



## ESPRESSO MACHINES

**#236ECM1** • 1 Group

**#236ECM2** • 2 Group

**#236ECM3** • 3 Group

## INDEX

General .....	2-3
Specifications .....	3
Installation .....	4
Setup .....	5
Operation .....	6
Cleaning & Maintenance .....	6
Shutting Down The Machine.....	8
Parts Diagram.....	9
Wiring Diagram (236ECEM1).....	10
Wiring Diagram (236ECEM2).....	11
Wiring Diagram (236ECEM3).....	12

**Note:** Save these instructions for future reference.

## GENERAL

1. Machine does not come pre-programmed. User must program output volumes before the machine is ready for use. See "Setup" for further instructions.
2. The steam wand, hot water wand, and brewing group can reach very hot temperatures. Use caution while operating.
3. This manual specifies important operation, maintenance, and safety information. Please read carefully.
4. After unpacking, check to ensure your machine has not been damaged during shipping. Please notify a qualified technician regarding all questions or concerns before installing. Note that the machine's packaging material, including plastic bag and Styrofoam, can be dangerous and should be kept out of reach of children.
5. There is an identification label on the unit. Before operating, check to ensure the power source corresponds to the rating shown on the identification label. The manufacturer is not responsible for issues resulting from improper installation and usage.
6. Make sure to use a power source that corresponds with the unit's power rating.
7. Use a no fuse breaker (NFB) that conforms to the safety regulation separately. Do NOT use a socket. The NFB should have a minimum contact space of 3 mm and provide electrical spike and drain protection. The ampere must be sufficient for providing the required electric current to this machine.
8. Be sure to use a grounded power source to prevent electric shock and ensure the safety of this machine and its operators.
9. The machine must be used in accordance with its original design. Additional use is inappropriate and dangerous.
10. Follow all cleaning and maintenance instructions specified in this manual in order to ensure peak operating efficiency.
11. If the machine breaks down or functions abnormally, turn off machine, disconnect the power source, and notify a qualified service technician to fix.



**Intertek**  
3058215

12. Use filtered and softened water. If using groundwater or tap water for brewing coffee, soften it first. Unsoftened water will decompose dissolvable minerals and turn to limescale after boiling, which will reduce the machine's thermal efficiency and machine's lifespan.
13. This machine fills water automatically. If the water fails to fill, the light touch panel will flash and power will be cut off automatically in order to protect the system. To resume normal functions, turn off the machine for 2-3 seconds and turn on the machine again.
14. The heating element on this machine will not operate unless the water in the unit is at the minimum required level. When starting the machine without any water in the tank, heating will be delayed for about 60 seconds.
15. Before operating the machine, confirm that there is no water inside of the boiler. Temperature of water must be kept above freezing point. Damage caused by frozen water inside the tube or boiler won't be covered by the manufacturer.
16. This unit is shipped from the factory with all water drained from the boiler. If you put the machine away for storage, ensure that all water is drained. If water were to freeze inside the unit, it could cause damage.
17. Only place dry cups in the storage area on top of the machine. Wet cups on the machine may damage the unit.

## SPECIFICATIONS

Every machine has an identification label placed on the front of the machine. The label includes information of model number, voltage, serial number, wattage, and its certificate. Please do not remove this label in order for technician to check electrical information in the future.

	236ECEM1	236ECEM2	236ECEM3
Groups	1	2	3
Boiler Capacity	6 Qt.	13 Qt.	19 Qt.
Voltage	110-120V	220-240V	220-240V
Wattage	2000W	4700W	6500W
Weight	97 lb.	141 lb.	179 lb.
Recommended Circuit Amperage	20A	30A	50A
Dimensions (in) WxDxH	19½" x 21" x 22¾"	27½" x 21" x 22¾"	37" x 21" x 22¾"

# INSTALLATION

## Notes

- A cold water connection is required for this unit to function properly.
- Contact a qualified technician to ensure that your electrical and water setup are correct to the specifications of the machine.
- This machine comes hardwired (no plug) and a qualified electrician is required for installation.
- A technician is also required to connect the existing waterline and check the filtration system before starting. Operating with poor water conditions can void the warranty.
- Use an independent breaker for this machine which conforms to safety regulations.
- Total Dissolved Solids: Minimum 50 PPM, Maximum 125 PPM
- Total Hardness: Minimum 3 GPG, Maximum 5 GPG
- pH: 6.5~7.5
- Free Chlorine: Maximum 0.5 PPM
- Total Chlorine: Maximum 0.5 PPM
- Minimum amount of water pressure: 40–80 PSI
- Make sure steam wands are closed before powering on the machine.

## Instructions

1. Carefully unpack the machine and check for damage and missing parts.  
Included in the box: 3 portafilters, cup rack, and reverse flushing silica plate.
2. Place espresso machine on a flat, sturdy, heat-resistant surface near a power and water supply.
3. Remove the plastic from underneath the grate before initial use.
4. Hardwire the unit.
5. This unit comes with a 1/2" water connection. Attach the unit to the water line. Hold the water inlet fitting with a wrench and tighten the water valve.
6. Turn on the water supply, making sure to check for any leaks.

# SETUP

## Starting the Automatic Machine

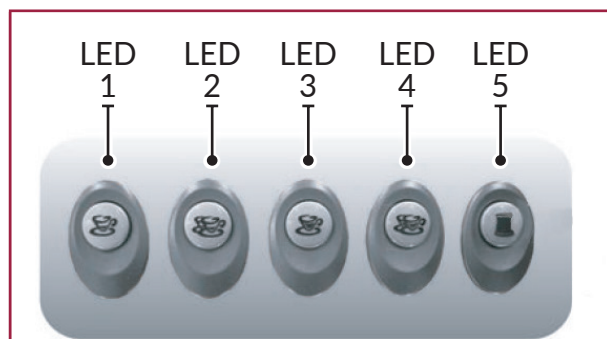
1. Check and confirm that water source is in normal working order.
2. Turn the power switch to ON to initiate automatic system check. If boiler water level is not in the green zone, wait until the automatic water replenishment process is complete before proceeding to the next step.
3. Heating will stop when boiler pressure reaches approximately 1.2 bars (factory default setting). Do not operate machine until steam pressure gauge reading is in the green zone.

## Output Volume and Frequency Setup

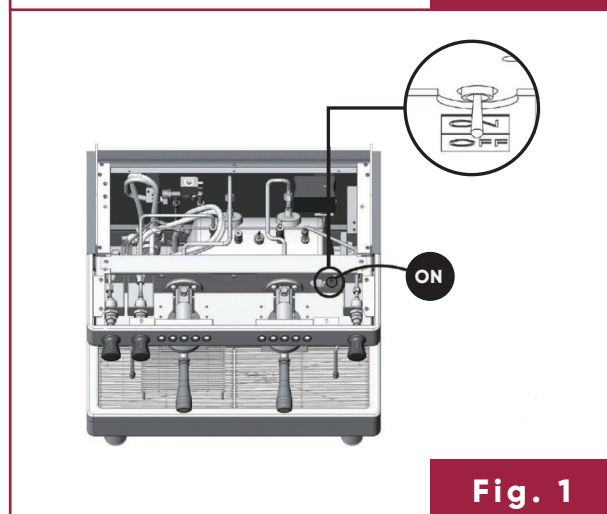
- **No default coffee output setting is provided. Settings must be made manually during setup.**

- Ensure that both the water level and steam pressure are in the green zone before proceeding.
- There are two identical button suites on 2 group models and three identical button suites on 3 group models.
- For two and three group machines, start by programming the buttons on the furthest group to the right and then move left. The programmed outputs will serve as default for the left group(s) until programmed differently.

1. To program your machine, turn the output volume setup switch ON (Fig. 1).
2. The output LEDs (Fig. 2) should be lit with the 5th button flashing, indicating the machine is in setup mode.
3. To configure output button 1, starting on the furthest right button suite, press and hold output button 1 until the desired output is reached. While the button is being held in, that LED will be lit and all other buttons will be shut off. Users can measure fluid ounces or time dispensed for their settings.
4. Once the desired output has been reached, release output button 1. At this point, LED 1 will be off and all other buttons will be lit.
5. Repeat steps to set up output buttons 2, 3, and 4, respectively.
6. The left set(s) of output buttons will mirror the value settings in the set of output buttons to its immediate right. Repeat steps 2 through 5 if different output volumes are desired for different groups.
7. The fifth button of each group head will remain continuous flow. This means once you press this button, it will not turn off until pressed again.
  - a. This button does not need to be programmed.
  - b. Good for brewing larger amounts of espresso.
8. After completing setup, turn the output volume setup switch OFF to save all data and return the machine to normal operational mode.



**Fig. 2**



**Fig. 1**

## OPERATION

- The steam wand, hot water wand, and brewing group can reach very hot temperatures. Use caution while operating.

### Brewing

1. Grind coffee beans to a fine consistency.
2. Fill the portafilter with coffee grounds. Make sure not to overfill the portafilter, or it will not reattach onto the machine properly.
3. Tamp the coffee grounds into the portafilter using a tamper (Recommended: 236TAMPSS).
4. Secure the portafilter to the espresso machine with a quarter turn.
5. Use any of the presets to brew or use the continuous flow button.

#### Frothing Milk (Steam Wand Operation)

- Fill frothing pitcher with milk, hold at an angle, and insert the steam wand. Twist the steam knob counterclockwise to release steam until the milk is properly frothed.
6. If using continuous flow, the brewing will continue until it is pressed again, stopping the brewing process.

### Stopping the Machine

1. After cleaning the machine, remove all liquids and solid matter from the water tray.
2. Turn off the power.
3. Open steam knob to release steam flow. Do not place any liquid under the steam tube during this process to avoid system contamination.

## CLEANING & MAINTENANCE

### Machine Body

1. Wipe machine exterior with a soft, slightly dampened cloth daily before starting operations.
2. If necessary, a mild, non-corrosive cleaning agent may be applied to the cloth. DO NOT spray cleaning agents directly on the machine body to avoid corrosion and possible damage to circuits.

### Brewing System

**WARNING:** Brewing group is hot, allow to cool before cleaning or servicing.

1. After each brewing cycle, remove the portafilter and press the manual water output button to remove all residual coffee grounds from the filter element.
2. Knock any remaining grounds out of the portafilter.
3. Hold the portafilter underneath the brewing group and press the manual output button to rinse out the rest of the grounds from the portafilter.
4. Place a reverse flushing silica plate in the portafilter, and apply about 2-3 grams of detergent. Attach the portafilter onto the machine and check for tightness.
5. Next, start the auto reverse flushing process.

6. Press the first and fifth buttons simultaneously to start automatic reverse flushing. Output buttons 2-4 in the control panel will light and start automatic reverse flushing from the right output system to the left.
7. The default is 10 cleaning cycles.
8. If you want to stop before the completion of all 10 cleaning cycles, press button 3.
9. Flush one group after the other. You can press the third output button to skip the next output system. The system will stop automatically after all reverse flushing is finished.
10. After the auto reverse flushing is complete, remove the portafilter and silica plate. Press the manual water output button to allow residual cleaning solution in the brewing system to flow out. Turn water off after flushing for about one minute or until the water is clear and clean.
  - a. During reverse flushing, remove and wash the copper plate and filter element with clean tap water. Wipe with soft cloth.
  - b. If process is unable to sufficiently clean the plate and filter element, immerse the components overnight in a mild cleaning solution of 3 tsp. detergent in 1 pint hot water.
11. Rinse and reassemble components before restarting the espresso machine.

#### **Portafilter and Filter Basket**

1. Rinse the portafilter with hot water after each brewing cycle to dissolve residual oils in the filter basket and outlet nozzle and prevent oils from affecting the quality of coffee.
2. Disassemble the portafilter and place all parts in cleaning solution (3 tsp. of detergent in 1 pint hot water) for 24 hours to dissolve residual coffee oils. DO NOT immerse plastic portion in cleaning solution to avoid deterioration.
3. Rinse all components with clean water. Wipe with a soft, clean cloth only.

#### **Steam Tube**

1. After making steamed milk, use a slightly moistened soft cloth to wipe steam tube.
2. After wiping, release a steam burst through the tube to remove any residual milk remaining in the nozzle.
3. If hardened milk residuals remain in the steam tube, disassemble and immerse tube in hot water for about 20 minutes to soften. Reassemble and repeat step (1).



# SHUTTING DOWN THE MACHINE

## Boiler

To extend the serviceable life of your unit's boiler, or when you expect the machine to sit idle for a long period of time:

1. Turn power to the machine OFF.
2. Open the steam output to discharge pressure in the boiler. Continue until the pressure gauge reading falls to zero and steam discharge ends.
3. If water does not discharge properly, place a tsp. of detergent into the discharge trough and flush with hot water to dissolve residual oils in the tube.
4. Once complete, empty and clean the water tray and discharge trough, following the instructions below:

Leave the steam output setting open following steam discharge. Steam output should remain open until after the machine is turned back on and hot water begins dripping from the steam tube.

Contact a service professional to delime the unit every 6 months.

## Water Tray and Discharge Trough

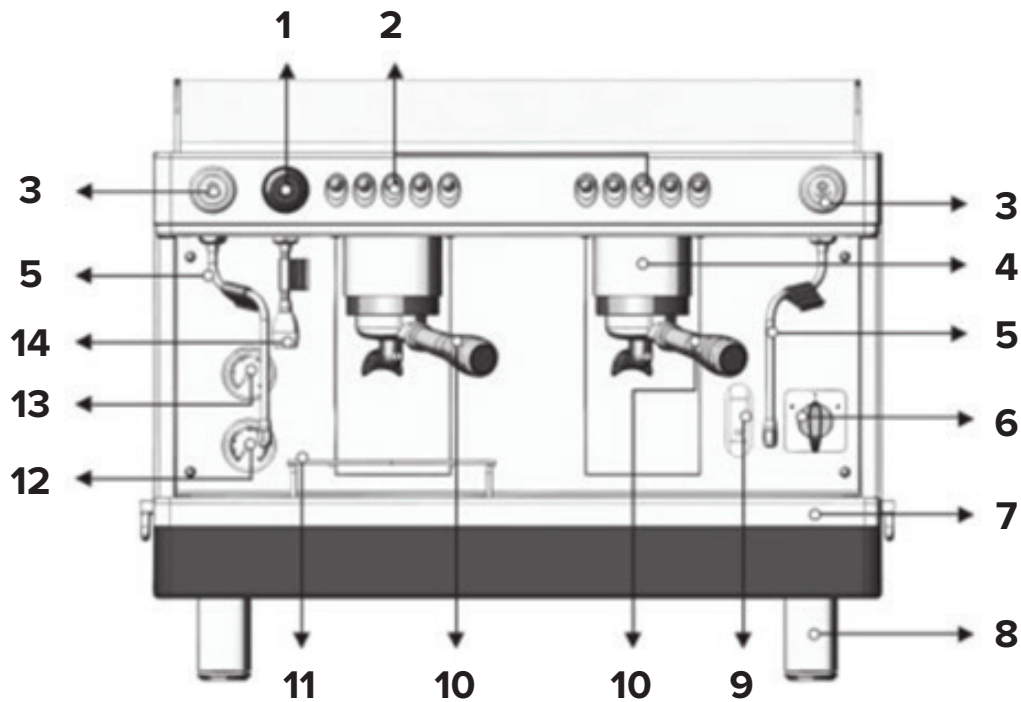
1. Remove the water tray. Wash thoroughly with cleaning solution and rinse with water.
2. After removing the water tray, wipe and remove sediments in the discharge trough with a wet cloth or napkin and wash with hot water to clear the discharge tube.
3. After the discharge trough is cleaned and the tray is dry, reassemble the water tray.

## Filter

The manufacturer recommends replacing the filter element on the resin exchange filter after processing 53 gallons of water (about 3,000–4,000 cups of coffee). This schedule can be expected to vary based on the quality of water used in your machine.



## PARTS DIAGRAM

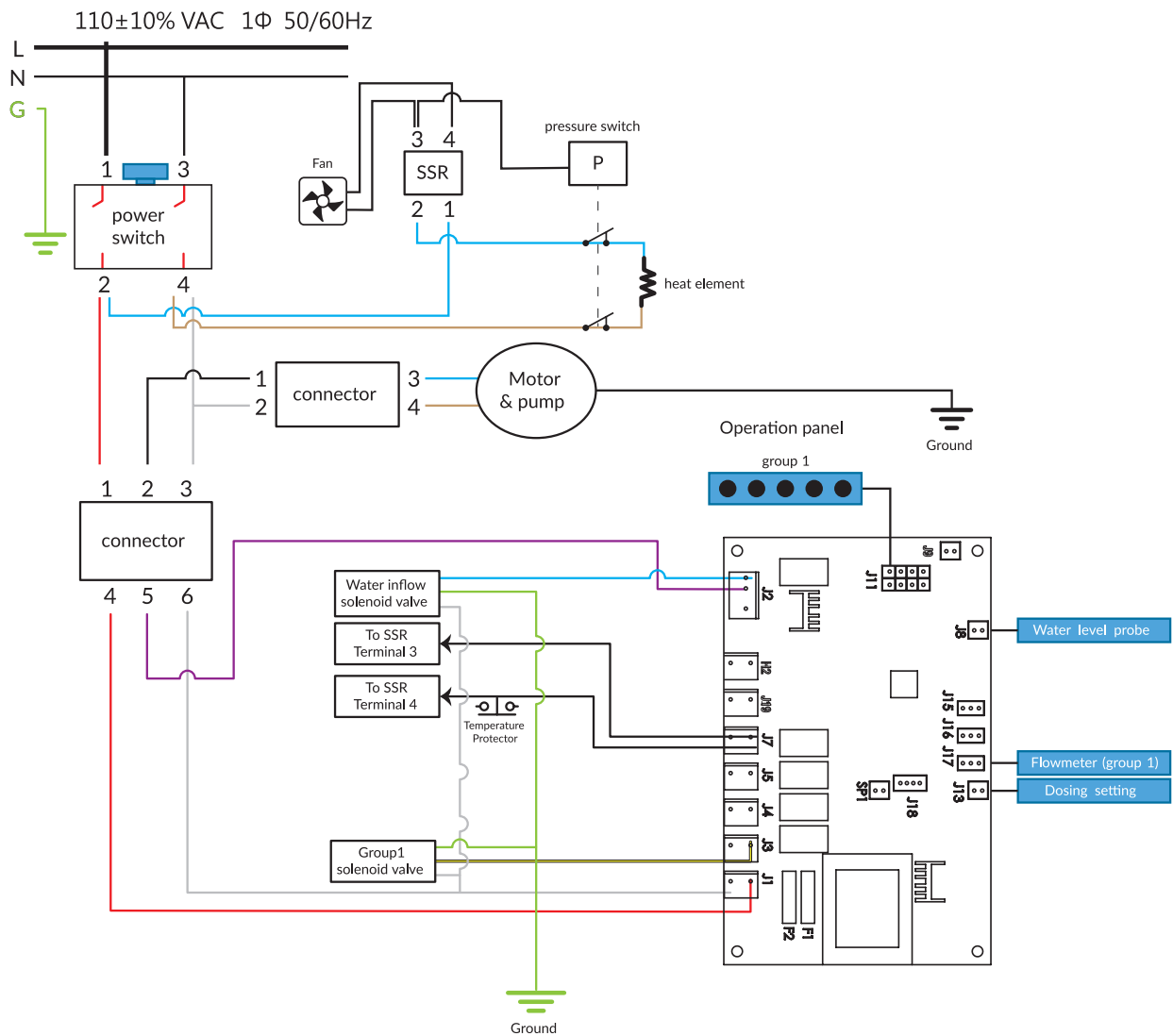


	Description
<b>1</b>	Hot Water Knob
<b>2</b>	Espresso Brewing Unit Control Panel
<b>3</b>	Steam Knob
<b>4</b>	Brewing Group
<b>5</b>	Steam Tube
<b>6</b>	Main Power Switch
<b>7</b>	Drain Tray

	Description
<b>8</b>	Foot
<b>9</b>	Sight Glass (Boiler Water Level Check Window)
<b>10</b>	Espresso Filter Holder
<b>11</b>	Cup Rack
<b>12</b>	Water Pressure Gauge
<b>13</b>	Steam Pressure Gauge
<b>14</b>	Hot Water Wand

# WIRING DIAGRAM

#236ECEM1





# WIRING DIAGRAM

#236ECEM3

