



INSTRUCTION MANUAL
PROFESSIONAL ESPRESSO COFFEE MACHINES

KUP
GB



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GENERAL INSTRUCTIONS

**THESE INSTRUCTIONS ARE INTENDED FOR
BARMAN / ESPRESSO COFFEE MACHINE OPERATOR
AND INSTALLATION / MAINTENANCE TECHNICIAN**

A INTRODUCTION

This manual applies to the entire range of professional coffee machines manufactured by ELEKTRA named KUP.

KUP models are equipped of the following accessories:

- CHS = Electrical cup heating
 - BLS = Body lighting
 - MFS = Automatic milk frothing
- for which one must consult the relevant manual.

This manual is divided in three parts as displayed below:

GENERAL INSTRUCTIONS

These instructions are intended for barman/espresso coffee machine operator and installation/maintenance technician

OPERATION INSTRUCTIONS

These instructions are intended for barman/espresso coffee machine operator

TECHNICAL INSTRUCTIONS

These instructions are intended for espresso coffee machine installation/maintenance technician

The instructions reported in this manual are also available in pdf format on the website www.elektrasrl.com

B GENERAL RECOMMENDATIONS AND SAFETY REGULATIONS

- 1 This manual is an essential and integral part of the product and must be given to the user.
It contains basic safety instructions that must be followed for the installation, operation and maintenance of the appliance.
Save these instructions.
- 2 After having unpacked the appliance, make sure it is intact.
If in doubt, do not use the appliance and contact a qualified engineer.
The packing elements (plastic bags, polystyrene foam, nails, etc.) should not be left within reach of children since they are potential sources of danger.
- 3 ⚠ **The appliance should be installed by a qualified engineer according to the manufacturer's instructions and in compliance with current safety regulations.**
Incorrect installation could cause injury to persons or animals and damage to property, for which the manufacturer cannot be held liable.
The company Elektra declines any and all responsibility for tampering or interventions carried out by non authorized persons. Such intervention automatically renders the guarantee null and void ⚠.
The appliance must be installed only in places where its use and maintenance can be carried out by qualified personnel.
Before carrying out the electrical connection of the appliance, check that the mains electricity supply corresponds to the data given on the rating plate.
The rating plate is located on the front of the espresso coffee machine.
The wiring diagram is given on an adhesive tag applied to the end of the power cable.

⚠ **This appliance is only electrically safe when it has been connected to an efficient grounding system in compliance with current safety regulations ⚠.**

Make sure that this fundamental safety requirement has been observed and if in doubt request a thorough check of the system by a qualified electrician.

The manufacturer cannot be held liable for any damage that may be caused by failure to ground the appliance.

If the appliance does not have power cable with plug, at installation the appliance should be connected to the electricity supply through a multipolar linked switch having a contact separation of at least 3 mm in all poles, in compliance with current safety regulations.

Check that the current carrying capacity of the system is adequate for the maximum rated output of the appliance as indicated on the rating plate and, in particular, that the section of the cables is adequate for the power absorbed by the appliance.

Unwind the whole power supply cable to prevent dangerous overheating. It is forbidden the use of adapters, multiple current taps or extension cables.

This appliance should not be installed in kitchens.

- 4 For the operations of connection to the water supply network, comply with the provisions in this manual.
- 5 This appliance should only be used for the purpose for which it was designed. Any other use is to be considered as unsuitable and therefore dangerous.
The manufacturer cannot be held liable for any damage or injury caused by improper, wrong or unreasonable use.

⚠ The use of the appliance entails compliance with the following fundamental rules:

- The appliance should be used in environments where the temperature does not fall below 5°C or rise above 40°C;
- Do not obstruct the intake and outlet grilles. In particular do not cover the upper cup tray with a cloth or such like.
- The appliance has a water circuit containing water, which must not be allowed to freeze otherwise the appliance could be damaged;
- The appliance should not be cleaned using water jets or installed in a place where water jets could be used for cleaning;
- The appliance should be installed on the level - it must not slope – high enough in order to have the cup heater tray at more than 1.5 meter from the floor.
- Do not touch the appliance when hands or feet are wet or damp;
- Do not operate the appliance barefoot;
- Do not tug the power supply cable;
- Do not expose the appliance to the elements (rain, sun, etc.): it is not suitable for outdoor use.
- The equipment can be used by children aged 8+ and people with reduced physical, sensory or mental capabilities, or lack of experience or knowledge required, provided they are under supervision or after they have received the same instructions for a safe use of the equipment and for understanding the dangers inherent in it. Children should not play with the equipment.

The cleaning and maintenance intended to be performed by the user, should not be performed by children without supervision ⚠.

- 6 Disconnect the appliance from the mains electricity supply before carrying out any maintenance, by switching off at the mains switch or disconnecting the plug from the socket. Every time maintenance jobs are carried out on joints for connection to the water supply, you must strictly use new joints and the old joints must never be reused. To clean the appliance, follow the instructions in this booklet.
- 7 In the event of failure or malfunctioning of the appliance, switch it off and under no circumstances try to repair it yourself. Always request service by a qualified technician. Any repair, electrical or mechanical adjustment should only be carried out at the factory or by an authorized service center using only original spare parts. Failure to comply with these instructions could jeopardize the safety of the appliance. The supply cable of this appliance should not be replaced by the user. Should the cable be damaged, switch off the appliance and apply solely to a qualified electrician for replacement.
- 8 Should the machine be used no longer, it must be made inoperative by cutting the supply cable after having disconnected it from the electrical power supply. Make sure that all those parts which could be possible sources of danger are made harmless.
- 9 Warning: hot surfaces .

C DESCRIPTION OF THE APPLIANCE

The main functions of the machine, and its relative parts, are described below, with a view to ensuring its maximum performance.

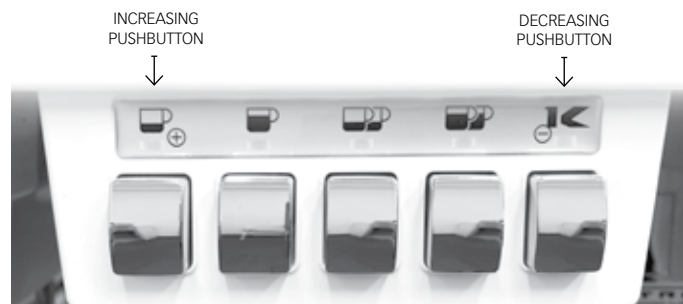
1 USER-MACHINE INTERFACE

The machine has an alphanumeric display which allows communications between the user and the same machine, in a specific selected language.

The inputs to the machine are executed by means of:

- Programming key
- Increasing pushbutton +
- Decreasing pushbutton -
- "Enter" pushbutton

Communication is obtained by means of a series of writing that may be fixed or scrolling if long: wait and read the complete written message to ensure you fully understand the alert.



In general, therefore, the "+" key is used to select the topics or information required and both "+" and "-" keys are used to change the parameters, but always with the possibility to restore the initial situation.

Data are only saved definitively on pressing "ENTER".

Carefully follow the instructions step by step as they appear on the display - they provide a complete guide to programming.

2 COFFEE DISPENSING

Independent dispensing groups with programmed or manual coffee doses.

Each dispensing group has a heating circuit for brewing water working with an heat exchanger coupled to a boiler with the following capacity:

- KUP 2gr 12 liters
- KUP 3gr 16 liters

This circuit ensures that the dispensing group remains at a constant and optimal temperature even when it is not being used, thanks to the effect of the natural circulation of hot water flowing through the circuit itself.

The boiler water temperature setting determines consequently the brewing water temperature.

Values from 72°C to 90°C about.

The machine is equipped with the following filter baskets for the coffee powder:

- 7 grams
- 9 grams (Optional)
- 17 grams
- 21 grams (Optional, with relevant filterholder)

3 STEAM DISPENSING

The machine has one or two steam valves equipped with swivel wands which allows the use of large milk containers and guaranteeing good general ergonomics.

The valves, marked with the symbols ☕ and ☕ are operated by a joy-stick with movement in any direction.

The steam is produced by the same boiler used to heat the coffee water.

4 HOT WATER DISPENSING

The machine has one hot water valve equipped with a swivel wand which allows the use of large water containers and guaranteeing good general ergonomics.

The valve, marked with the symbols 🔥 and 🔥 is operated by a joy-stick with movement in any direction.

Water is taken from the same boiler used to heat the coffee water and to produce steam.

5 CONTROL OF WATER LEVEL IN THE BOILER

This is done by means of a level probe and of a solenoid valve what control the water level in the boiler, topping it up automatically when required.

6 CONTROL OF WATER TEMPERATURE IN THE BOILER

Water temperature in the boiler is controlled by a sensor that switches the heating elements through a remotely controlled power switch.

The temperature value is settable from 112.5°C to 128.3°C, standard factory value 122.5°C.

Consequently, it also controls the pressure in the boiler, kept from 0.6 bar to 1.6 bar, standard factory value 1.2 bar.

Consequently, it determines also the temperature of the coffee infusion water.

7 CONTROL OF COFFEE DOSAGE

Each group head is fitted with a flow rate sensor, or a volumetric dosage device.

It measures the volume of water being fed through the group, to ensure that the final volume of coffee in the cup corresponds to the value programmed by the user.

At the end, the final volume of coffee in the cup, in cubic centimetres (millilitres), corresponds to its weight in grams, since the specific weight of the extract being almost the same of the water.

To achieve this result, the device control system takes account of the quantity of water necessary to wet the coffee puck, quantity that does not reach the cup during the extraction, and adds it to the programmed quantity.

The quantity of water necessary to wet the coffee puck is preset at the factory, with the quantity of ground coffee as 6/8 grams for singles and 12/16 grams for doubles.

The dispensing capacity corresponding to these parameters is around 1 cc/second, ie obtained by grinding granulometry required for the Italian espresso.

When using different quantities of coffee or different grinding granulometry, kindly contact Technical Support.

This system is not requiring complex and unreliable technologies such as Gravimetric technology, while still allowing a very high precision in determining the so-called Brew Ratio but with very low production times: for example, is not requiring the filterholder weighing before and after loading the coffee.

8 MEASURING THE BREWING PRESSURE

The appliance is fitted with a pressure sensor that measures the pressure delivered by the pump during brewing.

Through the reading of the display, this enables technician to set manually the pump pressure during coffee dispensing.

9 MEASURING THE WATER SUPPLY PRESSURE

The same sensor referred to in the previous paragraph measures, when the water pump is stopped, the water supply pressure with which the appliance is fed.

Value displayed on the same display.

10 PROTECTING THE HEATING ELEMENTS

The three boiler heating elements, 1170 W each for the 2 groups models and 1840 W each for the 3 groups, are protected from overheating.

Such protection is obtained by means of a thermostat with manual reloading which controls the cutting off of power to the heating elements.

In each of following cases:

- Excessive duration of heating,
 - Exceeding of maximum allowable temperature value,
- the heating elements are disabled and a major fault is displayed.

11 WARMING THE CUPS

These models are equipped with cup heater trays with the capacity to contain a large number of cups on various levels and to keep them warm in order to guarantee an excellent cup of coffee.

The heat is generated by a natural flow of hot air from the inside of the machine.

12 USER ALERTS

The machine can display the user the following alerts:

" WAIT: MACHINE IS HEATING UP "

" MACHINE READY "

" MACHINE IN SLEEP MODE - NIGHT CYCLE "

the following minor alarms:

" BREWING NOT SATISFACTORY- CHECK COFFEE TAMPING OR DOSING OR GRINDING "

" BUFFER BATTERY ABOUT TO GO FLAT- REPLACE PROMPTLY "

the following major alarms:

" BOILER WATER LEVEL CONTROL SYSTEM FAULT - MACHINE OFF - REPAIR "

" BREWING WATER TEMPERATURE CONTROL SYSTEM FAULT - MACHINE OFF - REPAIR "

13 SOUND EMISSION

The weighted sound emission level A of these models is 80dB uncertainty 1dB.

D TYPE APPROVALS

1 EUROPEAN TYPE APPROVALS

KUP models are in compliance with the applicable European Directives in force and, as such, they are marked with the symbol:



All products bearing this mark can to be sold directly in all member states of the European Community.

To be entitled to apply the CE mark, the manufacturer must draw up a technical file which ELEKTRA will place at the disposal of its clientele for all the various kinds of technical controls.

The products are in compliance with the following Directives:

2001/95/EC	General safety
2004/1935/EC	Materials and objects in contact with food (MOCA)
2006/42/EC	Machinery
2011/65/EC	Restrictions on use of some dangerous material (ROHS)
2012/19/EU	Waste electric and electronic equipment (RAEE)
2014/30/EC	Electromagnetic compatibility
2014/35/EC	Electrical safety
2014/68/EU	Pressure equipment (PED)

2 USA - CANADA TYPE APPROVALS

KUP models are approved with the following marks:



complying with the following rules:

UL 197	General safety USA
CSA-C22,2-109	General safety CANADA
NSF 4	General sanitation food safety
NSF 51	Food equipment materials
NSF 372	Drinking water system components - lead content

3 KOREA - AUSTRALIA - NEW ZEALAND TYPE APPROVALS

KUP models comply with Korean, Australian and New Zealand rules.

OPERATION INSTRUCTIONS

**THESE INSTRUCTIONS ARE INTENDED FOR
BARMAN / ESPRESSO COFFEE MACHINE OPERATOR**

A USE

1 SWITCHING ON THE APPLIANCE

The machine switches on by pressing the button marked with the symbol ① placed on the working front of the same.

When the machine is switched on, it automatically loads water into the boiler and, only when the boiler is full, does it switch on the heating, so as not to damage the heating elements.

The following alert is displayed:

“ WAIT: MACHINE IS HEATING UP ”

When the boiler has reached the working pressure, the alert change as the following:

“ MACHINE READY ”

Now is possible to make coffee.

2 NIGHT CYCLE

Through the setting of a time of day, the machine enters into a state of partial operation during which the temperature in the boiler is kept at a very low temperature (40°C).

In this state buttons with automatic dosing are not enabled, only the manual dosing buttons can be operated.

The following alert is displayed during the night cycle:

“ MACHINE IN SLEEP MODE - NIGHT CYCLE ”

When this period of time has elapsed, the machine resumes normal operation.

See the following paragraphs.

Such cycle, as it does not cool down the machine completely, allows less scale deposits to accumulate in its hydraulic components and to save energy.

3 DISPLAY OF FUNDAMENTAL PARAMETERS

When “Enter” pushbutton is pressed, the following operating parameters are displayed for a given time, one after the other:

- TIME AND DATE
- BOILER PRESSURE.
- SET INCREASE (OR DECREASE) OF BREWING TEMPERATURE
- WATER SUPPLY PRESSURE (WITH PUMP OFF)
- BREWING PRESSURE (WITH PUMP ON)
- NIGHT CYCLE START AND END TIME

4 OPERATING PARAMETERS SETTING

Pressing twice in quick succession the “ENTER” button” it allows to set the following operating parameters:

- GROUP 1 COFFEE BREWING DOSES PROGRAMMING
- GROUP 2 COFFEE BREWING DOSES PROGRAMMING
- GROUP 3 COFFEE BREWING DOSES PROGRAMMING
- GROUP 1 COFFEE DOSES COPYING ON GROUPS 2 AND 3
- GROUP 1 CLEANING

- GROUP 2 CLEANING

- GROUP 3 CLEANING

- NIGHT CYCLE SETUP

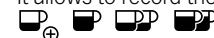
- 1) The main menu appear on the display, press any of the coffee buttons marked with the “+” sign to scroll the menu to reach the desired topic.
- 2) Press the “ENTER” button to confirm the chosen option to scroll down the correspondent menu or to activate the desired function.
- 3) Upon completing programming or consultation of the various topics, to quit the programming options scroll the menu by the “+” button until the following signal is displayed:

“ TO QUIT PRESS “ENTER”, TO REPEAT PRESS “+”

then, press the “ENTER” button: the machine automatically resumes full operation.

4.1 COFFEE DOSES SETTING

It allows to record the desired doses on each of the four push buttons

, for each group, by means of the two increasing pushbutton “+” and decreasing pushbutton “-”, and to store them by means of the “Enter” pushbutton.

4.2 GROUP 1 COFFEE DOSES COPYING ON GROUP 2 AND 3

It allows to copy the coffee doses of group 1 on group 2 and 3 in order to make the programming of coffee doses of the whole machine faster.

4.3 GROUPS CLEANING

See chapter “B MAINTENANCE AND CLEANING”, paragraph 3.

4.4 NIGHT CYCLE SETUP

It allows to set ON or OFF the night cycle function.

5 USE OF THE WORKING AREAS

The machine is divided into a coffee dispensing area on the right and a steam and hot water dispensing area on the left.


It is thus possible to work with containers of up to 70 mm (2.76 inches) in height or up to 130 mm (5.71 inches) in height, depending on the heights of the work counters used (dispensing groups) and with containers of up to 150 mm (5.91 inches) in height (water and steam wands).

Positioning the coffee grinder on the right of the machine speeds up the serving of coffee, given its proximity to the dispensing groups.

This subdivision ensures that two operators can use the machine at the same time, without obstructing one another-one serving teas and cappuccinos and the other serving coffee.

Includes two independent grilles and a raised work counter for coffee area.

6 COFFEE DISPENSING WITH MANUAL DOSING

This allows coffee of different lengths to be dispensed each time by pressing the button marked  and repressing the same button when the desired dose has been dispensed.

This function is enabled at all times, irrespective of the machine status - even in the case of a major fault - so as to enable washing or checks during repair operations.

7 COFFEE DISPENSING WITH AUTOMATIC DOSING

Allows the dispensing of coffee in preset doses.

This is carried out by pressing the buttons marked with the coffee cups symbols once only. Dispensing stops automatically once the preset dose has been dispensed.

This function is only enabled when all the envisaged operating and protection conditions have been met and can normally be stopped manually.

During the dispensing the time (s) elapsed from the dispensing start and the dosage of the coffee (cc) are displayed.

The final value of the time taken, together with the coffee volume value, is visualized for 10 seconds after the end of the dispensing.

The value of the time taken, together with the one of the final coffee volume, allows to assess whether the grinding grade of the powder used is correct.

See the following paragraph.

8 MAKING THE COFFEE

Factors of basic importance to make good quality coffee are:

- *Use of recently ground fresh coffee, because it rapidly loses its aroma and the fats contained turn rancid.*
- *Grinding of uniform size, which can be obtained only with good quality and well maintained coffee grinders. The uniform size of the powder ensures a complete extraction and a good reproducibility of the result in the cup.*
- *Use of properly warmed cups, which contribute considerably to preserving the cream of the infusion.*

With the exception of the above-illustrated factors, there are many recipes to obtain many different types of infusions, based first of all on the type of coffee bean used, both for the production of mixes and as single-origin coffee.

The fundamental parameters are:

- *Type of coffee bean used*
- *Grinding grade*
- *Quantity of powder used*
- *Infusion water temperature*
- *Infusion pressure*

For example, in order to obtain a good Italian-style espresso coffee, grinding must allow the espresso to be dispensed in approx. 25 seconds and to have, on average, a volume equivalent to approx. 25 cc.


The quantity of ground coffee must be of around 7 grams

*Infusion temperature varies between 80°C and 95°C depending on the type of coffee used.
Infusion pressure between 8 and 9 bar.*

- 1) Detach the filterholder from the dispensing group by turning it towards the left.
- 2) Discharge the coffee cake into the waste drawer without striking too hard so as not to damage the edge of the filter.
- 3) Perform the group purge by pressing the manual dispensing button.
- 4) Fill the filter with the dose of ground coffee.
- 5) Level it out and press it with the tamper.
Ensure that no grounds are left on the edges of the filter.
- 6) Attach the filterholder to the dispensing group, turning it firmly towards the right.
- 7) Place the cups underneath the spouts and start dispensing.


9 PREPARING FROTHY MILK

In order to froth up the milk, which is essential for preparing cappuccino, half-fill a tall, narrow container with milk and proceed as follows:

- 1) Briefly open the steam valve using the joy-stick marked with the symbol  as so to remove any water condensation that might have collected.
- 2) Place the container with the milk underneath the steam wand so that the spray nozzle touches the bottom, then reopen the steam valve and bring the milk to the desired temperature.
- 3) Lower the container so that the spray nozzle rises almost to the surface of the milk and, from this position, raise and lower the container repeatedly so that the spray nozzle enters and surfaces from the milk alternately.
Continue until the milk has frothed up, after that close the steam valve.

To make the cappuccino add hot espresso coffee to the hot frothy milk.

10 MAKING TEA – CAMOMILE TEA ETC

Put the container under the hot water nozzle and activate the hot water dispenser by using the joy-stick marked with the symbol .

Once the set hot water volume is reached close the hot water valve.

At this point, use the hot water to make the drink of choice.

B MAINTENANCE AND CLEANING

1 DAILY CLEANING OF THE GROUPS AND FILTERHOLDERS

Each evening or at least once a day, clean the group shower and the filterholder gaskets with a cloth or a sponge.


Rinse the filters and filterholders in boiling water in order to remove the fatty deposits of the coffee. It is advisable to wash the inside of the filterholders and filters with a view to avoiding incrustations and coffee deposits which could fall off during coffee making, forming grounds in the cup.

2 DAILY CLEANING OF THE STEAM WANDS

⚠ The steam wands, used for heating drinks, must be cleaned immediately after use in order to safeguard against the formation of incrustations that could block the holes of the spray nozzle and also to ensure that the residue of previously heated drinks does not deteriorate, leading to the unhygienic formation of bacteria ⚠.

Externally clean with a moist sponge, the steam nozzle immediately after every milk preparation cycle.

To clean the inside of the wand instead proceed as follows:

- 1) Fill a stainless steel pitcher with cold water up to at least the same level as the milk residuals on the wand.
- 2) Place the wand into the water filled pitcher.
- 3) Operate the steam valve by means of the joy-stick marked by symbol  until the water boils, obtaining a complete disinfection of the wand.

3 WEEKLY CLEANING OF THE GROUPS

⚠ At least weekly, it is necessary clean the dispensing groups from coffee deposits with an internal cleaning through a semi-automatic procedure guided by the machine ⚠.

That procedure is to be started only with hot machine ready to use and for all the groups, as follows:

- 1) Press twice in quick succession the "ENTER" button": the machine automatically enters a state of partial operation suitable for programming.
- 2) The main menu appear on the display: press any of the coffee buttons marked with the "+" sign to scroll the menu and reach the desired topic, i.e:

" GROUP 1 CLEANING " or
" GROUP 2 CLEANING " or
" GROUP 3 CLEANING "

- 3) Press the "ENTER" button to confirm the chosen option and to start the cleaning procedure, displaying the following alert:

" INSTALL THE BLIND FILTER, PUT THE DETERGENT AND PRESS " ENTER "

The cleaning starts on the groups, running 10 dispensing loops of 20 seconds each one. At the end of washing cycle is displayed the following alert:

" CLEANING FINISHED: REMOVE THE FILTER HOLDER AND PRESS "ENTER" TO MAKE RINSING "

a rinsing step will get started on the dispensing groups, divided into 30 seconds of dispensing, 30 seconds of stop and 30 second of dispensing.

On rinse completion remove the blind filter, place the standard filter back and hook the filterholder on the dispensing group.

- 4) Quit from programming by scrolling the menu pushing the "+" button until the following alert is displayed:

" TO QUIT PRESS "ENTER", TO REPEAT PRESS "+" "

press the "ENTER" button: the machine automatically resumes full operation.

4 WEEKLY CLEANING OF THE FILTERS AND FILTERHOLDERS

- 1) Place three teaspoons of detergent for coffee machines and approx. one litre of boiling water in a heat-resistant container.
- 2) Immerse the filters and filterholders in the solution prepared and allow them to soak for about 20/30 minutes (do not fully immerse filterholders with wood handles: the water and detergent solution would damage the handles).
- 3) Rinse thoroughly under running water.

5 WEEKLY CLEANING OF THE DRIP TRAY

At least once a week remove the lower cup grille, remove the drip tray and clean it.

⚠ Check and clean the drain box too, removing any dregs with the aid of a teaspoon, and then rinse it ⚠.

6 WEEKLY CLEANING OF THE BODY

Simply use a damp (non abrasive) cloth.

Do not use alcohol or solvents to clean written or painted parts as this could damage them.


7 MONTHLY BOILER WATER CHANGING

Due to the fact that the boiler water is used also for the hot drinks, it is preferably to change it completely , to clean the boiler inside, minimum once a month.

- 1) When the machine has heated up, i.e. displaying the following alert:

" MACHINE READY "

switch it off by pressing the button marked with the symbol .

- 2) Operate the hot water valve by using the joy-stick marked with the symbol , after having placed a big pitcher underneath the water wand, and take off hot water from the boiler.
- 3) Continue to take off the water until it will finish, until it does not more come out of the wand.
- 4) Switch the machine on and wait it is ready for use, after having automatically refilled the boiler with water.

C TROUBLESHOOTING

⚠ If problems arise with the appliance, consult the following guide and try to resolve them by implementing the suggestions provided.

If the problems persist, contact Technical Assistance. Do not carry out repairs directly on the appliance ⚠.

The company Elektra declines any and all responsibility for tampering or interventions carried out by non authorized persons. Such intervention automatically renders the guarantee null and void. The guide also contains problems that must be resolved directly by the Technical Assistance Service but which are explained to facilitate comprehension and repair operations.

1 BREWING WATER TEMPERATURE CONTROL SYSTEM ALARM, FAULT

If the following alert appears:

“ BREWING WATER TEMPERATURE CONTROL SYSTEM FAULT - MACHINE OFF - REPAIR ”

a major fault has occurred.

⚠ Switch off the machine and contact Technical Assistance ⚠.

2 NOT SATISFACTORY BREWING ALARM

If, after dispensing selected with an automatic button, e.g. group 1 single short coffee, the following alert is displayed:

“ BREWING NOT SATISFACTORY- CHECK COFFEE TAMPING OR DOSING OR GRINDING ”

the coffee may not have been made according to Italian espresso standards, and therefore adjustments in tamping, dosing or grinding of the coffee powder are required.

Perhaps even adjustments to temperature or brewing pressure are required (also consult chapters “C - ADJUSTMENTS”, paragraphs 1.5, 2).

Alternatively, there might be a fault due to:

- Water supply stoppage: restore it
- Fault or obstruction to the passing of water through some parts of the machine: contact Technical Assistance.

3 ALARM: BUFFER BATTERY ABOUT TO GO FLAT

The electronic control unit is equipped with a buffer battery that ensures the storing of the time and date.

The system continually controls the efficiency of the battery, warning in advance when it is about to go flat and advising its replacement.

When displaying the following alert:

“ BUFFER BATTERY ABOUT TO GO FLAT- REPLACE PROMPTLY ”

Contact Technical Assistance.

4 BOILER WARNING: WATER LEVEL CONTROL ALARM, FAULT

If the following alert appears:

“ WATER LEVEL CONTROL SYSTEM FAULT - MACHINE OFF - REPAIR ”

the fault could be due to:

- 1) Water supply stoppage: restore it
- 2) Fault in the boiler water inlet solenoid valve or obstruction to the passing of water through some parts of the machine
- 3) Electrically insulating incrustations on the level probe or an interruption in its electrical connection that prevents the presence of water in the boiler from being detected:

⚠ Switch off the machine and contact Technical Assistance ⚠.

5 THE MACHINE DOES NOT HEAT UP

Due to the (even temporary) lack of water in the boiler the heating element safety device may have been deactivated.

⚠ The heating element safety device can be manually reactivated, after the reason for the lack of water in the boiler has been eliminated or repaired ⚠.

Contact Technical Assistance.

6 STEAM DOES NOT COME OUT OF THE WANDS WHEN THE MACHINE IS HOT

This problem normally arises after the machine has been switched on from cold and is due to the sticking of the vacuum break valve of the boiler; this does not negatively affect the use of the machine, in fact:

- After venting all the air through a steam valve, wait until the machine heats up normally and use it.

In the meantime, contact Technical Assistance.

7 WATER COMES OUT OF THE STEAM WAND

This means that the boiler is completely full of water instead of containing a certain quantity of steam.

The possible causes of this are:

- Fault in the boiler water inlet solenoid valve.
- Electrically insulating incrustation on the level probe or interruption in its electrical connection.

⚠ Switch off the machine, turn off the water supply and contact Technical Assistance ⚠.

8 WATER DOES NOT COME OUT OF A DISPENSING GROUP WHEN THE MANUAL BUTTON IS USED

The possible causes of this are:

- Coffee ground too finely: adjust it
- Water supply stoppage: restore it
- Fault or obstruction to the passing of water through some parts of the machine: contact Technical Assistance

9 ONE DISPENSING GROUP DOES NOT HEAT SUFFICIENTLY

There is a reduction to the flowing of the brewing water, e.g:

- Group natural heating circuit clogged with scale deposits.

Contact Technical Assistance

10 BREWING PRESSURE GROUP DOES NOT HEAT SUFFICIENTLY

Unless this value exceeds 1.2 MPa (12 Bar), in which case switch off the machine and contact Technical Assistance, this is a fault that does not negatively affect the use of the machine.

The most likely causes are that the pump is out of calibration or worn.

Contact Technical Assistance.



11 THE DRIP TRAY IS FULL AND OVERFLOWING WITH WATER

- 1) Clean the drain box and use a metal wire to free the drain pipe of residue.
- 2) Eliminate any sagging or strangling of the flexible drain pipe, ensuring that it is always angled downwards in a straight and even manner.
- 3) If the above-mentioned causes are not responsible for the fault, this means that there is a blockage in the drain pipes external to the machine: contact a plumber.

Also consult chapter "B - INSTALLATION", paragraph 3.

D DISPOSAL OF THE APPLIANCE

The European Directive 2012/19/EU (WEEE) covering the disposal of electric and electronic equipment dictates that such equipment must not be disposed of through normal solid urban waste channels.

 When such equipment has reached the end of its useful life, the user is bound take to deliver it to authorized segregated waste collection centres or return it to the dealer on purchasing a new equivalent type of appliance, on a one-to-one ratio .

For further information on segregated waste collection centres, contact a dealer or the appropriate public authorities.

Effective segregated waste collection designed to subject the disposed equipment to environmentally compatible recycling, processing and disposal processes contributes to the avoidance of negative effects on the environment and on health, and enables the re-use of the materials of which the appliance is composed.

Improper disposal of the product by the user is punishable according to the penalties laid down in the legislation in force.

The crossed-out wheelee bin symbol indicates that the product must be handled asdescribed above



TECNICAL INSTRUCTIONS

THESE INSTRUCTIONS ARE INTENDED FOR ESPRESSO COFFEE MACHINE INSTALLATION/MAINTENANCE TECHNICIAN

A UNPACKING

Packaging is carried out with the aim of protecting the machine from damage during transportation.

The packaging materials used are recyclable. They are, therefore, chosen according to environmental protection criteria and ease of disposal, the latter process being geared at further integration in productive cycle materials.

Thanks to this mechanism, not only is the volume of waste reduced but a more rational use of non renewable resources is also ensured.

- 1) Cut the strap that keeps the box closed.
- 2) Open the top of the box and remove the shock-proof panels inside, remove the accessories contained inside them and take out the present manual, keeping these articles to hand for the later phases of use of the appliance.
- 3) ⚠ Remove the nylon bag covering the upper part of the machine and put it in a safe place out of the reach of children ⚠.
- 4) Drive the box up out leaving the machine on the pallet.
- 5) Remove any other packaging materials and protections attached to the machine.
- 6) ⚠ Hand the packaging materials over to an authorized enterprise for disposal and recycling ⚠.

B INSTALLATION

1 ADJUSTING THE FEET

Place the machine on the work counter and ensure that it is level, by adjusting the length of the feet.

Turn the black foot counter-clockwise, when viewed from underneath, to lengthen it and clockwise to shorten it. There are no screws or nuts to be loosened or tightened.

2 WATER CONNECTION

The water is fed thanks to a connection with the drinkable water supply at a minimum pressure of 0.15 MPa (1.5 bar) and a maximum pressure of 0.6 MPa (6 bar).

Hardness of the water not above 20°F.

Were the hardness should be higher than the above value, install a water softener between the water supply and the machine.

Should the water supply pressure exceed 0.6 MPa (6 bar), install a pressure reducer upline of the coffee machine / water softener system.

An external check-valve may be required to meet local regulations.

The machine has a flexible steel-braided connection pipe with a 3/8 female connection, approx. 1.7 metres in length.

- 1) Connect the flexible pipe to the coupling located on the bottom of the machine.
- 2) Connect this flexible tube to the water softener, if present, or directly to the water supply (water mains).

3 DRAIN CONNECTION

The machine has two rubber connecting pipes, one of 20 mm in external diameter and the other of 18 mm in external diameter, both approx. 1.5 metres in length.

This flexible pipes must be made to flow into a fixed drain manifold with a minimum internal diameter of 50 mm located underneath the machine work counter.

The space created by difference in diameter of the two pipes inserted into the drain manifold must be left free for the venting of air during the discharging of the water.

- 1) Hook up the rubber pipe of 20 mm in diameter between the pipe fitting on the plastic drain box installed at the bottom of the machine to the drain manifold located underneath the counter, ensuring that it does not sag and that it is not strangled.
- 2) Hook up the rubber pipe of 18 mm in diameter between the metal pipe fitting on the bottom of the machine to the drain manifold located underneath the counter, ensuring that this too does not sag and that it is not strangled.

4 ELECTRICAL CONNECTIONS

The machine is equipped with a connecting power cable, approx. 2 metres in length, with 5 wires of the following colours:

- Green/Yellow:	Ground
- Blue:	Neutral
- Brown:	Phase 1
- Black:	Phase 2
- Grey:	Phase 3

 **The wires should be connected only to a terminal board on the electric switchboard** 

The wiring diagram is shown on an adhesive tag applied to the end of the power cable. Electrical power specifications are given on the plate applied to the front of the machine. The connection may be made without any modification being required to the machine, either to a single-phase 230VAC power supply or to a triple phase 400VAC N3 power supply, as follows:

4.1 SINGLE-PHASE 230VAC CONNECTION

Hook up the Ground and Neutral wires to the two respective terminals on the electric switchboard.


Join up the three wires of phases 1, 2 and 3 themselves and connect them to the single terminal of the phase present in the electric switchboard.

4.2 THREE-PHASE 400VAC N3 CONNECTION

Hook up the Ground and Neutral wires to the two respective terminals on the electric switchboard.

Connect each of the three wires of phases 1, 2 and 3 to the respective terminals of the phases present in the electric switchboard.

5 FILLING THE HYDRAULIC CIRCUITS

- 1) Ensure that the water supply is turned on.
- 2) Switch on the machine.
- 3) Activate the manual dispensing of each group by pressing the button, marked by the  symbol, of the pushbutton, until complete elimination of the air contained in the water circuits and regular outflow of water.



C ADJUSTMENTS

1 BASIC PROGRAMMING

This enables the implementation of the Adjustment, Maintenance and Data Management functions listed below.

It also facilitates the providing of telephonic assistance.

⚠ **Basic Programming is the exclusive responsibility of the installer/service technician** ⚠. It is carried out with the key provided, which enables to use the following display menu:

- LANGUAGE SELECTION
- TIME AND DATE SETTING
- NIGHT CYCLE PROGRAMMING
- BREWING TEMPERATURE SETTING
- CRONO SETUP
- SCHEDULED MAINTENANCE ALERTS RESET
- COFFEE PRODUCTION DISPLAY AND RESET
- WATER CONSUMPTION DISPLAY AND RESET

- 1) Insert the key in the lock on the control panel, gently press and turn it clockwise: the machine automatically enters a state of partial operation suitable for programming.
- 2) The instructions for the using the main menu appear on the display: after confirming by pressing "ENTER" on the control panel, press any of the coffee buttons marked with the "+" sign to scroll the menu to reach the desired topic.
- 3) Press "ENTER" to confirm the choice of the topic and access the submenu for the function concerned. To change numerical values press the "+" and "-" keys to increase or decrease respectively. Then save the data by pressing "ENTER"
- 4) Upon completing programming or consultation of the various topics, turn the key counter-clockwise and remove it from the lock: the machine automatically resumes full operation.

1.1 LANGUAGE SELECTION

This allows the conversion of all the communications made by the machine into Italian or English or French or Spanish or German.

1.2 TIME AND DATE SETTING

This is used to set the minutes, hours, days, months and year for correct night cycle management and dating of statistical data.

1.3 NIGHT CYCLE PROGRAMMING

The night cycle programming is obtained by setting a start time and an end time. See chapter "A USE", paragraph 2.

1.4 BREWING TEMPERATURE SETTING

This allows the brewing temperature to be varied according user requirements, the blend being used or environmental conditions, with a view to obtaining the best "quality in the cup".

This is done by setting the required increase (or decrease) of the temperature in relation to the standard brewing temperature, measured in centigrade degrees (°C). The standard brewing temperature is that programmed by the manufacturer and is the same for all produced pieces of this model.

After varying the brewing temperature, make at least three espresso coffee per dispensing group to enable the new temperature to stabilize itself.

See chapter "C DESCRIPTION OF THE APPLIANCE", paragraphs 2 and 6.

1.5 CRONO SETUP

It allows to set ON or OFF the displaying of the delivery time and of the coffee volume in the cup.

See chapter "A USE ", paragraph 7.

1.6 SCHEDULED MAINTAINANCE ALERTS RESET

If a scheduled maintenance program has been activated (see paragraph 3 "SPECIAL PROGRAMMING"), this function lets you reset the maintenance alert once the espresso coffee machine has been serviced.

The alert can be reset by entering the reset code known to the technician.

1.7 COFFEE PRODUCTION DISPLAY AND RESET

The system records the number of cups of coffee dispensed by each button for each group. Each dispensing activated by double buttons corresponds to two cups of coffee.

These data can be zero-set by entering the Reset Code known to the technician.

1.8 WATER CONSUMPTION DISPLAY AND RESET

The system records the volume of water consumed.


These data can be zero-set by entering the Reset Code known to the technician.

2 BREWING PRESSURE ADJUSTING

With a view to obtaining the best "quality in the cup", brewing pressure may be adjusted. Recommended pressure is between 0.8 MPa (8 bar) and 0.9 MPa (9 bar).

Disassemble the frontal lower steel panel on the machine's work side, unscrewing the five screws that fix it in place.

Behind it lies the pump with its pressure regulator, which can be adjusted with a screwdriver.

Pressing the "ENTER" pushbutton, at a certain moment will be displayed the water supply pressure: dispense a coffee on the right group by pressing the button marked by symbol : the pressure displayed will change in brewing pressure: proceed adjusting the pump.

3 SPECIAL PROGRAMMING

This allows the personalization of certain machine functions according to important servicing, marketing or individual end Customer requirements.

Special Programming is the exclusive responsibility of the dealer's specialized technician who will have been specifically trained by ELEKTRA to do so.

Special Programming should be carried out on the dealer's premises prior to installation.

It is carried out via PC by connecting a special cable to the machine's electronic control unit and the ELEKTRA program.

These functions are as follows:

- Setting of a scheduled maintenance program.
- Activation of start of dispensing only upon reaching the ideal brewing temperature.
- Activation of brewing satisfactory control according to Italian espresso standards.
- Personalization of maximum coffee dispensing time.
- Personalization of the maximum heating element "on" time.
- Personalization of the reset code for the scheduled maintenance call, coffee production and water consumption.
- Saving and printing of all machine configuration data.
- Saving and printing of all machine cumulative historical data.



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