Top Loading Balances

European Catalogue Numbers:

611-2605	ELECTRONIC PRECISION BALANCE 200G/ 0.01G
611-2606	ELECTRONIC PRECISION BALANCE 1500G/0.1G
611-2607	ELECTRONIC PRECISION BALANCE 2200G/ 0.1G
611-3236	ELECTR.PRECISION BALANCE 2200G/0.1G CERT.
611-3246	ELECTR. PRECISION BALANCE 200G/ 0.01G CERT.
611-3299	ELECTRONIC PRECISION BALANCE 420G/ 0.01G

User Manual

Version 1 Issued 14/04/15
Soft. RL5.xx

Legal Address of Manufacturer

Europa
VWR International bvba
Researchpark Haasrode 2020
Geldenaaksebaan 464
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http://be.vwr.com

Country of origin

Italy

Intended use

Precision balances are used for accurate weighings in laboratory, industry, universities, etc…

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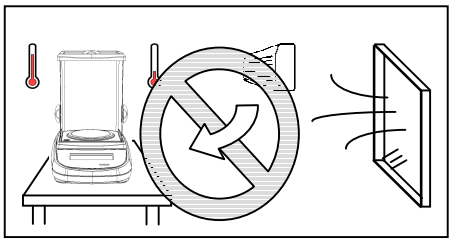
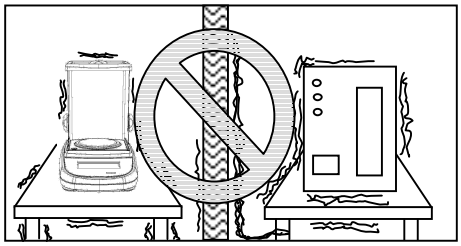
1 Installation instruction

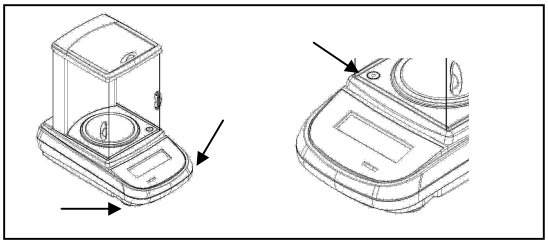
WARNING:
Please follow carefully these steps for installing and use the new balance before starting your work routine. A way of use of the instrument different from this user manual will not guarantee the instrument's safety anymore.

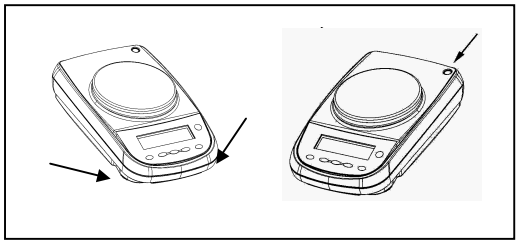
- **Remove** the balance and accessories from the cartoon and check for any visible damage of the instrument.
- **Do not install** the balance in a place with air flows, heavy thermic changes and vibrations.
- **Do not use** the balance in blast risk environment**.**
- **The humidity rate** of the balance environment must be between 45% and 75%





- **Place** the weighing pan and the support pan on the balance (see par. 3).
- **Level** the balance using the level bubble and levelling feet located underneath the case





- **Connect** power supply to connector 2 located on the rear panel of the unit (see par.5).
- **Insert** power unit into AC outlet, **which shall be easily accessible;** after few seconds the balance will automatically switch on.

- **Wait 30 minutes from switch on** and then calibrate the balance using the appropriate mass, following the instructions (par.7)

- **Calibrate** again the balance every time it's moved to another place

- **Check** the balance calibration periodically.

- **We recommend** not to drop heavy objects on balance pan, in order to avoid damages.

- **Assistance service** must be effected by specialized staff and the spare parts used must be original. Therefore, it is necessary to apply to the reseller who sold the equipment.

2 Storage

.

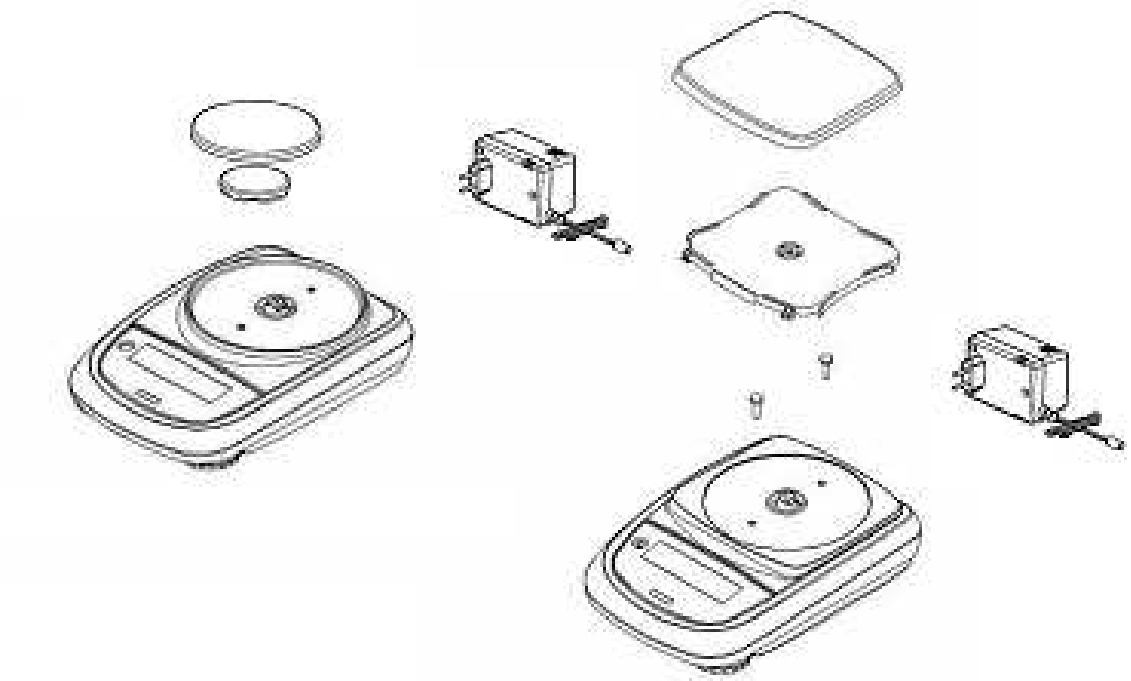
- **Storage temperature:** +5 °C…+40°C

- **Storage humidity** 45% - 75%.

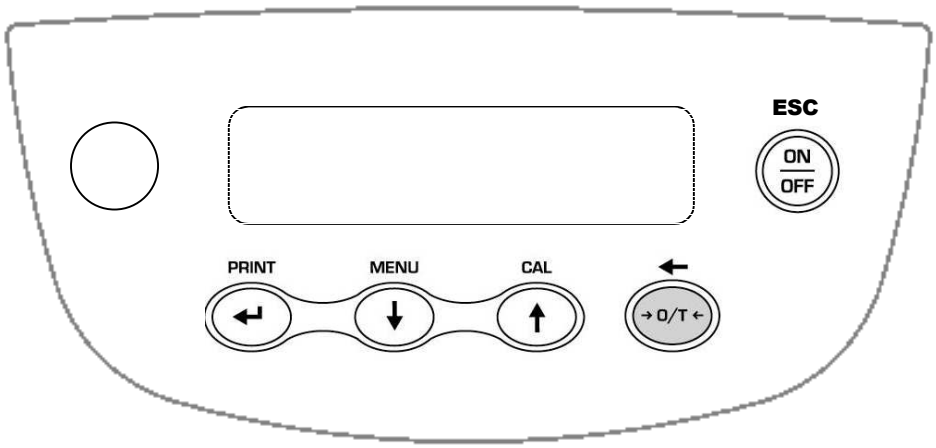
- **Keep package** in the case the balance should be sent back to the factory for service. Disconnect the cables and the accessories for avoiding damages during transportation.

- **Do not place** the balance in extreme temperature and humidity condition and avoid the balance to take strong hit.

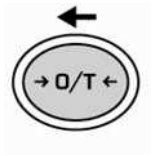
3 Weighing pan assembly



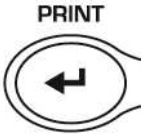
4 Keypad and display



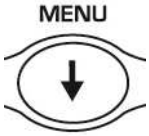
Standby (OFF) or power on (ON).



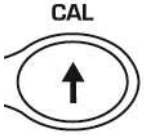
TARE or zero button.



Selection CONFIRM or SEND data to printer.



Balance setup MENU button.



Balance CALIBRATION button.

***** Stability indicator

O Zero indicator

% Percentage weighing

PC Piece counting

Battery charge indicator

Insert data mode

H Upper threshold

L Lower threshold

DS Density measure mode

ct, Measure unit
ozt, lb, GN, dwt, Kg, mg

5 Overview

5.1 Rear and bottom part of balance

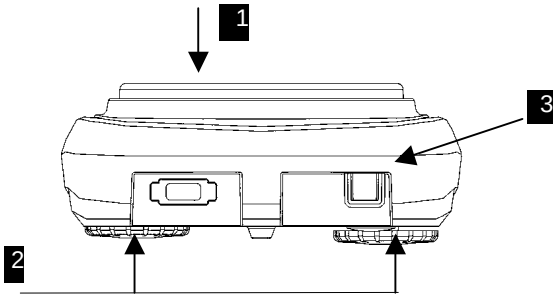


Fig.1

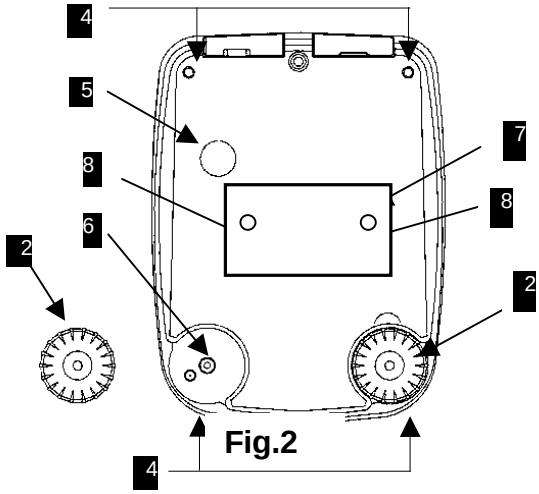
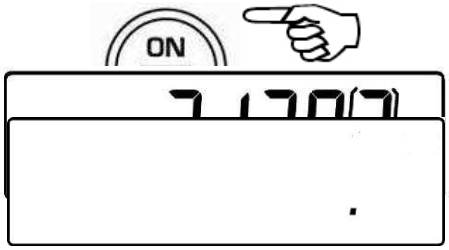


Fig.2

Fig.1 and 2 : Rear and bottom part of balance	
1	Weighing pan
2	Adjustable feet
3	Power supply connector
4	Balance closing screws
5	Hook for under balance weighing (**Note:** remove the cap to find the hook)
6	RESET button (Press with a sharp object inside the hole to reset the instrumet if necessary)
7	Battery
8	Screws closing the battery compartment

6 Weighing

After having connected the balance to AC outlet, it will perform an internal circuits test,



after that the balance will set itself in stand-by mode.

6.1 Stand By

From **“STAND BY”** mode:

- Press **ON/OFF** button to bring balance to work conditions.
- Press again **ON/OFF** button to return to “**STAND BY**” condition.

6.2 Simple weighing

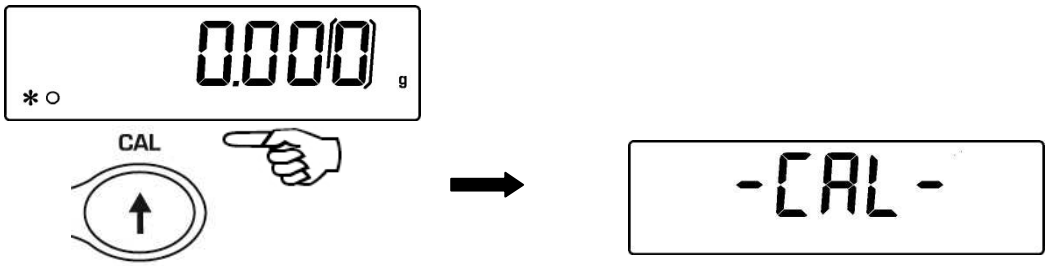
Load the sample to weigh on the pan and read the value on display as soon as the stability symbol **ж** (*star*) appears

7 Calibration

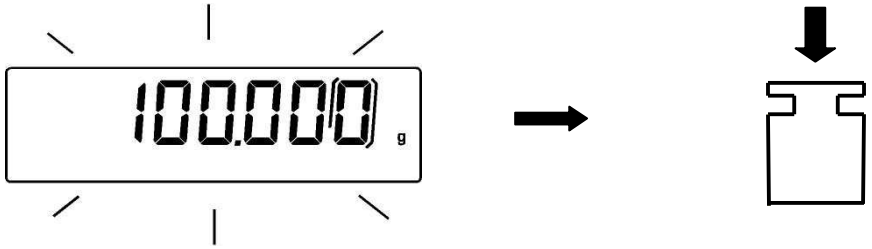
Electronic balances take mass measurements making use of gravity (g). Difference of latitude in geographic areas and altitude will vary gravity acceleration value (g). Therefore, for accurate measurements, the balance must be adjusted to the local environment. This adjustment is accomplished by calibration function.

7.1 External calibration balances

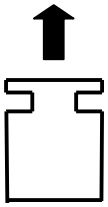
Calibration is accomplished by pressing **CAL** button.



1. Press **CAL** button when pan is empty, dashes are displayed on the display.



2. When calibration weight value starts to flash, load the weight on the pan.

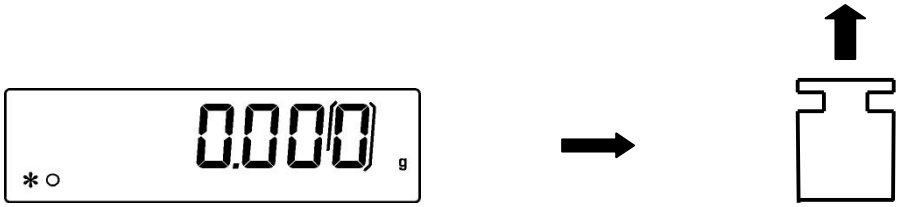


3. The display will stop flashing, indicating calibration weight value. Once the calibration is effected will be shown the value of the calibrated weight and the current unit of measure.

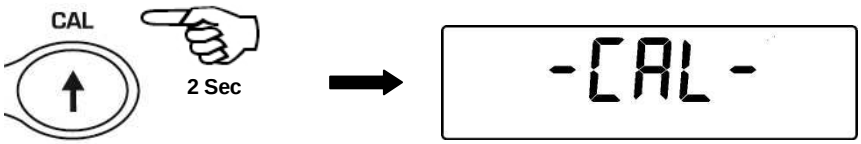
4. Unload calibration weight from the pan.
   The balance is ready for weighing operations.

NOTE: if there is interference during calibration process, an error message will be displayed.

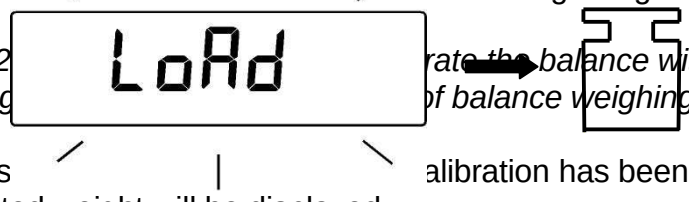
Moreover, it is possible to calibrate the balance with a calibration weight higher than the one set by default:



1. Press and keep **CAL** button pressed with empty pan until the acoustic alarm stops, then release the button. On display it will be visualized the string **"-CAL-"**, followed by flashing string **"LOAD"**.



2. Load on the pan a weight equal higher or lower than default calibration weight; the balance will recognize it as valid weight if equal or higher than calibration weight as long as it is a whole numb t meaningful digit of calibration weight .
   e.g.: if calibration weight is 2 rate the balance with values from 100g 200g, 300g of balance weighing range.
   The message "**LOAD**" on dis alibration has been effected, the value of calibrated weight will be displayed.

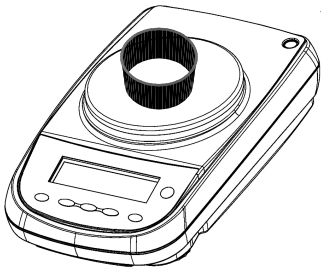


3. Unload calibration weight. The balance is ready for weighing operations.

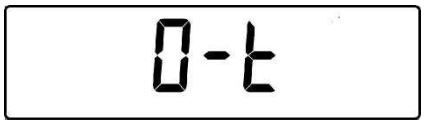
NOTE: if there is an interference during calibration process, an error message will be displayed.

8 Tare function

1. Load the container on the pan. The display will show the weight.

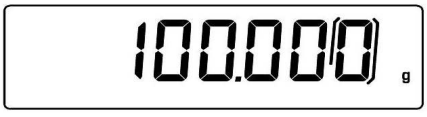


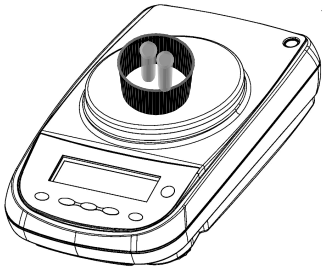
2. Press **O/T** button. "**O-t**" string will be displayed



3. After reaching stability, the value "**0.000**" will be displayed. If the stability is not reached (due to air flows or vibrations or other disturbs) the dashes will remain displayed.

4. Load the objects to weigh in the container. Read net weight value on display.



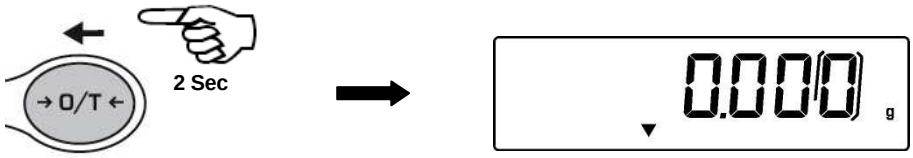


8.1 Manual tare function

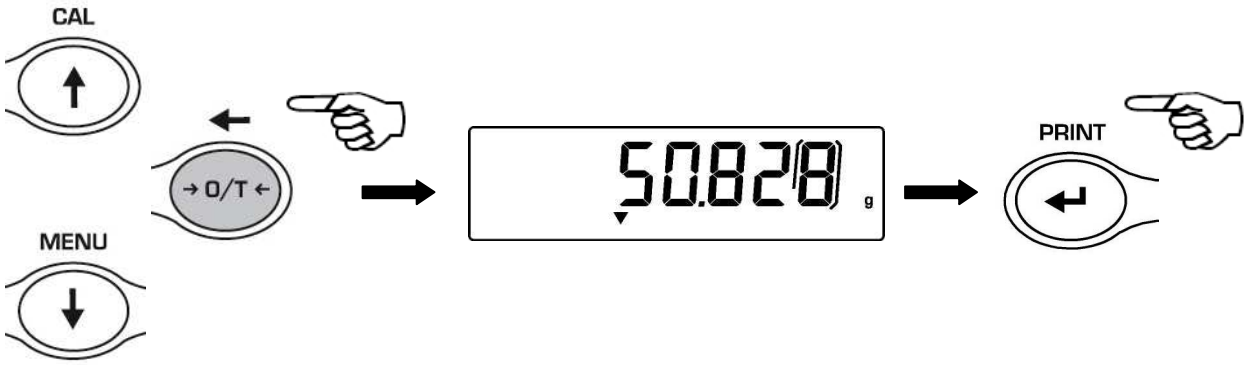
This function allow to insert manually the tare values.

1. Press and keep pressed the **O/T** key whit no objects on the weighing pan until the beep alarm stops, then release the key.

2. Will be shown on the display the following string:



3. Insert now the desired tare value using the keys **CAL** and **MENU** for increase or decrease the value, and press the **O/T** key for skip to the following digit. During the value insert mode, if keep pressed the **O/T** key is possible to delete the inserted value.

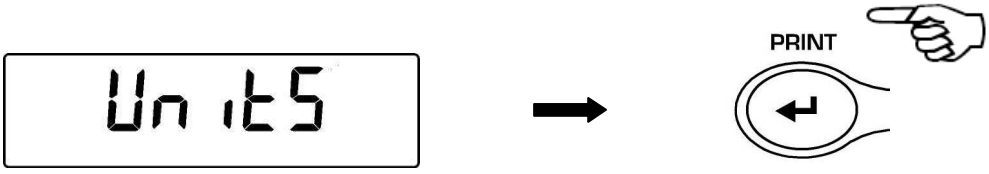


Press **PRINT** key to confirm the value inserted.

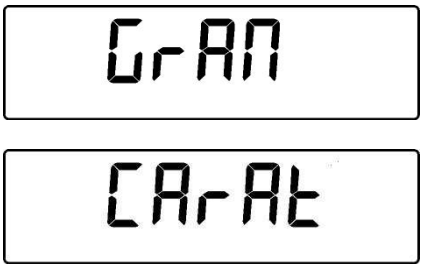
9 Weighing units

It is possible to select the weight unit that balance will use to display weight.

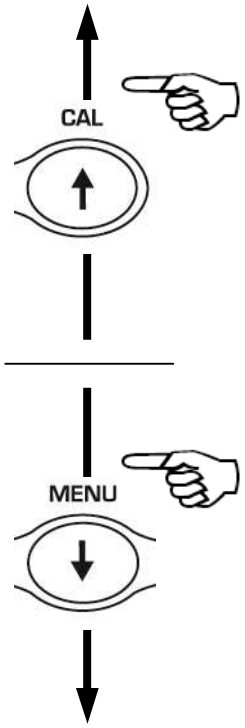
1. From display zero condition press and keep pressed the **MENU** button until the acoustic alarm is over, then release the button. The message "**unitS**" will be displayed then press **PRINT** to confirm.



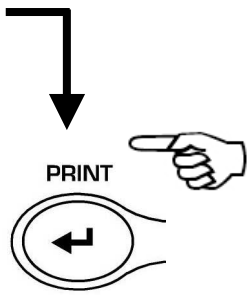
2. It will be displayed "**GRAM**" unit. Pressing now the **MENU** or **CAL** button, it will be possible to scroll forward or backward the weight units menu.



3. Press **PRINT** button to confirm or **MENU** button to shift to the other weight unit.



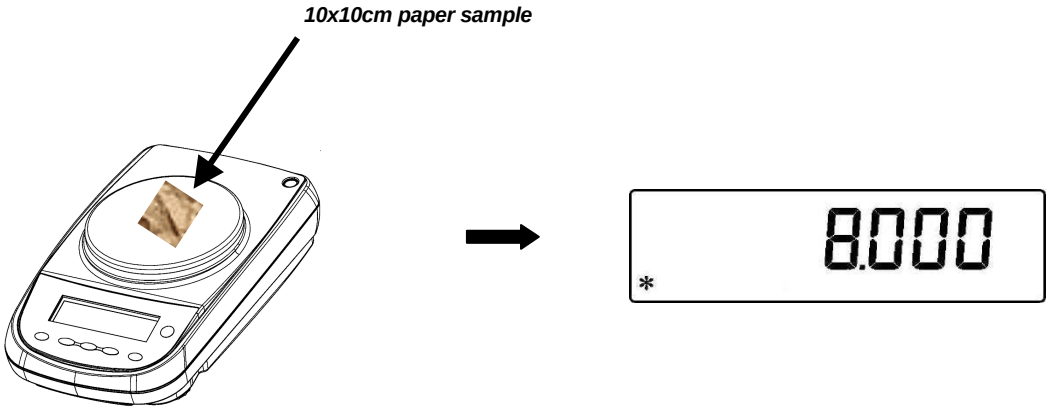
SYMBOL	UNIT	CONVERSION FACTOR 1g =
GRAM	GRAM	1.
CARAT	CARAT	5.
OUNCE	ONCE	0.035273962
POUND	POUND	0.0022046226
PENN.	PENNYWEIGHTS	0.643014931
ONCETR.	ONCE TROY	0.032150747
GRANO	GRAIN	15.43235835
TAEL HON	HONG KONG TAEL	0.02671725
* TAEL SGP	SYNGAPORE TAEL	0.02646063
* TAEL ROC	R.O.C. TAEL	0.02666666
* MOMME	MOMME	0.2667
M 10	x 10	10.
M 100	x 100	100.



4. After having selected the desired weight unit, press the **MENU** button to go to next parameter or **CAL** button to return to previous.

5. To escape from parameters setup menu, press the **MENU** button until the acoustic alarm is over, then release the button. The balance returns to normal weighing conditions.

***** The unit of measure with the star (*) are not available in the balances with the software for paper grammage. In these models is possible to set from the menu of the units of measure the multiply factor of the weight “M 10” or “M 100”. For visualizing the m^2 weight, select the M 100 multiply factor (as described at par.9) and load on the pan a 10x10 cm piece of paper.

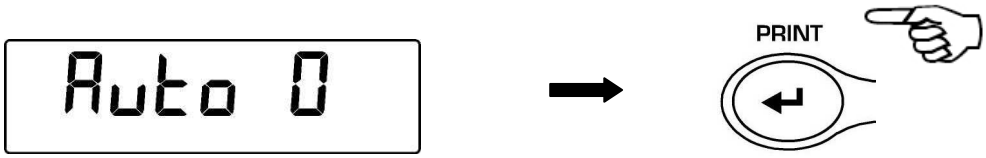


10 Autozero function

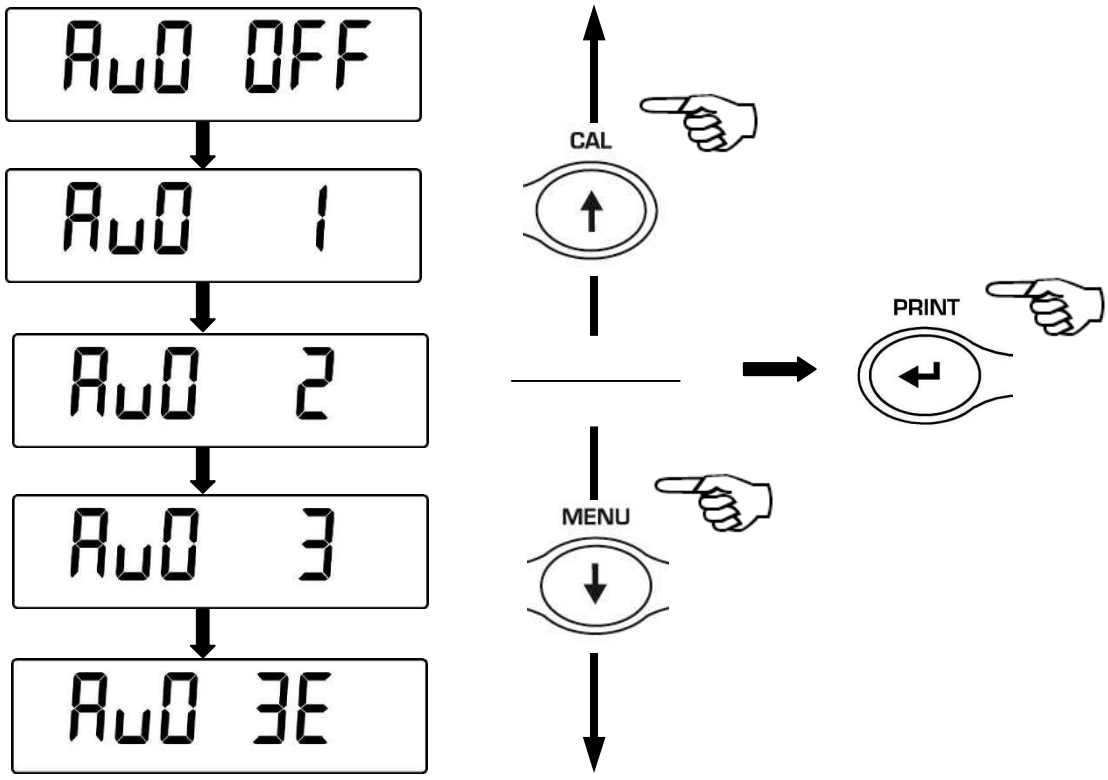
Autozero is an automatic correction of a possible zero drift.

- **Au0 OFF** = autozero disabled
- **Au0 1** = soft autozero
- **Au0 2** = medium autozero
- **Au0 3** = heavy autozero
- **Au0 3E** = heavy autozero over all range

1. From zero condition on display, press and keep pressed the **MENU** button until the acoustic alarm is over, then release the button. The message "**unitS**" is displayed, then press **MENU** button until the message "**AUTO 0**" is displayed, then press **PRINT** to confirm.



2. Pressing **MENU** or **CAL** button it will be possible to scroll forward or backward through the different autozero levels, select the one you wish and confirm it by pressing the **PRINT** button.



3. After having selected the autozero level you wish, press the **MENU** button to go to next parameter or **CAL** button to go to previous one.

4. To escape from parameters setup menu, press the **MENU** button until the acoustic alarm is over, then release the button.

5. The balance will return to standard weighing conditions

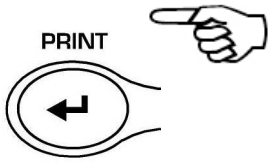
11 Filters selection

It is possible to adapt the balance to the different environment conditions thanks to the

selection of three filters:

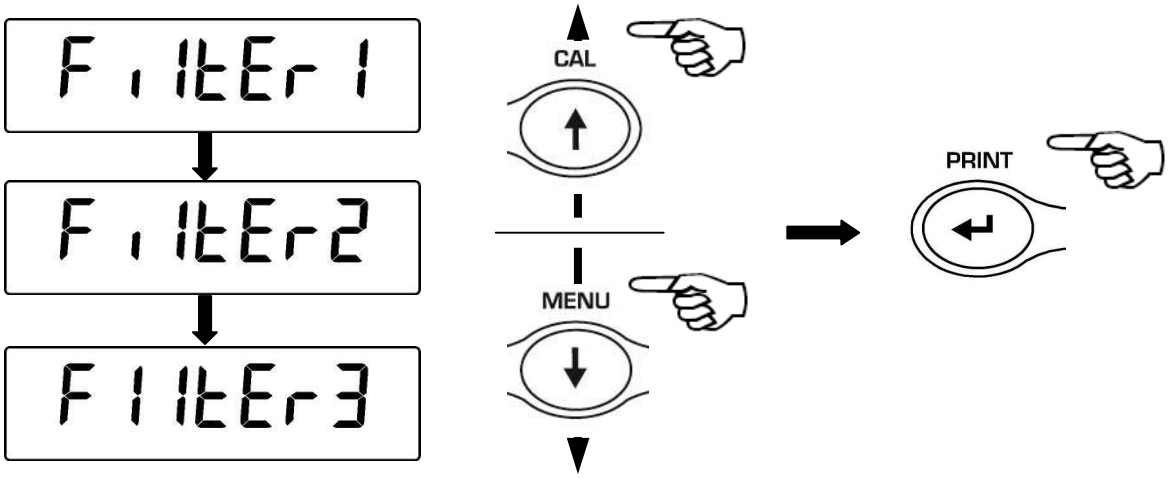
- **FILTER 1:** proportion of ingredients condition

- **FILTER 2:** stable conditions
- **FILTER 3:** unstable conditions



1. From zero condition on display, press and keep pressed the **MENU** button until the acoustic alarm is over, then release the button. The message "**unitS**" is displayed, then press **MENU** button until the message "**FILTER**" is displayed then confirm it by pressing the **PRINT** button.

2. Pressing **MENU** or **CAL** button it will be possible to scroll forward or backward the different filtering levels, select the one you wish and then confirm it by pressing the **PRINT** button



3. After having selected the filtering level you wish, press the **MENU** button to go to next parameter or **CAL** to go to previous one.

4. To escape from parameters setup menu, press the **MENU** button until the acoustic alarm is over, then release the button.

5. The balance will return to standard weighing conditions.

NOTE: It is suggested to use FILTER 1 when proportion of ingredients must be performed

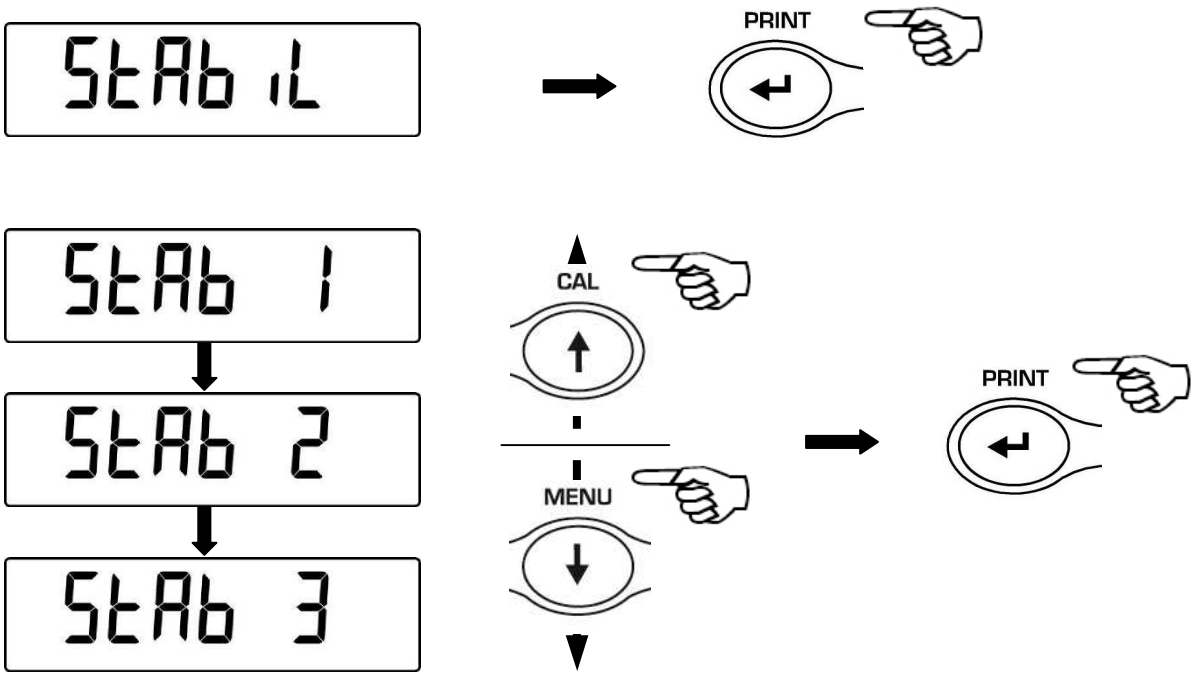
12 Stability function

The stability symbol is displayed when the weight is stable inside a defined range

- **STAB 1** = for stable environments
- **STAB 2** = for not so stable environments
- **STAB 3** = for unstable environments

1. From zero condition on display, press and keep pressed the **MENU** button until the acoustic alarm is over, then release the button. The message "**unitS**" is displayed, then press **MENU** button until the message "**StAbiL** " is displayed, then confirm this by pressing the **PRINT** button.

2. Pressing **MENU** or **CAL** button it will be possible to scroll forward or backward the different stability levels, select the one you wish and then confirm it by pressing the **PRINT** button.



3. After having selected the stability level you wish, press the **MENU** button to go to next parameter or the **CAL** button to go to previous one.

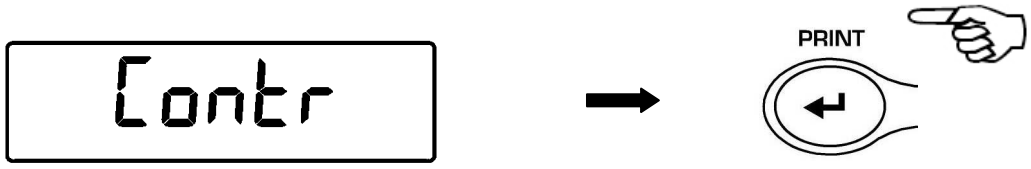
4. To escape from parameters setup menu, press the **MENU** button until the acoustic alarm is over, then release the button.

5. The balance returns to normal weighing conditions.

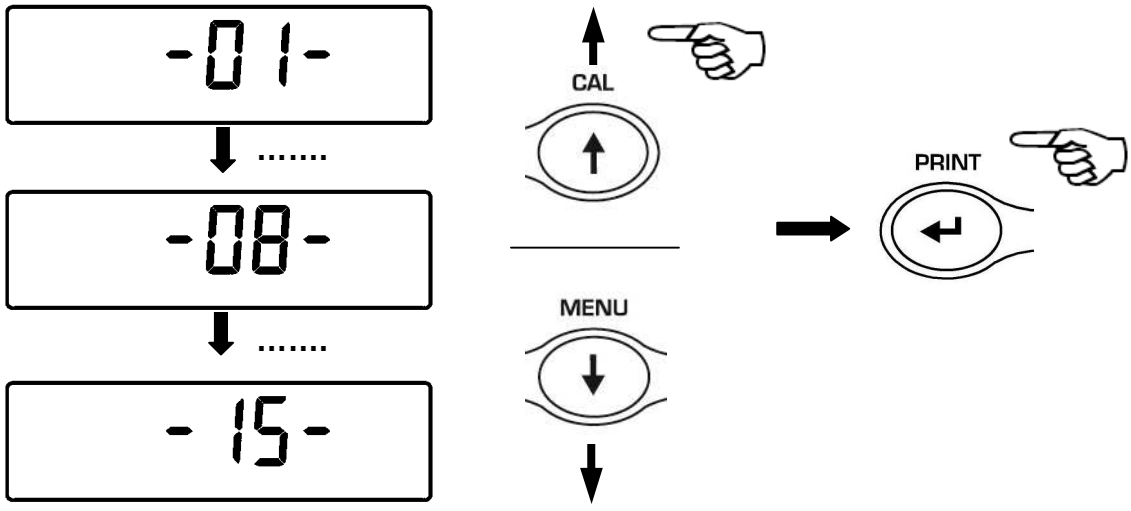
13 Display Contrast regulation

It is possible to regulate the contrast level of display to have a comfortable view of the indication at different angles of usage.
There are 15 different levels of regulation:

1. From zero condition on display, press and keep pressed the **MENU** button until the acoustic signal gets mute, then release the button. The message "**unitS**" is visualized, now press the **MENU** button repeatedly until the message "**contr** " is displayed and confirm this by pressing the **PRINT** button



2. Now, pressing the buttons **MENU** or **CAL** it is possible to increment or decrement the level of the display contrast; select the one desired and confirm by pressing the **PRINT** button.



3. After you have confirmed the contrast level desired, press the **MENU** button to go to the next parameter or the **CAL** button to go to previous one.

4. To escape from parameters setup menu, press the **MENU** button until the acoustic alarm gets mute, then release the button.

5. The balance returns to normal weighing mode

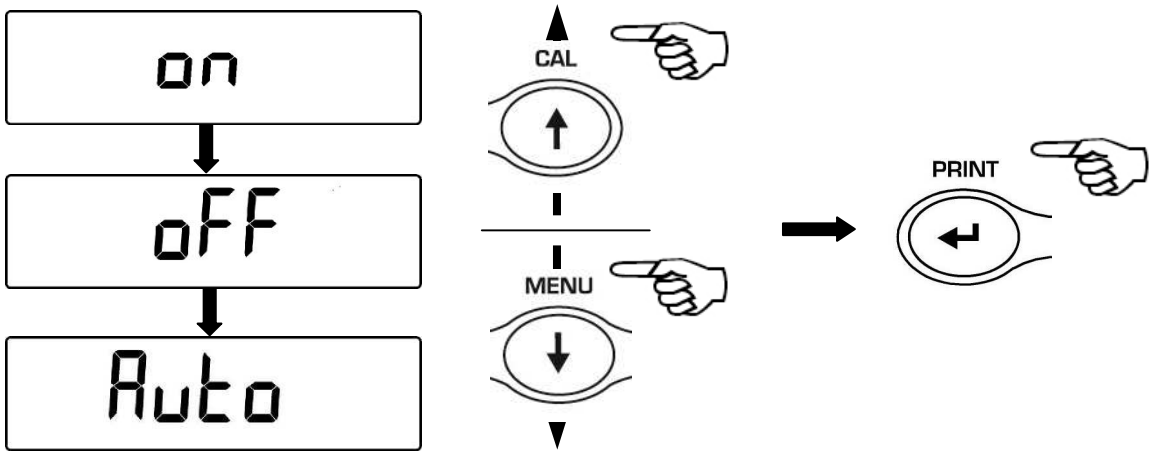
14 Backlight setup

The balance display is equipped with backlight to make the indication more visible also during low light conditions.
There are 3 working modes:

- **ON** = light always switched ON
- **OFF** = backlight always switched OFF
- **AUTO** = backlight automatically switched on during weighing operations

1. From zero condition on display, press and keep pressed the **MENU** button until the acoustic alarm is over, then release the button. The message "**unitS**" is displayed, then press **MENU** button until the message "**bLt** " , then press the **PRINT** button to confirm this.

2. Pressing **MENU** or **CAL** button it will be possible to scroll forward or backward the different working modes, select the one you wish and then confirm it by pressing the **PRINT** button



3. After having selected the backlight working mode you wish, press the **MENU** button to go to next parameter or the **CAL** button to go to previous one.

4. To escape from parameters setup menu, press the **MENU** button until the acoustic alarm is over, then release the button.

   - 5 Min **= Auto power-off after 5 minutes of idle time**
   - 15 Min **= Auto power-off after 15 minutes of idle time**

5.

The balance returns to normal weighing conditions.

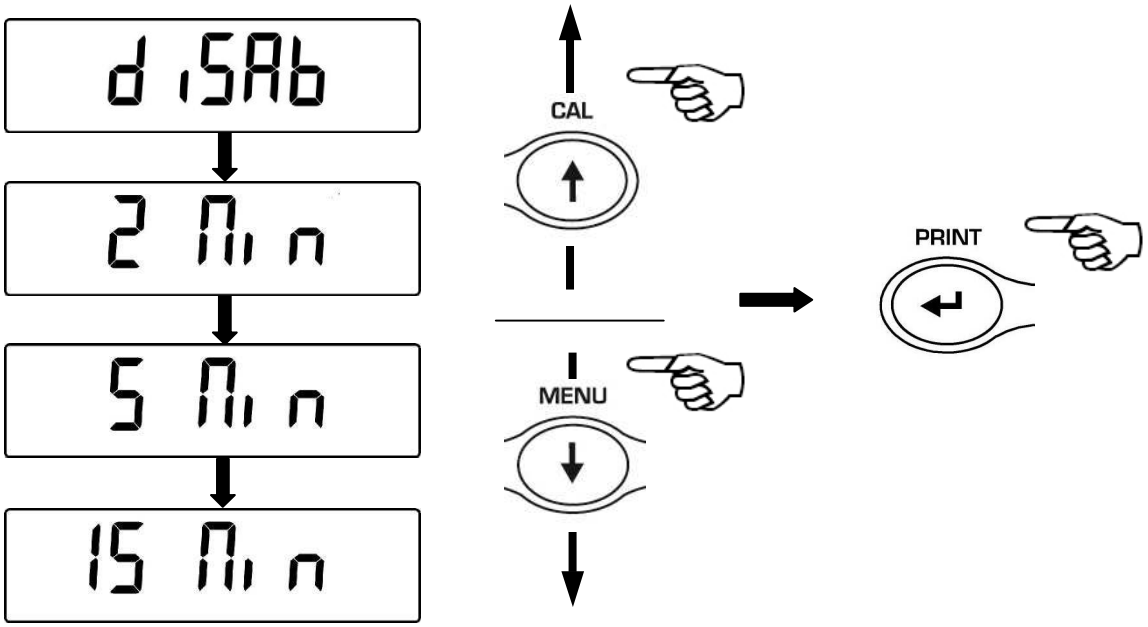
15 Auto Power-off function

This function allows to activate the automatic power-off of the balance after a defined balance idle-time. There are 4 auto power-off modes:

- **disab** = Auto power-off disabled
- **2 Min** = Auto power-off after 2 minutes of idle time

1. From zero condition on display, press and keep pressed the **MENU** button until the acoustic alarm is over, then release the button. The message "**unitS**" is displayed, then press **MENU** button until the message "**tiME oFF** " then confirm by pressing the **PRINT** button.

2. Pressing **MENU** or **CAL** button it will be possible to scroll forward or backward the different auto power-off modes, select the one you wish and then confirm it by pressing the **PRINT** button



3. After having selected the auto power-off mode you wish, press the **MENU** button to go to next parameter or the **CAL** button to go to previous one.

4. To escape from parameters setup menu, press the **MENU** button until the acoustic alarm is over, then release the button.

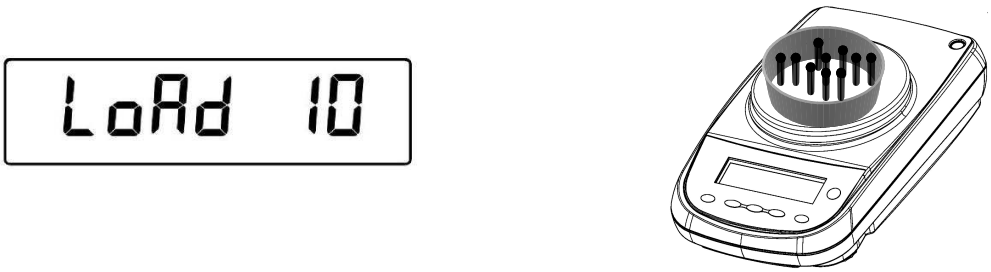
5. The balance returns to normal weighing conditions.

16 Piececounting function

1. From zero condition on display, press **MENU** button until the message **“Count “** is displayed then press the **PRINT** button to confirm

2. Select the number of pieces to put on the pan as sample by pressing **MENU** repeatedly to increase and **CAL** to decrease the number. Choice of the number of pieces (10, 25, 50, 100) depends from the weight of single pieces.
   If available, load the empty container first then press **PRINT** to confirm.

3. Load on the pan the number of pieces displayed on the balance display

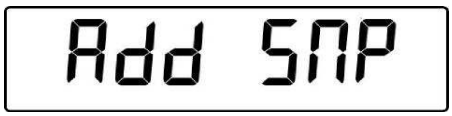


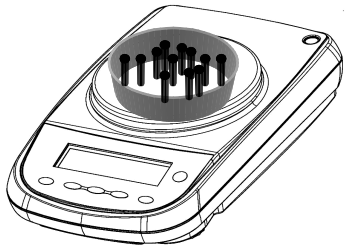
4. Press again the **PRINT** button and wait the weight to stabilize.

   If the number of samples is enough (for example 10 as in figure), then this number will be displayed and it will be possible to go on by loading the pieces to count on the balance pan.

   If the weight of the pieces to count is too low in comparison with balance resolution, then an error message will be displayed. In this case it is necessary to use a balance with higher resolution.

If the weight of samples is acceptable but not enough, then the message "**Add**" will be displayed.
Add a quantity of pieces so that to almost double the number read on display, then press the **PRINT** button





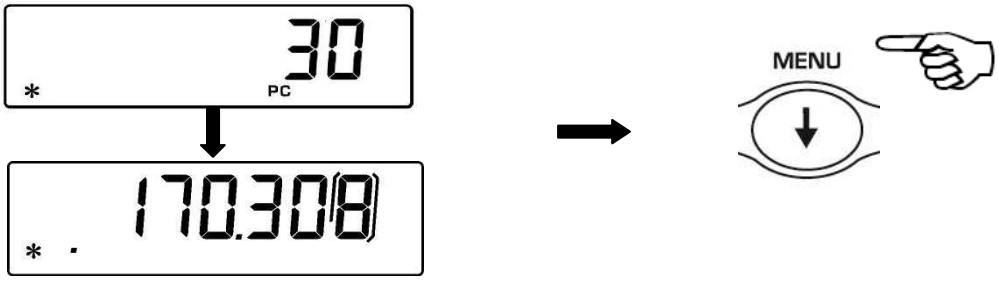
If the number of pieces is still not enough then the message **"Add SMP"** is displayed.
Add again a quantity of pieces so that to almost double the number you read on display

As soon as it is reached a sufficient number of pieces, this number is displayed and it will be possible to go on with count by loading the pieces count on the balance pan.

5. To escape from piececounting mode press the **ON/OFF** button and the balance returns to normal weighing conditions.

16.1 Visualization of total and unit weight of pieces

1. Press **MENU** button to pass from pieces number visualization to total weight visualization.



2. In order to display the weight of single piece from the total number of pieces press and keep pressed the **MENU** button until the acoustic alarm is over.

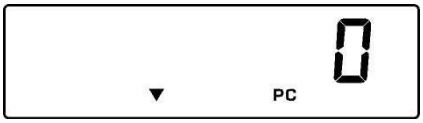
3. Press again the **MENU** button to display the number of pieces.

16.2 Manual insertion of the unit average weight

It is possible to insert the unit average weight of the sample, if known. In this way can be avoided the sampling of the units.

1. From zero condition on display, press the **MENU** button until the message **"Count"**, then press the **PRINT** button to confirm.
   Select **MANUAL** by pressing repeatedly the **MENU** button.

2. Press the **PRINT** button to confirm.



3. Insert the unit weight of a sample in grams using **CAL** and **MENU** buttons for increase and decrease the value and use the **O/T** button to skip to the others digits. For insert the For inserting the decimal point keep pressed the **CAL** button. Keeping pressed the O/T button is possible to delete the inserted value.

4. Press the **PRINT** button to confirm.
   If the inserted weight is 100 times lower than balance resolution, it will be displayed an error message.
   To escape without inserting the weight press **ON/OFF.**

5. If the weight is enough then "**0**" is displayed ; it is now possible to go on to count loading the pieces on the pan.

6. Press **MENU** button to display the total number of pieces, then press again the button to display again the number of pieces.

7. To escape from piececounting function, press **ON/OFF** button.

It is possible to use the optional alphanumeric keyboard to insert the weight of the unit sample as following:

1. From zero condition on display, press the **MENU** button until the message **"Count"**, then press the **PRINT** button to confirm.
   Select **MANUAL** by pressing repeatedly the **MENU** button.

.

2. Press the **PRINT** button to confirm.

3. Insert the unit weight of a sample in grams using the numerical buttons from 0 to 9 and the decimal point.
   In case of mistake, press the **CLEAR** button to start insertion again.

4. Press the **INSER** button to confirm.

5. If the inserted weight is 100 times lower than balance resolution, it will be displayed an error message.
   To escape without inserting the weight press **ESCAPE** (on alphanumeric keyboard) or **ON/OFF.**

6. If the weight is enough then "**0**" is displayed ; it is now possible to go on to count loading the pieces on the pan.

7. Press **MENU** button to display the total number of pieces, then press again the button to display again the number of pieces.

8. To escape from piececounting function, press **ON/OFF** button.

16.3 Automatic update of unit weight

After having effected the sampling, it is possible to update the average piece weight as follows:

1. Instead of loading all the pieces to count, load a number of pieces equal to the double of the ones loaded on the pan and wait for the acoustic alarm.

2. It is now possible to repeat this procedure up to a maximum of 255 pieces or to proceed to the normal counting of the pieces.
   This procedure allows a more accurate evaluation of the average unit weight and a better precision in the pieces count.

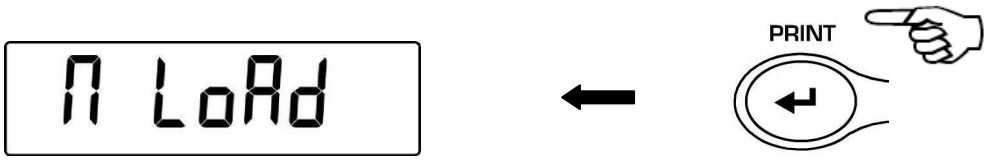
NOTE: automatic update is not active if the sampling has been effected by insertion of the average unit weight

17 Maximum load determination function

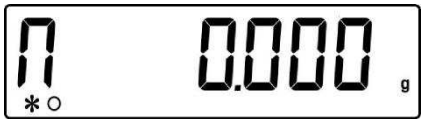
The balance must be equipped with the specific optional software (non available for all models)

The function **M LOAD** allows to measure the maximum load for a solid.

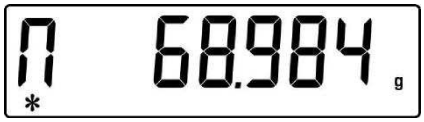
1. To activate the function M LOAD from zero display condition, press repeatedly the **MENU** button until the message **"M Load"** is displayed, then press the **PRINT** button to confirm. When this function is activated, a tare is automatically performed.



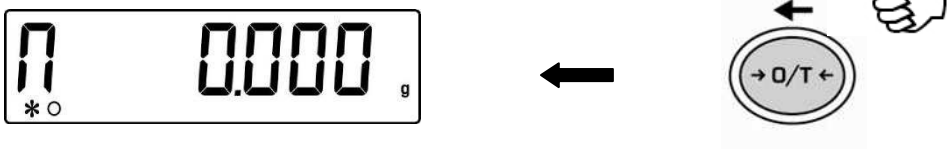
2. Activation of this function is indicated by the visualization of the letter **M** on the last digit on the display.



3. It is now possible to determine the weight of the maximum load.



4. Then press the **TARE** button to effect another measurement.



5. When the function **M LOAD** is active, the calibration is disabled.

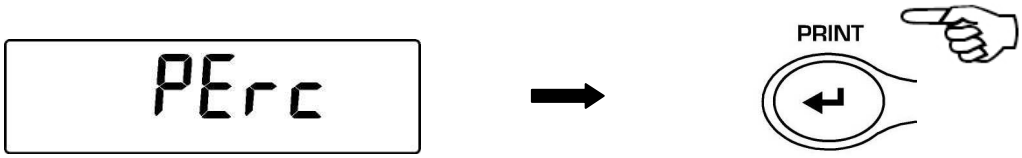
6. Press the button **ON/OFF** to escape from **M LOAD** function.

18 Percentage weighing function

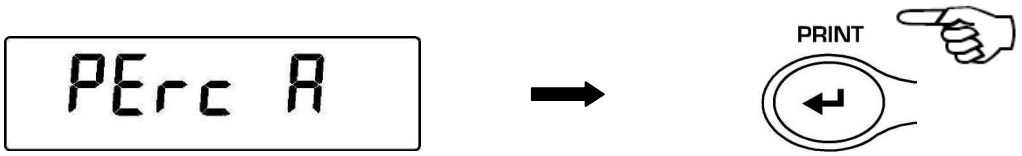
This function allow to read the weighing value as a percentage of a reference weight. The reference weight is took as 100% percentage value (factory setting).
There are two mode for acquiring the reference weight: one is automatic (with the reference weight) and one manual (by inserting manually the value of the reference weight).

18.1 Mode with weight reference

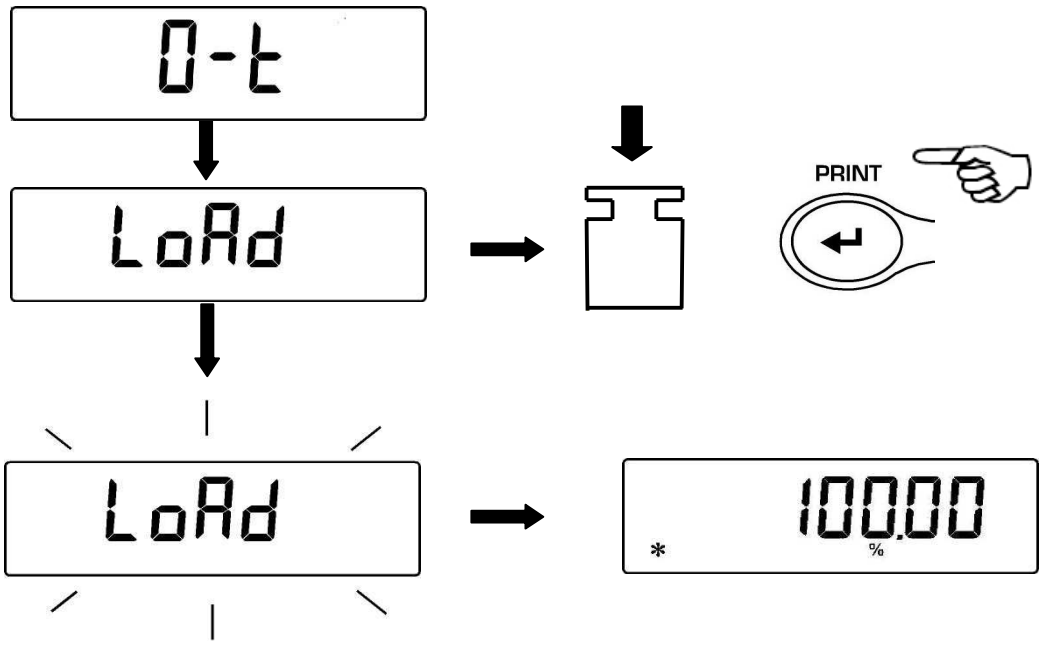
1. From zero condition of the display press the **MENU** button until will be displayed the **"Perc"** message, then press the **PRINT** button to confirm.



2. Press the MENU button to select the **"Perc A"** function and press **PRINT** button to confirm.

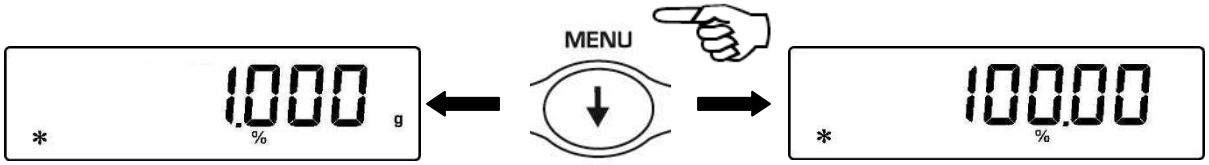


3. Tare function will be performed and will be shown on the display the string **"Load"**. Then load on the weighing pan the reference and press the **PRINT** button, the string **"Load"** will start to flash and once the weight is acquired will be visualized the value with the % indication.



4. Remove now the reference weight and load the sample. Is possible to read the weight in percentage now.

5. Press the **MENU** button to visualize the weight in gram and vice-versa.



6. Press the **ON/OFF** button to escape from the percentage weight function.

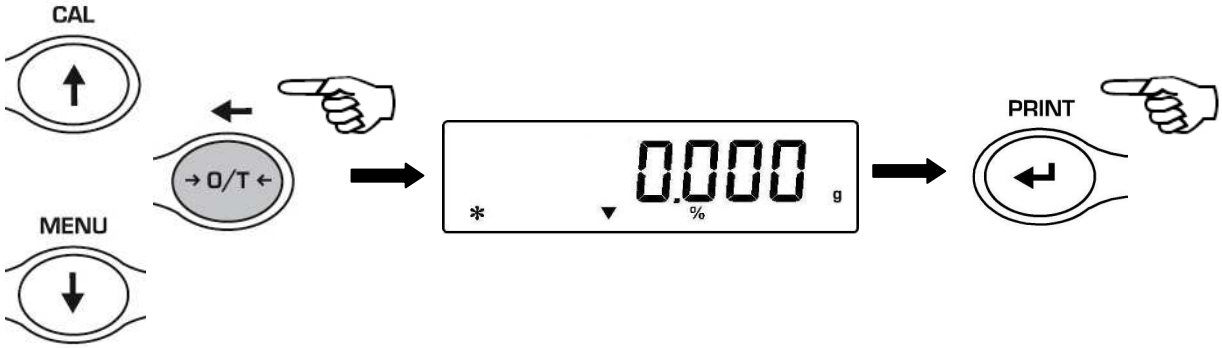
NOTE: If the reference weight is lower than 10 digits after the acquiring sequence of the weight, the string ERROR 07 will be displayed.

18.2 Mode with manual insertion of the reference weight.

1. From zero condition of the display press the **MENU** button until will be displayed the **"Perc"** message, then press the **PRINT** button to confirm.

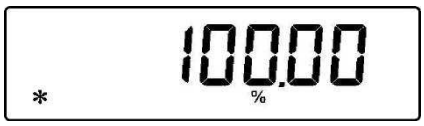
2. Press the MENU button to select the **"Perc A"** function and press **PRINT** button to confirm.

3. It is possible to set a different value using the **CAL** e **MENU** buttons for increase and decrease the value and using the **O/T** button for skip to the others digits. Keeping pressed the **O/T** button is possible to delete the inserted value. The inserted value will be stored in the memory until the balance is switched off.

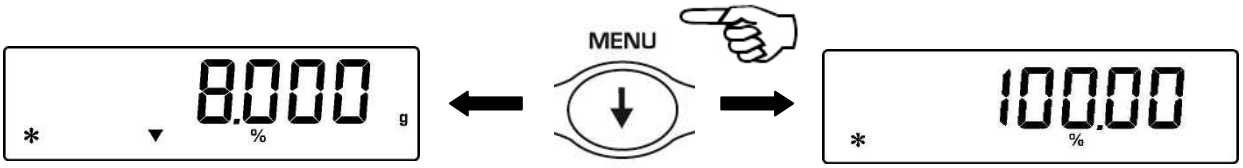


4. Press **PRINT** button when the desired value of the reference weight is inserted

5. Load now the sample and read the percentage value.



6. Press the **MENU** button to visualize the weight in gram and vice-versa.



7. Press the **ON/OFF** button to escape from the percentage weight function.

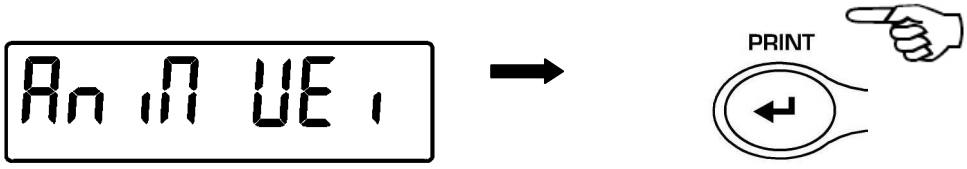
8. It is also possible to set the value if the balance is equipped with the optional alphanumeric keyboard. Press PRINT button to confirm the inserted value.

NOTE: If the reference weight inserted is lower than 10 digit displayed, will be shown the ERROR 07.

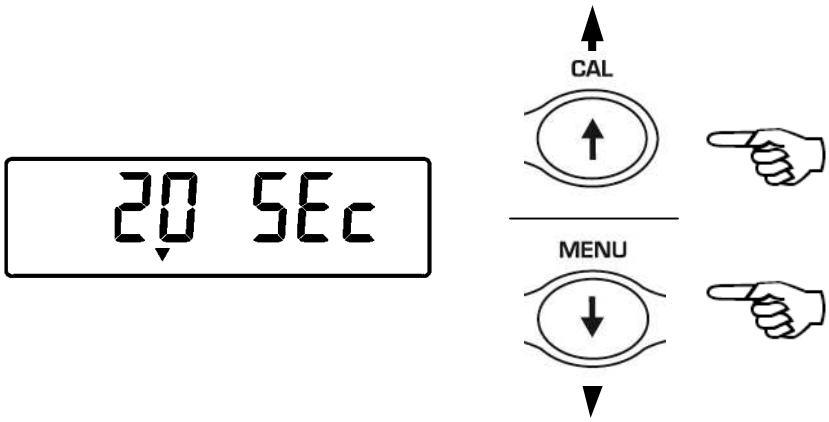
19 Animal weighing function

This function allows to acquire the averaged weight of moving objects or animals for a time period that can be set.

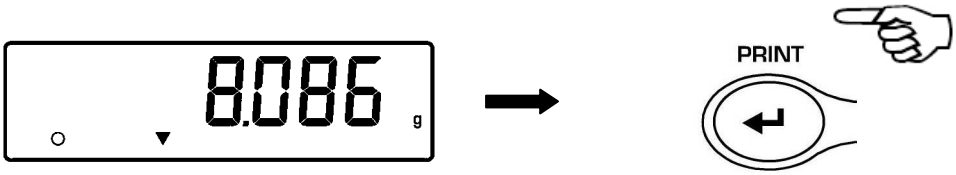
1. From zero condition of the display press the **MENU** button until will be displayed the **“anim UEi”** message, then press the **PRINT** button to confirm.



2. Set the desired period time from 5 to 90 sec. using the button **MENU** to decrement and **CAL** to increment time.Confirm by pressing the **PRINT** button.



3. It is now displayed the value of current weight, effect tare if necessary, then load on the pan the sample to weight and press the **PRINT** button



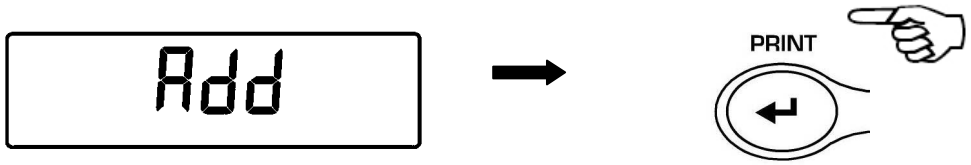
4. It is then displayed the count-down of the sampling time value that has been previously set.
5. When the count-down is finished, it is calculated and then displayed the value of the averaged weight measured.

6. Press once the **ON/OFF** button to start another measurement, or twice to escape this function and return to weighing mode

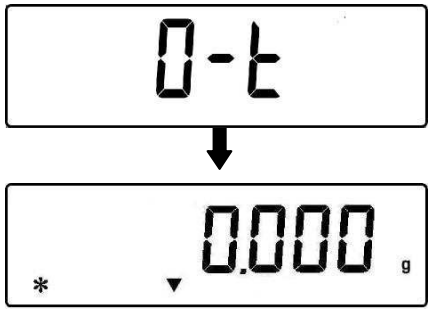
20 Totalizing

This function allows to effect sum of consecutive weighings.

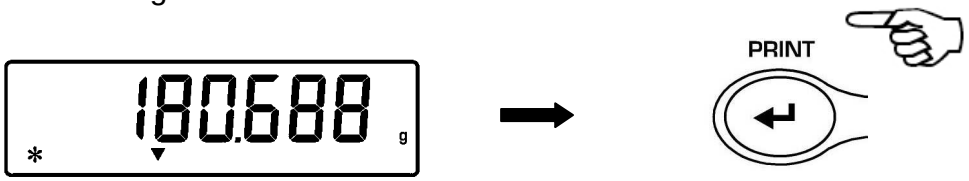
1. From zero condition of the display press repeatedly the **MENU** button until will be displayed the **“add”** message, then press the **PRINT** button to confirm.



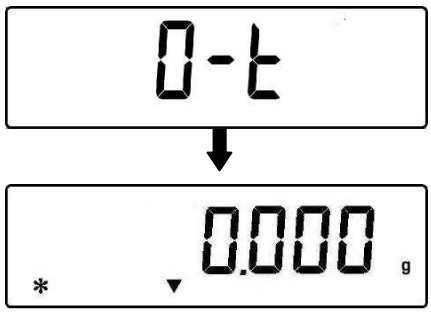
2. The Tare is automatically effected.



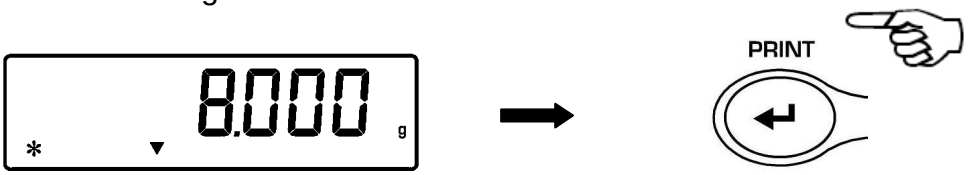
3. Load the first weight to sum.



4. Confirm with the **PRINT** button.
5. The Tare is again effected.

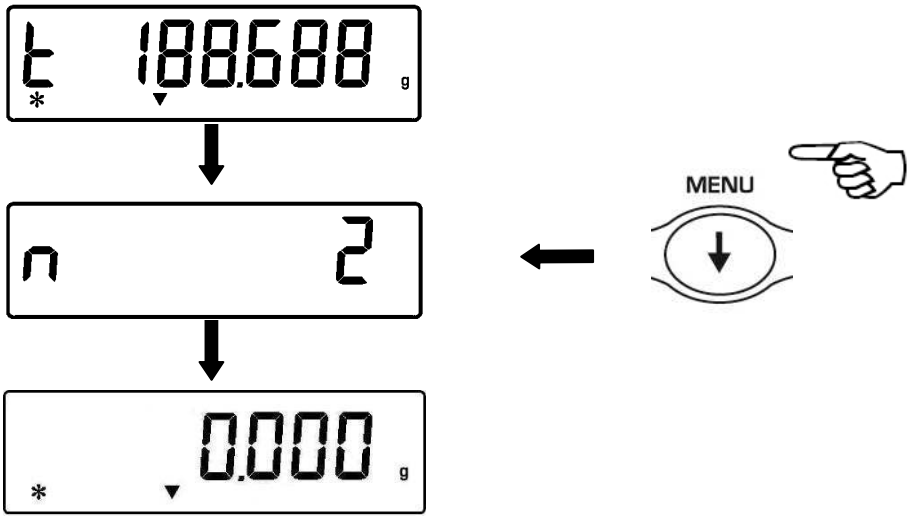


6. Load the second weight to sum.



7. Confirm with the **PRINT** button. Follow all the above steps for all weights to sum up to a maximum number of 99.

8. Pressing the **MENU** button it is possible to show in sequence the informations respectively of total weight, number of weighings effected and current weight.



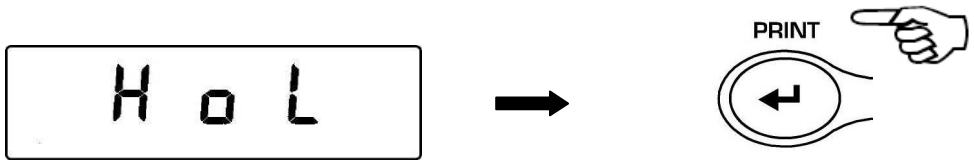
Before the output function:
If the balance is equipped with a printer or connected to a PC, automatically after pressing the print button, will be printed or sent to PC the weigh number and its value. After running all the desired weighs, press CAL to print or send to the PC the value of the total weight. The count of the weighings will then be reset and it will be possible to start over a new measure.

Press the **ON/OFF** button to escape this function and return to weighing mod

21 Threshold function

Threshold function allow to determinate if the weight loaded on the pan is above or below the two threshold fixed by the user.

1. From zero condition of the display press the **MENU** button until will be displayed the string **“H o L”**, then press the **PRINT** button to confirm.



2. Insert the lower threshold value using the **CAL** e **MENU** buttons for increase and decrease the value and using the **O/T** button for skip to the others digits. Keeping pressed the **O/T** button is possible to delete the inserted value. The inserted value will be stored in the memory until the balance is switched off.

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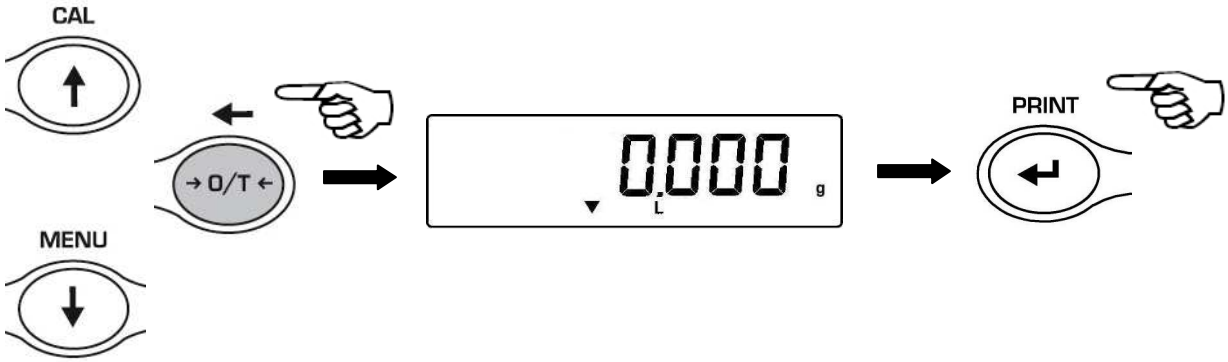
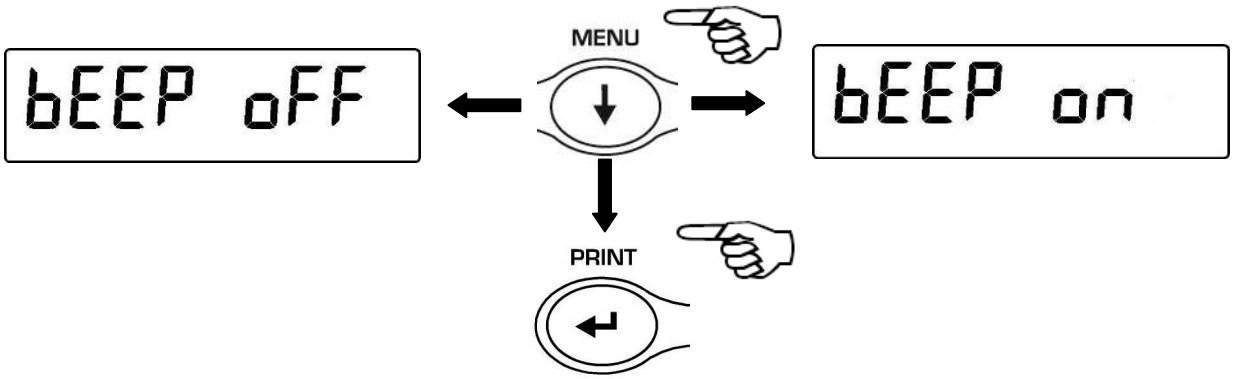


3. Insert the higher threshold value as same as the lower value steps.

4. The string “**bEEP OFF”** will be displayed and select by the **MENU** button if the acoustic alarm should be set or not if the weight is within the two threshold values set before. Press **PRINT** button to confirm.



5. If the value of the thresholds is correctly inserted, the balance will be back to the weighing mode with the indication of the threshold state (H = higher threshold, L = lower threshold, OK= weight within the two set thresholds).

Setting only the lower threshold and leaving to zero the higher threshold, will be displayed the symbol "OK" and the weight value acoustic alarm activated when the weight is higher than the lower threshold value set. When the weight is under the lower threshold set the symbol "L" will be displayed.

Setting only the higher threshold and leaving to zero the lower threshold, will be displayed the symbol "OK" and the weight value acoustic alarm activated when the weight is higher than the higher threshold value set. When the weight is under the higher threshold set the symbol "H" will be displayed.

Setting only the higher threshold and leaving to zero the lower threshold, will be displayed the symbol "OK" and the weight value acoustic alarm activated when the weight is higher than the higher threshold value set. When the weight is under the higher threshold set the symbol "H" will be displayed.

NOTE: If the values are not inserted correctly will be displayed the string ERROR 07.

There are 3 modes of the threshold function:

21.1 Both thresholds set

21.2 Lower threshold set only

21.3 Higher threshold set only

22 Working with battery

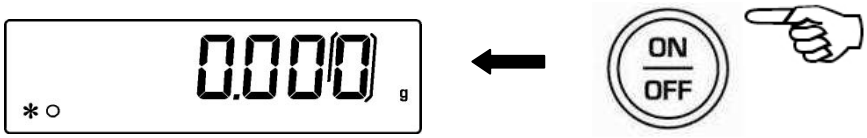
Balance can work, at wish, using only the battery power.
The battery on board is located inside the balance and grants 10 hours of autonomy

1. With the external power supply disconnected, it is possible to switch on or switch off the balance trough the **ON/OFF** button and work without being connected to power

AC outlet.

2. When the balance is working using the battery, the symbol of battery with charge level is displayed on up-right corner of the balance's display. The three lines all

NOTE: Battery duration depends also from working mode of the display backlight. To get a longer battery duration, switch off the backlight or set it in AUTO mode.



switched on means a maximum level of battery charge, instead when all three lines are switched off and only the battery symbol is displayed means that it is necessary to connect the balance to AC power outlet to re-charge the battery.

3. To re- charge the battery, connect the provided external power supply to the balance. (see par.5)

4. When the external power supply is connected, the balance automatically switch itself on and, after performing the initial test on display, it enters the stand-by mode showed by a single point in the display. In standby mode also the battery recharge symbol will remain switched on.

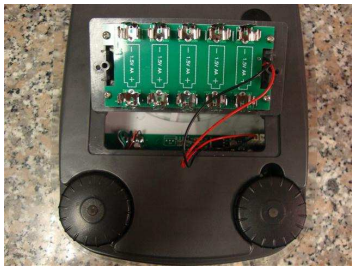
5. The charge level will step by step raise until it reaches the maximum level. However let the battery recharge at least for 8-10 hours before disconnecting the external power supply from the balance.

23 Working with internal batteries type AA 1,5V

With batteries inserted the balance can work without power supply.

1. To install the battery type AA 1,5V remove the two screws on the bottom to the balance

2. Open the panel and you will find the batteries holders.



3. Insert five AA 1,5V batteries taking care of the right position of each battery.

4. Put again the panel into its position and fix it again with the screws.
5. Now the balance can operate with batteries.

With the external power supply disconnected, it is possible to switch on or switch off the balance trough the **ON/OFF** button and work without being connected to power AC outlet.
When the balance is working using the battery, the symbol of battery with charge level is displayed on up-right corner of the balance's display. The three lines all switched on means a maximum level of battery charge, instead when all three lines are switched off and only the battery symbol is displayed means that it is necessary to change the batteries.

Wenn die externe Stromversorgung angeschlossen ist, die Waage automatisch schalten sich ein.
Schalten Sie die Waage Trog die ON / OFF-Taste.

24 Error Codes

ERROR MESSAGE ON DISPLAY	MEANING	POSSIBLE SOLUTIONS
ERR01	Weight not stable after operation of tare	Protect the balance from air flows or from vibrations of the working table
ERR02	impossible to start the calibration due to instability of the balance	Protect the balance from air flows or from vibrations of the working table.
ERR03	calibration weight not correct or balance unstable	Calibrate with correct weight or protect the balance from environment disturbs
ERR04	weight of samples for the piececounting function not adequate or unstable	Select a bigger number of samples or protect the balance from vibrations.
ERR05	impossible to print / weight unstable	Protect the balance from environment disturbs
ERR06	Weight cannot get stable in density mode	Protect the balance from environment disturbs
ERR07	error in inserting the data	
	Over-range condition	Unload the weights loaded on the pan
	Under-range condition	Place properly pan and underpan

25 Maintenance and care

Regular maintenance of yours balance guarantee accurate measurements.

- **Cleaning**

Before cleaning the balance unplug the power supply of the balance from the voltage supply of your room. Do not use aggressive cleaning product (as solvents or similar), use a humid towel with soft detergent, Avoid liquids to go inside the instruments during the cleaning. Wipe the balance with a soft towel. Parts of samples or powder can be removed using a brush or vacuum cleaner.

- **Safety checks**

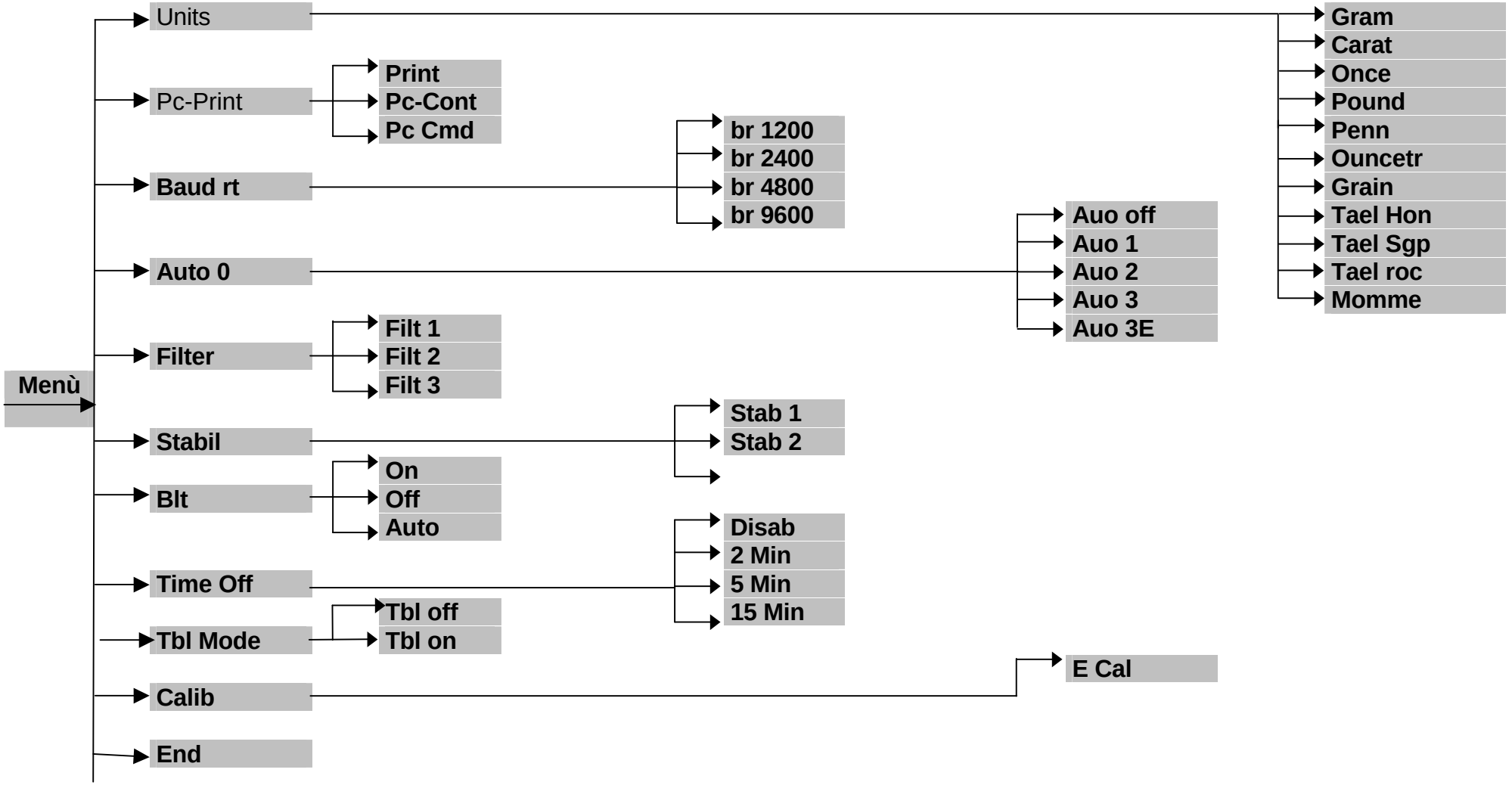
  Safety of the instrument is no more guaranteed when:
  -balance power supply is clearly damaged
  -balance power supply is not working anymore
  -balance power supply is stored for long time in hard environment conditions.
  In these instances refer to the assistance centre where specialized technician will make reparations to bring back the instrument in the safety conditions eventually.

26 Quick guide to balance parameters setup

- To enter the balance parameters setup menu, press and keep pressed the **MENU** button until the acoustic alarm is over.
- Use then the **MENU** button to go to next parameter, use the **CAL** button to go to previous and the **PRINT** button to confirm the choice.

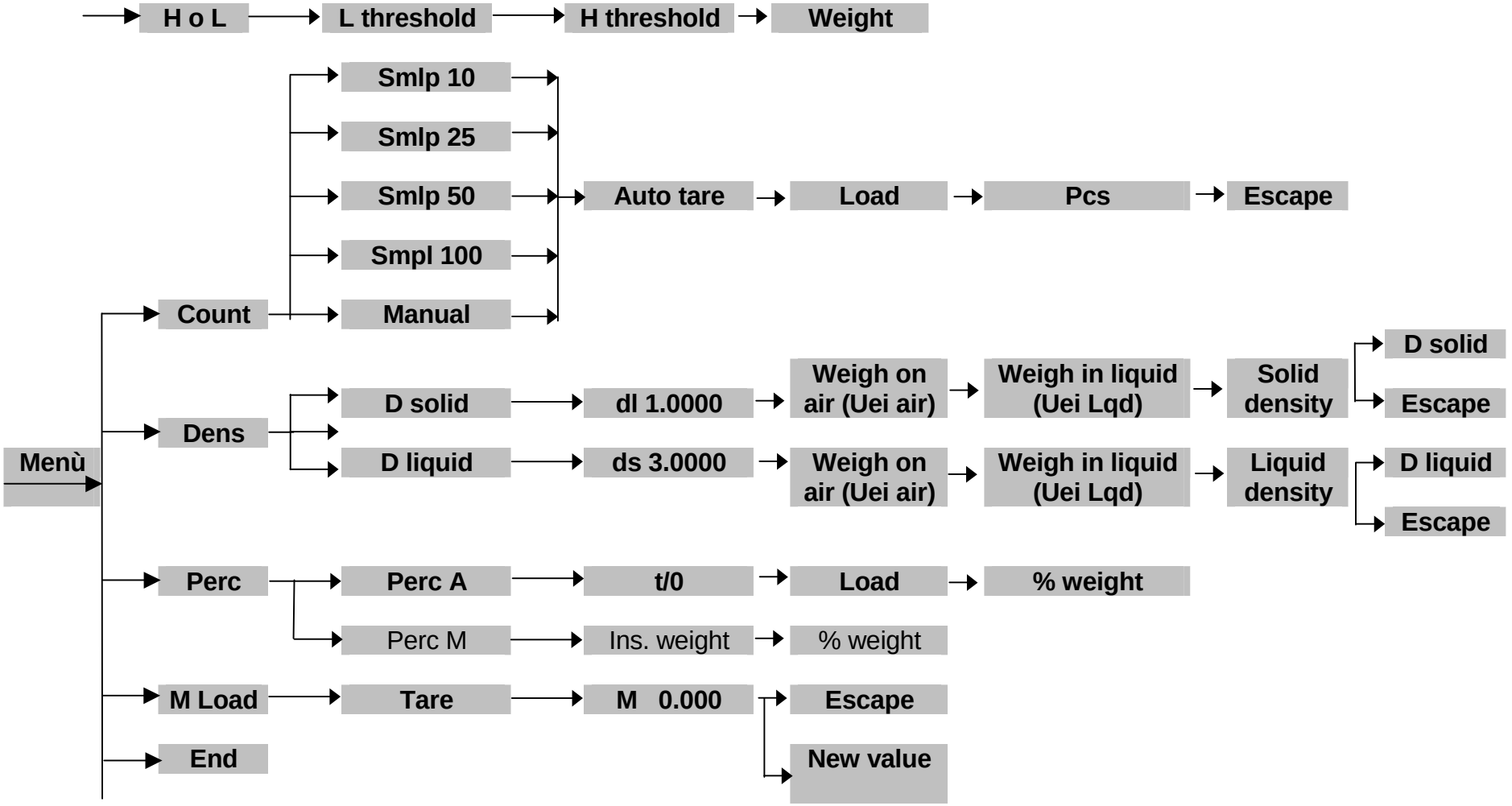
Stab 3

- To escape from menu, press the and keep pressed the **MENU** button until the acoustic alarm is over**.**



27 Quick guide to the use of the balance programs

- To enter the balance programs menu, press the **MENU** button.
- Use then the **MENU** button to go to next parameter, use the **CAL** button to go to previous and the **PRINT** button to confirm the choice.
- To escape from menu, press the and keep pressed the **MENU** button until the acoustic alarm is over**.**



28 Balance technical features

The models below indicated are all for internal use. Max altitude use: 4000m; Polltion grade: 2; Overvoltage category: II

Power supply included:	INPUT: Switching 100-240Vac~ 50/ 60Hz, OUTPUT: 9V DC 1000mA, Max absorbed power 9VA
Battery:	internal rechargeable
Enviroment condition adaption:	Selectable filters
Autozero:	Selectable from Menu
Operating temperature range:	+5°C - +35°C

29 Optional Accessories

ACCESSORIES	
Code	**DESCRIPTION**
611-2553	KIT density Solids and Liquids scales 0.001 and 0.0001
611-2552	KIT Density Solids scales 0:01
611-8684	Pack portable rechargeable batteries. (not for all models)

30 Technical service

Web Resources

Visit the VWR's website at **www.vwr.com** for:
• Complete technical service contact information
• Access to VWR's Online Catalogue, and information about accessories and related products
• Additional product information and special offers
Contact us For information or technical assistance contact your local VWR representative or visit. **www.vwr.com**.

31 Warranty

VWR International warrants that this product will be free from defects in material and workmanship for a period of two (2) years from date of delivery. If a defect is present, VWR will, at its option and cost, repair, replace, or refund the purchase price of this product to the customer, provided it is returned during the warranty period. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication, or from ordinary wear and tear. If the required maintenance and inspection services are not performed according to the manuals and any local regulations, such warranty turns invalid, except to the extent, the defect of the product is not due to such non-performance.

Items being returned must be insured by the customer against possible damage or loss. This warranty shall be limited to the aforementioned remedies. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

32 Compliance with local laws and regulations

This equipment is marked with the crossed out wheeled bin symbol to indicate that this equipment must not be disposed of with unsorted waste.
Instead it's your responsibility to correctly dispose of your equipment at lifecycle -end by handling it over to an authorized facility for separate collection and recycling. It's also your responsibility to decontaminate the equipment in case of biological, chemical and/or radiological contamination, so as to protect from health hazards the persons involved in the disposal and recycling of the equipment.
For more information about where you can drop off your waste of equipment, please contact your local dealer from whom you originally purchased this equipment.

By doing so, you will help to conserve natural and environmental resources and you will ensure that your equipment is recycled in a manner that protects human health.

The customer is responsible for applying for and obtaining the necessary regulatory approvals or other authorizations necessary to run or use the Product in its local environment. VWR will not be held liable for any related omission or for not obtaining the required approval or authorization, unless any refusal is due to a defect of the product.

33 Equipment Disposal

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