

User Manual

M5-Alcodens



M5-Alcodens hydrostatic Balance
Software Revision: 1_00

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1 Safety instructions and warnings



ATTENTION!

Please read these installation and operating instructions carefully before starting work with your new scale. Use of the device other than that described in this manual no longer guarantees product safety. Keep the instruction manual carefully.

The scale complies with the directives and standards for electrical equipment, electromagnetic compatibility and the given safety regulations. If the installation is not carried out according to the instructions provided or if it is used improperly, all warranty rights become void.



- Do not use the device in potentially explosive areas.



- Before using the device for the first time, check whether the power supply unit or power cable is damaged and whether the supply voltage corresponds to the mains voltage.
- To disconnect the device from the mains voltage, unplug the power cable.

2 Storage conditions

- **Storage temperature** +5 °C...+40°C
- **Storage humidity** 45% - 75%.
- **Keep the packaging of the scale** in case of any sending for assistance, disconnect all cables and any accessories to prevent unnecessary damage.
- **Do not unnecessarily expose** the scale to extreme temperatures and humidity, and avoid strong shocks.

2.1 Overview and installation of accessories

Unpack the device and place it on a stable table and in a suitable place as described in paragraph 2.2



Once unpacked, the device will be found as shown in the first image. The Weighing Range is already fixed correctly.

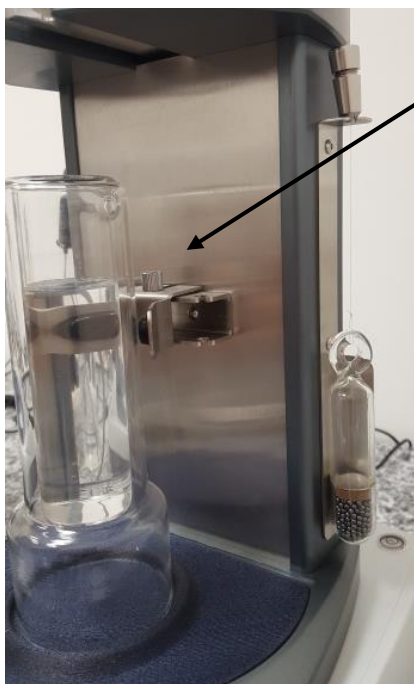
Accessories installation:



Position the thermometer and the floating item as shown in the figure.



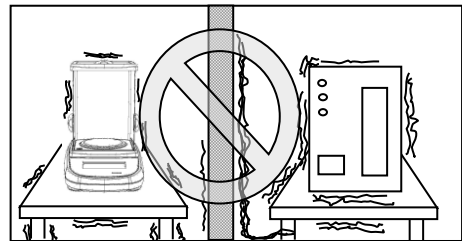
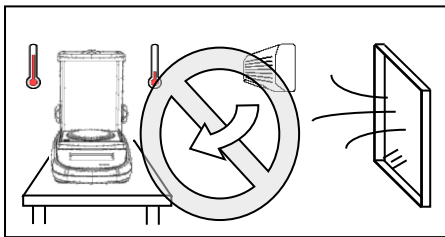
Connect the temperature probe to the device.



Position the **Beker** and use the center beaker to center it correctly.

2.2 Place of installation

- **Remove** the scale and the relevant calibration weight, in the models where it is included, from the packaging and check for any visible damage to the device.
- **Do not install** the scale in environments where there are drafts, strong temperature changes and vibrations.
- **Do not use** the scale in potentially explosive atmospheres.
- **The humidity of the environment** in which the scale is used must be between 45% and 75%.



2.3 Commissioning

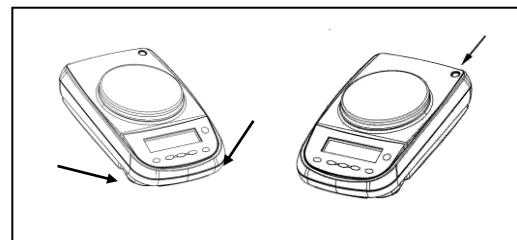
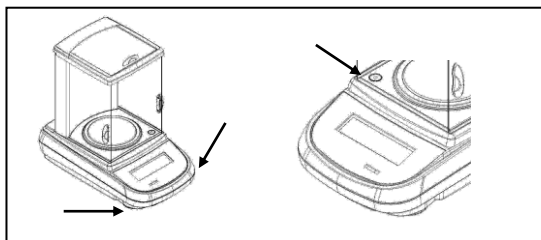
In models with internal calibration, manually remove the screw located in the lower part of the left-hand side scale



ATTENTION!



Level the scale by adjusting the special feet located on the front of the scale.



Wait 30 minutes after switching on and calibrate the device after leveling it. For the calibration procedures, refer to the “**Device calibration chapter**”. Perform calibration of the device whenever it is moved to another place.

It is recommended not to drop objects of excessive weight on the weighing pan of the scale to avoid damaging it.

The assistance service must be performed by specialized personnel and the spare parts used must be original. To do this, contact the dealer from whom the device was purchased.



Insert the jack of the supplied power supply into the connector on the back of the device.



Then connect the power supply to the socket located near the device. Do not use cables/extensions that do not comply with current regulations.

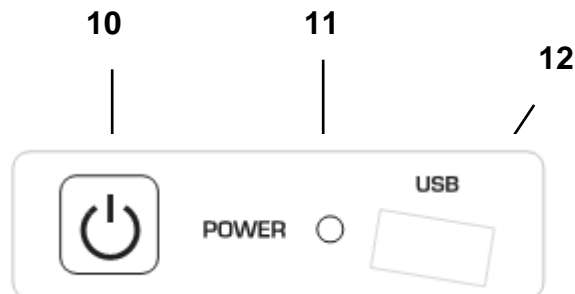
N.B. Check that the power supply indicated on the device plate corresponds to that used in the Country in which the installation is being carried out.

3 Side keyboard functionality I

The scale is equipped with a keyboard located on the left side to perform the on/off operations.

3.1 Description

The keyboard has an on/off button (1), an operating indicator LED (2) and a USB port.



After connecting the power supply to the mains, the device will start automatically without having to press the power button.

Use the power key to turn off the device and to restart the system when the power cord is already plugged in.

N.B. The switching on and off of the device takes about 20 seconds during this period the display will remain off.

When turning on, wait for the initial screen to appear before performing other operations.

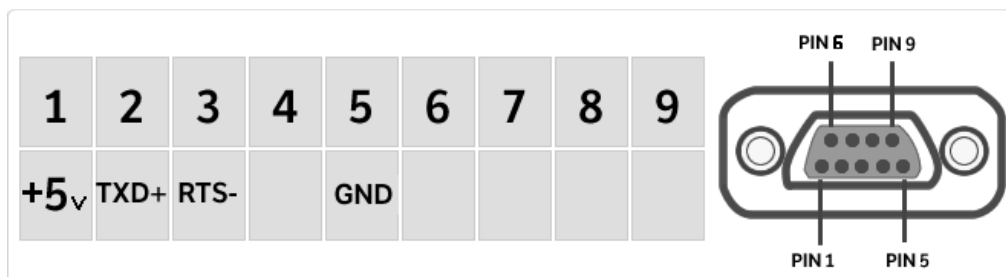
While in the shutdown phase, wait for the green LED to switch off before removing the power plug if necessary.

4 Serial interface connections

The device is standard equipped with an RS 232C interface for connection to a serial printer. To ensure communication between the device and a printer, the following conditions must be met:

connect the printer using a suitable cable by matching the position of the printer signals with those of the device.

correctly set the transmission speed and the type of printer according to the printer parameters. See chapter 7.7



N.B. It is recommended to use one of the printers indicated in chapter 7.7, (Mod. dpp250 or TLP50) to ensure correct printing operation. (If different printers are used, it will not be possible to print the graph).

4.1 Basic screen display area functionality

The scale is equipped with a color display with touch screen functionality that allows you to quickly access the various menus and functions of the device by touching the screen in the active areas.



Area with analysis functions






Program for determining the alcoholic strength.

Program for determining the total dry extract.

Program for evaluating musts.

2

Bar displaying the date and the time, selecting the user, accessing the function menu, setting the weighing parameters and switching off the device.

	Touching this area let you access the menu of available functions.
	Touching this area let you access the weighing settings menu, display preferences, peripheral setup and user customization.
	Touching this area let you access the menu for switching off or activating standby status of the device.
Default	Touching this area let you access the user menu to quickly select the desired one.

4.2

4.3 Analysis screen display area functionality

The scale is equipped with a color display with touch screen functionality that allows you to quickly access the various menus and functions of the device by touching the screen in the active areas.



1 →  Densità 

2 →  T 25.71 °C **0.92941** * dT/20

3 → Massa Vol. = 0.92774 g/cm³

Stampa -0-

1

Bar with active function description



Description of the active function



Touching this area let you exit the function and return to the main screen.



By touching this area, you can go to the previously displayed screen.

2.

This area displays all the information relating to the type of analysis being performed.

3

Function key display bar.

Touching the keys displayed in this area will perform the relevant function. All the keys available in the simple weighing screen are explained below. The function key display bar varies according to the selected applications.



Key bars available in Simple Weighing screens.

Print: Data print activation key.

-

Reset operation activation key. Reset operation activation key.

-

4.3.1 Instructions for using the numeric and alphanumeric keyboard for entering data

The functionality of the alphanumeric keyboard described below is valid for all data entry operations in the various ways of using the device.

Form 1

<	Nuovo utente										×	
q	w	e	r	t	y	u	i	o	p			
a	s	d	f	g	h	j	k	l	←			
⬆	z	x	c	v	b	n	m	Enter				
A_1_#	⌋						Del	⬅	➡			

Alphanumeric keyboard.



Uppercase or lowercase letter input mode selection key.



Key to delete the last character entered.



Key to delete all entered characters.



Key for moving the cursor back and forth on the entered string.

Form 2

<	Nuovo utente										×	
§	€	£	°	&	'	!	?	@	ç			
à	è	é	ì	ò	ù	ß	{	}	←			
⬆	ä	ö	ü	μ	ø	[]	Enter				
A_1_#	⌋						Del	⬅	➡			



Key for confirmation and memorization of the entry.

Form 3

<	Nuovo utente										×	
_	=	%	7	8	9	+	*	;	:			
#	()	4	5	6	-	/	,	←			
⬆	<	>	1	2	3	0	.	Enter				
A_1_#	⌋						Del	⬅	➡			



Keyboard character selection key. Touching this key, the various characters available for entry are displayed in rotation: Form 1, Form 2, Form 3




Button for canceling the entry operation.

5 Standby, logout, shutdown function

After inserting the power cable into the mains socket, the device will turn on automatically taking you to the basic weighing screen.

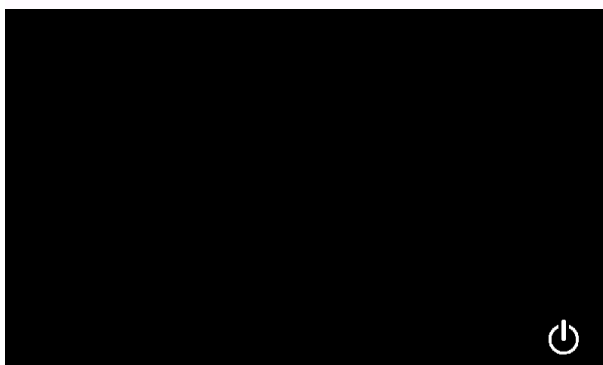


By touching the area with the  you access the shutdown menu.



There are 3 shutdown modes:

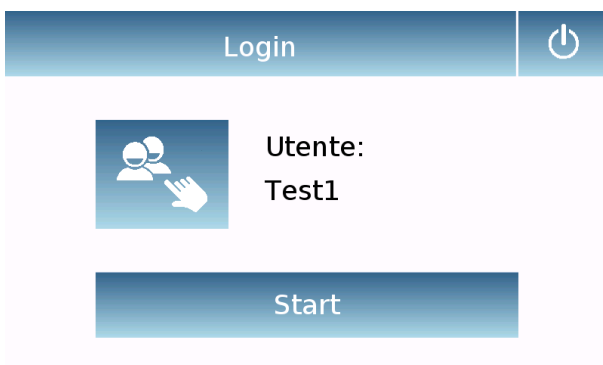
- Display off.
- Logout.
- Shutdown.



Display off.

By selecting the display off mode, the device will enter standby status, the display will be turned off and the command to turn the system back on will remain active only in the lower right corner.


By touching the symbol, you will return to the basic weighing screen.



Logout

By selecting the logout mode, the current user will be deactivated.

Touching the **“Start”** key will reactivate the user and in the case of a password-protected user, it will be requested to enter it.

By touching the key , you can select another user with which to restart the device.

Shutdown

By selecting the shutdown command, the device will be switched off. To restart, it will be necessary to press the key on the left of the device. Or remove the power plug and reinsert it.

6 Custom settings

This section explains all the customization functions of the device. Each function described below can be set differently for each user.

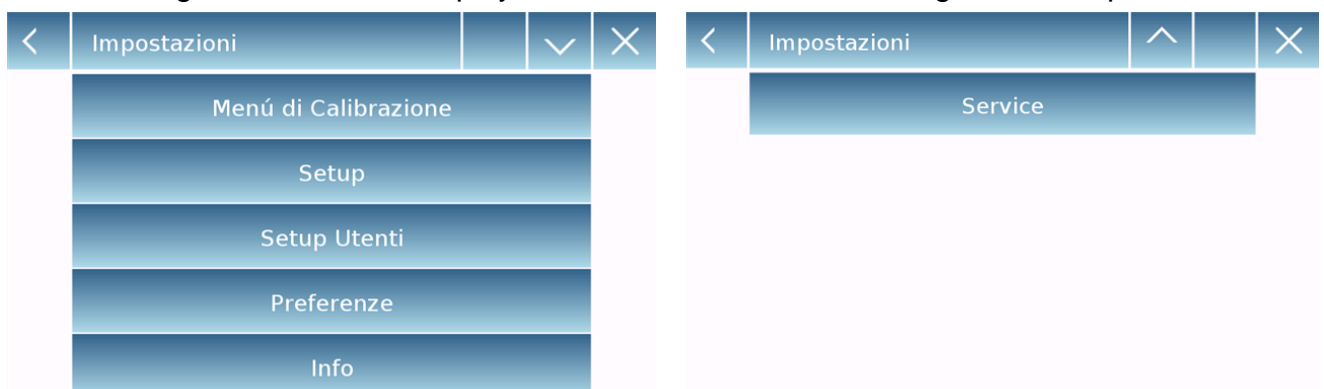
N.B. Some settings can only be changed by users with administrator rights.



- Calibration menu
- Setup
- User setups
- Preferences
- Info
- Service

To access the settings menu, touch the key in the top bar of the display.



The following screens will be displayed with all the functions relating to the setup menu.



Number of pages available indicator. Return to the previous screen ←   → Exit the menu

To scroll the pages forward and backward, tap on the arrows.



Function indicator not available or not enabled for users without administrator rights.

6.1 Language selection

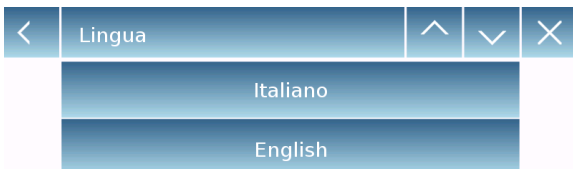
Select the “**Preferences**” function in the settings menu.



Touch the “**Language**” key in the menu list.

You can select the language in which the device is used.

Touch the “**Language**” key in the menu list.



Then select the desired language.

All displays will automatically be translated into the selected language.

N.B. The selected language will only be assigned to the user with whom the selection was made.

6.2 Time date setting

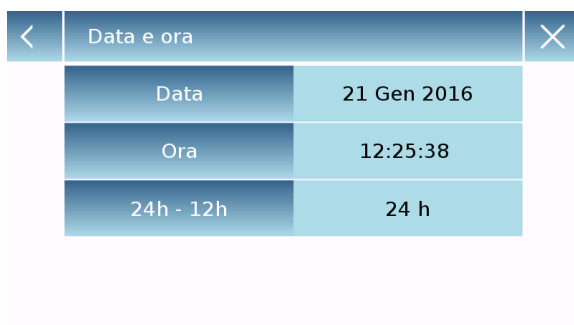
Select the “**Setup**” function in the settings menu.

Enter the new date and time values. It will also be possible to select the 24- or 12-hour format for the time.

N.B. The date and time setting cannot be customized for each user, but once defined it will be changed for all users.



Touch the “**Date and time**” key in the menu list.



Touch the “**Date**” key in the menu list to change the date.

Touch the “**Time**” key in the menu list to change the time.

Touch the “**24h – 12h**” key in the menu list to set the time format.



A numeric keypad will appear for entering the date and time.

In “**dd/mm/yyyy**” mode for date and “**hh:mm:ss**”

Then touch the “**OK**” key to confirm the new settings, the “**C**” key to cancel all the data entered or touch the “**X**” to exit without changing the value.

6.3 User profile creation, modification and selection

The scale can be set up for customized use for multiple users. You can create up to 10 different usage profiles. When first switched on, the device has the “**Default**” user active; this user cannot be deleted or renamed.

Each user will then be able to fully customize all the settings of the database tool included. Once your profile has been created, just touch “**on the user area**” on the basic screen and select the desired user. This will load all the settings relating to the selected user. From now on, all changes made with the active user will be stored and made available every time the user is selected.

Two types of user can be created:

- **Administrator**
- **Standard**

The creation of an administrator user allows the created user to access all the setting functions of the device and to be able to modify or eliminate other user users.

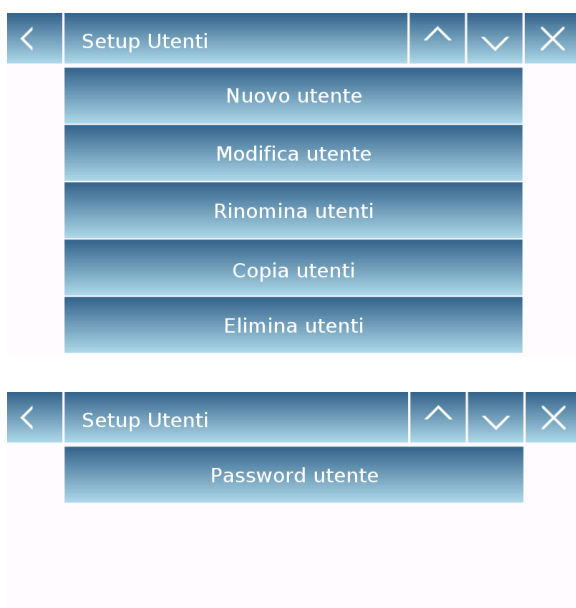
The creation of a standard user allows the created user to access only some setting functions of the device.

The prohibition indication displayed when touching a function that is not available to the standard user is as follows



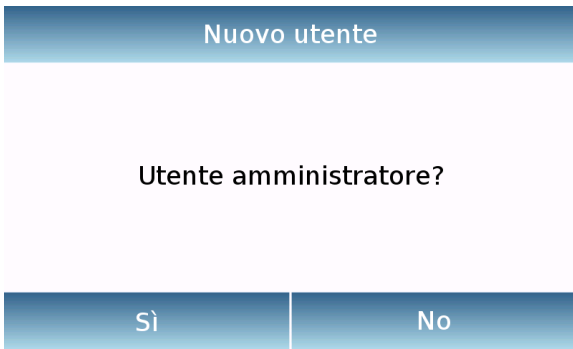
To be able to change the protected functions, you must log in with an administrator user. Furthermore, after creating both an administrator and a standard user, it will be possible to assign an access password that will be required each time the user is selected and when the device is switched on.

All the operations relating to user creation, modification and deletion are described below. Select the “**User Setup**” function in the settings menu



From this screen, you can access the following functions.

- New user
- Edit user
- Rename user
- Copy users
- Delete users
- User password



▪ **New user**

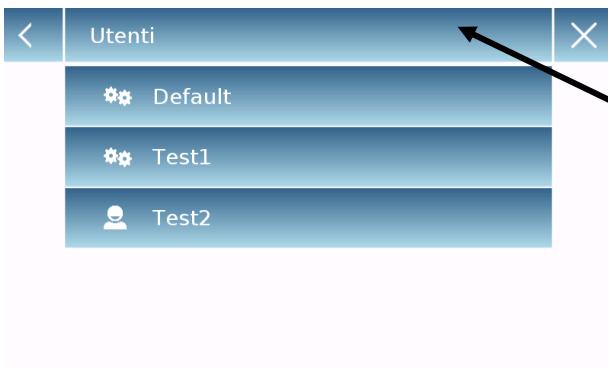
By selecting the "New user" function, a new user can be defined. The maximum number of users that can be inserted is 10. You will be prompted to select whether the user you want to create should have administrator powers or be a standard user.



The keyboard for entering the user name will then be activated automatically. The maximum number of characters allowed is 30.

The entry method distinguishes uppercase from lowercase letters; therefore, a user entered as "TEST" will be different from a user entered as "test".

After searching for a new user, go back to the main screen.



Touch the user selection area and select the user you just created. From now on, all changes made to the functions, databases or analysis results will be associated with the user and each time the user is called up they will be automatically reloaded.

The symbol to the left of the user name indicates the type of user:



Administrator



Standard

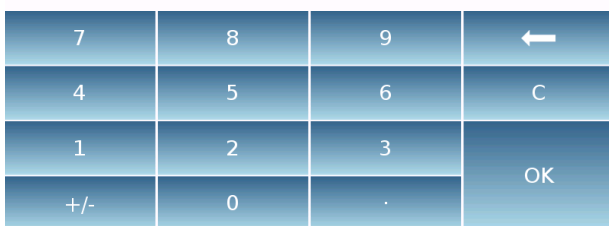


▪ **Edit user**

In the menu of the "edit user" function, you can edit the type of user ("Standard or Administrator) and temporarily unlock the settings locked in the case of a "standard" user.

Type

If the user is of the standard type, in order to be able to change the type of user, the password of a user with administrator rights will be required to be entered.



Select "Standard" to set the user in standard mode or select "Administrator" to set the user with administrator rights,



Setting

By selecting this function, you will be asked to enter the password of a user with administrator rights.

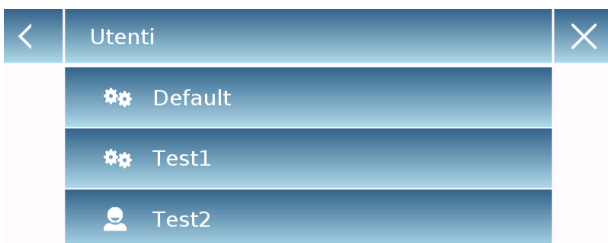
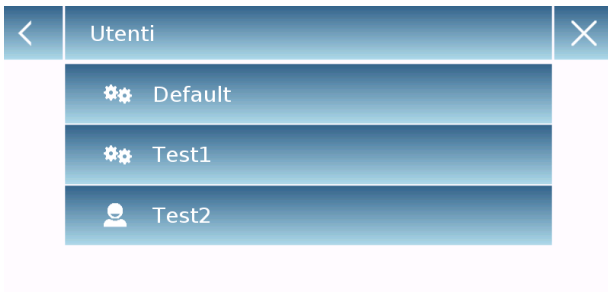


Then select the "Enable" function to temporarily unlock the standard user or select the "Disable" function to lock the user again.



After unlocking the user, an open padlock will appear on the left side of the user name in the basic screen.

Unlocking will remain active until it is locked again via the edit user menu, or when another user is selected or the device is turned off.



▪ **Rename user**

By selecting the "Rename users" function, the name of the selected user can be changed.

Select the user you want to rename.

The keyboard for editing the name will appear.

Touch "X" to cancel the operation or change the name and confirm with the "Enter" key.

▪ **Copy users**

By selecting the "Copy users" function, a new user can be created with the same configuration as an existing user. Any databases will not be copied and any password protection will not be activated. To copy the databases of another user, it is necessary to export and then import them into the desired user.

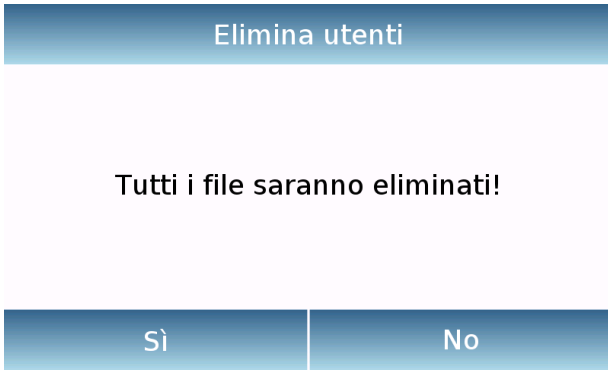
Select the user you want to duplicate.

Enter the name to be assigned to the new user and confirm with the "Enter" key

▪ **Delete users**

By selecting the "Delete users" function, you can definitively eliminate a user with the related databases.

The list of memorized users will be displayed, then select the user to delete.



Confirm by touching the “**Yes**” key or cancel the operation by touching the “**No**” key.



▪ **User password**

By selecting the "User password" function, it will be possible to assign an access password for the "standard" or "Administrator" user.



You will then be prompted to enter your password again for confirmation.

Enter it and touch the “**OK**” key.

From this moment on, every time you want to access the user you will be asked to enter the password.

N.B. Write down the password you entered and keep it in a safe place. Attention! In case of loss, it will be possible to recover only the password for the "standard" user. The recovery procedure is described in chapter 8.3.1.

6.3.1 Password recovery and removal

User protection via password is applicable to both "Standard" and "Administrator" users. In the first case, if the user forgets its password, it will be possible to update it from the **"User password"** menu.

<	Vecchia Password			×
7	8	9	←	OK
4	5	6	C	
1	2	3		
+/-	0	.		

After selecting "user password", you will be asked to enter the **"Old password"**.
Enter an administrator password.

<	Nuova Password (min 4 car.)			×
7	8	9	←	OK
4	5	6	C	
1	2	3		
+/-	0	.		

Then enter the **"New password"** to be assigned to the user.

<	Conferma nuova Password			×
7	8	9	←	OK
4	5	6	C	
1	2	3		
+/-	0	.		

Confirm the password you just entered.

From now on, the "Standard" user will have a new access password

N.B.
To remove the password, when asked to enter and confirm the new password, touch the "OK" key without typing any value.

Attention! If the lost password is that of an administrator, you will need to contact a service center to recover it.

6.4 Preferences: language, display appearance, brightness, buzzer

For each user you can set a graphic aspect of the display, the language of use, the activation or not of the acoustic signal, and the luminous intensity of the display. The various options available and how to activate them are described below.

Select the “**Preferences**” function in the settings menu.



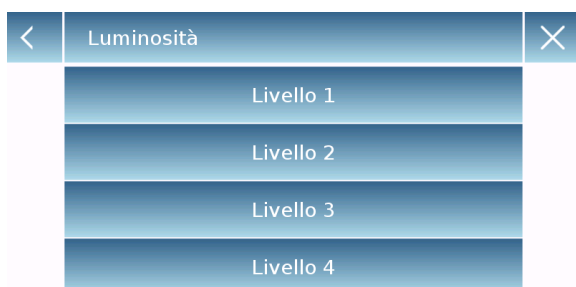
The parameters that can be set in the “**Preferences**” menu are as follows:

- Language (see chapter 7.1)
- Appearance
- Brightness
- Beeper
-



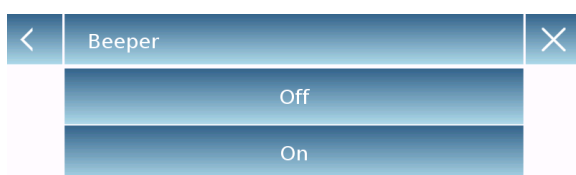
Appearance

You can choose between 6 different color combinations and select the one you want by touching the corresponding button.



Brightness

There are 4 levels of display brightness. Select the one you want by touching the corresponding key.



Beeper

The beeper function allows you to activate or deactivate the acoustic signal. When activated, a beep sounds every time active parts of the touch screen are touched.

6.5 Setting of weighing parameters

For correct use of the scale, it is important to set the weighing parameters correctly according to the environment of use.

This section describes the filter, stability, autozero and weighing unit parameters.

Select the “**Setup**” function in the settings menu and then the “**Weighing parameters**” function



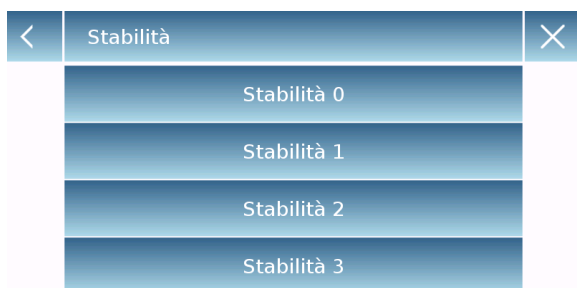
In the “**Weighing parameters**” screen, the set values can be checked immediately (in the box to the right of the parameter).

By touching the key of the parameter to be modified, the value can be modified.



- **Filter:** the filter function allows speeding up or slowing down the response of the scale according to the weighing requirements and environmental conditions. By selecting level 1, the response will be immediate but the scale will remain more sensitive to environmental disturbances such as ventilation and vibrations. As the level increases, the response will be slower and the indication more stable

- **Level 1:** dosing conditions
- **Level 2:** stable conditions
- **Level 3:** unstable conditions



- **Stability:** this function allows you to adapt the scale to the working environmental conditions. When using the device in a virtually vibration free environment, select level 0. The default level is 2. Use level 3 for very noisy environments.

- **Level 0:** For stable environments.
- **Level 1:** For not so stable environments.
- **Level 2:** For unstable environments.
- **Level 3:** For highly unstable environments.



- **Autozero:** the automatic zero correction constantly adjusts the zero value. These possible variations may be due, for example, to the dirt that can be deposited on the plate. You can deactivate this function by selecting the “**Off**” mode. Level 1 is the one with the least correction up to level 3E that is the maximum correction.

6.6 Calibration and setting the calibration mode

The electronic scale takes measurements of mass using gravity (g). Differences in geographical regions and in altitude vary the acceleration due to gravity (g). Therefore, to obtain accurate measurements, the scale must be adapted to the place of use and the ambient conditions. This adjustment is made via the calibration function.

Select the “**Calibration menu**” function in the **settings menu**



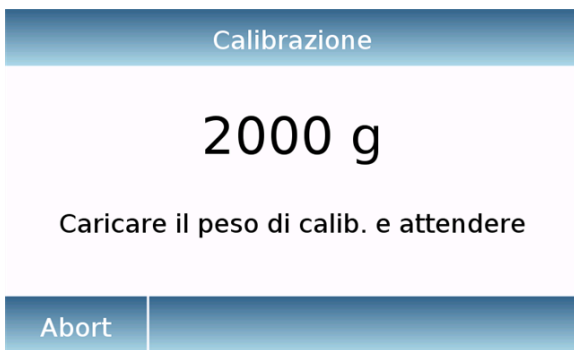
In the calibration menu, you can carry out the calibration, view and print the data relating to the last calibration and set the calibration mode.

Before carrying out the calibration procedure, check that the pan is empty.

- **Calibration:** touching the calibration key will activate the calibration procedure corresponding to the set calibration mode.



Load the required calibration weight or touch the “**Abort**” key to cancel the calibration procedure.



Wait for the weight to be acquired.



If the operation is successful, the weighing screen will be displayed with the calibrated weight value.

Remove the weight from the pan.



- **Calibration data:** in the calibration data screen, you can check the date on which the last calibration was carried out, the way it was carried out, the value of the weight used and the correction made with respect to the previous calibration. Touching the “**Print**” key you can print the displayed data.



- **Calibration mode:** the scale can be set to perform calibration in two different modes:

Default external

By selecting the default calibration mode when the calibration command is given, the requested weight will be the default one set in the factory, the value of which will vary according to the scale model.

Optional exterior

By selecting the "external optional" calibration mode, you can set a customized calibration weight value.



After selecting the "select mode", touch the Weight setting key to set the desired weight value.





Internal*

By selecting the internal calibration mode when the calibration command is given, the scale calibrates automatically through the internal motorized autocalibration system.



Automatic*

By selecting the Automatic calibration mode, the scale automatically calibrates when the environmental conditions change or in any case within a time interval that can be set from 60 to 999 minutes. Furthermore, with this mode you can carry out the calibration whenever you want by touching the "Calibration" key.



To change the autocalibration interval, touch the "Calibration interval" key and set the desired range that must be between 60 and 999 minutes.

***The internal and automatic calibration mode is only available for models with an autocalibration system.**

6.7 Device settings

This section describes the functions and related settings of the RS232 and USB serial output with which the device is equipped.

Select the **“Setup”** function in the settings menu and then the **“Peripherals”** function.

Periferiche		^	v	×
Stampante	Generica			
Baud rate	9600 Baud			
Stabilità	Off			
Intestazione stampa	On			
Avanzamento carta	0			

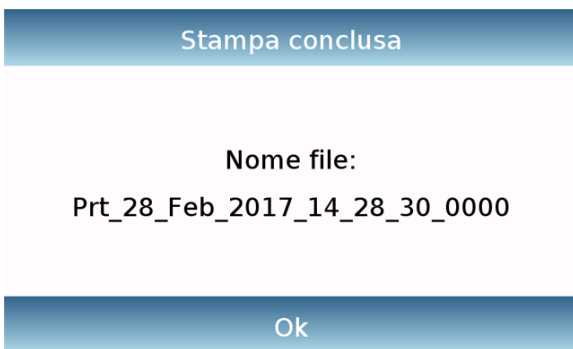
In the **“Peripherals”** menu screen, the values of the parameters set can be immediately verified (in the box to the right of the parameter).

Touching the key of the parameter to be set will activate the relevant screen with the list of the various options that can be selected.

Periferiche		^	v	×
GLP	Off			
Ora e data	Off			
Dati Cal. termometro	Off			
Dati Cal. pescante	Off			
Dati Cal. bilancia	Off			

Stampante		×
DPP 250		
DPP 350		
T/LP 50		
File su Usb-Key		
Generica		

- **Printer:** this function allows you to select the device connected to the serial output.
 - **Dpp250:** print on command, touching the **“Print”** key for the printer Dpp250.
 - **Dpp350:** print on command, touching the **“Print”** key for the printer Dpp350.
 - **Tlp50:** print on command, touching the **“Print”** key for the printer Tlp50.
 - **General:** print on command, touching the **“Print”** key for generic serial type printer.



 P1

 dT/20: n 0.92975
 Vol. Mass: 0.92808 g/cm3
 Temp.: 26.25°C

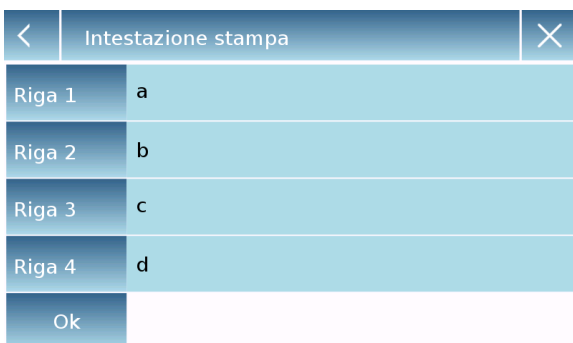
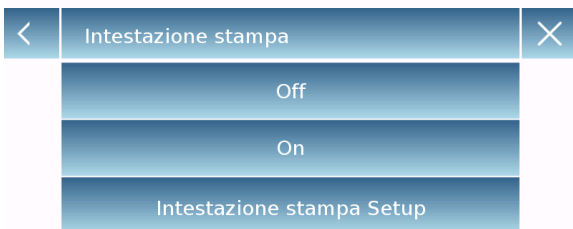
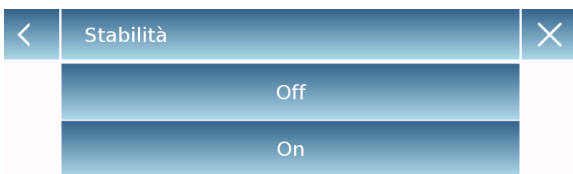
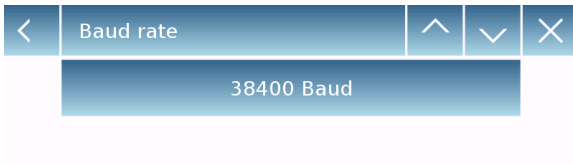
➤ **File on Usb-Key:** print on command, touching the **“Print”** key will print on file. In order to use this mode, you will need a USB key to be able to save files. (Possibly use a dedicated USB key only for this purpose). With the "File on Usb_Key" mode activated, before executing the print command, check that the USB key dedicated to saving is inserted in the USB port on the left side of the instrument.

While saving the file, the screen will scroll through the information that will be saved in the file.

At the end of saving, the automatically assigned file name will be displayed on the screen.

On the USB key you will therefore find a compressed format file containing a text file (.txt) with the weighing data or the result relating to the function used.

Example of printing with density function.



- **Baud Rate:** serial transmission speed selection parameter.
- The selectable speeds are as follows:

- **1200 Baud.**
- **2400 Baud.**
- **4800 Baud.**
- **9600 Baud.**
- **19200 Baud.**
- **38400 Baud.**

- **Stability:** stability check before data transmission. You can decide whether to activate or deactivate the stability control before printing the weight value:

- **On.**control enabled.
- **Off.**control disabled.

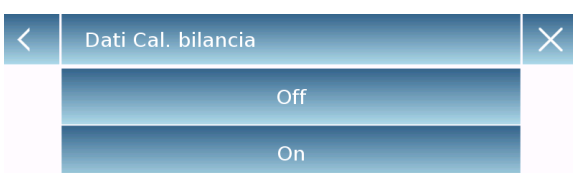
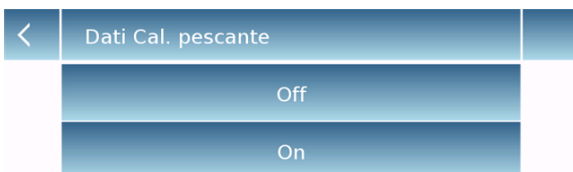
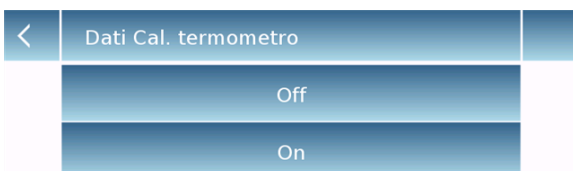
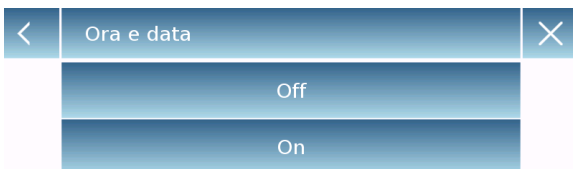
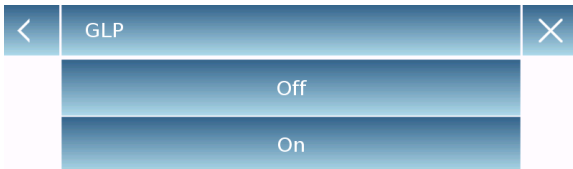
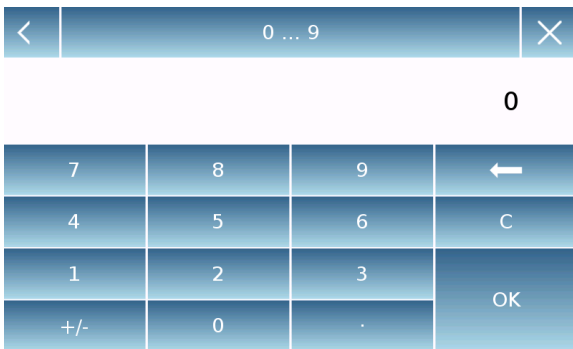
- **Print header:** this function allows you to position a header at the beginning of the receipt printout. The function can be:

- **On.**receipt heading enabled.
- **Off.**receipt header disabled.
- **Print header Setup:** activation screen for entering the desired text for the receipt header.

In the print header screen, touch the rectangles indicating the line number to automatically activate the alphanumeric keyboard and enter the desired text with a maximum number of 40 characters per line.

Touch the “**Ok**” key to confirm the text entered.

NB. You can activate and deactivate the receipt heading function without losing the entered text, which will remain memorized until the contents of the various lines are deleted.



- **Paper feed:** this function allows you to set a number of blank lines to add at the end of receipt printing to allow it to come out of the printer.

The numeric entry keyboard will be activated automatically, enter the desired number of lines (between 0 and 9) and touch the “Ok” key to confirm the entered number.

- **G.I.p.:** this function allows you to activate or deactivate the printing of g.i.p. data after input by the user

- **On.** g.i.p. data print enabled.
- **Off.** g.i.p. data print disabled.

For entering information and managing the G.I.p., see **chapter 9.9**

- **Time and date:** this function allows you to activate or deactivate the printing of the time and date.

- **On.** calibration data print enabled.
- **Off.** calibration data print disabled.

The printing of the time and date cannot be deactivated with the G.I.p. Function enabled.

- **Thermometer cal. data:** this function allows you to activate or deactivate the printing of the thermometer calibration data.

- **On.** thermometer data print enabled.
- **Off.** thermometer data print disabled.

- **Floating item cal. data:** this function allows you to activate or deactivate the printing of floating item calibration data.

- **On.** floating item data print enabled.
- **Off.** floating item data print disabled.

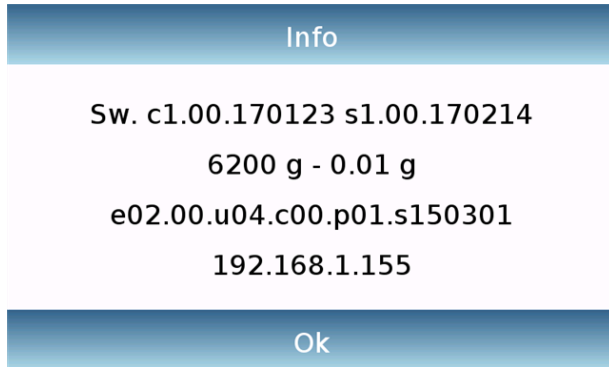
- **Scale cal. data:** this function allows you to activate or deactivate the printing of scale calibration data.

- **On.** calibration data print enabled.
- **Off.** calibration data print disabled.

6.8 Software info

This section explains how to view information about the device's software versions.

Select the “**Setup**” function in the settings menu, then the “**Info**” function



The information shown in the Info screen will be requested by the technical personnel in the event of a request for service.

6.9 Service

This section describes all the functions relating to the Service and data backups of the device.

Select the “**Setup**” function in the settings menu, then the “**Service**” function



The functions available in the **Service** menu are as follows:

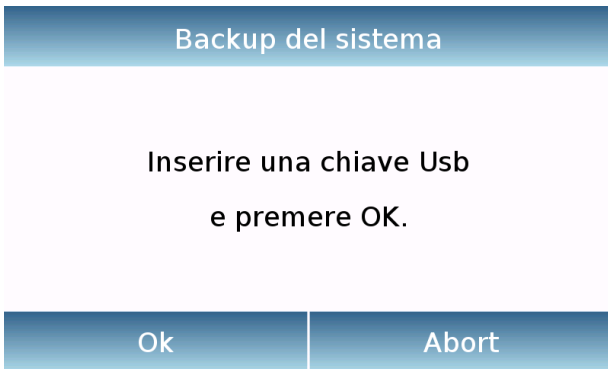
- System data backup and restore.
- Factory reset.
- Software update.
- Scale technical service.
- Thermometer technical service.

6.9.1 System data backup and restore

You can perform a total backup of the system, or restore the data and configuration previously saved on a USB stick.

This section describes the steps to be taken to export or import data.

N.B. It is recommended to use an empty USB key dedicated to saving and restoring data.



- **System backup:** this command allows you to save all users and their configurations stored in the system. Including related drying databases and saved test results.

To make the backup, you need a USB stick.

Insert the flash drive into the USB port located on the left side of the device, and press the "OK" key. Touch the "Abort" key to cancel the backup operation.

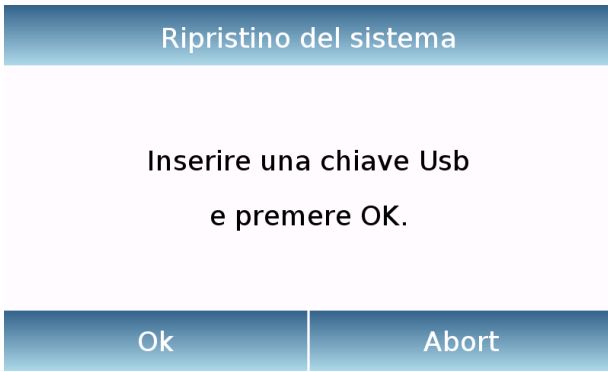
If the USB key has been inserted correctly, after confirmation, the alphanumeric keyboard will automatically appear for entering the name you want to assign to the backup.

A screen with the message "Complete!" will indicate that the export operation was successful.

A backup folder with the assigned name will then have been created on the key.

Opening the folder, you will find a series of files and subfolders containing all the data. N.B: do not modify or rename any file to avoid damaging the content. The folder thus created will be automatically restored to the tool using the system restore command.

- **System restore:** this command allows you to restore all users and their system configurations previously exported with the backup to USB stick command. N.B. You can import data exported from another device in order to be able to configure several devices with the same users and the same settings.



Insert the flash drive into the USB port located on the left side of the device, and press the "OK" key. Touch the "Abort" key to cancel the system restore operation.



If the USB key has been inserted correctly, after confirmation, the alphanumeric keyboard will automatically appear for entering the name of the backup to be restored.



A screen with the message "Complete!" will indicate that the system restore operation was successful.

6.9.2 Factory reset

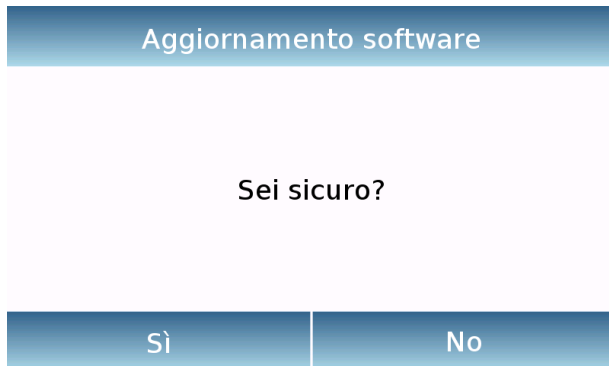
You can perform a total reset of the device, to bring it back to the initial conditions.

Touch the "Factory reset" key, confirm by touching the "Yes" key, or cancel the operation by touching the "No" key.

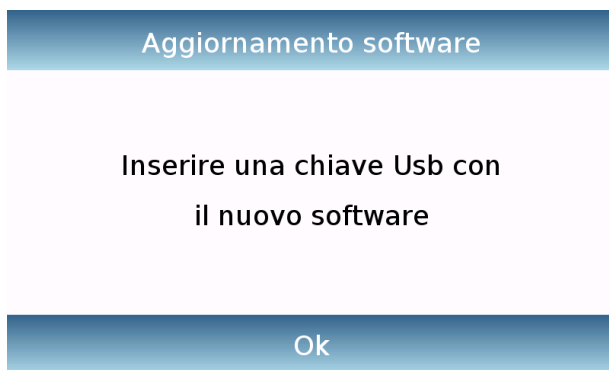
N.B. Attention! All data of all users including their databases will be lost. If you want to save them, make a backup before doing the factory reset.

6.9.3 Software update

Through the USB port you can carry out any software updates supplied by the manufacturer. The steps you need to take to perform the update are explained below.



By selecting the "Software update" function, the screen with the confirmation request will be displayed. Select "**No**" to cancel the operation, or "**Yes**" to continue.



Insert the USB key into the port located on the left side of the device, first checking that the update program supplied by the manufacturer is loaded on the key and confirm with the "**Ok**" key

If the selected file is correct, the update operation will be activated and a displayed counter will indicate the progress.

N.B. Once the software update operation has started, do not cut off the power to the device until the operation is complete. During the update the device will turn off and restart automatically, do not press any key but wait for the indication of successful operation.

6.9.4 Scale technical service

The scale technical service function can only be accessed via password by authorized technical personnel.

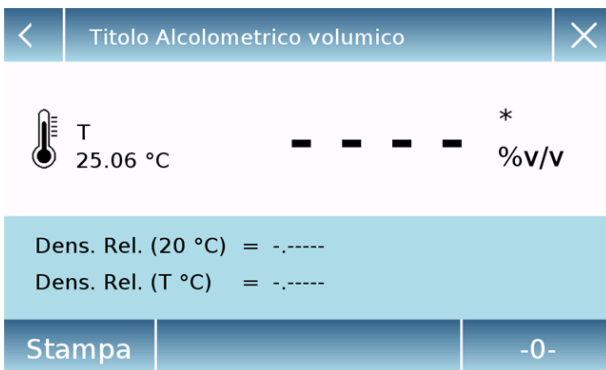
6.9.5 Scale technical service

The scale technical service function can only be accessed via password by authorized technical personnel.

7 Determination of "Alcoholic Strength".

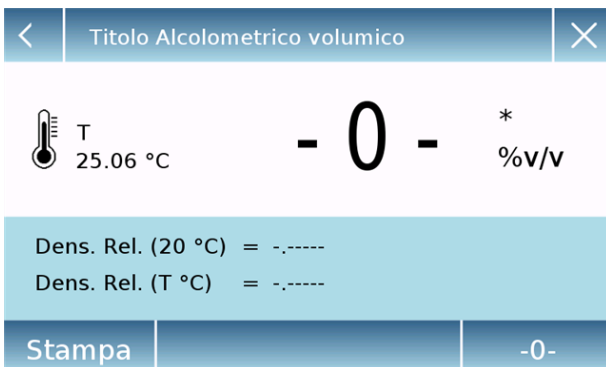


From the basic screen, touch the icon relating to the "Alcoholic Strength" function. The "Alcoholic Strength" function screen displays on the left the indication of the temperature detected by the probe, on the right the indication of the alcoholic strength, while in the lower part the value of the relative density reported at 20°C and of the relative density are indicated to the temperature detected by the probe.



Operations to be carried out for the measurement of the "Alcoholic Strength":

- Remove the floating item from the weighing device.
- If the indication is different from **"-0-"**, carry out the reset operation by touching **"-0-"**



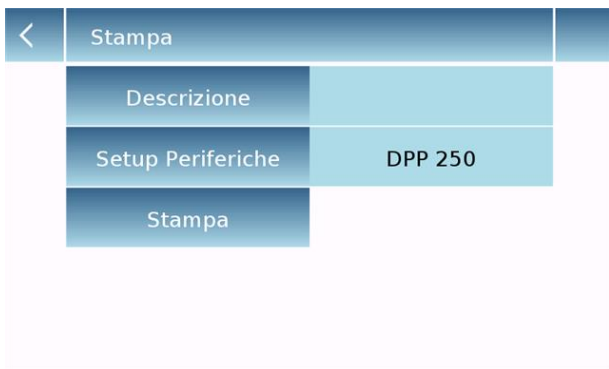
If the indication "-----" is updated with the indication "-0-" the reset operation has been successful:

- Hook the floating item.
- Prepare the beaker by filling it up to the reference mark with the liquid to be analyzed.
- Place the temperature probe inside.
- Position the beaker and insert the floating item inside.



The screen will then display the value of the alcoholic strength.

- Wait for the stability symbol " * " to switch on for correct measurement.
- Touch the **"Print"** key to print the result.



Before printing, the following screen will open:



Description: Touch this key if you want to enter a description of the measurement performed

Peripherals setup: by touching this key, you can access the setup menu of the peripherals to modify their settings.

Print: Touch this key to print.

- Now remove the beaker and floating item to proceed with any measurement.

Please note: The temperature allowed for the analysis is between 10 and 30°C; it is however recommended for more precise results to work with temperature values as close as possible to 20°C

To exit the function menu, touch the  or  key.

8 Establishing the “Total dry extract”



From the basic screen, touch the icon relating to the "Total dry extract" function. The total dry extract is expressed in g/l and is the concentration of sucrose having the same density as the de-alcoholic must/wine.

The determination of the total dry extract is obtained by first determining the value of the relative density of the wine/must, and then by measuring the density of the corresponding distillate.

For this type of measurement, it is recommended to work with temperatures as close as possible to 20°C.



You can proceed in two ways:

1. First determine all the density values of the wine/must by saving the results in memory, and then recall them when measuring the related distillates.
2. Determine the density of the wine/must and immediately measure the related distillate.

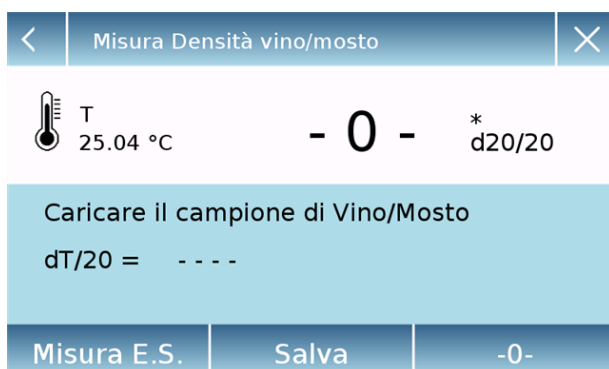


Wine/must density measurement

Selecting this function will start the screen for determining the density of the wine/must.

- Remove the floating item from the weighing device if present.
- If the indication is different from “-0-“, carry out the reset operation by touching “-0-“

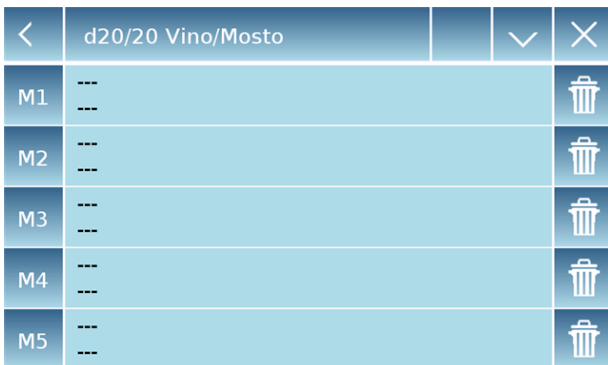
If the indication "-----" is updated with the indication "-0-" the reset operation has been successful:



- Hook the floating item.
- Prepare the beaker by filling it up to the reference mark with the wine/must.
- Place the temperature probe inside.
- Position the beaker and insert the floating item inside.



Wait for the stability symbol " * " to switch on for correct measurement. The value displayed indicates the density of the wine/must brought back to a temperature of 20°C. It is now possible to proceed with method 1 **Save**, memorize the result of the wine/must Or with method 2 **E.S. Measurement** proceed with the analysis of the distillate



- **Save:** touch this key to save the result in memory for later recall for distillate measurement.

The maximum number of memories is 20.


Select the position where to store the result by touching one of the memory keys M1, M2 ... up to M20.



Description: touch this key if you want to insert a reference to the value to store.

Save: touch the save key to store the data.



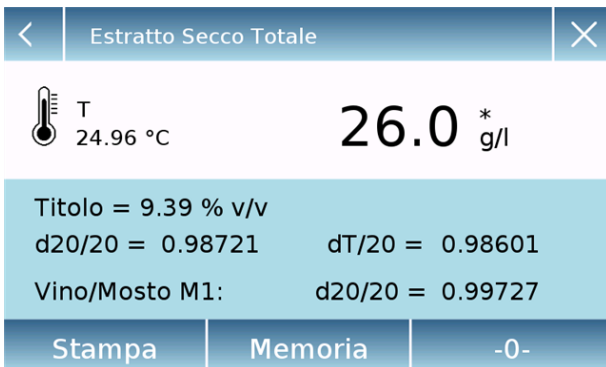
You can delete a memorized data using the key .

You can select a record that has already been used; in this case, confirmation will be requested in order to be able to overwrite it.



- **E.S. measurement:** touch this key if you want to proceed with the measurement of the total dry extract.
 - Unload the floating item
 - Prepare the wine/must distillate, place the beaker with the temperature probe inside
 - Reset with the “-0-“ key if necessary.
 - Hook the floating item and place it inside the beaker.

Wait for the stability symbol " * " to come on for the correct measurement of the dry extract.



Memory: touch this key to recall another wine/must density data from the memory and proceed with the steps previously described to determine the dry extract

Print: touch this key to print the result. Before printing, the following screen will open:



Description: Touch this key if you want to enter a description of the measurement performed

Peripherals setup: by touching this key, you can access the setup menu of the peripherals to modify their settings.

Print: Touch this key to print.



Dry memory extract

By selecting this function, you can recall the previously measured density value of the wine/must from the memory and proceed with the measurement of the distillate.



<	d20/20 Vino/Mosto	✓	✕
M1	T1 13 Lug 2017 14:26:40 d20/20 = 2.29350		🗑️
M2	Test2 18 Lug 2017 16:57:26 d20/20 = 0.99718		🗑️
M3	---		🗑️
M4	---		🗑️
M5	---		🗑️

Select the desired wine/must and proceed as previously described for the measurement of the total dry extract.

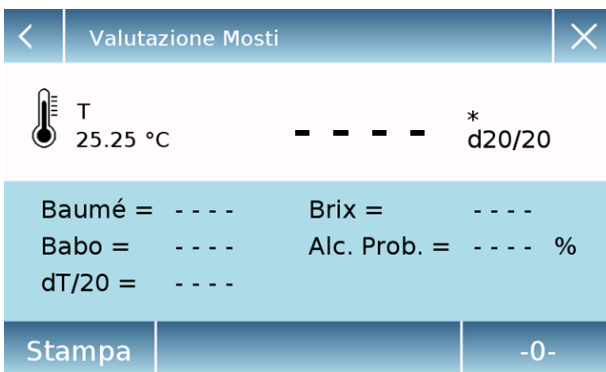
To exit the function menu, touch the  or  key.

9 Evaluation of Musts.



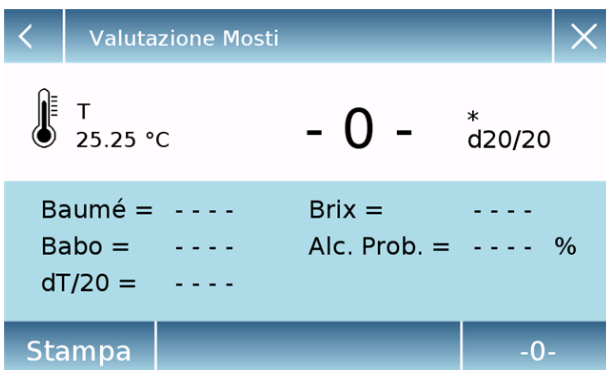
From the basic screen, touch the icon relating to the "Evaluation of Musts" function. The "Evaluation of Musts" function screen displays on the left the indication of the temperature detected by the probe, on the right the indication of the relative density reported at a temperature of 20°C, while the following data are shown in the lower part:

- Baumè -
- Babo -
- dT/20 -
- Brix -
- Alc. Prob. -



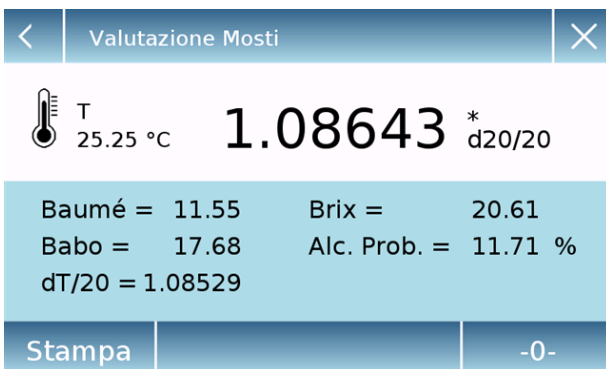
Operations to be performed for the measurement of the "Alcoholic Strength":

- Remove the sipper from the weighing device.
- If the indication is different from **"-0-"** carry out the reset operation by touching the **"-0-"** key



If the indication "-----" is updated with the indication "-0-" the reset operation has been successful:

- Hook the floating item.
- Prepare the beaker by filling it up to the reference mark with the liquid to be analyzed.
- Place the temperature probe inside.
- Position the beaker and insert the floating item inside.



The screen will then display the value of the alcoholic strength.

- Wait for the stability symbol " * " to switch on for correct measurement.
- Touch the **"Print"** key to print the result.



Before carrying out the printing operation, the following screen will open:



Description: Touch this key if you want to enter a description of the measurement performed

Peripherals setup: by touching this key, you can access the setup menu of the peripherals to modify their settings.

Print: Touch this key to print.


- Now remove the beaker and floating item to proceed with a possible new measurement.

Note: The temperature allowed for the analysis is between 10 and 30°C; it is however recommended for more precise results to work with temperature values as close as possible to 20°C

To exit the function menu, touch the  or  key.



10 Function menu

This section describes the available functions.

Touch the  key to access the function menu.

Instead, touch the icon corresponding to the desired function to access the related settings.



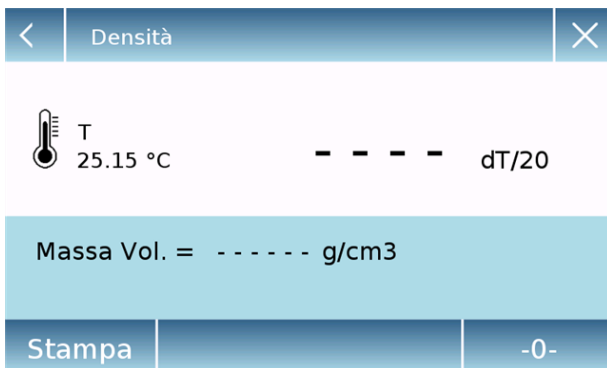
To exit the function menu, touch the  or  key.

10.1 Density function

The "density" function allows you to determine the value of the relative density of a liquid.

To access the function from the "Functions" menu, touch the "**Density**" icon.

The screen relating to the "Density" function displays on the left the indication of the temperature detected by the probe, on the right the indication of the density $dT/20$ measured at the indicated temperature, while in the lower part the value of density g/cm^3 is indicated at the detected temperature.



Steps to take for density measurement:

- Access the function after having removed any floating item loaded.
- Carry out the reset operation by touching the “-0-“ key

If the indication "-----" is updated with the indication "-0-", the reset operation has been successful:



- Hook the floating item.
- Prepare the beaker by filling it up to the reference mark with the liquid to be analyzed.
- Place the temperature probe inside.
- Position the beaker and insert the floating item inside.

The relative density value and its density will then be displayed on the screen.



- Wait for the stability symbol " * " to switch on for correct measurement.
- Touch the “**Print**” key to print the result.
- Remove the beaker and proceed with a possible new measurement.

10.2 "Weighing" function

The weighing function allows you to check the metrological parameters of the instrument.

To access the function from the "Functions" menu, touch the "Weighing" icon.



In the central part of the weighing screen, the weight detected by the device is displayed. The weight is expressed in grams. By touching the unit of measurement symbol, you can switch from displaying the weight from grams "g" to milligrams "mg" and vice versa

-0-: use this command to set a new zero point and reset all tare values.

"-T-": use this command to perform a tare operation for a loaded weight.

Cal: use this command to perform scale calibration.

Analog display bar of the quantity of the weighing.

Print: use this command to print the weight

Weight printout example:

```
-----  
Gross:    0.000g  
Tare:     0.000g  
Net:      0.000g  
-----
```

10.3 "Scale calibration" function

The scale calibration function allows you to calibrate the device in the mode selected in the calibration setup menu. See para. 6.6.

To access the function from the "Functions" menu, touch the "**Scale calib.**" icon.



After touching the calibration function key, the calibration procedure will start.

With internal or automatic calibration mode, a waiting screen will be displayed.

By touching the "**Abort**" key, the operation can be canceled.

With default or optional external mode: a screen will be displayed and indicates the calibration weight to be loaded to complete the operation.

By touching the "**Abort**" key, the operation can be canceled.

In case of error during calibration, the following screen will be displayed.

After the error signal, you can decide whether to try again to carry out the calibration with the "**Cal**" key, or whether to access the calibration settings menu using the "**Menu**" key to change the mode.

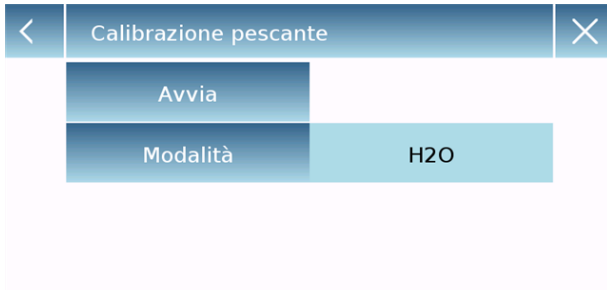


At the end of the calibration, if performed correctly, the function screen will be displayed.

10.4 "Floating item calibration" function

The floating item calibration function allows you to calibrate the float using distilled water or a known hydroalcoholic solution.

To access the function from the "Functions" menu, touch the "Floating item Calib."



Start: use this command to start the floating item calibration procedure.

Mode: use this command to select the type of liquid to use for the calibration.

H2O: select if distilled water is used

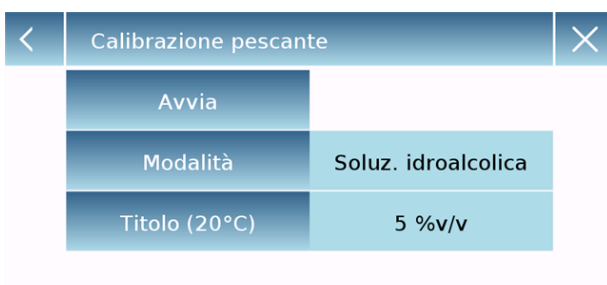


Hydroalcoholic solution: select this mode if you are using a known liquid.

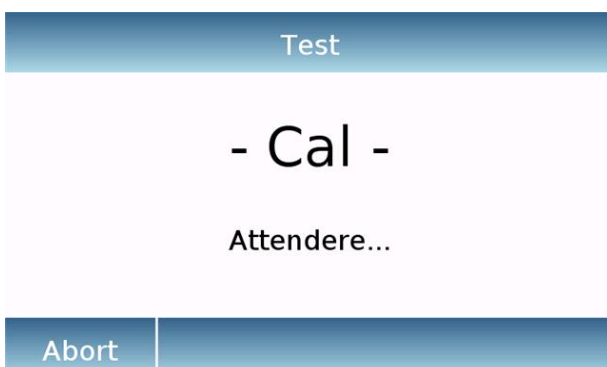
If the mode with known solution is selected, touch the "**Titre (20°C)**" key and enter the value of the solution at a temperature of 20°C.

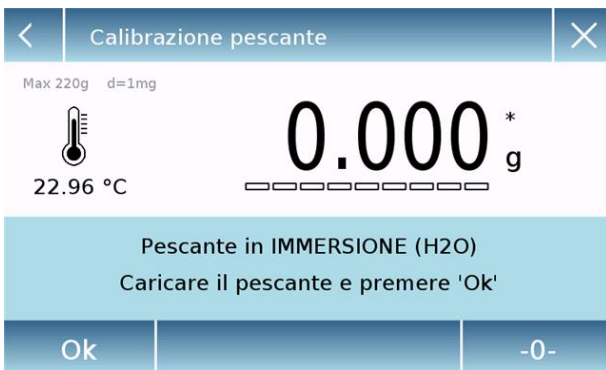
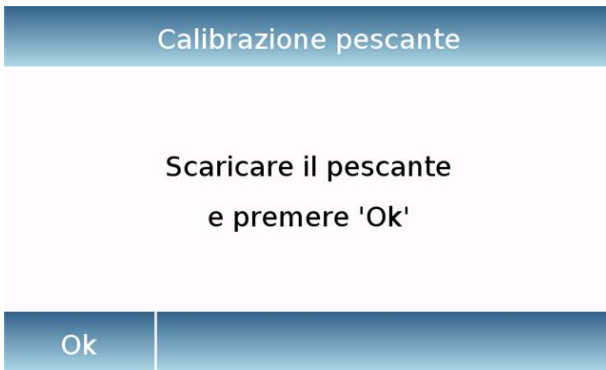
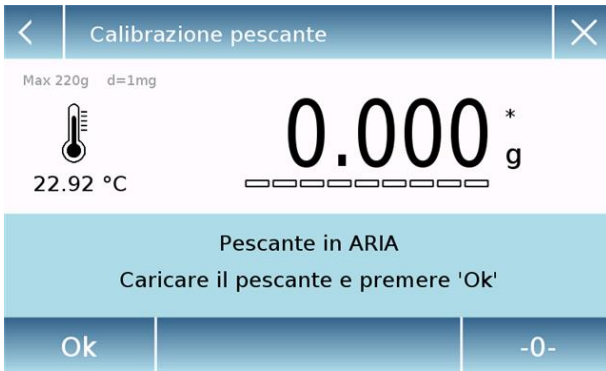


After having entered the known value of the liquid, touch the "**Start**" key to proceed with the calibration of the floating item.



After confirming with the "Start" key, the scale calibration will be performed automatically.





Once the scale calibration procedure is complete, you will be asked to load the floater to weigh in air.

Before loading the floating item, check that the weighing indication is at zero. Otherwise, use the “-0-” key to zero the device.

After loading the floating item, wait for stability “*” and touch the “Ok” key.

After acquiring the value, remove the floating item.

Fill the beaker up to the level mark with the selected liquid and insert the thermometer inside. Then place the beaker, hang the floating item and immerse it in the liquid. Pay attention to the formation of any air bubbles around the floating item. Remove them by shaking the floating item.

Before loading the floating item, check that the weighing indication is at zero. Otherwise, use the “-0-” key to zero the device.

After loading the floating item, wait for stability “*” and touch the “Ok” key.

At the end of the procedure, the data relating to the floating item calibration will be displayed:

- Date and time
- Weight value of the floating item in grams.
- K calibration constant.
- Liquid used and relative temperature.
-

Use the “Print” key to print the data, or the “Esc” key to exit.

10.5 GLP data settings

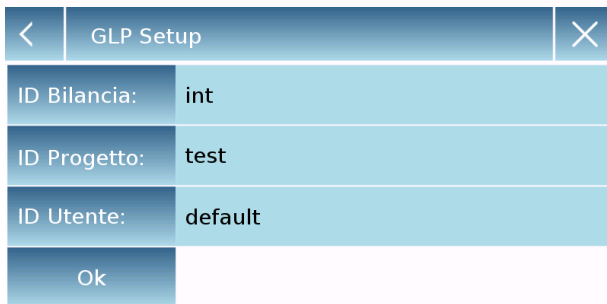
This function allows you to customize and create a database with G.l.p. parameters.

To access the function from the "Functions" menu, touch the **"GLP" icon**.



GLP Setup: use this command to enter GLP parameters when you do not want to save them in the database.

The data entry screen will be displayed. Touch the corresponding parameter to enter the desired data.



- **Scale ID**
- **Project ID**
- **User ID**

After entering the data, press the **"Ok"** key to confirm them.

NB. the maximum number of characters allowed per parameter is 20.



GLP database: touching this command you can access the menu for managing the database relating to the GLP parameters

All available functions are described below:

- **Selection by name:** by touching this key you can call up a program by entering the corresponding name.
- **Selection from list:** by touching this key, you can recall a program by selecting it from a list.
- **New:** by touching this key, you can insert a new record.
- **Edit:** by touching this key, you can access the modifiable parameters of GLP.
- **Delete:** by touching this key, you can delete one or more previously stored records.
- **Print:** by touching this key, you can select a GLP record and print it.
- **Export (Usb):** by touching this key, you can export the database to a USB stick.



- **Import (Usb):** by touching this key, you can import a previously predefined database from a USB stick.

The selection, edit, deletion, printing, export and import commands are the same as those described in **chapter 9.7.1**

New: this command allows you to insert a new record.

Enter the name you want to assign to the record and confirm with the **“Enter”** key.

The data entry screen will be displayed. Touch the corresponding parameter to enter the desired data.

- **Scale ID**
- **Project ID**
- **User ID**

After entering the data, press the **“SAVE”** key to confirm them.

In order to save the data, at least one of the three fields must be completed; otherwise, a screen of incomplete data will be displayed.

After inserting the record, use the "Select from list" or "Select by name" command to select it.

Touch the desired record and confirm with the **“Ok”** key.

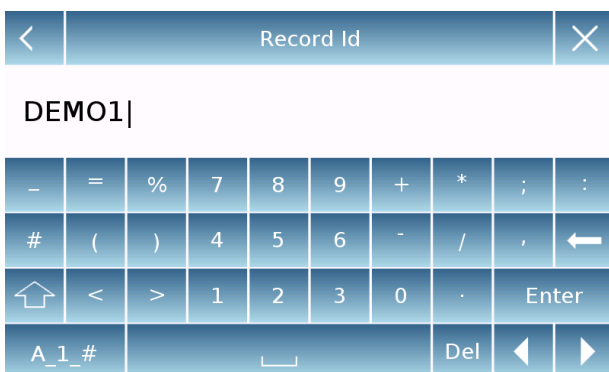
N.B. By activating the **"GLP"** command in the print setup menu, the data set in the "scale id, project id, user id" fields will be shown on the receipt or in the save file.

10.6 Using the database

The functions can be customized for each user by memorizing the desired methods and articles through the relevant database.

The same search, save, delete, and modify functionality for all databases is explained below. To enter data into the database, refer to the paragraph corresponding to the desired function.

After selecting the desired function, touch the "**Database**" key to access the database menu relating to the desired function.



Every time a new user is created, the database will be completely empty. All the available functions common to all databases are described below:

- **Selection by name:** by touching this key, you can call up a program by entering the corresponding name.
- **Selection from list:** by touching this key, you can recall a program by selecting it from a list.
- **New:** entry of a new record (refer to the paragraph corresponding to the desired function).
- **Edit:** by touching this key, you can access the modifiable parameters of the function.
- **Delete:** by touching this key, you can delete one or more previously stored records.
- **Print:** by touching this key, you can select a record and print it.
- **Export (Usb):** by touching this key, you can export the database to a USB stick.
- **Import (Usb):** by touching this key, you can import a previously predefined database from a USB stick.

Use the keyboard to enter the name to assign to the new record.

The maximum number of characters that can be entered is 30.

Touch the "**Enter**" key to confirm.

10.7 "Calibration data" function

The "Calibration data" function allows you to view and possibly print the data relating to the calibration of the floating item, the thermometer, and the scale.

To access the function from the "Functions" menu, touch the "**Calibration Data**" icon.



Select the desired parameter to be able to view the relevant calibration data.

- **Thermometer:** after touching the relevant key, a screen containing all the calibration data of the thermometer will be displayed. Date and time the last calibration was performed and the temperature values used for the calibration. Use the "**Print**" key to print the data, or the "**Esc**" key to exit.
- **Floating item:** after touching the relevant key, a screen containing all the floating item calibration data will be displayed. Date and time when the last calibration was carried out, as well as the weight of the floating item, the calibration constant "K" and the liquid used with the relative temperature. Use the "**Print**" key to print the data, or the "**Esc**" key to exit.
- **Scale:** after touching the relevant key, a screen containing all the scale calibration data will be displayed. Date and time when the last calibration was performed and the correction value made expressed in g. Use the "**Print**" key to print the data, or the "**Esc**" key to exit.

11 General characteristics

The device to which this manual refers is intended for internal use. Maximum height of use: 4000m; Pollution degree: 2; Overvoltage category: II

Technical weighing data:

Maximum capacity: 220 g

Resolution: 0.1 mg

Standard deviation: 0.0005 g

Linearity: ± 0.002 g

Calibration Mode:

- External with optional reference mass.
- Self-calibration with internal mass.

Thermometer technical data:

1/3 DIN Pt100 platinum temperature probe

Temperature setting range 0 \div 40°C with resolution 0.01°C

Minimum temperature for calculating the alcohol content 10°C

Maximum temperature for calculating the alcohol content 30°C

Values Alcoholic strength by volume:

Reading range: 0.00 \div 99.99% vol

Sensitivity: 0.01% vol

Reading repeatability accuracy: $\pm 0.03\%$ vol with temperature range between 10 \div 30

Total dry extract values:

Value range: 0 \div 505.8g/l

Reading accuracy and repeatability: $\div 0.3$ g/l

Must evaluation values:

Relative Density Range: 1.0400 \div 1.1600

Power supply:

With supplied power supply:

INPUTS: Switching 100-240V AC~ 50/60Hz

OUTPUTS: 24V DC 550mA

Max. absorbed power 13.2VA

Communication ports:

RS232C serial output

USB port

Working temperature:

+5°C - +35°C

12 Warranty

- The duration of the warranty is 24 months from the date of purchase proven by the receipt of the product or by the delivery note.
- The warranty covers all parts that are originally defective. It does not cover mechanical and electronic parts damaged as a result of incorrect installation, tampering or improper use.
- The warranty does not cover damage caused by impact, fall of the scale or objects falling on the weighing pan.
- Transportation to and from the service center is the responsibility of the customer.

13 Disposal



If the packaging is no longer used, it can be handed over to your local waste disposal center. The packaging is made entirely of non-polluting materials, which can be recycled as valuable secondary raw materials. Exhausted batteries must not be placed in normal household waste. Throw them in the appropriate collection containers. In case of scrapping the device, contact the local authorities. Before scrapping the device, remove the batteries.