary to reduce the values of the derivative constant: **Kd**.
4. If during the heating phase, the boiler temperature values are bellow the **T° Set**, and not improving or no coming near this value as time pass. It would be necessary to increase the value of the derivative constant: **Kd**.
5. If during the heating phase, the boiler temperature values are below the **T° Set** regularly. It would be necessary to increase the value of the proportional constant: **Kp**, and at the same time to increase slightly the value of the integrative constant: **Ki**.
6. If during the regular performance, the boiler temperature values are over the **T° Set** regularly. It would be necessary to increase the value of the integrative value, and at the same time to increase slightly the value of the proportional constant: **Kp**.

IMPORTANT: THE IBERITAL EXPRESIÓN COFFEE MACHINA HAS TO WORK UIT THE OPTIONS: "ON/OFF" OR "PID". THE IBERITAL EXPRESSION MODEL NEVER HAS TO HAVE THE OPTION. "Pressure Swi tch"., BECAUSE THIS MODEL CONTROLS THE BOILER TEMPERATURE WITH A TEMPERATURE PROBE.

Press the   button to select the option: "On / off" o "PID".

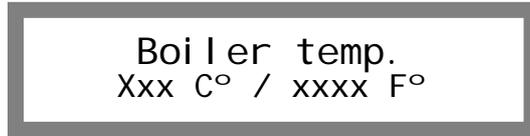
* In case you have selected "On / Off", press the **OK** button to confirm, and the display will show:



Press the   buttons to select the degrees options: °C or °F. Press the **OK** button to confirm, and the display will show:

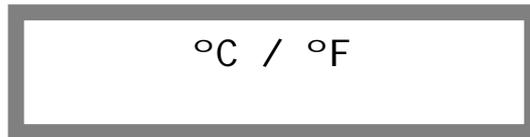


Press the   buttons to select the histeresis (boiler temperature variation GAP) requested. Confirm the selection pressing the **OK** button and the display will show:

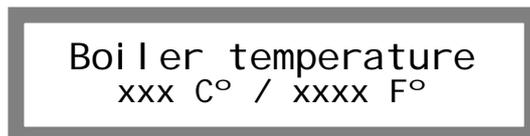


Press the   buttons to select the boiler temperature, and confirm the selection pressing the OK button.

In case you have selected "Pid", press the **OK** button to confirm, and the display will show:



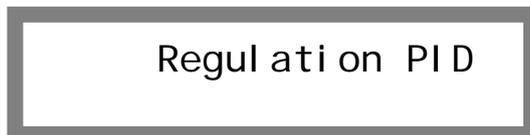
Press the   buttons to select the degrees option: °C or °F. Press the **OK** button to confirm, and the display will show:



Press the   buttons to select the boiler temperature, and press the **OK** button to confirm. Following the display will show:



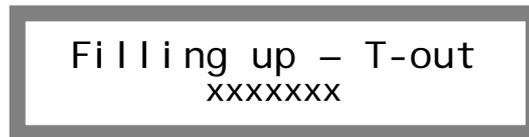
Press the   buttons to select the value for all of the constants and press the **OK** button to confirm the value. After finishing with all the constants, the display will show:



Initial regulation temperature for the three constants algorithm. (can have the values: 2°C / till 20°C or 3°F / till 36°F).

Press the   buttons to select the temperature and press the **OK** button to confirm.

Once you have finished this procedure, press **MENU** button to pass to the following option:



The display will show the option of maximum "FILLING UP TIME", from this time will jump the Alarm-warning of Time-out. When you are filling up the machine for the first time, this alarm will appear. In this case, in order to continue the filling up process, turn off the general power switch (position 0) and following turn on the general power switch to position 1, in order to allow the filling up process.

Press   buttons in order to select the maximum filling-up time in seconds. (from 10 sec. . until 250 s, by 1 sec.).

Once you have finished this procedure, press **MENU** button to pass to the following option:



The display will show the option "WATER FILTER". You have to select the number of liters of water for the "WATER-SOFTENER" regeneration/replacement alarm. When the number of liters selected arrive to the number of this option, the alarm advice of the water filter regeneration/replacement.

Press the   to select the amount.

WARNING: If you leave this amount to zero "0", you have this option "DISABLE" and NO ALARM will advise for the water softener.

*Finally, press **MENU** button to finish all the TECHNICAL'S MENU options.*



1.9.- ALARMS AND WARNING SIGNALS.

A. BOILER FILL UP EXCEEDING TIME.

After exceeding the time of the "Filling UP-T-out" time option, the display will show:

Time-out alarm
Filling up

At the same time all the LEDS of the dosing selections will wink.
In order to cancel this alarm, you have to TURN OFF (position 0) the main switch, and following TURN ON (position 1).

B. EXCEEDING BOILER TEMPERATURE.

(NO available for the IBERITAL Model with pressure boiler control by “Pressure Switch”).
The display will show the temperature alarm of the boiler when this temperature will pass over 140°C during more than 5 seconds.

alarm
Boiler temp

This alarm will disappear when the boiler temperature will come back to normal value.

C. TEMPERATURE PROBE CUT-OFF.

When this probe notices a temperature of 0°C during 5 seconds, the LEDS of the dosing buttons will wink and the display will show:

T. probe / unconnect

This alarm will disappear when the boiler temperature will come back to normal value.

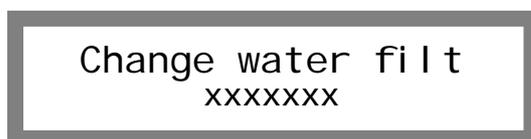
D. FAILURE IN THE VOLUMETRIC COUNTER (FLOW METER)

When the volumetric counter is not dosing well or it is not receiving the proper signals during 5 seconds, the LED of the dosing button will wink and the display will show:

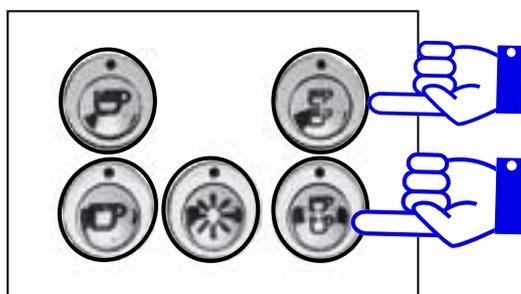
alarm
Flow meter GR x

E. WATER FILTER CHANGE /REGENERATION

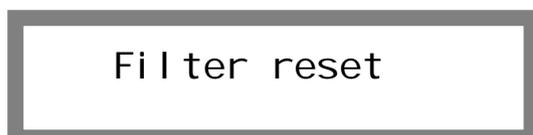
After exceeding the liters of water selected in the “WATER FILTER” option of the TECHNICAL’S MENU, the display will show:



In order to cancel this alarm, press the “2 long coffees” and “2 short coffees (espressos)” at the same time in the GROUP N° 1 (left hand group).

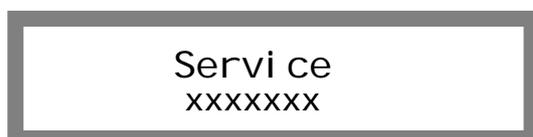


Following the display will show:



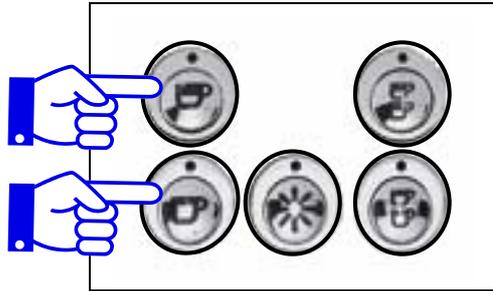
F. MAINTENANCE ALARM.

When the display shows:

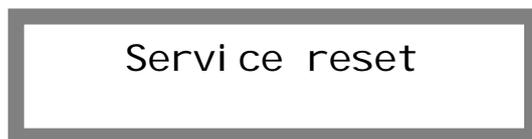


xxxxxxx will show the “SERVICE PHONE” (selected in the TECHNICAL’S MENU), pointing out that we have exceeded the number of service cycles selected in the TECHNICAL’S MENU option.

In order to cancel this alarm, press the “1 long coffee” button and the “1 short coffee (espresso)” at the same time in the GROUP N° 1 (left hand group).

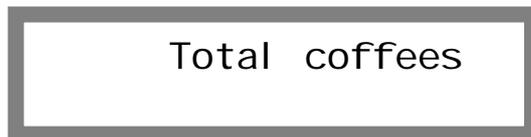


Following the display will shows:

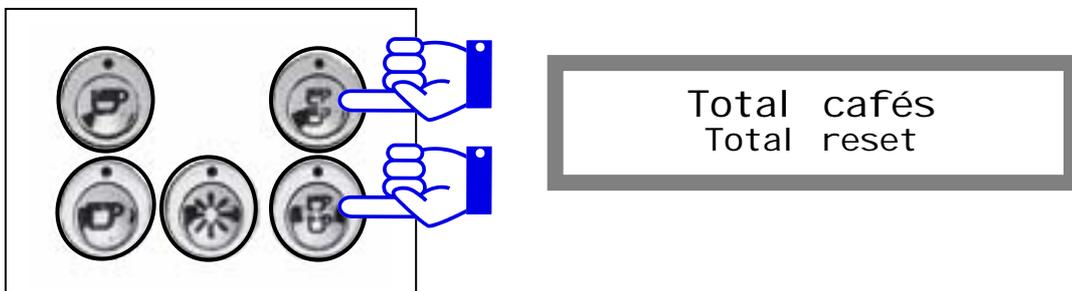


G. ERASE OF THE TOTAL NUMBER OF COFFEES.

Enter in the display user's MENU, in the option "COUNTERS" and select the option:



In order to erase to ZERO "0" value, press the "2 long coffees" and the "2short coffees" at the same time in the GROUP 1 (left hand group), following the display will show:



WARNING: The individual counter for each dose (1 short coffee- espresso, 1 long coffee, etc.) can not be erased.

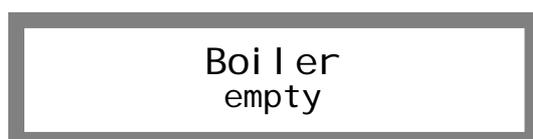
WARNING: The total coffees erased do not erase the counter of the liters of water wasted.

H. WARNING OF LOW WATER LEVEL IN THE BOILER.

When you are turning on the machine for the first time (General Switch – position 1), the filling up process begins.

If the level probe do NOT DETECT WATER inside the boiler in 6 seconds, automatically will cut off the element and stopping the heating process.

The display will show:



In case the machine is normal operation and the level probe notice NO WATER for 3 seconds, automatically will cut off the element and stopping the heating process.

In order to cancel this alarm, you have to fill up the boiler of water; the element will be on and the machine will continue the heating process after, having noticed water by the level probe for 3 seconds.

2.- INSTRUCTIONS FOR THE TECHNICIAN

CAUTION: When the cover of the machine is removed in order to repair or push the reset button, remember to seal another time the two side panels with NSF silicone.

2.1.- DESCRIPTION OF THE INTERNAL COMPONENTS

29) Pump

30) Boiler
2 groups 14 liters
3 groups 20 liters

31) Spring loaded safety valve

32) Pressure eliminating valve (Empty valve)

33) Boiler heating elements

35) Expansion valve

61) Thermostat for the electronic temperature control of the heating element: this thermostat is to control the temperature inside the boiler. When this temperature is over the correct level the machine turns off (stop). In order to turn on the machine push the reset button located in this thermostat (right side of the machine).

62) Boiler water level probe

2.2.- WATER CONNECTION

IMPORTANT: This Equipment is to be installed to comply with the applicable Federal, State or Local Plumbing codes having jurisdiction.

2.3.- ELECTRICAL CONNECTION

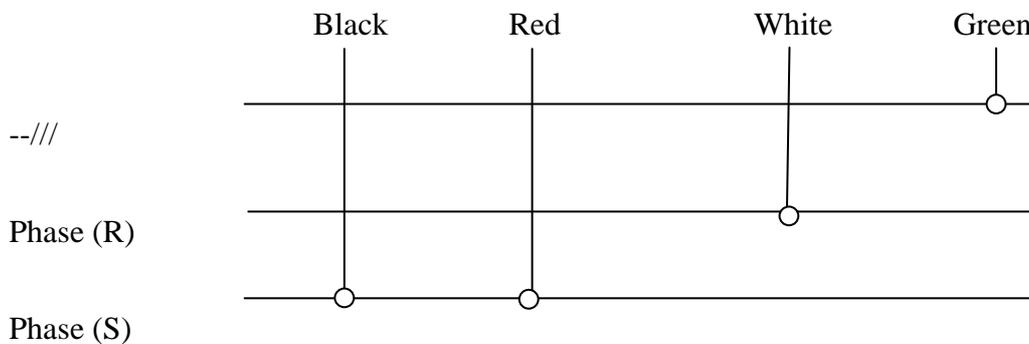
IMPORTANT: This equipment is to be permanently cord connected.

The machine is fitted with heating and other electric elements of either 110V, 220V or 240V depending on the version. A circuit breaker, with an adequately rated fuse, must be fitted between the appliance and the mains. The maximum power consumption is indicated on the data plate (17).

The green wire must be connected to an efficient grounding installation.

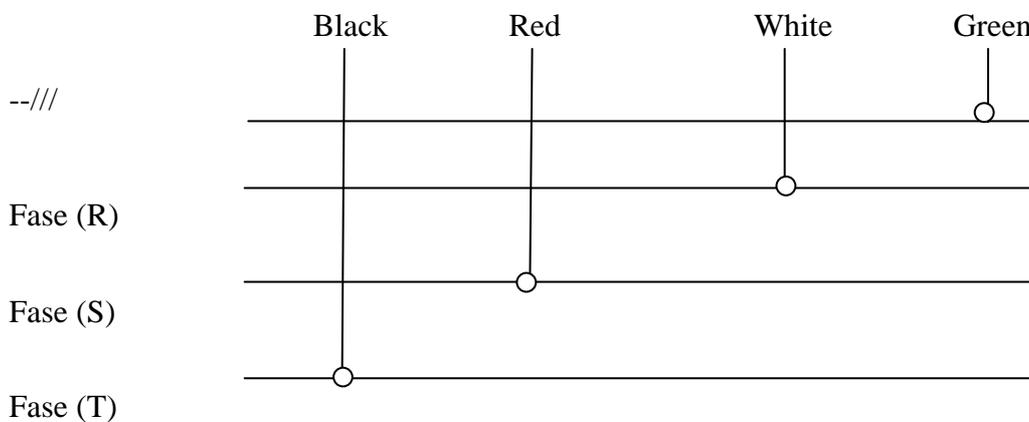
220V-240V SINGLE PHASE.

The machine can be connected in single phase, in this case the black wire should be joined together with the red wire and then connected to phase. The white wire must be connected to other phase. Green wire to ground.



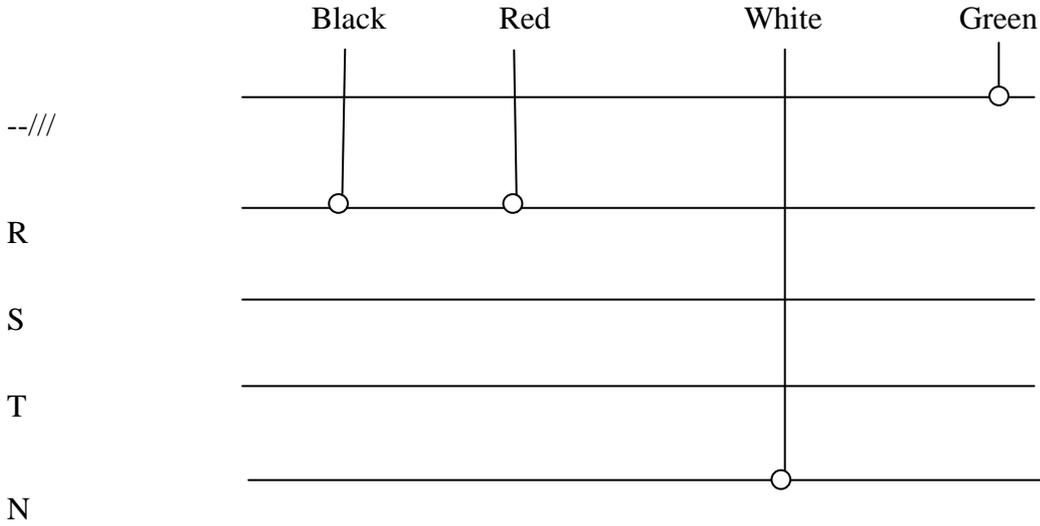
220V-240V THREE PHASE WITHOUT NEUTRAL.

The machine can be connected in three phase 220V without neutral, to do this connect the black wire to one of the three phases and the red wire to another of the three phases and then the white wire to the remaining phase. Green wire to ground.



380V THREE PHASE WITH NEUTRAL (TWO AND THREE GROUPS MACHINES)

The machine can be connected in three phases 380V with neutral. In this case the black wire and the Red wire must be connected to one of the three phases, and the White wire to the neutral wire. The green conductor/wire must be connected to ground.



2.4.- FEED UNIT GROUP.

44) Gasket

46) Spray head

47) Water drainage system

49) Solenoid valve

The feed unit consists of a hot press brass block in which the infusion chamber has been set.

Pressing the coffee feed button turns on the pump (29) and activates the solenoid valve (49).

2.5.- BOILER

50) Feed unit

52) Injector

53) Heat exchanger

This boiler is made of copper and is intersected by a heat exchanger (53) which is connected to the feed unit (50).

During the feed cycle cold water is sent into the exchanger through the use of a pump and injector (52). Between the heat exchanger (53) and the feed unit (50) a thermo siphon circulation is established, through the difference in temperature and the density of water which maintains the unit and the correct temperature needed for making the coffee.

A thermostat (61) controls the temperature of the heating element inside the boiler, in order not to pass over the correct rate. In this case the machine turns off. To be turned on press the reset button located on the thermostat.

GROUPS	HEATING ELEMENT
2	3800 W / 5000 W
3	5000 W / 5000 W

2.5.1.- SPRING LOADED SAFETY VALVE

In the case of anomalies in the heating control pressure system the spring loaded safety valve (31), located on the boiler guarantees the integrity of the boiler by releasing the excess pressure when the boiler reaches 1.8 bar.

The safety valves are manufactured under strict conditions and respect severe technical criteria, they are sealed after testing in the factory.

2.5.2.- PRESSURE ELIMINATING VALVE (empty valve)

This valve (32), which is located on the boiler, prevents depressurization inside the boiler therefore avoiding the risk of liquids being sucked back through the steam jet.

2.5.3.- OPTICAL LEVEL CONTROL AND AUTOMATIC WATER LEVEL DEVICE

48) Solenoid valve

A probe (62) (consisting of a stainless steel rod which is in contact with the water inside the boiler) positioned the water level in the optical level device (11). The probe is connected to the electronic control (CPU)(1) signaling a low water level in the boiler. Then, the CPU switches on the pump (29) and activates the solenoid valve (48), therefore allowing passing water until the correct water level in the boiler has been reached.

2.5.4.- VALVE UNIT

13) Boiler manual filling button

35) Expansion valve (set to open at approx. 12 bar +/-1)

2.6.- MOTOR PUMP

59) Lock nut

60) Setting screw

Power consumption: 250W. The motor pump turns on when the coffee feed button is pressed, increasing the pressure to the 8/9 bar required for making the coffee.

The motor pump is also controlled by the level device for the automatic fill-up of the boiler.

To regulate the pressure of the motor pump proceed as follows: release the lock nut (59) which fastens the setting screw (60), loosen the screw (60) to reduce the pressure or tighten to increase the pressure. After having finished tighten the lock nut (59).

3.-PRODUCT CERTIFICATIONS.

The product conforms the following Standards:

UL 197 Standard. (Safety for Commercial Electric Cooking Appliances)
CAN/CSA C22.2 NO. 109 (Commercial Cooking Appliances)
NSF4 (Standard for Commercial Cooking & Hot Storage Equipment)

Directive 89/336/EEC. (Electromagnetic Compatibility).
Directive 73/23/EEC and 93/68/EEC. (Electric Safety).

Under demand, IBERITAL DE RECAMBIOS, S.A. may supply equipments conforming other standards.

CAUTION: Changes or modifications to the equipment not expressly approved by IBERITAL DE RECAMBIOS, S.A., could result in violation of the product certifications.

Product marks.

Accordingly with the certifications, products may carry the following marks:



Declaración de conformidad CE

CE Declaration of conformity
Ref.: V703-54

IBERITAL DE RECAMBIOS, S.A.
C/Agricultura, 21 Nave 12
08980 SANT FELIU DE LL.
BARCELONA

Con la presente declaramos que las máquinas de preparación de café con las marcas comerciales y los tipos indicados a continuación, son conformes con las Directivas CE que les son de aplicación, de acuerdo con las Normas Europeas que se relacionan.

We hereby declare that the coffee machines, with the trademarks and types listed below, conform with the applicable CE Directive, according to the European Standards listed.

Esta declaración quedará sin efecto en caso de que se realice cualquier tipo de modificación del aparato que no haya sido explícitamente autorizada por la empresa.
This declaration shall not apply to machines modified without IBERITAL approval.

Marcas comerciales:

Trademarks: "IBERITAL EXPRESSION"

Tipos de máquina:

Machine type: "ELECTRÓNICA" Modelo 2/3 grupos.
"ELECTRONIC" Models with 2/3 groups.

Directivas aplicables:

Applicable Directives:

Directiva de Seguridad en las Máquinas.

EC Machinery Directive.

89/392/CEE

Directiva de Baja Tensión.

EC Low Voltage Directive.

73/23/CEE

Directiva de Compatibilidad Electromagnética.

EC Electromagnetic Compatibility Directive.

89/336/CEE

Normas armonizadas

Aplicadas:

Applied harmonized

Standards:

UNE EN 292-1, UNE EN 292-2

UNE EN 60335-1, UNE EN 60335-2-75/63335-2-15

UNE EN 50081-1, UNE EN 50082-1

Fecha (Date): 30/11/2006

Firmado por (Signed): Sr. Blai Farré Llord

Cargo (Position): Director Técnico