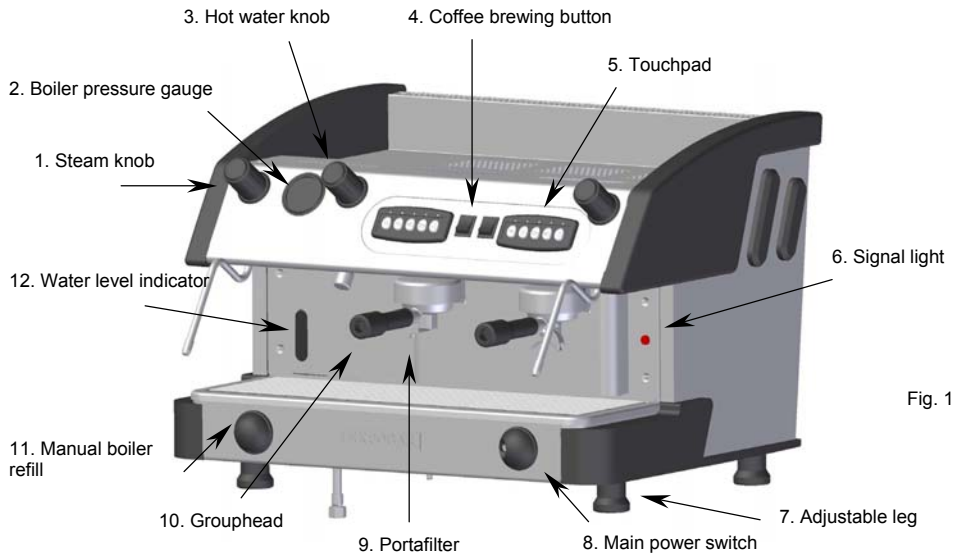


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PLEASE READ CAREFULLY THIS INSTRUCTIONS MANUAL BEFORE INSTALLING OR USING THE COFFEE MACHINE

1. Identification of external components



2. Features

| Model | Number Group | Sizes mm. | | | Boiler Litres | Power (W) | | Voltage Vac | Weight Kg. |
|-----------------------|--------------|-----------|-----|-----|---------------|-----------|-------|-------------|------------|
| | | A | B | C | | Heater | Total | | |
| Mini with grinder | 1 | 500 | 600 | 690 | 6 | 2500 | 3115 | 230 | 47 |
| Mini with grinder | 1 | 500 | 600 | 690 | 6 | 2000 | 2615 | 115 | 47 |
| Mini | 1-2 | 500 | 600 | 510 | 6 | 2500 | 2850 | 230 | 40-50 |
| Mini | 1-2 | 500 | 600 | 510 | 6 | 2000 | 2350 | 115 | 40-50 |
| 2 Groups | 2 | 685 | 600 | 510 | 11,5 | 3000 | 3235 | 230 | 60 |
| 2 Groups | 2 | 685 | 600 | 510 | 11,5 | 4500 | 4683 | (*) | 60 |
| 2 Groups with grinder | 2 | 710 | 600 | 690 | 11,5 | 3050 | 3675 | 230 | 67 |
| 3-4 Groups | 3-4 | 975 | 600 | 510 | 17,5 | 4000 | 4200 | 230 | 85 |
| 3-4 Groups | 3-4 | 975 | 600 | 510 | 17,5 | 6000 | 6200 | (*) | 85 |

(*) The machine is prepared to be wired: 3 phases, neuter and earth.

3. Accesories

- For Mini models:
1 complete portafilter 2 cups + 1 complete portafilter 1 cup + small flexible hose of 1/2 metre and 1 membrane group cleaning.
- For models: 2, 3 and 4 groups.
2 complete portafilter for two cups, in two groups machine.
3 complete portafilter for two cups, in three groups machine.
4 complete portafilter for two cups, in four groups machine.
+ 1 complete portafilter for 1 cup.
+ 1 small flexible hose of 1/2 metre.
+ 1 membrane cleaning group.

4. Installation of coffee machine

The machine, once it is installed on its coffee cabinet, it should be horizontal as much as posible (use its adjustable legs) so the coffee will be equally distributed in all the coffee cups.

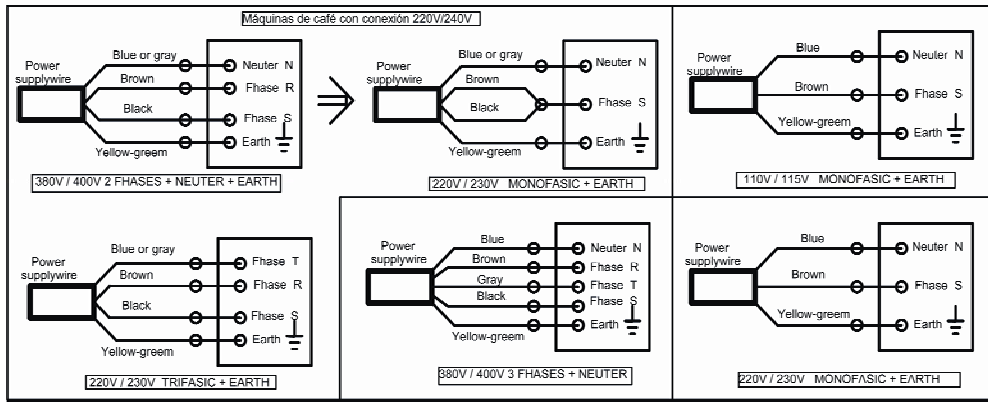
-Wiring:

Wiring of coffee machine must be done by qualified staff, always following the safety instructions:

- a) Before plug in the machine, make sure the voltage of the supply mains correspond to the ratings indicated on the nameplate featuring the appliance's technical data.
- b) The wall socket must be fitted with an earth contact. Make sure the earth system is efficient and in conformity with current safety rules. It is compulsory to earth the machine.
- c) You should protect the electric line of the installation with a magnetothermic switch for the machine specified on the nameplate.
- d) You should have a differential relay in accordance with the characteristics of the installation.
- e) Check the rating of the system and cable are suitable for the power absorbed by the machine.
- f) Do not use extension cable or plug adapter for multiple wall sockets.

-Hydraulic installation:

Using the small flexible hose which is in the machine, hook it up to a stainless connection hose 3/8" male, with by-pass valve. Placement of a water softener filter between the valve and the machine is compulsory (among all the spare parts you should have another small flexible hose of 50 cm in order to connect both water softener filter and valve). In the following chapter we will explain how to regenerate the resines of the water softener filter, so it can continue trapping the lime.



The manufacturer is not liable for the injuries or damages on people and/or animals, as well as damages on equipment, caused by a improper installation of the coffee machine.

5. Water loading in the boiler

The water level must be between the maximum and the minimum level. To increase the water level press the manual boiler refill.

- Machines with electronic control panel have electronic boiler refill control.
- Machines without water level indicator, have electronic boiler refill control.

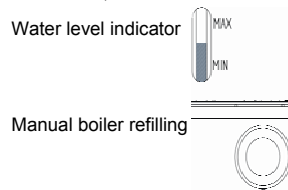


Fig. 2

6. Main power switch

For all Mini models:

- The general switch is luminous.



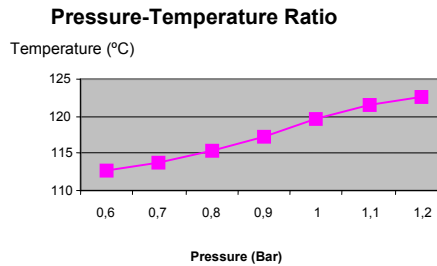
Fig. 3

For all models:

- The general switch is a knob, -see (8)Fig.1

7. Pressure gauge

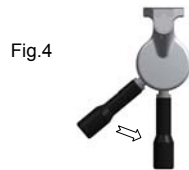
The pressure gauge shows the pressure inside the boiler.



8. Machine start-up

1. Open the water by-pass valve, which is outside of the coffee machine.
2. If the machine has optical level indicator, fill the boiler between the minimum and maximum level.
3. Turn ON the main power switch, -see (8)Fig. 1-.
4. Turn the steam knob until steam comes out.
"The red pilot, -see (6) Fig.1-, shows us the machine is heating-up. Once it turns OFF, it means the machine has reached the ideal temperature".
5. Press the brew switch ,-see (4) Fig. 1-, or the control panel, -see (5) Fig. 1-, until water comes out continuously from the groups, -see (10) Fig. 1-.

9. Portafilter locking into the group



PORTAFILTER LOCKING INTO THE GROUP.

Align the portafilter tabs with the channel in the grouphead (locking collar). Then you should turn from left to right until the portafilter tabs do fully engage in the grouphead.

CORRECT POSITION OF PORTAFILTER IN THE GROUP



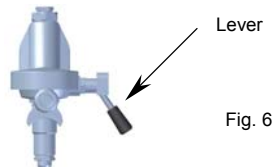
10. Coffee brewing

PULSER MODEL

- a) Unlock the portafilter from the grouphead.
- b) Insert the filter basket and fill it with the right amount of coffee (it will depend on filter's basket size). Use fresh ground coffee. Use the right portafilter,-see Fig. 6-.
- c) Press down the coffee with the coffee tamper.
- d) Insert the filled portafilter into the grouphead and lock it in,-see Fig.5-. Place one cup beneath the spout and turn on the brew switch, -see (5) Fig. 1-.

LEVA MODEL

Proceed as in Pulsar model. The coffee brewing key is the lever. Lift up the lever and coffee will come out from the group. Take down the lever and coffee will stop coming out.



CONTROL MODEL

Proceed as in Pulser model. Fill the filter basket with the right amount of coffee, and press the desired option on the switchboard. The switchboard is already programmed with 4 standard doses (if you want to modify them, see setting) and a continuous coffee button. The first 4 buttons (1 short coffee – 1 large coffee – 2 short coffees – 2 large coffees) disconnect automatically. The 5th one is for continuous coffee, and should be pressed again to disconnect it.

KEEP THE PORTAFILTER ALWAYS INTO THE GROUPHEAD TO KEEP IT WARM, it is very important to maintain it with a suitable temperature in order to obtain a good espresso coffee.

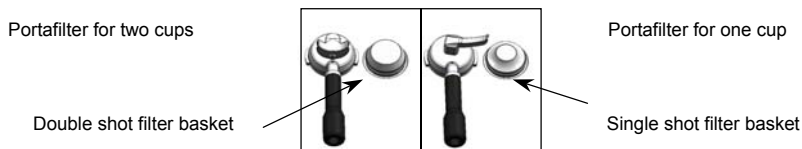


Fig. 7

11 Electronic control panel

11.1 Electronic control panel features

The 1d5 control panel does the following functions:

- Four different coffee doses for each single group plus continuous. Coffee doses' volumetric control.
- Timed tea dose's control (on customer's request)
- Simultaneous dispensation of the coffee and Tea groups (on customer's request).
- Survey of the filling-up level/safety (on customer's request).
- Automatic switch off in case boiler is operated dry.
- Heating element protector (on customer's request)
- System's supervision through alarms.
- Serial connection RS-232 with data-reading devices from the control panel to the computer.
- Brewing group auto-cleaning.
- Those machines which have more than one control panel, in case of anomaly in any of their control panels, you can continue working with the other ones because they are independents.

11.2 Programmation dosage of the control panel

It is possible to modify the quantity related to the coffee doses (through the volumetric control) and memorize them by means of the following procedures:

Press the key 7 pad "*" (continuous coffee)- see Fig. 8 -and keep it pressed for 7 seconds, until all the programming LEDs on the keyboard are simultaneously switching on. Within 5 seconds press any of the pads related to the 4 coffee selections (1 short coffee, 2 short coffees, 1 large coffee, 2 large coffees) which can be programmed. You will see all the green LEDs switch off, except the option you have pressed as well as "*" led.

When the required coffee dose is reached, press the selected key pad to stop the dispensing. The new value of the dose is memorized and the LED of this option will switch off to show that setting has been successful. To proceed with the other coffee doses's programming, repeat the same sequence.

You should carry out this process using fresh coffee in the portafilter.

You are able to program any of the coffee doses, meanwhile the other remain memorized because they are independent.

Example of 1 short coffee programming:

Unlock the portafilter from the machine and fill it with fresh ground coffee. Lock it into the group head, place one cup beneath the spout. Press the "*" key pad and keep it pressed for 7 seconds, until all the green lights are simultaneously switching on. Within 7 seconds press "short coffee key" pad, and you will see all the green lights switch off, except the option you have selected as well as "*" led. The machine will start brewing. When the required coffee dose is reached, press the "short coffee key" pad. Led of this option will turn off. Programming of this option has been successful.

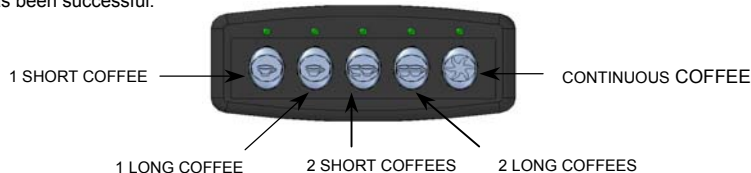


Fig. 8

11.3 Electronic control panel alarms

- When the electronic control panel detects the boiler is running dry, all LEDs of key pad start blinking.
- When the control panel detects problems on the flowmeter, the LED of the dose pushed starts to flash.
- The product dispense is automatically interrupted after 5 minutes (Time-out). The led keeps on blinking until a new selection is made.

12. Heating-up liquids

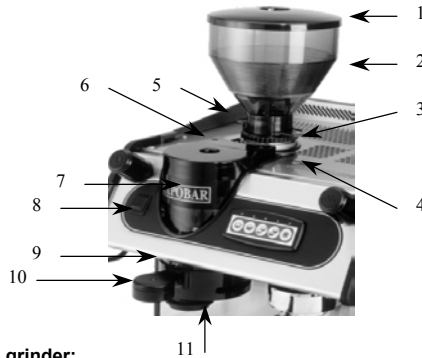
- Place the steam wand, -see (1) Fig. 1-, above the tray and open a bit the steamer knob, -see (2) Fig. 1-, in order to allow condensed water drops go out.
- Turn the steam knob.
- Place the steam wand inside the liquid wanted to be heated up.
- Open up the steam knob and it will start to heat the liquid (do not take it out from the liquid until closed, you could be injured with the steam).
- Once this process has finished, put the steam wand on the tray and open up the steam knob to clean leftovers of milk or other liquids, inside the steamer. Turn the knob and clean the outside of the steamer with a damp cloth.

13. Hot water for infusions

- Place the recipient under the water tap, -see (13) Fig. 1-, where you want to have hot water.
- Open up the water knob, -see (3) Fig. 1,- until you have the desired volume of water.
- Close it down.

14. Coffee machine with built-in grinder

| | |
|----|---------------------------------|
| 1 | BEAN HOPPER LID |
| 2 | BEAN HOPPER |
| 3 | BEAN HOPPER GATE |
| 4 | COFFEE GRINDING ADJUSTMENT DISK |
| 5 | GRINDING TRIGGER |
| 6 | GROUND COFFEE DOSAGE DEVICE LID |
| 7 | GROUND COFFEE DOSAGE DEVICE |
| 8 | GRINDER ON/OFF SWITCH |
| 9 | DOSAGE DEVICE LEVER |
| 10 | COFFEE TAMPER |
| 11 | GROUND COFFEE OUTLET |



Previous operations before starting-up the coffee grinder:

- Check the bean hopper (2) is correctly placed.
- Place the bean hopper gate (3) in a locked position, in order to avoid the pass of the coffee beans to the grinder, just pressing it.
- Lift up the bean hopper (2) lid (1), fill the bean hopper with beans and close it again
- Slide the bean hopper gate (3) to a position allowing the coffee getting into the grinder, pull from the bean hopper gate.

How to obtain a ground coffee dosage:

- Place the portafilter over portafilter holder (7), which it is just under the ground coffee outlet.
- Pull from the ground coffee dosage device lever (9) towards you in order to obtain a dosage and leave the coffee dosage device lever free.
- Place the portafilter under the coffee tamper (9) and push it upwards in order to compact the coffee.

Adjusting the grinding degree of coffee:

You can obtain two grinding degrees (thin ground coffee/coarse ground coffee).

- If you want to obtain thin ground coffee.** Maintain pressed the millstone trigger (5) in order to turn right the setting grind wheel (4), then set it free.
- If you want to obtain a coarse ground coffee.** Maintain pressed the millstone trigger (5) in order to turn left the setting grind wheel (4), then set it free.

Adjustment of grinding coffee quantity per time:

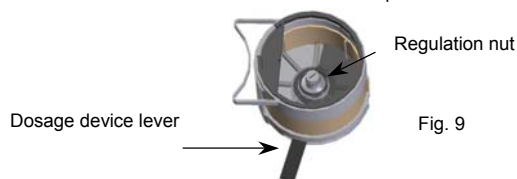
- a) Switch OFF the grinder general switch, (8).
- b) Remove ground coffee dosage device lid (6).
- c) In order to get lower dosage: Move the coffee grinding adjustment disk towards right.
- d) In order to get higher dosage: Move the coffee grinding adjustment disk towards left
- e) Put the ground coffee dosage device lid (6).

You should know that the coffee spoon is equal to 7 grs of ground coffee.

If you notice when you are making coffee, it comes out very fast, the grind is too coarse.

If you notice when you are making coffee, it comes out very slow the ground coffee, is too thin.

Coffee should come out with slow and continuous drop.



15. Cleaning of coffee machine

Disconnect the machine from the main supply to make this process. All the body truck could be cleaned with a damp cloth. Do not use abrasive products or dissolvents.

16. Cleaning of group

For pulser machines:

- a) Unlock the portafilter from the grouphead.
- b) Place the filter membrane on the filter basket , -see Fig. 10-
- c) Insert a sachet of detergent into the portafilter. You must use special soap for this kind of cleaning.
- d) Lock the portafilter into the grouphead and press brew switch, -see (4) Fig. 1,- and then dispense water as if pulling a shot during 10 seconds.

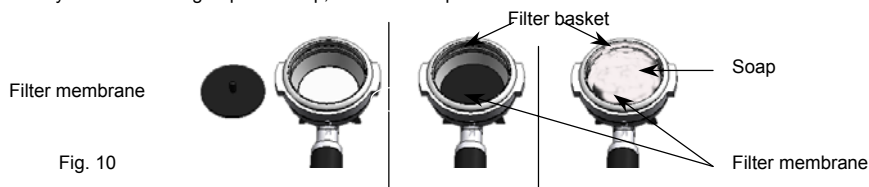
- Repeat again this action five times more.

Important: After cleaning with detergent, remove the portafilter and run the group again to rinse out all remaining detergent. Repeat cleaning without detergent one more time for a perfect result.

“DO NOT MANIPULATE THE PORTAFILTER DURING THE AUTO-CLEANING PROCESS”

We advise you to clean every day the group without soap, only with membrane and water.

We advise you to clean the group with soap, at least once per month.



For control machines:

- a) Unlock the portafilter from the grouphead.
- b) Place the filter membrane on the filter basket , -see Fig. 10-
- c) Insert a sachet of detergent into the portafilter. You must use special soap for this kind of cleaning.
- d) Lock the portafilter into the grouphead.
- e) Switch OFF the machine with the general switch, -see (8) Fig. 1.
- f) Press the push button “2 shorts coffees” from the control panel, switch on the machine keeping pressed the “2 shorts” button, and the self-cleaning process will start automatically.

“DO NOT MANIPULATE THE PORTAFILTER DURING THE AUTO-CLEANING PROCESS”. Once the process has finished, the machine will be in normal working position.

We advise you to clean every day the group without soap, only with the membrane and water.

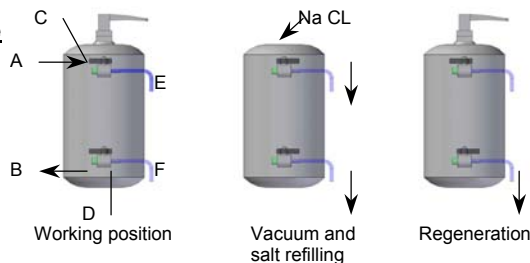
We advise you to clean the group with soap, at least once per month..

Important: After cleaning with detergent, remove the portafilter and run the group again to rinse out all remaining detergent. Repeat cleaning without detergent one more time for a perfect result.

17. Water softener device

A
B
C
D
E
F

Water inlet.
water outlet.
Water inlet tap.
Water outlet tap.
Vacuum tube
Regeneration tube.



| Model | Quantity of softened water according To water hardness (in french negrees) | | | | | Salt KG |
|-------|--|------|------|------|-----|------------|
| | 20° | 30° | 40° | 60° | 80° | |
| L 8 | 1200 | 1000 | 900 | 700 | 500 | 1 |
| L 12 | 1900 | 1500 | 1350 | 1050 | 750 | 1.5 |

18. Possible anomalies

These failures are produced by lime:

- **The coffee does not come out at a suitable temperature:**
 - The outlet tubes of heat exchangers are clogged by lime.
- **Water does not come out from all the groups:**
 - Lime blocks the water getting through .
- **Water does not come out from any of the groups:**
 - Lime blocks the water getting through.

Ninety percent of failures are caused by scale build-up in the machine when none water treatment operation is done. Is very easy to avoid this kind of failure by doing decalcifying.

Problems due to grind setting:

- **Coffee comes out very fast:**
 - Adjust the grinder setting, the grind is too coarse.
 - **Coffee comes out very slow:**
 - Adjust the grinder setting, the grind is too fine.
- If you observe any anomaly in the coffee machine turn to the technical service.

19. Pieces of advice

- You should clean every day the group without soap, only with the membrane and water.
- You should clean the group with soap, at least once a month.
- You should clean regularly the water softener device
- Always use fresh just ground coffee to maintain the best properties of the coffee, aroma and flavour.
- In order to obtain a good espresso coffee, do not forget that either the group (10) or the portafilter (11) must be hot and a constant temperature, so the portafilter must be placed into the group.

20. Cautions

- When you are making coffee do not take out the portafilter, water at high pressure can burn you.
- Do not handle inside the machine, leave this matter to the technician.
- Do not put any thing inside the holes.
- Check frequently the drip tray.
- Do not let the kids touch the machine, it is very dangerous and someone could be injured.
- Do not use the machine with wet hands or barefoot.
- Do not pull from the wire if You want to disconnect the machine from electricity network, do it from the plug.
- If you have any problem call the technical service.

The manufacturer has the rights to modify the machine in order to improve the product.