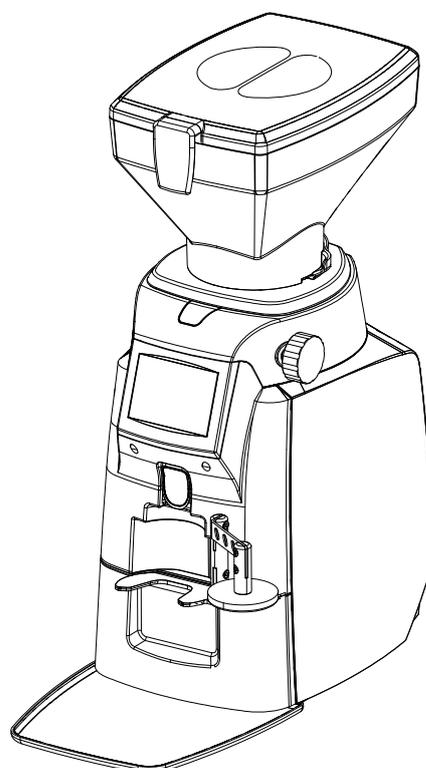
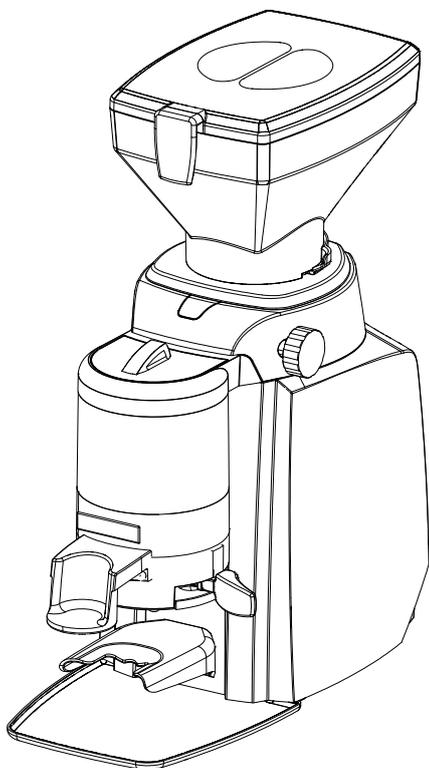




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IT

EN

FR

DE

ES

PT

Manuale del tecnico

Engineer's manual

Manuel du technicien

Techniker handbuch

Manual del técnico

Manual do técnico

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1. IMPORTANT SAFETY MEASURES

Read the entire contents of this manual carefully before using the appliance.

Make sure this manual is available to all technical personnel authorised to use the appliance.

NB: The manufacturer disclaims all responsibility for harm to people or damage to property resulting from failure to respect the safety rules.

INSTALLATION OF THE APPLIANCE

- Check that the rating plate data corresponds to the data of the electrical supply network.
 - The appliance must be connected to a working earth system in compliance with applicable regulations concerning electrical safety.
 - Do not use adapters, multiple plugs and/or adapters.
 - The manufacturer cannot be held liable for any accidents caused by the non-compliance of the equipment's power supply systems.
- Transport and installation operations must only be carried out by qualified and authorised technical personnel.
 - Upon receipt of the appliance, check that the material received is correct and as specified in the shipping documentation.
 - Check that the original packaging is not damaged.
 - After removing the packaging, make sure the appliance and its safety devices (if any) are in perfect condition.
 - Packaging elements must not be left within the reach of children as they are potential sources of danger.
 - The appliance must be installed in a dry, well-ventilated indoor environment, away from sources of heat, vibration and moisture.
 - The appliance must be installed in a place where it can only be used by suitably trained persons who have received adequate instruction on the risks associated with using the appliance itself.
 - Do not install the appliance in a room where cleaning with water jets is expected.(e.g: professional kitchen).
 - Do not install the appliance in a potentially explosive environment or where flammable substances are present.
 - Do not obstruct ventilation / heat dissipation apertures.
 - Do not install the appliance in an environment where the temperature can fall below 10 °C and exceed 32 °C.
 - The appliance must be placed on a flat, stable surface, at a minimum distance of 20 mm from the walls and the supporting surface.

2. INTRODUCTION

2.1 AIM OF THIS MANUAL

The appliance described in this manual is designed and built for grinding coffee beans and dosing ground coffee for use in espresso coffee machines. Any other use is deemed improper.

The manufacturer of the appliance is:

Cimbali Group S.p.A.
Via A. Manzoni, 17
20082 Binasco (MI), Italy

This manual provides information reserved for personnel authorised to use the appliance (standard use and maintenance).

2.2 HOW TO READ THIS MANUAL

The manual is divided into chapters and paragraphs. Each paragraph is a sub-level of the relative chapter. References to titles or paragraphs are indicated with the abbreviation ch. or par., followed by the relative number. For example: "ch.2" or "par.2.1".

The figures in this manual are progressively numbered in relation to the specific chapter - e.g. figure 1.3 is the third figure of the first chapter. The references to the figures are indicated with the abbreviation Fig., followed by the relative number. For example: "Fig.1.3". The components indicated in the figures are referred to with letters or numbers, depending on the case in question. For example, a reference to component C in figure 2 of chapter 3 will appear as: "see C - Fig.3.2", or simply "(C - Fig.3.2)".

ATTENTION: the pictures in this manual are intended as a general indication. The real components may vary from those shown. If in doubt, contact the technical support service.

Apart from instructions for use and maintenance, this manual also contains safety information that calls for special attention. This information is highlighted as follows.

ATTENTION: failure to respect the indication leads to a situation of potential risk which, if not avoided, may cause slight damage to the appliance.

NB: provides additional information (on top of the previous safety instructions and messages).

3. IDENTIFICATION PLATE

The identification plate (see Fig. 3.1) is attached directly to the appliance.

ATTENTION: Do not remove the identification plate. If the plate gets damaged and/or is no longer legible, contact the technical support service.

The identification plate shows the following data.

- A. Manufacturer's details
- B. Model of the appliance
- C. Type of appliance
- D. Serial number
- E. Year and month of manufacture

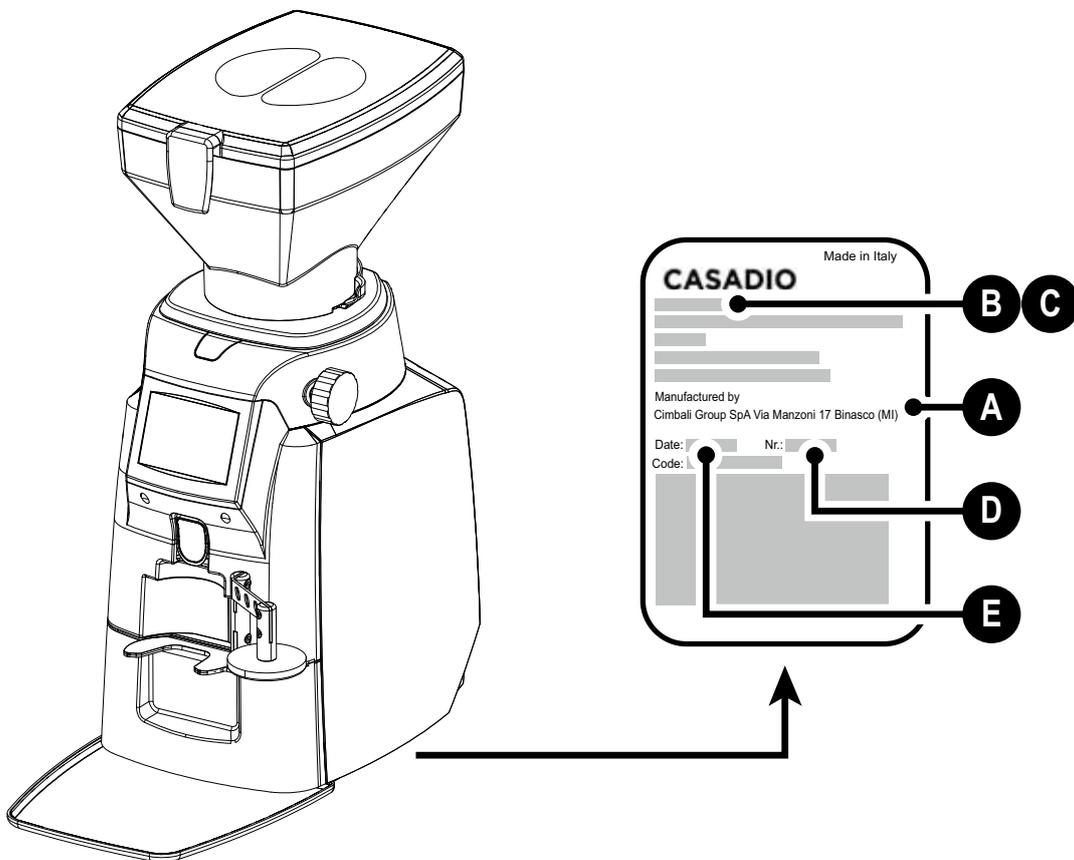


Fig. 3.1 - Label on the appliance

3.1 DESCRIPTION OF SYMBOLS ON DISPLAY

For a description of the display, see Fig. 3.2.

1. Single dose
2. Continuous dose
3. Double dose
4. Recipes (see section 5.3)
5. Grain size indicator (see section 4.1)
6. User menu (see section 5.1)



Fig. 3.2 - Home screen

4. ADJUSTING THE GRINDERS

For the adjustment of the grinders, see Fig. 4.3.

They are adjusted by turning the relative knob (4 - Fig. 4.3).

- A. Coarser grinding
- B. Finer grinding

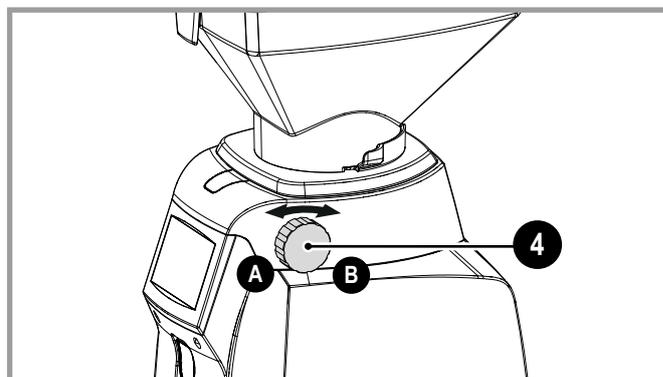


Fig. 4.3 - Adjusting the grinders

If the Stabiliser function is active, every time the grinders are adjusted, the grinding times of the coffee are automatically corrected in relation to the grind size selected.

The Stabiliser, or dose correction factor, allows the time associated with the various doses to be adjusted according to the grinder setting.

With Stabiliser not enabled:

- enabling and configuration are the responsibility of the technical personnel
- In this case, changing the burr setting has no effect on grinding times for coffee doses.

4.1 GRAIN SIZE INDICATOR

The grain size indicator allows the adjustment being set to be displayed (see Fig. 4.4).

To access the grain size indicator, press the appropriate bar on the display (5 - Fig. 3.2).



Fig. 4.4 - Grain size indicator

5. PROGRAMMING

5.1 ACCESSING THE PROGRAMMING MENU: USER MENU

The following authorisation levels are provided in the user menu.

- **USER** access: regular operator.
- **MANAGER** access: for franchise businesses, restricting access to certain functions for new operators.
- **TECHNICIAN** access: for maintenance technicians only.

NB: The options described below are only available if the user menu is enabled (without password prompt).

- Press icon (1 - Fig. 5.1) to enter the user menu.



Fig. 5.1 - Home screen

- Enter the password, if required.

NB: The password is required if the manager password protection or user password protection is activated. Otherwise, access to the user menu takes place without entering the password.



Fig. 5.2 - Incorrect password

Once the last digit has been entered, if the password is incorrect, the Password error screen appears for 2 seconds (see Fig. 5.2), after which the numeric keypad is displayed again.



Fig. 5.3 - User menu

From the user menu (see Fig. 5.3), the following menus can be accessed.

- A. Counters
- B. Recipes
- C. Display theme
- D. Standby time
- E. Manager password change menu
- F. Stabiliser

5.1.1 COUNTERS

For the counters menu, see Fig. 5.4.



Fig. 5.4 - Counters

The first counter represents the hourly average of the doses dispensed since the last switch-on, the second counter represents the total switch-on time and the total doses dispensed. This counter is resettable by the user.

5.1.2 RECIPES

Press the recipe button to enter the menu and change the grinding times (see Fig. 5.5).

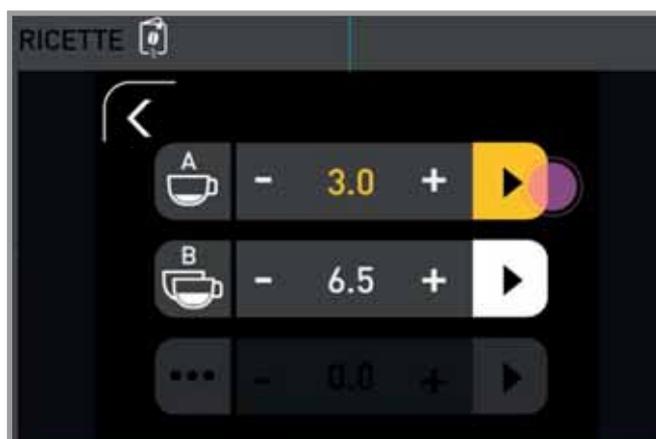


Fig. 5.5 - Recipes

Press + and - to change the grinding time for the dose; press the return button to accept the change and return to the previous menu.

Pressing the **||** button, which appears instead of the **▶** button, once the test has started, stops the test.

5.1.3 DISPLAY THEME

It is possible to choose the colour theme for each icon (see Fig. 5.6).

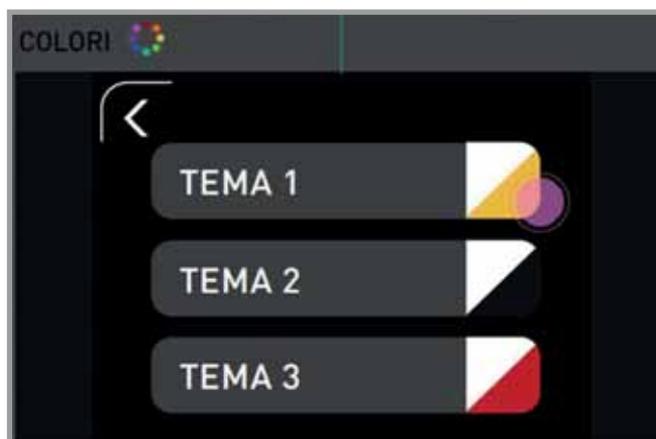


Fig. 5.6 - Colours

5.1.4 STAND-BY TIME

After a certain dispensing time, the stand-by mode reduces the brightness of the display (see Fig. 5.7).

- Activation or deactivation of the function.
- Setting the stand-by time (seconds).

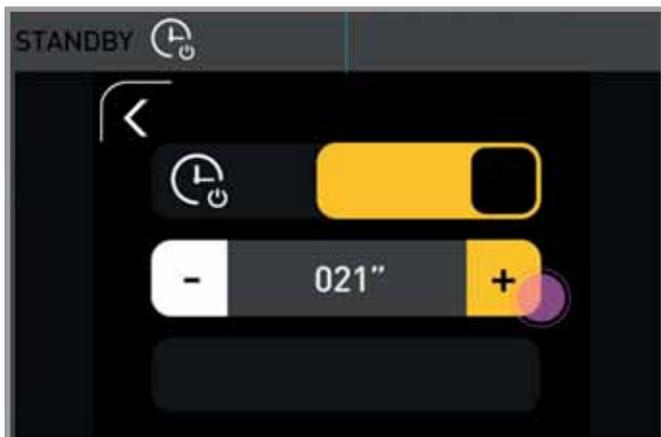


Fig. 5.7 - Stand-by

5.1.5 MANAGER PASSWORD CHANGE MENU

By pressing on the Manager password change menu, a 4-digit numeric keypad appears through which the numeric password can be entered.

Correct entry of the password gives access to all functions of the sub-menus for which one has authenticated oneself.

The manager password must always begin with the digit 1, so only the last three digits will be programmable.

Once the last digit of the password has been entered, the confirmation screen to change the password appears (see Fig. 5.8), then returns to the previous menu.

NB: By default, the manager password is not active. The latter, again by default, is as follows: 1111.



Fig. 5.8 - Confirm password change

NB: Enabling the manager password function links access to the user menu to the entry of the manager password.

Therefore, if the manager password is active, all functions within the user menu will be password-protected.

5.1.6 STABILISER MENU

With the Stabiliser active, each time the grinder is adjusted, the grinding time associated with the various doses is automatically adjusted, depending on the handling performed, and thus the grain size chosen.

The user can activate or deactivate the Stabiliser by means of the slider bar and correct its value (set by the technician) according to three levels of variation, selectable within the relevant screen (see Fig. 5.9), located within the user menu.

The levels of variation are as follows.

- Low: dose correction factor below the value set by the technician.
- Medium: correction factor equal to the value set by the technician.
- High: correction factor higher than the value set by the technician.



Fig. 5.9 - Stabiliser Menu

The percentage parameter for increasing or decreasing the dose correction factor is set by the technician within the respective parameter configuration menu.

NB: With the Stabiliser deactivated, the grinding time of the doses does not change automatically as the grinder setting changes.



Fig. 5.10 - Configuration

1. **% Correction factor:** percentage values between 0% and 10%, with a default value of 2.5%.
2. **Stabiliser:** values from 1 to 100, with resolution 1 and default value of 50.

FACTORY TECHNICAL PARAMETERS

% Correction factor	2.5
Stabiliser	50

CORRESPONDING CORRECTION FACTORS

MEDIUM	2.5
HIGH	3.75
LOW	1.25

SUGGESTIONS FOR USE WITH FACTORY PARAMETERS

Coffee recipes type	Stabiliser setting per user
Espresso	HIGH
espresso / crema	MEDIUM
cream	LOW

ATTENTION: The factory technical parameters were elaborated to meet the requirements of different recipes and coffee blends, acting exclusively on the parameters HIGH, MEDIUM, LOW.

ATTENTION: In the event that further refinement is required for specific mixtures or recipes, please contact the technical support service.

5.2 ACCESSING THE PROGRAMMING MENU: TECHNICIAN MENU

- Press the icon (A - Fig. 5.10) to enter the technician menu.



Fig. 5.11 - User menu

- Enter the password.



Fig. 5.12 - Incorrect password

NB: Pre-set password: 1111 = MANAGER , 2222 = TECHNICIAN.

- Once the last digit has been entered, if the password is incorrect, the Password error screen appears for 2 seconds (see Fig. 5.11), after which the numeric keypad is displayed again.



Fig. 5.13 - Technician Menu

From the technical menu (see Fig. 5.12), the following menus can be accessed.

1. Technical counters
2. Changing the password
3. Configuration
4. Counter alerts
5. Restoring factory data
6. Maintenance
7. User password activation
8. Information
9. Component test

5.2.1 COUNTERS



Fig. 5.14 - Counters (1/2)

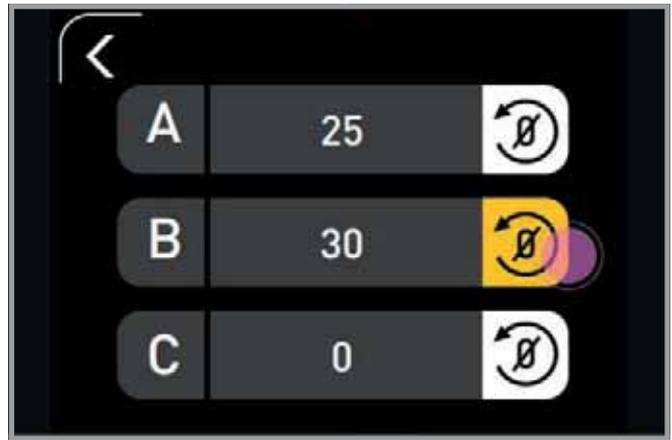


Fig. 5.15 - Counters (2/2)

The Counters menu of the technician menu (see Fig. 5.13) contains:

- the total number of doses dispensed, non-resettable. The counter cannot be reset by the technician, and does not reset when the grinder is switched off;
- the total number of doses dispensed, resettable. The counter is resettable by the technician, whereas it does not reset when the grinder is switched off;
- the working time of the grinder since the first start-up, expressed in days, hours and minutes (DD-HH-MM). The counter is resettable by the technician, and does not reset when the grinder is switched off;
- the counters for each button: A-B-C. These counters are resettable by the technician, whereas they do not reset when the grinder is switched off.

5.2.1.1 COUNTS ASSOCIATED WITH SINGLE DOSE

Pressing the Single Dose button (1 - Fig. 3.2) increments the following counters:

- position counter of the relevant button: +1;
- maintenance counter: +1;
- total dispensing counter: +1.

5.2.1.2 COUNTS ASSOCIATED WITH DOUBLE DOSE

Pressing the Double Dose button (3 - Fig. 3.2) increases the following counters:

- position counter of the relevant button: +1;
- maintenance counter: +2;
- total dispensing counter: +2.

5.2.1.3 COUNTS ASSOCIATED WITH CONTINUOUS DOSE

Pressing the continuous Dose button (2 - Fig. 3.2) increments the following counters:

- position counter of the relevant button: +1;
- maintenance counter: + continuous dose grinding time/ single dose grinding time;
- total dispensing counter: + continuous dose grinding time/single dose grinding time.

The decimal part resulting from the division is added to the next grind and is not stored if the grinder is switched off.

If several single doses are present at the same time, use the one associated with the shorter grinding time.

If there are no single doses, use the double dose at a shorter time.

NB: The counts also increase in the case of test grindings (carried out in the Recipe change screen) and interrupted grindings.

5.2.1.4 RESETTING COUNTERS

- Resetting the counters in the user menu does not reset the counters in the technical menu;
- Resetting the counters in the technician menu does reset the counters in the user menu;

NB: The first counter in the technician menu can never be reset.

5.2.2 TECHNICIAN PASSWORD CHANGE MENU

- By pressing the technician password change menu, a 4-digit numeric keypad appears through which the numeric password can be entered.
- Correct entry of the password gives access to all functions of the sub-menus for which one has authenticated oneself.
- The technician password must always begin with the digit 2, so only the last three digits will be programmable.
- Once the last digit of the password has been entered, the confirmation screen to change the password appears (see Fig. 5.15), then returns to the previous menu.

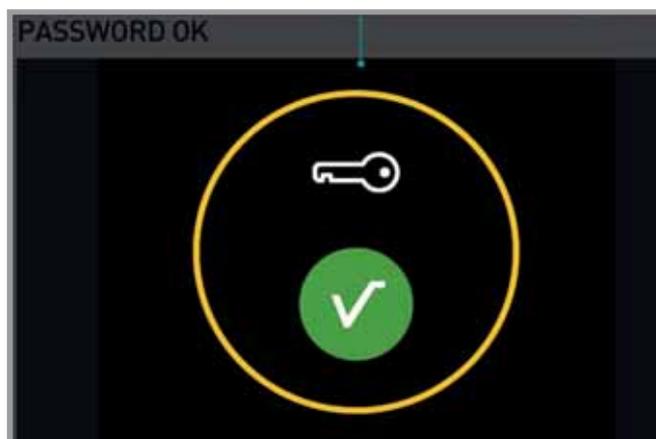


Fig. 5.16 - Changing the password



Fig. 5.17 - Configuration

Within the Configuration menu (Fig. 5.16), the following functions can be configured.

- A. Fan: the fan starts up when grinding is begun, and remains active for the set time (minimum 180 seconds, maximum 300 seconds)
- B. Correction factor: percentage value set by the technician.
- C. Stabiliser: the percentage parameter for increasing/decreasing the dose correction factor.

With the Stabiliser active, each time the grinder is adjusted, the grinding time associated with the various doses is automatically adjusted, depending on the handling performed, and thus the grain size chosen.

The Stabiliser must be able to take percentage values between 0% and 10%, with a default value of 2.5%.

By setting the value to 0%, Stabiliser mode is disabled.

NB: The parameter controllable by the technician ranges from 0% to 10%, with 0.1% resolution. The parameter that the user can set instead can be lower, equal to or higher than 50% of the value set by the technician.

With the Stabiliser active, it is possible to manually adjust the dose time from the special menu under the following conditions.

- Free adjustment: Manual adjustment of the dose time is always allowed to the operator.
- Conditional adjustment: Manual adjustment of the dose time is only possible after entering the manager password.
- Restricted adjustment: Manual adjustment of the dose time is only possible after entering the technician password.

NB: With the Stabiliser deactivated, the grinding time of the doses does not change automatically as the grinder setting changes.

5.2.3 COUNTER ALERTS



Fig. 5.18 - Counter alerts (1/2)

On the home screen is the alert icon corresponding to the last alarm that occurred (Fig. 5.17).

Errors are shown on the home screen with a red icon.

Warnings are shown on the home screen with a yellow icon.

Signals are not shown on the home screen and are indicated with a green background code.

If the alert (error or warning) is resolved, the code appears with a white background.



Fig. 5.19 - Counter alerts (2/2)

To access the Counter alerts menu, press the appropriate button within the technical menu (4 - Fig. 5.12).

In the alerts menu (Fig. 5.18) the numerical value underneath the summation symbol indicates how many alerts (regarding that code) have been generated since the last reset.

the values next to the coffee bean indicate the number of the dispensing operation in progress (in relation to the total number) when the last alert was generated.

The values next to the clock indicate the moment when the last alert was generated, in relation to the total working time of the grinder-doser (i.e. from the switch-on time).

5.2.4 RESTORING FACTORY DATA



Fig. 5.20 - Standard data

By accessing the Factory Data Reset menu (5 - Fig. 5.12) and entering the password 4482, the settings can be restored to factory conditions, i.e:

- reset the default values for all the parameters
- reset the factory values for the passwords: 1111 for the manager password and 2222 for the technician password.

This operation does not reset:

- the number of work cycles already carried out for maintenance purposes
- the threshold set for maintenance
- the non-resettable total dispensing counter in the technical menu;
- the grain size indicator shown on the display;
- the serial number associated with the grinder.

In addition, by accessing the Restore Factory Data menu and entering the password 4590, it is possible to reset the manager and technician passwords to factory defaults.

5.2.5 MAINTENANCE



Fig. 5.21 - Maintenance required

It is possible to set the number of working cycles at which the required maintenance signal, the spanner in the top bar of the home screen (see Fig. 5.20), is to be displayed from the maintenance menu (see Fig. 5.21).

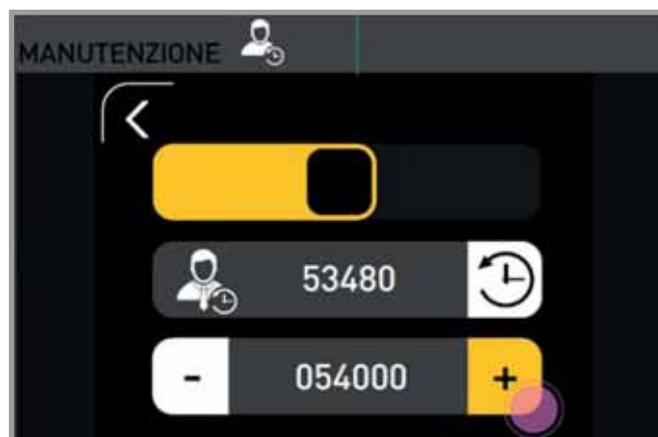


Fig. 5.22 - Maintenance adjustment

By pressing the numeric value for 3 seconds, a 7-digit numeric keypad appears for entering the desired limit.

NB: The value must be settable in the range 1÷1,000,000, with a default value of 100,000.

Once the parameter has been reset, the spanner on the home screen becomes transparent again.

NB: the scroll button blocks/unblocks the possibility of editing the two fields below it.

5.2.6 USER PASSWORD ACTIVATION



Fig. 5.23 - User password activation

From the User Password activation screen (see Fig. 5.22), it is possible to enable conditional access, i.e. linked to the entry of the manager or technician password.

Enabling the manager password function links access to the user menu to the entry of the manager password.

The second icon (see Fig. 5.22) activates the Technician Password for adjusting the dose time: By activating this option, the corresponding function will be bound to the entry of the technician password in the user menu screens.

5.2.7 INFORMATION



Fig. 5.24 - Information

The association of the grinder's serial number with the application is possible by pressing the SN button, within the Information menu (see Fig. 5.23).

The serial number is entered:

- after entering the technician password in case of first association;
- after entering the master password (3382), following the first power-up.

NB: The serial number consists of 7 digits, to be entered via a 7-character numeric keypad.

5.2.8 COMPONENT TESTS - GRINDER RESET

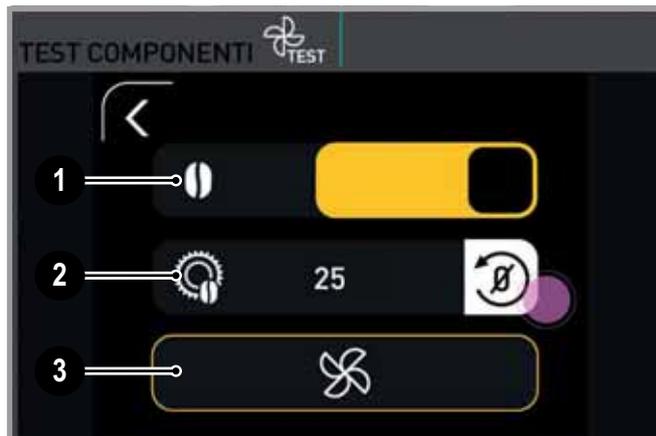


Fig. 5.25 - Component test

In the Component Test menu (see Fig. 5.24), the mechanical operation of the following devices can be tested.

1. Grinder movement: Grinder reset procedure. This icon enables the motor to be activated.
2. Grinder movement: Grinder reset procedure. This icon resets the indicator shown on the display.
3. Fan (when present). By pressing the appropriate button in the Component Test menu (2 - Fig. 5.24), the fan is activated and the edge of the icon is coloured; by pressing the button again, the suction cup is switched off and the edge of the icon becomes transparent again.

5.2.9 GRINDER RESET PROCEDURE

1. Bring the grinders into contact manually after activating the main motor, using the slide button next to the coffee bean icon (see fig. 5.24).
2. Press the grinder reset icon for three seconds to reset the number. When the operation is completed, the value 0 flashes for 2 seconds.
3. Carry out the spacing of the grinders manually.

NB: When accessing the grinding chamber and/or grinder removal, follow the procedure for correct positioning of the potentiometer (see Chapter 8) before performing the electronic reset described.

6. DIAGNOSTICS MESSAGES

FAULT CODE	DESCRIPTION	POSSIBLE CAUSES	WHAT TO DO
202	Lower full scale reached on the grinder potentiometer	Incorrect potentiometer calibration. Faulty potentiometer.	Calibrate the potentiometer, respecting the indications given in the grinder replacement section. Check the potentiometer and replace it if necessary.
203	Upper full scale reached on the grinder potentiometer	Incorrect potentiometer calibration. Faulty potentiometer.	Calibrate the potentiometer, respecting the indications given in the grinder replacement section. Check the potentiometer and replace it if necessary.
88	EEPROM data integrity error	Data integrity error in EEPROM memory.	Switch the appliance off and on again. If the error persists, replace the display board.
96	Maintenance expired		The appliance has displayed the message warning the user that maintenance needs to be carried out.
97	Password reset	A password reset was performed.	
99	Standard data reset.	The factory parameters have been uploaded.	

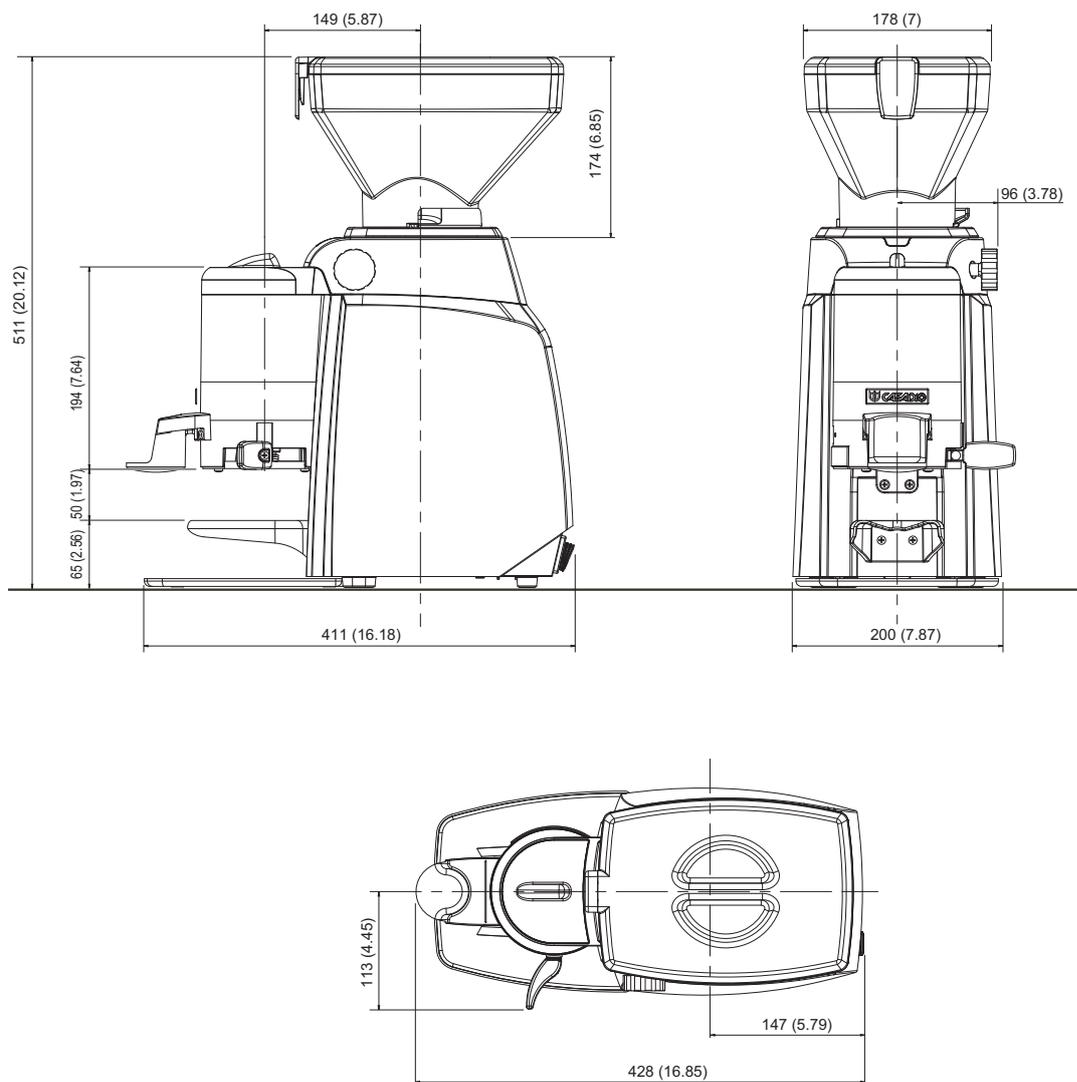
6.1 STANDARD PASSWORD AND RESET

The default passwords are as follows.

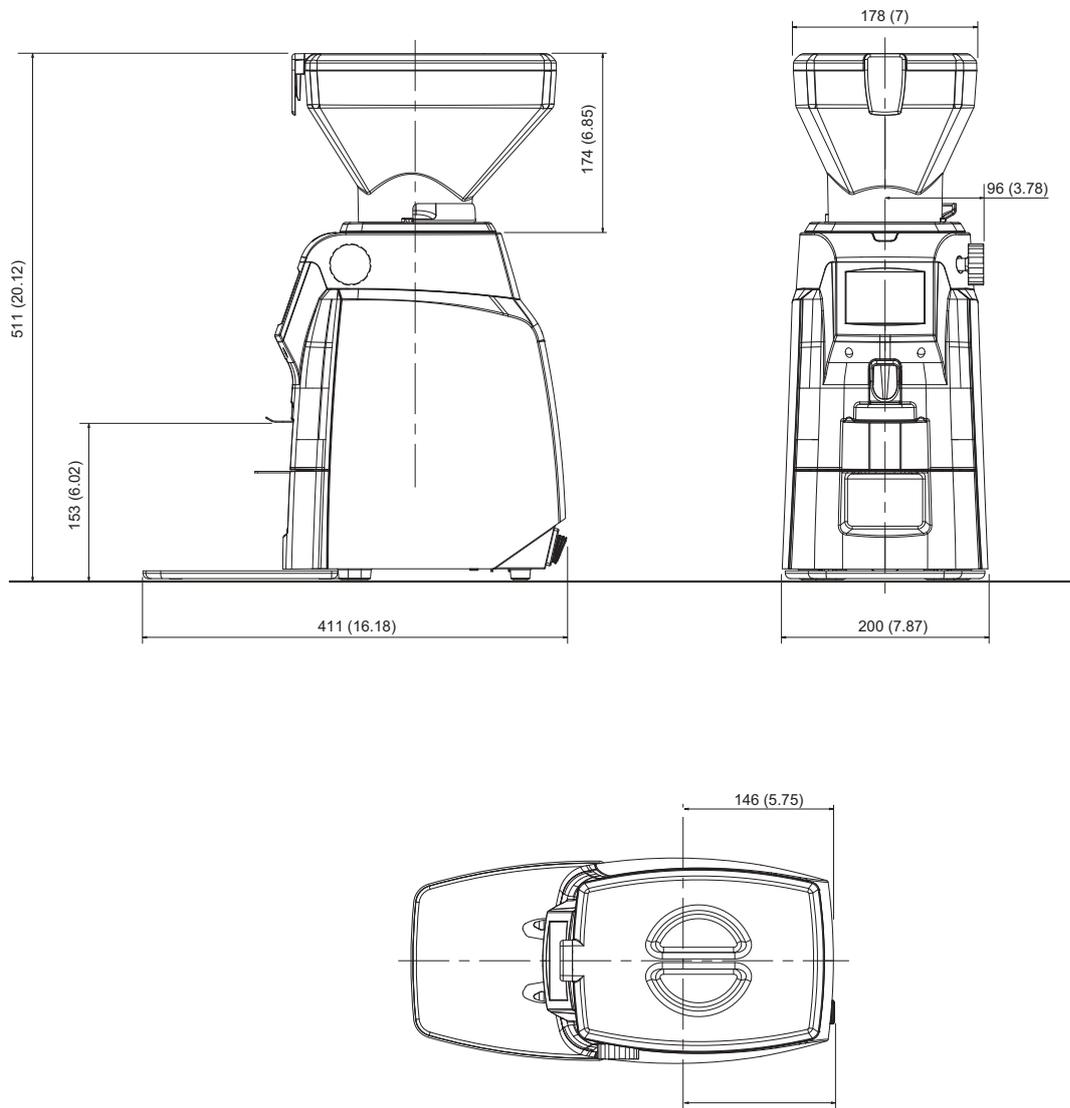
- **4482**: restoring settings to factory conditions, i.e:
 - reset the default values for all the parameters
 - reset the factory values for the passwords:
- **1111** for the manager password;
- **2222** for the technician password.
- **4590**: reset both the manager password and the technician password to factory settings.
- **3382**: master password, to change the serial number.

7. TECHNICAL DATA

NB: The manufacturer reserves the right to make changes or improvements without prior notice.



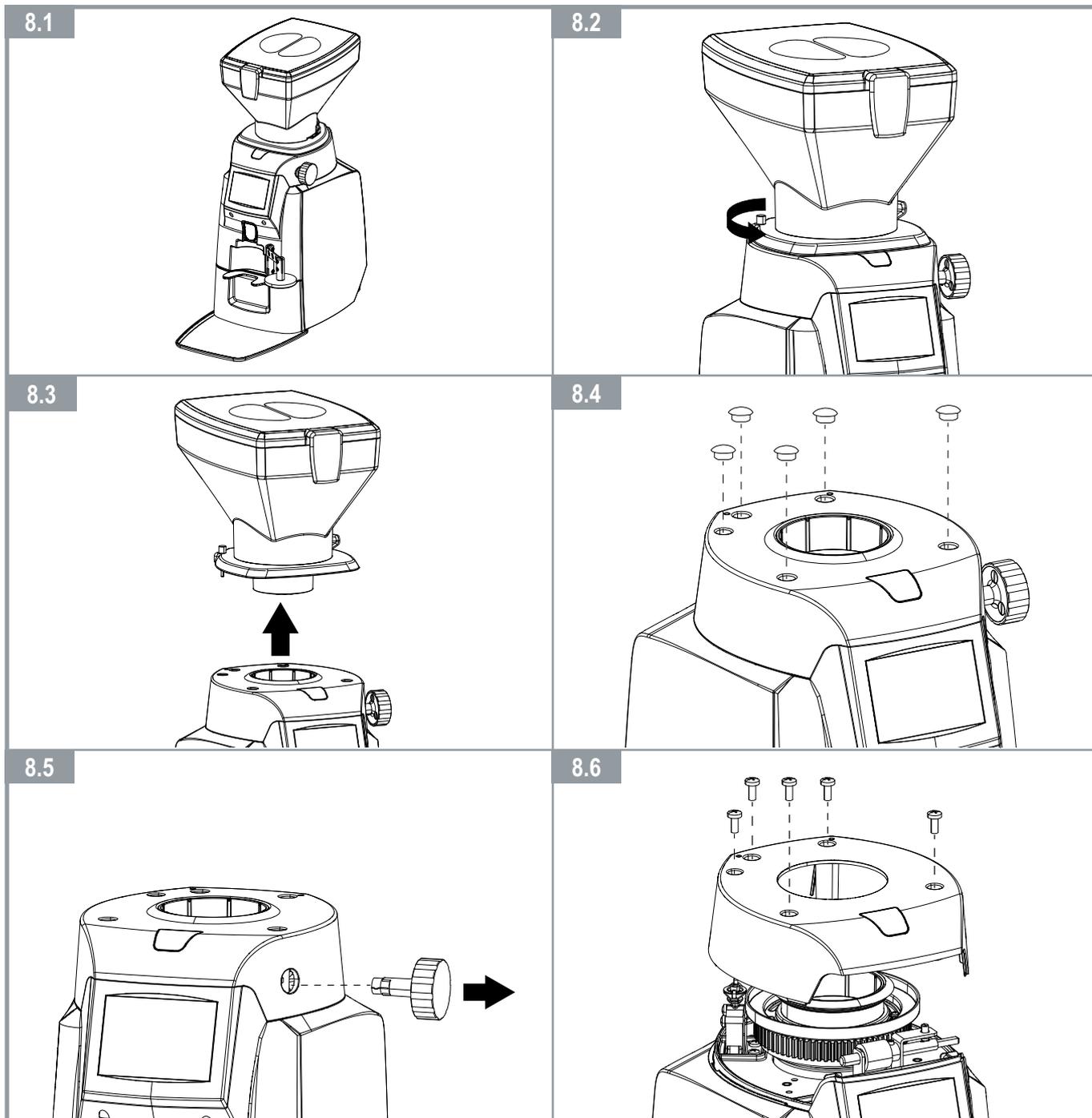
PESO NETTO NET WEIGHT	Kg	10
	pounds	22



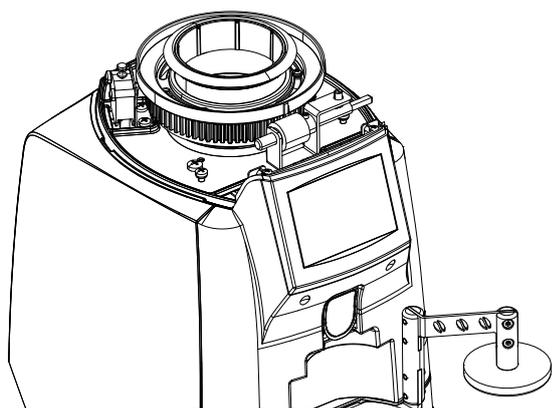
PESO NETTO NET WEIGHT	Kg	9.4
	pounds	20.7

8. DISMANTLING AND ADJUSTMENTS

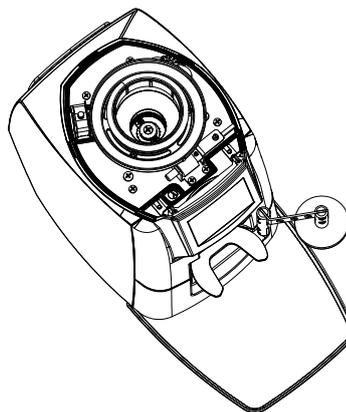
8.1 GRINDER RESET PROCEDURE SEQUENCE



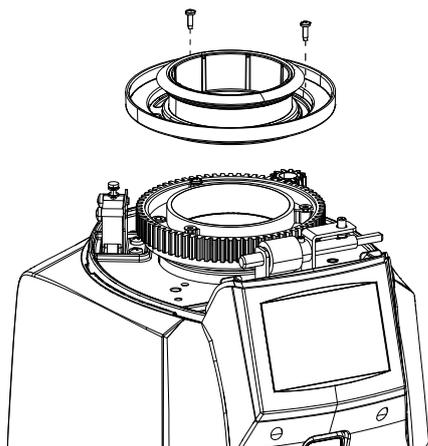
8.7



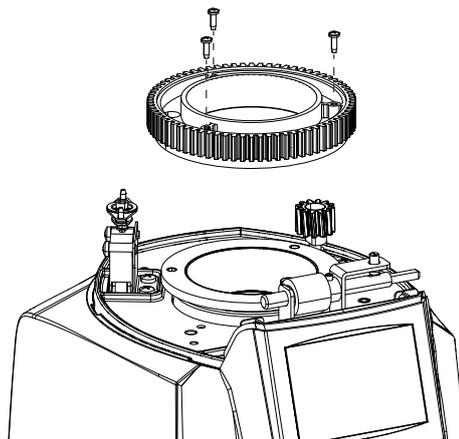
8.8



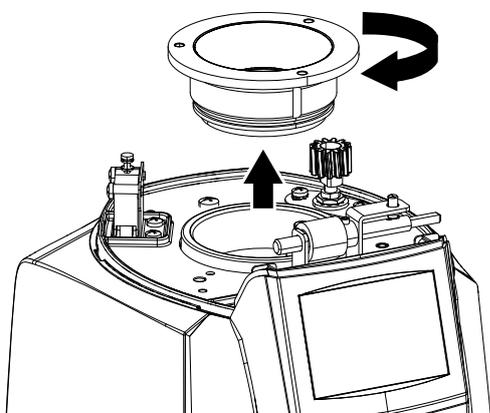
8.9



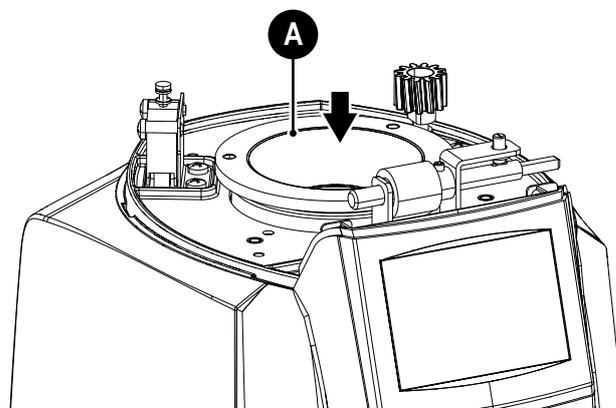
8.10



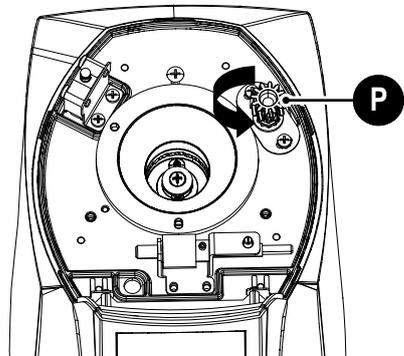
8.11



8.12



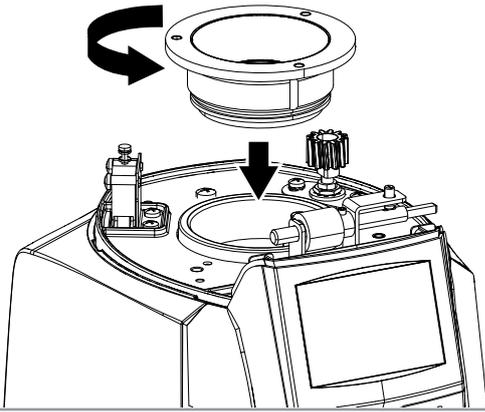
8.13



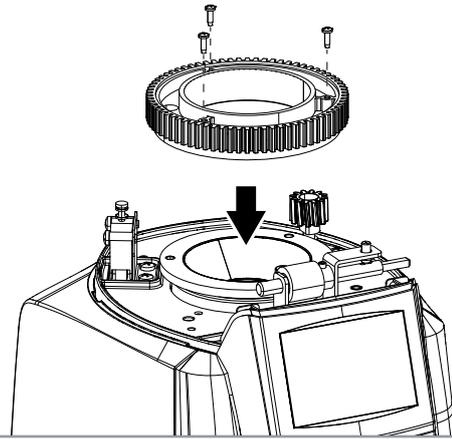
Turn the potentiometer (P) clockwise until it stops, then turn it anti-clockwise for approximately two turns.

Replace the grinders and reposition the support ring (A) in the grinder by screwing it partially anticlockwise. Screw in the ring nut (A) until the grinders touch, then turn it clockwise by approx. 30°.

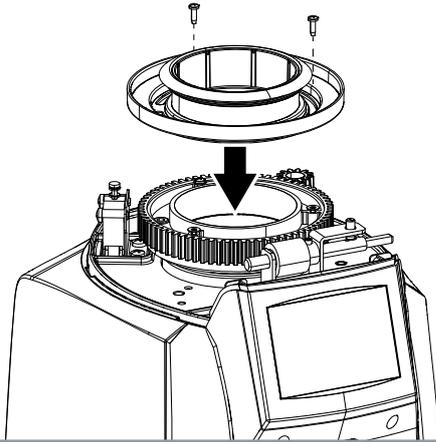
8.14



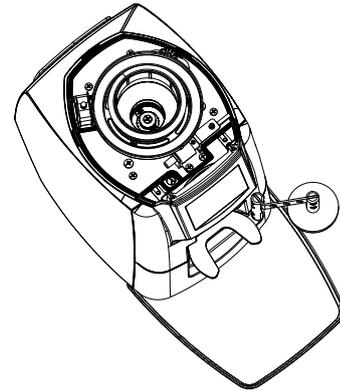
8.15



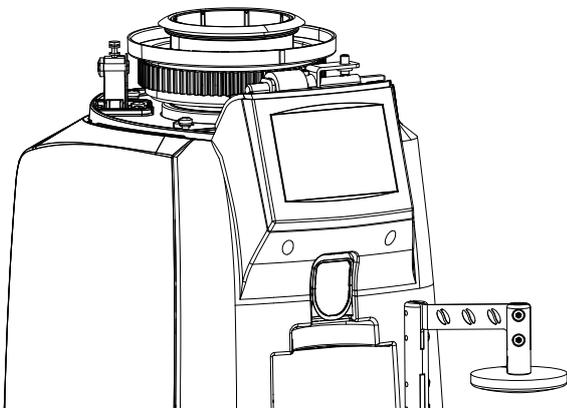
8.16



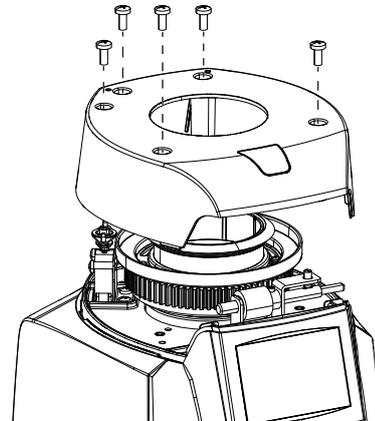
8.17



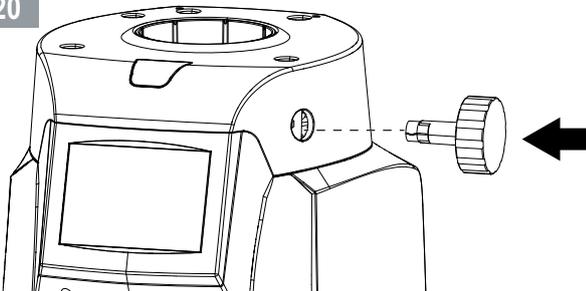
8.18



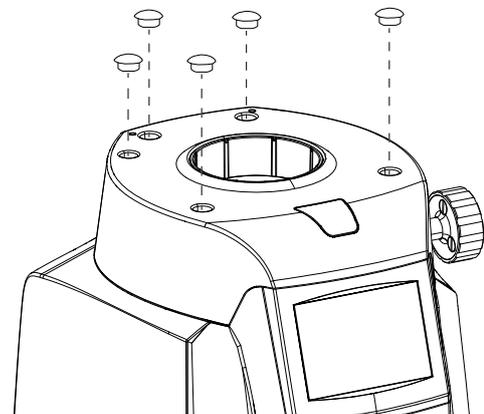
8.19



8.20

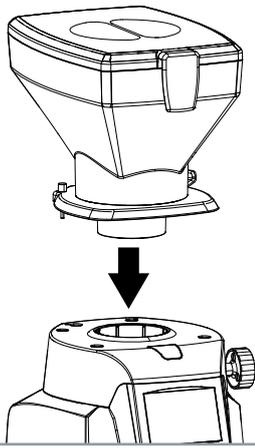


8.21

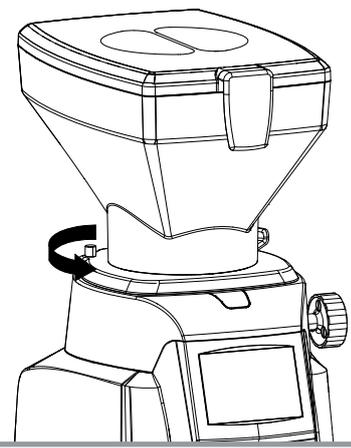


NB: Before making the electronic reset via the display, make sure the adjustment knob is in line with a mechanical plate (you should hear a "click").

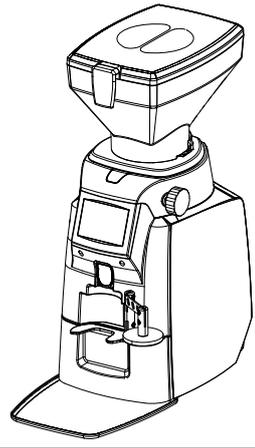
8.22



8.23

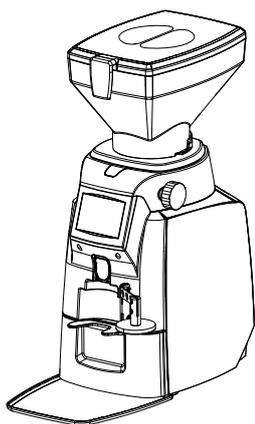


8.24

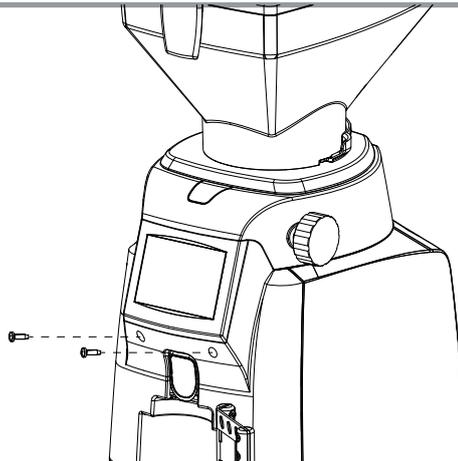


8.2 ACCESS TO THE DISPLAY AND USB PORT

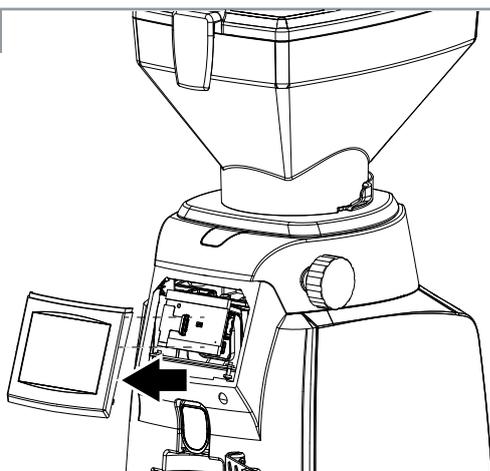
8.25



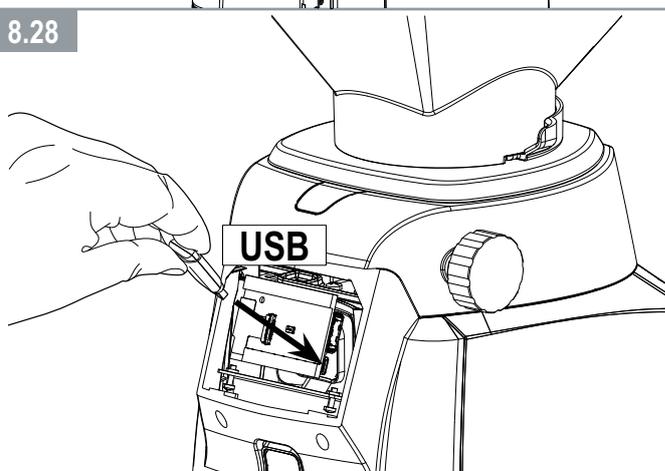
8.26



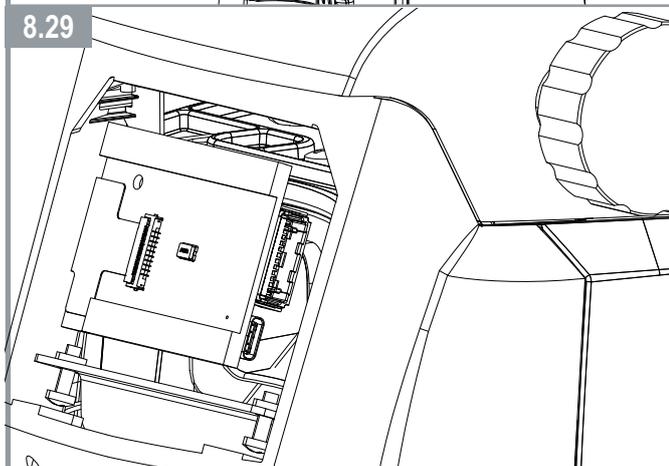
8.27



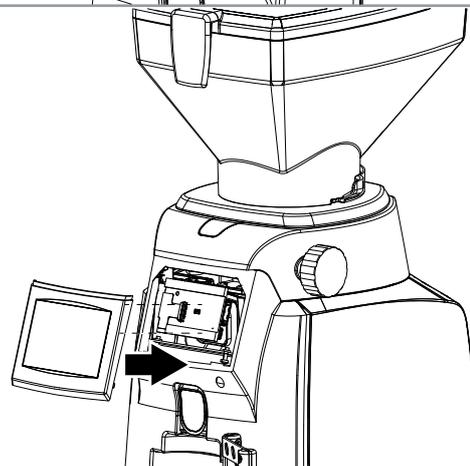
8.28



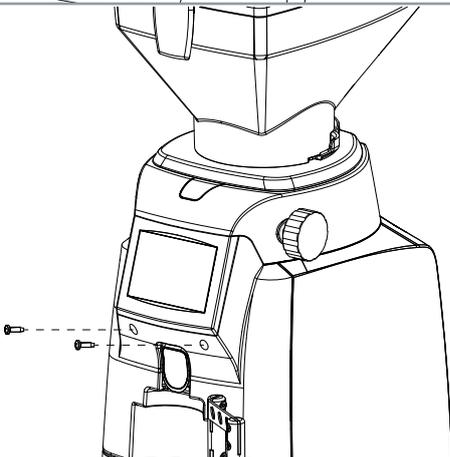
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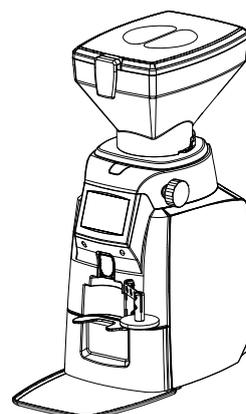
8.30



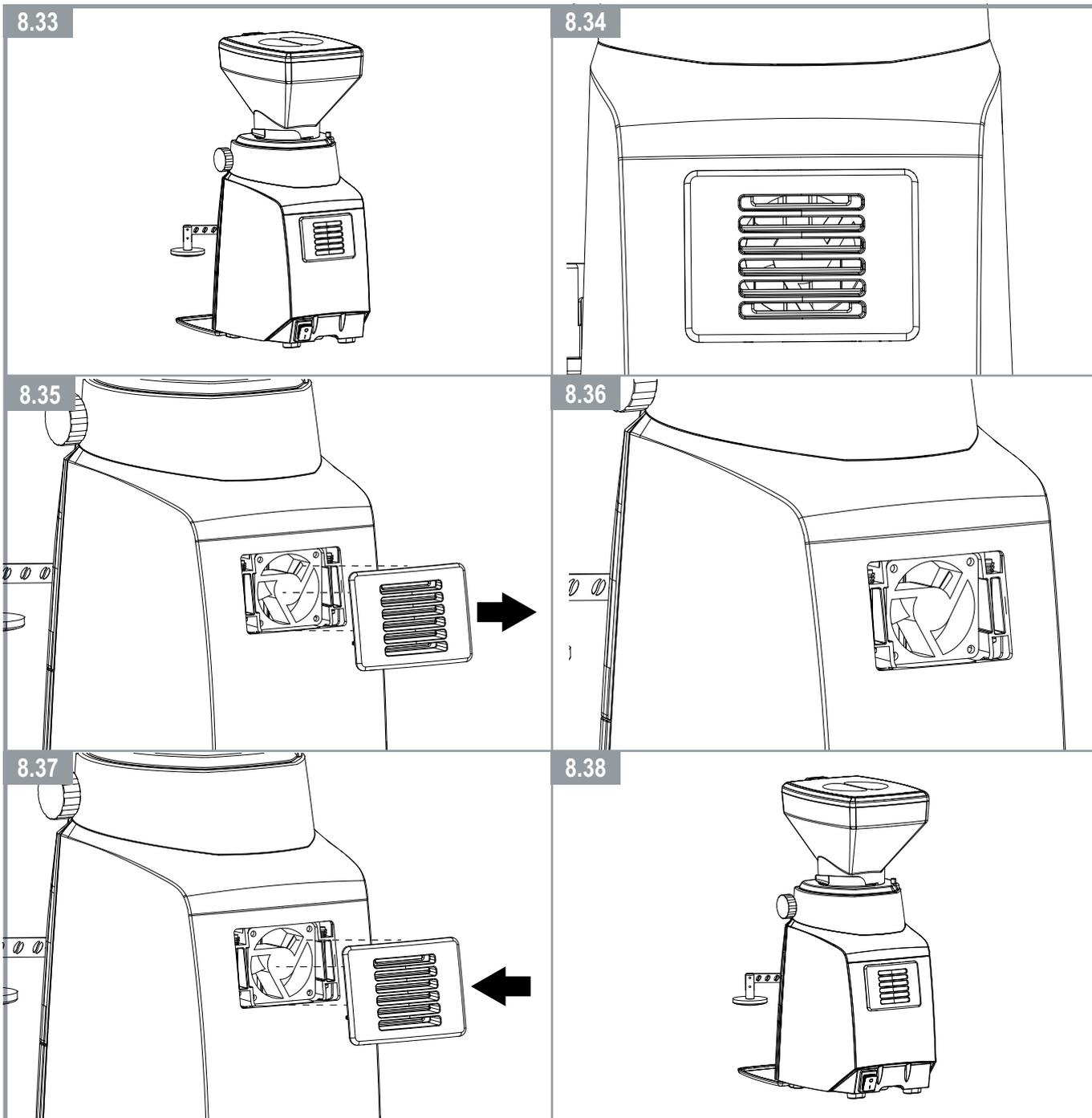
8.31



8.32



8.3 ACCESS TO THE FAN (WHEN PRESENT)



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