SECTION
Be Cool Evo T1S

Smart temperature probe

20.0 GENERAL FEATURES

The Be Cool Evo T1S temperature probe is designed for use in the installation and/or maintenance of cooling systems and heat pumps.
Be Cool Evo T1S features:
- Battery power supply (2x1.5 V AAA)
- Measurement storage memory
- Bluetooth® interface

20.1   Package Contents

The standard package of the Be Cool Evo T1S temperature probe includes:
- No. 1 Be Cool Evo T1S Smart temperature probe
- 2x 1.5 V AAA batteries (alkaline - non-rechargeable)
- Quick Guide
- WEEE Instructions
- Simplified Declaration of Conformity
- Test Report

20.2   Typical Use

- Temperature measurement.
- During the system leak test: when left in ambient air, it measures the temperature used for temperature compensation.
- High and low pressure line temperature measurement: during pressure verification of cooling systems or heat pumps.

20.3   Maintenance

To ensure the correct operation of the instrument and measurement accuracy, Seitron suggests performing a calibration annually or whenever deemed necessary. Calibration and any necessary recalibration can be performed at the Seitron Service Center. The product is supplied with a test report.

21.0 PRODUCT DESCRIPTION

21.1   Main functions

Main Functions The Be Cool Evo T1S temperature probe detects the refrigerant pipe temperature, providing essential data for pressure measurement in a cooling system or heat pump.
Alternatively, it detects the ambient temperature, providing essential data for a correct system leak test with temperature compensation. Its use is crucial during the installation and maintenance of cooling systems and heat pumps. Designed for maximum versatility, Be Cool Evo T1S can operate either paired with the Be Cool Evo M4S 4-way digital manifold or interfaced with the Seitron Smart Analysis app.

21.1.1   Data Logging and Storage

Be Cool Evo T1S is equipped with internal memory that stores all measurements, associating a date and time with each record to create a complete history.

To enable this data logging function, the probe must be paired with the Seitron Smart Analysis app and recording must be activated on the probe's internal memory.

When activated, recording is indicated by the green LED flashing (one flash every 5 seconds). This setting remains saved in the probe, automatically starting recording at each subsequent power-up. To deactivate recording, you must always use the App.

The Seitron Smart Analysis app also allows you to customize the sampling frequency, thus affecting the total memory capacity: ranging from one sample every second (for 46 hours of recording) up to one sample every hour (for over 165,000 hours). If the memory is full, recording stops automatically and the green LED stops flashing. Finally, via the App, it is possible to download all data recorded by the temperature probe to create and share professional reports in .csv or .pdf format. For a complete guide to settings, refer to the "Seitron Smart Analysis App" chapter.

21.1.2   Bluetooth® Connection

Be Cool Evo T1S features an internal Bluetooth® module, allowing communication with latest-generation smartphones or tablets running Google Android v.5.0 (Lollipop) or higher, subject to installation of the "Seitron Smart Analysis" App available on the Play Store and App Store. The maximum transmission range in open field is 100 meters, provided that the connected device features Class 1 Bluetooth® connectivity.

21.1.3   Available Software and Applications

Seitron Smart Analysis

The Seitron Smart Analysis mobile app is available for devices featuring:
- Google Android OS v.5.0 and later
- Apple iOS v.12.2 and later

Features available with Be Cool Evo:
- Display of associated instrument rating plate data
- Instrument configuration (e.g., unit of measurement)
- Firmware update
- Start recording to Smartphone or Tablet memory
- Remote real-time viewing of measurement/test (data or graph format) and saving acquired data
- Generation, editing, viewing, archiving, and/or exporting of reports (in .csv format, importable to Excel, and/or .pdf)
- Deletion of measurements in memory

21.2   Mechanical Description
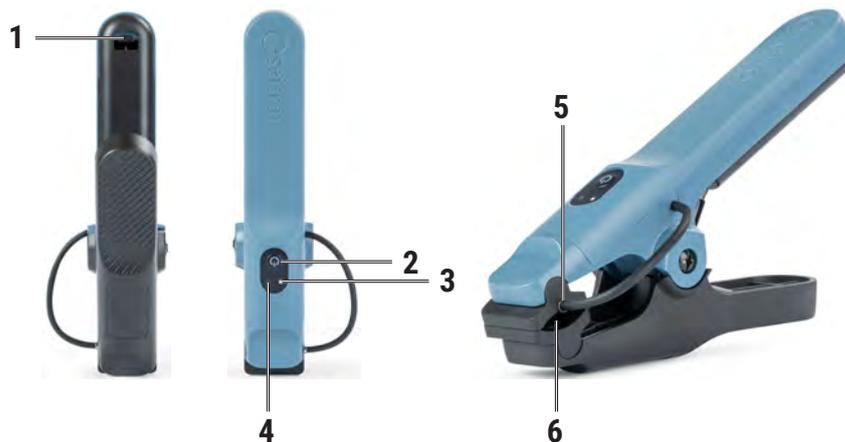
1	Battery compartment access clip
2	Multifunction button (See paragraph "21.3 Multifunction Button Definition" on page 71)
3	White LED
4	RGB LED (Red - Green - Blue)
5	Sensing element
6	Clamp: for pipes with diameter from 1/4" (6.35 mm) to 1"3/8" (34.925 mm)

21.3   Multifunction Button Definition

⏻	**Power ON** Press and hold the button until all LEDs light up briefly; then release the button.
	Power OFF Press and hold the button for more than 3 seconds.

21.4   LED Definition

White		**Flashing (2 flashes/sec + 3 sec pause)** Bluetooth® on, waiting to connect to the Seitron Smart Analysis App or Be Cool Evo M4S manifold.
		Flashing (1 flash every 5 seconds) Be Cool Evo T1S is connected to the Seitron Smart Analysis App or Be Cool Evo M4S manifold.
RGB	Red	**Flashing (2 flashes per second + 3 second pause)** Probe configured for high temperatures. Low battery: 2 hours of battery life (5% remaining charge).
		Flashing (1 flash every 5 seconds) Probe configured for high temperatures.
	Blue	**Flashing (2 flashes per second + 3 second pause)** Probe configured for low temperature. Low battery: 2 hours of battery life (5% remaining charge).
		Flashing (1 flash every 5 seconds) Probe configured for low temperature.
	Green	**Flashing (1 flash every 5 seconds)** Data recording in progress.

21.5   Wiring Diagram

See chapter "4.0 CONNECTION DIAGRAMS" on page 12.

22.0 TECHNICAL FEATURES

Battery Power:	2x 1.5 V size AAA Alkaline (supplied) or NiMH Rechargeable
Battery Life:	100 hours of continuous operation
Logging Time:	890 hours (30-second intervals)
Measurement Range:	-50 °C - +150 °C
Accuracy:	±1 °C full range
Resolution:	0,1 °C
Units of Measurement:	°C, °F
Process Connection:	For pipes with diameter from 1/4" (6.35 mm) to 1"3/8" (34.925 mm)
Connectivity:	Bluetooth: Class 1 / Range: <100 meters (open field)
Protection Rating:	IP54
Operating Temperature:	-10 °C - 50 °C / -14 - +122 °F
Storage Temperature:	-20 - +60 °C / -4 °F - +140 °F
Operating Humidity:	20% - 80% RH non-condensing
Storage Humidity:	10% - 90% RH non-condensing

23.0 COMMISSIONING

23.1 Preliminary operations

Remove the probe from the shipping packaging and perform an initial inspection.
Check that the contents match your order. If any signs of tampering or damage are noticed, immediately report the issue to the SEITRON Service Center or your local representative, while retaining the original packaging. The probe's rating plate indicates the serial number and model.
Please provide both of these details for any request regarding technical service or technical and application support. Seitron maintains an archive of historical data for every instrument at its headquarters.

Rating plate data example:

Model

Serial Number

23.2 Temperature Probe Power Supply

The temperature probe is powered by two 1.5 V AAA batteries. Two alkaline batteries (non-rechargeable) are included in the package, but NiMH rechargeable batteries can also be used as an alternative.

> **WARNING**
> **- If the temperature probe is not used for a long period, it is advisable to store it with the batteries removed.**
> **- For battery insertion/replacement, refer to the maintenance chapter of this manual.**

23.2.1 Internal Battery Charge Level

The Be Cool Evo T1S temperature probe indicates via the Red or Blue LEDs if the autonomy falls below 2 hours of operation (5% residual charge).
In this case, the Red or Blue LED will flash as follows: **2 flashes per second + 3-second pause**. The temperature probe will not start if the battery charge is below 4.8%.

23.3 Temperature Probe Startup

With the device OFF, press and hold the button ⏻ until all LEDs light up briefly; then release the button.
The temperature probe is on; the white LED flashes (2 flashes per second + 3-second pause) to indicate Bluetooth® is on and waiting to connect to the Seitron Smart Analysis App or the Be Cool Evo M4S manifold.

23.4 Temperature Probe Shutdown

With the device ON, press and hold the button ⏻ for 2 seconds.

23.5 Temperature Probe Configuration

Configuration of the temperature probe is performed exclusively via Smartphone or tablet after installing the "Seitron Smart Analysis" APP.

Unit of measurement:		Allows setting the desired unit for temperature (e.g., °C or °F).
Operating Mode (High/Low/Auto):	Manual:	Manually sets whether the probe is used on the "High temperature" or "Low temperature" line.
	Automatic:	In this mode, the manifold autonomously decides whether the temperature detected by the probe is high or low.

23.6 Pairing

Be Cool Evo T1S offers the flexibility to connect to the Seitron Smart Analysis App or the Be Cool Evo M4S 4-way digital manifold. The connection is exclusive: the temperature probe connects to only one device at a time.
The same logic applies to automatic reconnection: if both known devices are nearby, the Be Cool Evo T1S immediately connects to the first one it detects. Immediately after, it stops its signal and becomes "invisible" to other devices.

23.6.1 Pairing Be Cool Evo T1S - Seitron Smart Analysis App

- Download and install the Seitron Smart Analysis App on your Smartphone or tablet.
- To pair, follow the on-screen instructions in the App step-by-step.
- You will be asked to select the temperature probe corresponding to a specific serial number; the serial number is marked on the back of the instrument followed by "S/N:".

For more information, see the section "Seitron Smart Analysis" on page 77.

23.6.2 Pairing Be Cool Evo T1S - Be Cool Evo M4S (Manifold)

For detailed instructions, refer to the product's Quick Guide.

24.0 MAINTENANCE

24.1   Battery Insertion/Replacement

To insert/replace the batteries, proceed as follows:

Open the battery compartment door by pressing the lever indicated by the arrow inwards.

In case of replacement, remove the batteries, prying them out with a tool if necessary.

Insert the new batteries (2 x 1.5 V size AAA), respecting the indicated polarity.

WARNING

-   **WHEN REPLACING BATTERIES, DISPOSE OF OLD BATTERIES IN THE APPROPRIATE RECYCLING CONTAINERS.**

24.2   Cleaning the Instrument

If the probe housing is dirty, clean it using neutral detergents or simply soap and water.
Do not use aggressive detergents or solvents!

24.3   Firmware Update

The firmware can be updated exclusively using the Seitron Smart Analysis App.
See the section "Seitron Smart Analysis" on page 77.

SECTION
Seitron Smart Analysis

Mobile app

25.0   GENERAL OVERVIEW

The Seitron Smart Analysis application is the essential digital tool for interacting with your portable instruments directly from a smartphone or tablet. It is available for free download on the Google Play Store and Apple App Store.

System Requirements
For optimal performance, ensure that your device features:
- Google Android OS v.5.0 and later
- Apple iOS v.12.2 and later

Features:
View instrument rating plate data.
Configure the instrument.
Update firmware.
Start measurements and/or tests.
Start data logging to the memory of the Smartphone or Tablet in use.
View real-time analysis remotely from the portable analyzer and save acquired data.
View, export (in .csv format, importable into Excel, and/or .pdf), or delete stored analyses.

The app interface automatically adapts to the connected instrument, enabling only the parameters and functions compatible with the instrument currently in use.

26.0 PAIRING

To pair the APP with a Be Cool Evo device, follow the step-by-step procedure outlined below.

1. Download the Seitron Smart Analysis App from [Google Play Store / Apple App Store].
2. Install the Seitron Smart Analysis App on your mobile device.
3. Launch the App; the Pairing screen will appear.
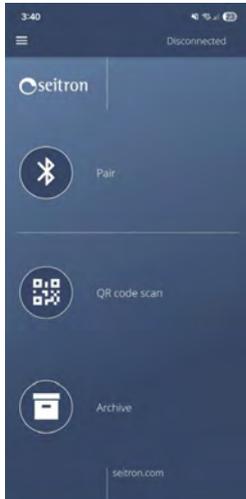
4. Turn on the Be Cool Evo device you intend to pair with the App.
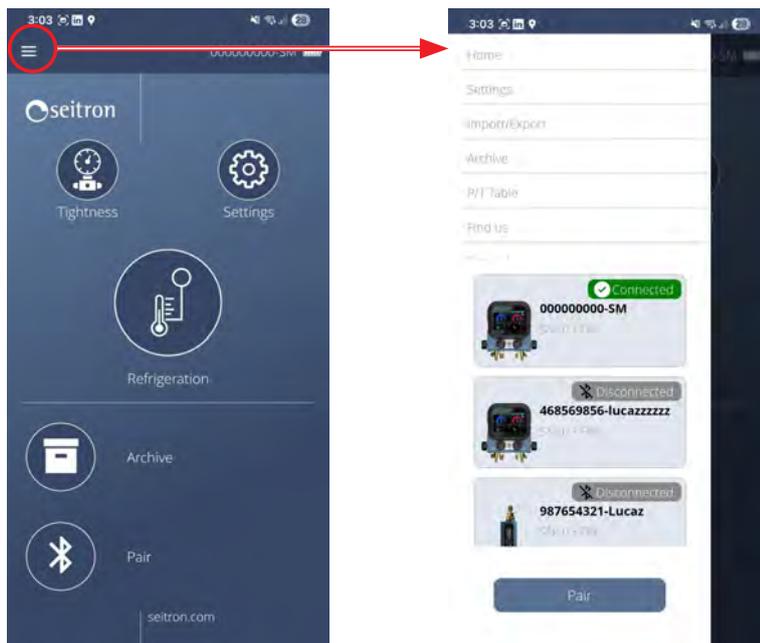
5. Tap the icon "   "; the device search page will appear:
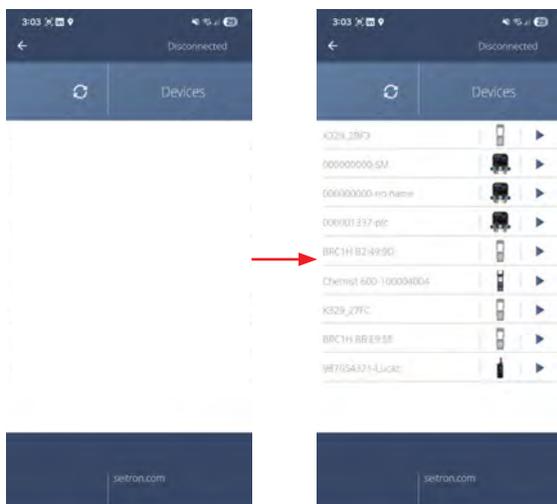
6. Find the serial number of the instrument to be associated; the serial number of the instrument is shown on the nameplate preceded by S.N. Tap the corresponding line.

7. The selected tool is associated with the App.
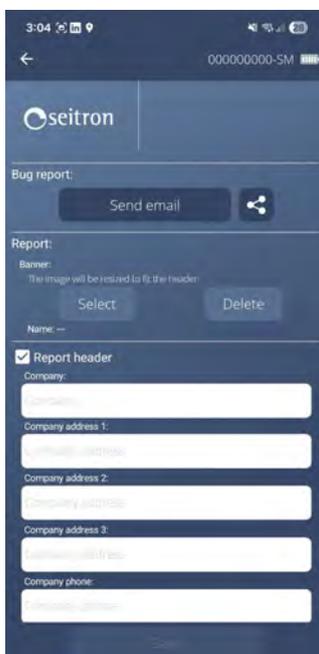
27.0 GENERAL MENU

27.1 Home

Pressing this button takes you to the app's home page.

27.2 Settings

This screen allows you to customize report generation, the company data included, and the general settings of the app.

27.2.1 Bug Report

This section allows you to send a bug report (error) to the app developers.
Send email: by pressing this button, you send the bug report directly to the developers.

 :   By pressing this button, you can share the report via email or other installed apps, instead of sending it directly.
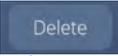
27.2.2 Report

This section allows you to configure the graphic appearance of the documents generated by the application, allowing you to add a professional touch to the documents generated by the App.
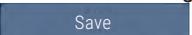
Header management (Banner)

You can customize the top of each report by inserting an identifying image (for example, your company logo).

Insert image: Touch the button " Select " to browse the gallery or files on your device.
Once you have selected the file, the image will be displayed as a banner at the top of newly generated reports.

Image removal: If you want to delete the custom header or replace it, touch the button " Delete ".
The system will remove the current image, returning to the standard format.

Technical note for the user
Although this section concerns the report's graphic layout, remember that the instrument's technical settings (such as pressure or temperature units of measurement) are configured separately on the instrument settings page. Ensure that you have correctly saved each technical change using the command " Save " before proceeding with the generation of the final document.

Report header

This section allows you to configure the company information that will automatically appear on every document generated.
Select the "Report header" checkbox to enable the inclusion of company data in the report. If the checkbox is not selected, the text fields will remain disabled:
Company: Enter your company name.
Address (Rows 1, 2, 3):   Fill in these fields to enter the location details (street, city, postal code). Up to three lines are available to ensure maximum precision.
Company Phone Number: Enter the company phone number to be displayed.

Save

To make the changes effective, complete the save procedure by pressing the " Save " button.
If you accidentally exit the page, the application detects any unsaved changes and displays a warning message, asking you to confirm whether you want to save before proceeding.
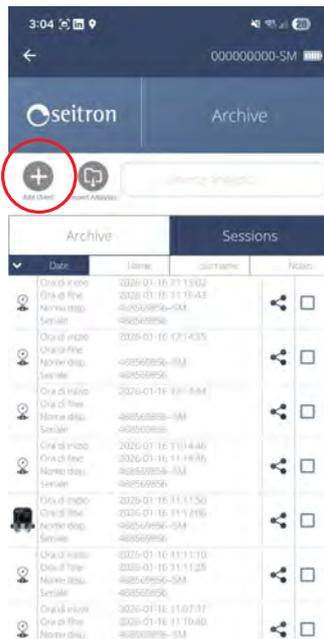
27.3 Import/Export

This screen allows you to manage the application archive, offering tools for data backup and transfer.

Export

Select this command to create a file containing all the data in the app. You can share it via email, messaging systems, or save it to an external cloud service. This is recommended periodically to avoid loss of information.

Import

Use this feature to load data from a previously saved file into the application. It is ideal for adding new databases or transferring specific archives.

Restore backup

This command allows you to restore the application to a previously saved state.
Warning: restoring a backup may overwrite your current data; make sure you have saved your recent analyses before proceeding.

27.4   Analysis archive

All data collected during technical tests is stored, organized, and consulted in the Analysis Archive.

Key Features
- Allows you to view a chronological list of all saved analyses, making it easy to retrieve previously performed tests.
- Allows you to generate and share documents in PDF format (for official reports) or CSV format (compatible with Excel for advanced tabular analysis).
- Using the dedicated command, you can delete each individual report.
- Associate each analysis with customer and installation site data, ensuring complete traceability of interventions.

To keep your archive secure at all times, periodically use the Global Export (Backup) function in the "Data Management" screen to save a backup copy of all your analyses to a cloud service or email.

The archive is divided into two main sections:

1. Analysis archive: Show the list of customers with their associated measurements.
2. Sessions: Lists individual measurement sessions that are not yet associated with a specific customer (when you start recording a measurement, it is stored in Sessions because it cannot be immediately associated with a customer).

Search and Sorting:

1. Use the Search Bar at the top to find a customer by date, time, first name, last name, or note.
2. Tap the column headers (Date, First Name, Last Name, Notes) to sort the list in ascending or descending order.

Add customer

On this screen, you can fill in the customer fields to be associated with the measurements stored on the device.

By tapping the "+" button, you can add a new customer by filling in the requested information:

Customer: Name of the owner of the plant or company.
Contact and Address Details: Enter Contact Person, Phone Number, and Email Address.

System: Name of the plant under consideration (Generator)
Full address of the site in question
c Notes: A space for technical notes or reminders.

Operator: Data relating to the operator who performed the measurement.

Note
Only the following data will be included in the report:
Customer First and Last Name
Generator
System notes

Sharing

Share: Tap the icon for " " to send the report in PDF, CSV, or XML format via email, WhatsApp, or other apps.

**Associate a measurement with a customer (from the "Sessions" tab only)**

Associate the measurement with a customer: Tap the icon " ", to which a flag is added " " and two new icons appear at the bottom: "Add new customer" and "Add to customer".

It is possible to associate one or more measures simultaneously with a single customer by selecting the relevant measures.
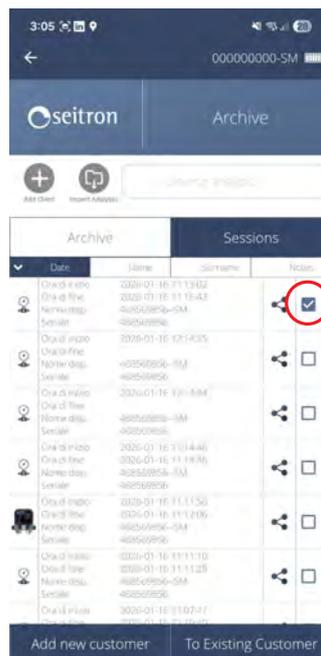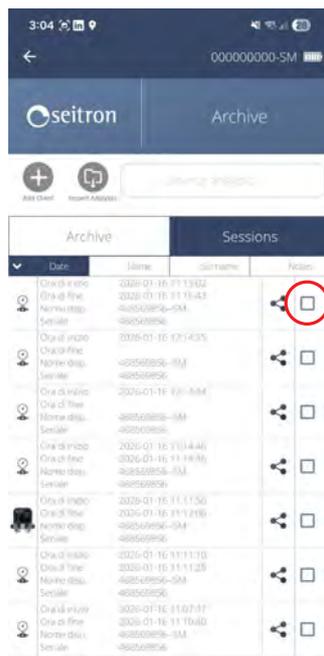
Delete

From the "Analysis Archive" or "Sessions" list, swiping the measurement row to the left or right (Swipe) displays the "X Delete" icon to permanently delete the selected measurement from the phone's memory.
To delete the selected row, tap the icon " ✕ Delete ".
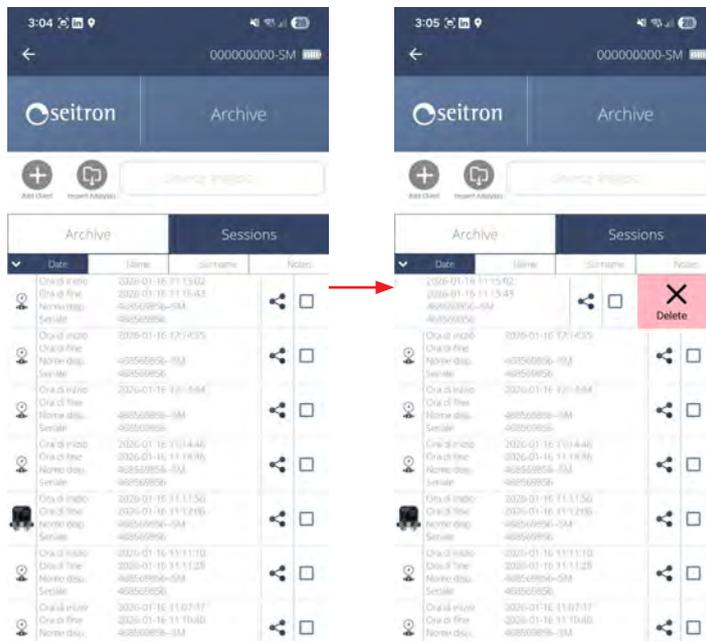
27.5   P/T Table (Pressure/Temperature Ratio)

This section of the application acts as a dynamic calculator to instantly determine the correspondence between the pressure and saturation temperature of a refrigerant gas.
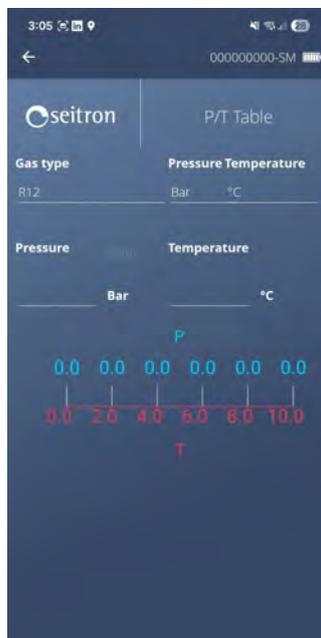
How to use the tool

Refrigerant Gas Selection

Tap the "Gas type" field to select the refrigerant you are working with from the database (e.g., R452A).

Measurement unit configuration

The "Units" fields show the units of measurement currently set for pressure (e.g., Bar) and temperature (e.g., °C). These reflect the preferences saved in the instrument's general settings.

Calculation

By entering a numerical value in the "Pressure" field, the app will automatically calculate and display the corresponding saturation "Temperature." Similarly, by entering a temperature, you will obtain the equivalent pressure value.
To ensure accurate calculations, make sure you have selected the correct gas before entering the values. Remember that gases set as "Favorites" on the settings page will be easier to find when navigating.

Visual Reference

At the bottom of the screen there is a graduated scale (marked with P in blue and T in red) that provides an immediate visual indication of the position of the detected value relative to the operating range.

27.6 Find us

The "Find us" menu is a tool integrated into the app that allows you to quickly locate the Seitron professional support closest to your geographical location or the site of your intervention.
Pressing the "Find us" button takes you to the Seitron "Sales network and CAT" (Technical Assistance Center) screen, where you can perform a targeted search by selecting the required data.

28.0 SETTINGS

In this menu, you can configure the main data of the instrument associated with the App.
The data is contextual to the associated instrument: Be Cool Evo M4S, Be Cool Evo T1S, or Be Cool Evo V1S.
Through this screen, you can set the instrument to your operational needs: it allows you to define the units of measurement (such as pressure, temperature, and vacuum), set the data recording times, and manage energy saving through auto-shutdown.
In addition, the menu offers tools for instrument maintenance, such as managing preferred refrigerant gases and the ability to rename the device to recognize it more easily during Bluetooth connection.
Main Features
Customize Units of Measure: Choose how to display data (e.g., Bar or PSI for pressure, °C or °F for temperature).
Manage Device: Change the device name ("Advertising Name") and adjust the screen brightness or theme (Light/Dark).
Configure Analysis: Set the interval at which the instrument records samples and define the times for automatic shutdown.
Advanced Maintenance
Reset Analysis: Clear the instrument's internal memory of old saved analyses.
Firmware Update: Install the latest version of the system software to keep the instrument up to date.
Favorite Gas List: Select and mark the refrigerant gases you use most often to find them quickly while working.
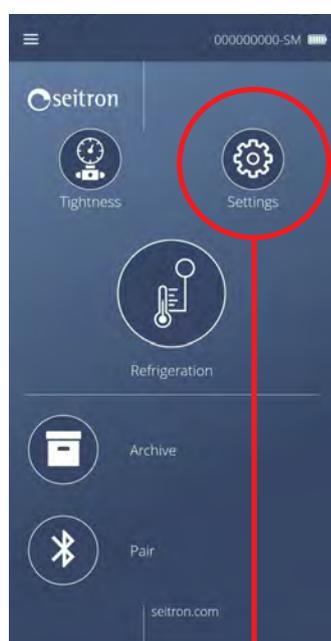
Version	Version of the configuration set on the instrument.
Firmware version	Firmware version installed on the instrument.
Serial number	Device serial number.
Device name	The name that will appear on your smartphone when you search for the device via Bluetooth (maximum 10 characters).
Pressure unit	Set the unit for pressure measurements (e.g., bar, psi, kPa, MPa).
Temperature unit	Choose between degrees Celsius (°C), Fahrenheit (°F), or Kelvin (K).
Vacuum unit	Defines the unit for the vacuum gauge (e.g., mbar, micron, Pascal, Torr).
Weight unit	Set the unit for connected scales (kg or lb).
Recording interval	Frequency with which the instrument saves data during an internal analysis (from 5 seconds to 1 hour).
Refrigerant gas	Select the refrigerant gas used in the system to be monitored, which is used for automatic calculation of saturation temperatures.
Working mode	Configure the device to operate in Hot mode (Heating/High temperature), Cold mode (Cooling/Low temperature), or Automatic mode (only for Be Cool Evo M4S).
Language	Set the language of the instrument interface.
Theme	Set the light or dark theme for the device display.
Auto Shutdown	Set how long the device should remain inactive before it automatically turns off to save battery power.
Screen Off	Defines the time after which the screen dims or enters power-saving mode.
Brightness	Adjusts the brightness of the screen (value from 20 to 100).
App rec. interval (s)	Every set seconds the App records a piece of data coming from the instrument.
Max. chart size	Maximum number of points displayed simultaneously in real-time graphs (from 30 to 300).
Diagnostic activity	When activated, the app saves detailed technical logs that are useful in case of assistance.
Preferred gases	Select the most frequently used gases to display them at the top of the list on the system configuration screen.

28.1   Save

After changing one or more parameters, it is essential to press the key " [Save] " at the bottom of the screen to transmit the new settings to the instrument.

28.2   Reset analysis

Clear the instrument's internal memory of old saved analyses.

28.3   Update FW

Feature only available for Be Cool V1S and Be Cool T1S.

Before starting the firmware update, ensure that the following safety conditions are met to avoid interruptions during loading:
1. Battery Level: The instrument battery must have a charge of more than 30%.
2. Recording status: No data recording should be active.
3. Firmware File: Make sure you have downloaded the updated firmware file provided by Seitron to your smartphone/ tablet. Visit the website www.seitron.it

Update Procedure:
1. Scroll to the bottom of the page and locate the FW Update button.
2. Tap the button to start the procedure.
3. File Selection: The app will automatically open your device's file manager (File Picker).
4. Browse through the folders on your smartphone and select the firmware file specific to your device.
5. Once the file has been selected, the app will begin transmitting the data to the device.
   Important: During this phase, do not close the app or move your smartphone away from the device to avoid interrupting the Bluetooth connection.
6. Once the download is complete, the tool will finish the installation and the app will return to the previous screen.

Common Error Messages
"Insufficient battery": If the charge is below 30%, the app will block the operation for safety reasons.
"Recording in progress": If the device is saving data, you must first stop recording before you can update the firmware.

29.0 TIGHTNESS TEST

This menu in the Seitron Smart Analysis app allows you to perform a tightness test on the system, monitoring pressure variations over time, with the option of compensating the data based on temperature.
Before starting the tightness test, you must set the required parameters to automatically determine whether the test has passed or failed:
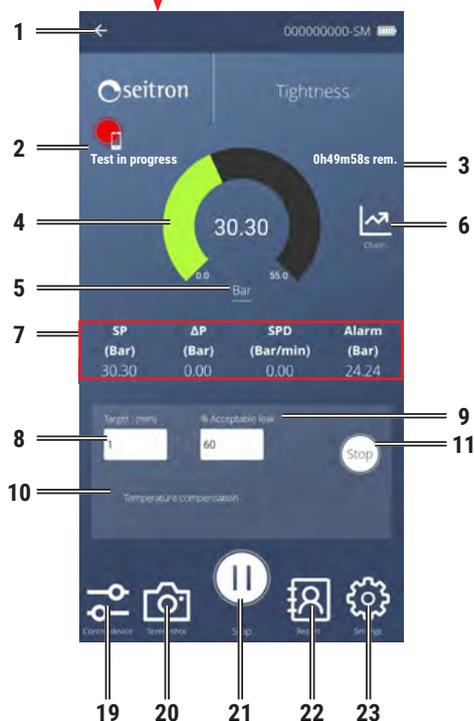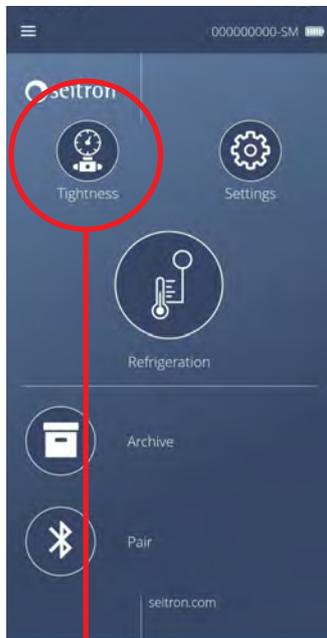
Selecting the Unit of Measure:	Tap the pressure gauge or the arrow next to the unit (e.g., bar, psi, kPa) to select the desired one.
Set the Duration:	Enter the total number of minutes for which you want to monitor the system in the "Target Time (min)" field.
Set Acceptable Loss:	Enter the maximum percentage of pressure drop allowed for the system to be considered leak-proof in the "% Acceptable Loss" field.
Temperature Compensation:	If you have temperature probes connected, you can activate the "Temperature compensated" switch. This corrects the pressure reading based on environmental temperature changes.

The system calculates technical data such as pressure drop (ΔT) and leakage rate, and also offers a temperature compensation function to correct readings based on environmental temperature variations. Finally, you can document your analysis by taking screenshots, viewing graphs, or generating professional reports.

1	Return to the main screen
2	Test Status: Shows whether the test is in progress, passed, or failed. The icon " " shows that the test is being stored on the mobile device memory.
3	Time Remaining: A stopwatch that indicates how much time is left until the end of the test.
4	Digital Pressure Gauge: Displays the current pressure in real time.
5	Select the unit of measurement: Tap the pressure gauge (e.g., bar, psi, kPa) to select the desired unit.
6	View the pressure trend on a time graph.
7	PI: value recorded at the start of the test. ΔT: pressure variation compared to the initial value. VEL: Leak Rate: Indicates how quickly the pressure is dropping (e.g., bar/min). Alarm: value below which the pressure leak test is considered failed (calculated value)
8	Target Time: Enter the total minutes for which you want to monitor the system.
9	% acceptable loss: Enter the maximum percentage of pressure drop allowed for the system to be considered leak-proof.
10	Enable/disable temperature compensation. If you want to perform the temperature-compensated leak test, enable the data and connect the temperature probe to the instrument.
11	Pressing the "Test" button starts the leak test, which is saved in the memory of the mobile device. Once the test has started, the "Stop" button appears. Pressing this button interrupts the leak test of the system.
19	Commands (see section "30.1 Commands" on page 92).
20	Take a snapshot of the current screen to save it in the work session (see section "30.2 Screenshot" on page 93).
21	Allows you to start or stop recording data in the internal memory of the Seitron instrument (see paragraph "30.3 Start rec." on page 93).
22	Generate a professional report with the test results to share or save (see section "30.4 Report" on page 94).
23	Access the general device settings (see chapter "28.0 SETTINGS" on page 87.

29.1   Tightness test start

Ensure the system is pressurized (see paragraph "11.4 TIGHTNESS TEST" on page 42).

Tap the central circular "Test" button (marked by the white ring icon). The app will automatically record the Initial Pressure and start the countdown.

Monitoring: If the pressure drops below the calculated limit (based on the set acceptable leak), the test will stop, and the message "Test Failed" will appear. If the pressure remains within the limits when the time is up, the message "Test Passed" will appear.

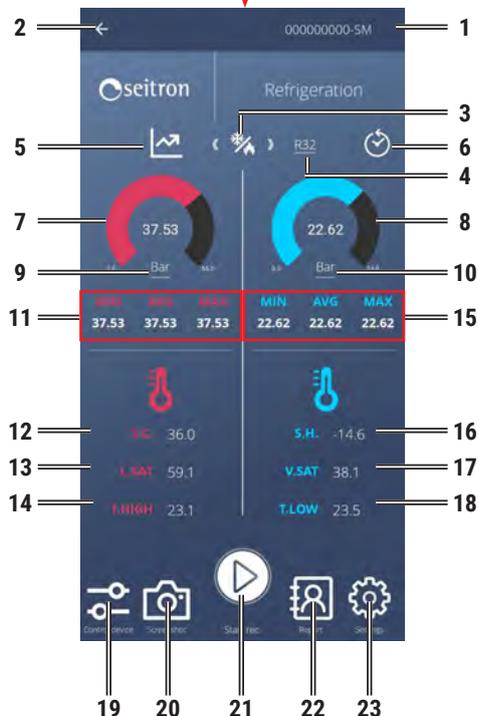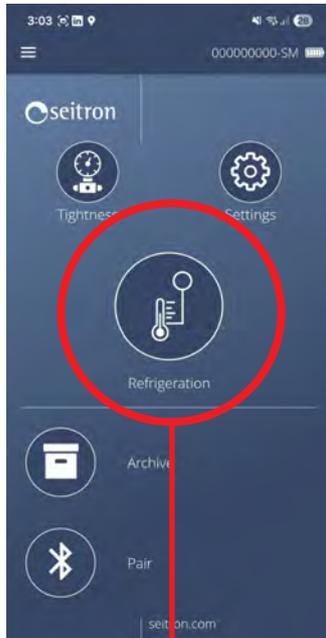You can manually stop the test at any time by pressing the "Stop" button.

Important Note
If Temperature Compensation is active but the probe is disconnected during the test, the analysis will be automatically interrupted to prevent erroneous data. Ensure the probe is connected.
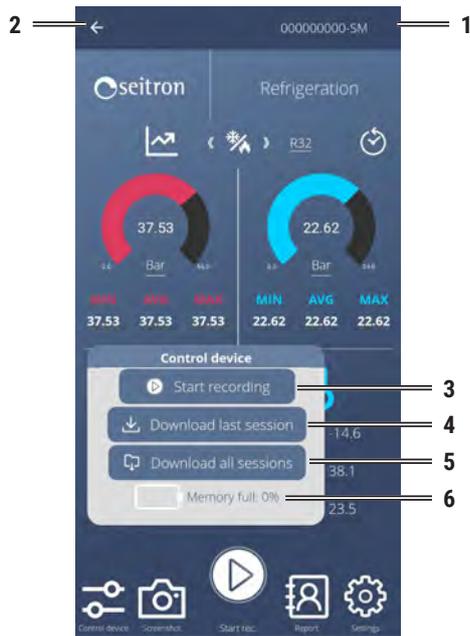
30.0 REFRIGERATION

This section of the Seitron Smart Analysis App acts as an Advanced Digital Manifold (PT Analysis) for monitoring refrigeration and air conditioning systems.
The menu enables real-time viewing of circuit pressures and temperatures, distinguishing between the high and low pressure sides. The interface automatically calculates key technical parameters such as Subcooling and Superheating based on the selected refrigerant gas, while also allowing for data logging, viewing time-based graphs, and generating professional maintenance reports.

1	Be Cool Evo M4S battery level indicator.
2	Return to main screen
3	System operating mode setting: **Cooling** (low-pressure side, the blue gauge will be positioned on the left of the display) **Heating** (heat pump - high-pressure side - the red gauge will be positioned on the left of the display) **Automatic** (automatic cooling / heating (heat pump) detection)
4	Selected refrigerant setting

5	View graph
	    Normally, the App displays all pressure measurement data in "Dashboard" mode.
	    By selecting the "Graph" function, the App displays the detected data in two distinct graphs:
	    - Pressure values of the high and low-pressure lines
	    - Minimum and maximum temperatures detected by the clamp probes connected to the low and high-pressure lines respectively.

6	View digital gauges
7	High-pressure side gauge (hot)
8	Low-pressure side gauge (cold)
9	Pressure unit of measurement setting
10	Pressure unit of measurement setting
11	Minimum, average, and maximum temperature measured by the clamp probe connected to the high-pressure branch
12	Subcooling (calculated temperature)
13	Condensation temperature of the selected refrigerant
14	Maximum temperature detected by the clamp probe connected to the high-pressure line
15	Minimum, average, and maximum temperature detected by the clamp probe connected to the low-pressure line
16	Superheating (calculated temperature)
17	Evaporation temperature of the selected refrigerant
18	Minimum temperature detected by the clamp probe connected to the low-pressure line
19	Commands (see paragraph "30.1 Commands" on page 92)
20	Takes a snapshot of the current screen to save it in the work session (see paragraph "30.2 Screenshot" on page 93)
21	Allows starting or stopping data logging in the Seitron instrument's internal memory (see paragraph "30.3 Start rec." on page 93)
22	Generates a professional report with test results to share or save (see paragraph "30.4 Report" on page 94)
23	Accesses general device settings (see chapter "28.0 SETTINGS" on page 87)

30.1   Commands

1	Be Cool Evo M4S battery charge status indicator.
2	Return to the main screen
3	Start recording on the Be Cool Evo M4S: measurements are saved to the device's memory. The " [icon] " icon appears in the top left corner of the App (**Fig. a**). The "● REC" icon appears on the instrument display. With this mode active, it is NOT possible to switch off the instrument. To switch off the instrument, you must first stop recording (via the instrument or the App - **Fig. b**).
4	Download the last session saved on the Be Cool Evo M4S memory.
5	Download all sessions stored on the Be Cool Evo M4S memory.
6	Information regarding the memory of Be Cool Evo M4S.

Fig. a

Fig. b

30.2 Screenshot

By pressing the Screenshot button, the displayed image is saved in the internal memory of the mobile device used, in a .jpg file.
Examples:

30.3 Start rec.

By pressing the button "", The recording of measurements on the mobile device's internal memory is started: The icon "" appears in the app, on the upper left corner.
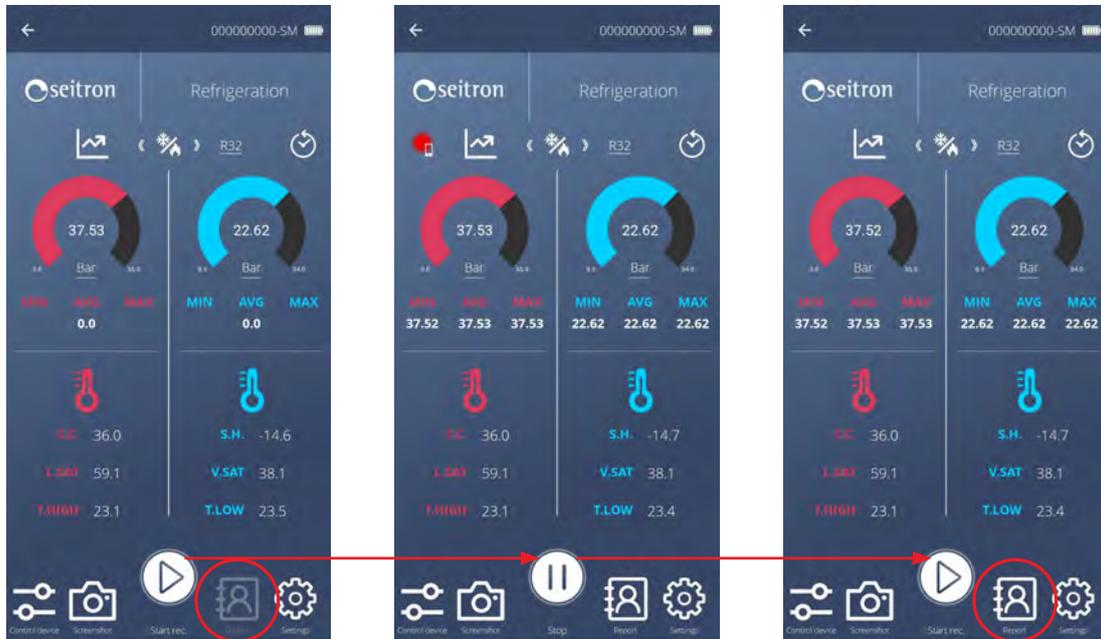

By pressing the button "" the registration is completed.

30.4 Report

The "Report" menu contains all measurements and personal data saved in the app database. The data stored here remains on the mobile device even after the device is disconnected.

To access and view the data, tap the Report icon on the main analysis screen (available only after starting a recording).

For full details, see section "25.4 Analysis archive".

31.0 VACUUM

This section of the app is dedicated to vacuum analysis and the related system vacuum hold test. It allows for real-time monitoring of the vacuum level via a digital gauge and simultaneous viewing of temperature data (ambient and water) with automatic calculation of the differential (ΔT).

Through this menu, the user can configure custom vacuum and duration targets, start automatic tests to confirm the absence of system leaks, capture screenshots of graphs, and generate complete professional technical reports for export or archiving.

Before starting the vacuum evacuation and the related vacuum hold test, you must set the desired targets in the fields at the bottom of the screen:

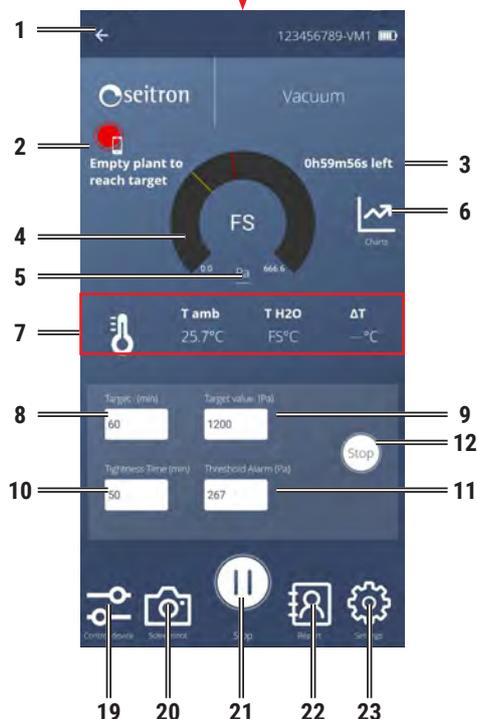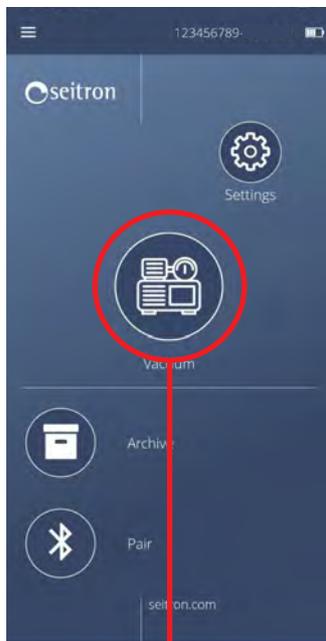Vacuum Evacuation: Target Time (min) - Target Value
Vacuum Hold Test: Hold Time (min) - Alarm Threshold

Test Outcome

The app will automatically notify you with on-screen messages:

Test Passed: If the pressure remains within the established limits during the hold phase.

Test Failed: If a leak is detected or if the target vacuum is not reached within the preset time.

1	Return to the main screen
2	Test Status: Shows whether the test is in progress, passed, or failed. The icon " " indicates whether the test is in progress, whether it is in the vacuum or leak test phase. The test is stored in the mobile device's memory.
3	Time Remaining: A stopwatch that indicates how much time is left until the end of the test.
4	Digital Pressure Gauge: Displays the current pressure in real time.
5	Select the unit of measurement: Tap the pressure gauge (e.g., mBar, mTorr, Micron) to select the desired unit.
6	View the pressure trend on a time graph.
7	T amb: Ambient temperature measured by the vacuum gauge T H2O: Evaporation temperature (calculated based on the pressure measured) ΔT: Real-time temperature difference (T amb + T H2O)
8	Target time (min): maximum time expected to reach the desired vacuum.
9	Target Value: sets the pressure value (e.g., in mTorr) that the system must reach.
10	Hold Time (min): Set how long the app should monitor vacuum stability after reaching the target.
11	Alarm threshold: pressure value that must not be exceeded during the vacuum leak test (to confirm the absence of leaks).
12	Pressing the "Test" button first starts the vacuum process and then the vacuum leak test, which are saved in the mobile device's memory. Once the test has started, the "Stop" button appears. Pressing this button interrupts the test.
19	Commands (see paragraph "30.1 Commands" on page 92).
20	Take a snapshot of the current screen to save it in the work session (see section "30.2 Screenshot" on page 93).
21	Allows you to start or stop recording data in the internal memory of the Seitron instrument (see paragraph "30.3 Start rec." on page 93).
22	Generate a professional report with the test results to share or save (see section "30.4 Report" on page 94).
23	Access the general device settings (see chapter "28.0 SETTINGS" on page 87).

32.0 TEMPERATURE

This menu is a dedicated tool for professional thermal monitoring. It allows for real-time viewing of temperatures detected by two probes (typically positioned on the hot and cold lines of a system), automatically calculating the difference between the two (ΔT). The user can observe data on a dual-display digital gauge, log trends over time, view detailed graphs, and generate technical reports ready for sharing.

In the center of the screen, you will find a digital temperature indicator. The red indicator shows the temperature of the high-temperature probe (T High), while the blue indicator shows the temperature of the low-temperature probe (T Low). The value in the center of the indicators displays the temperature difference (ΔT).

|	
1	Return to the main screen.
2	The icon " " indicates whether the test is in progress, whether it is in the vacuum or leak test phase. The test is stored in the mobile device's memory.
3	Indicates the value of ΔT (difference calculated between the two temperatures).
4	Digital pressure gauge: Shows the current temperature in real time. Red indicator: Shows high temperature. Blue indicator: Shows low temperature.
5	Select the unit of measurement: Tap the pressure gauge to select the desired unit (°C, °F, or K).
6	View historical temperature trends on a time chart
7	Temperature monitoring: T High: The exact value measured by the probe connected to the high-temperature branch of the system. T Low: The exact value measured by the probe connected to the low-temperature branch of the system. ΔT: The difference calculated between the two temperatures.
19	Commands (see section "30.1 Commands" on page 92).
20	Take a snapshot of the current screen to save it in the work session (see section "30.2 Screenshot" on page 93).
21	Allows you to start or stop recording data in the internal memory of the Seitron instrument (see paragraph "30.3 Start rec." on page 93).
22	Generate a professional report with the test results to share or save (see section "30.4 Report" on page 94).
23	Access the general device settings (see chapter "28.0 SETTINGS" on page 87).

* For the association and configuration of each of the two probes, refer to the following paragraph.

32.1 Pairing of two probes

Once the first probe has been paired, and you wish to pair the second one as well, proceed as follows:
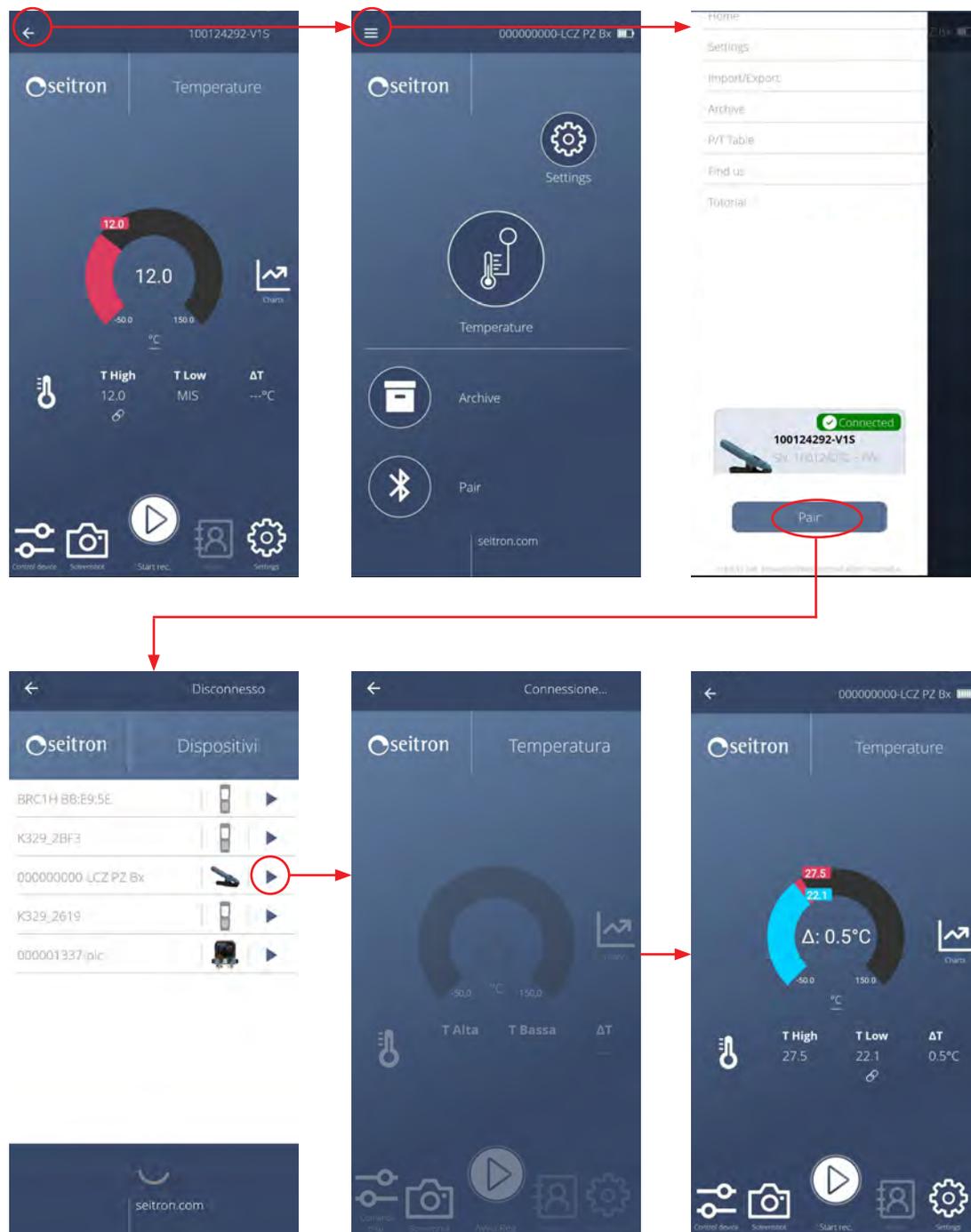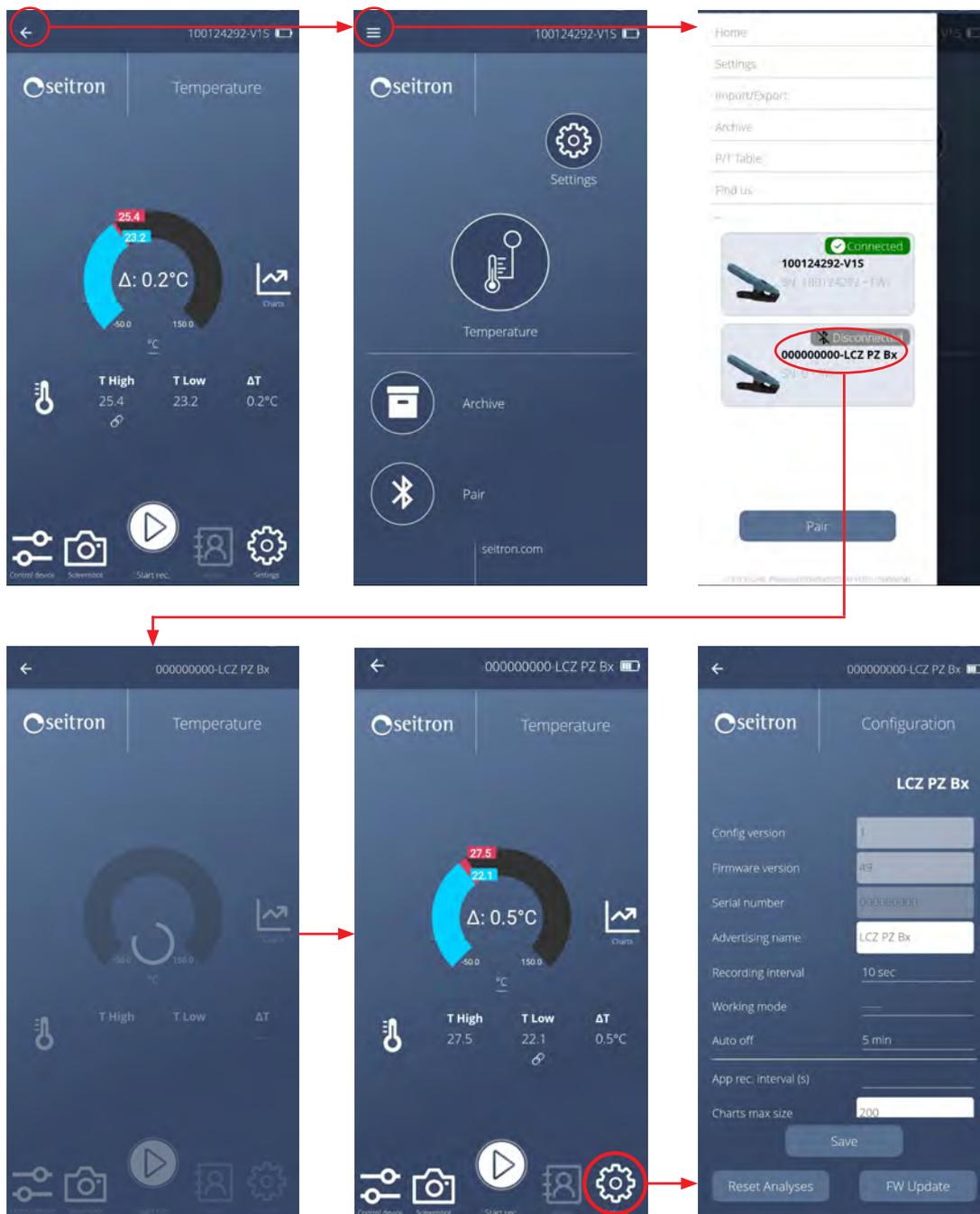
32.2 Probe configuration

Once both probes have been paired, each probe must be configured individually by following the step-by-step procedure described below.

1. Pressing the button it is possible to proceed with the configuration of the probe whose ID is shown at the top right of the arrow:
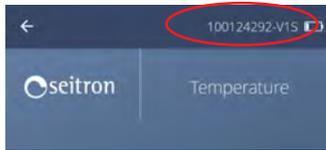
2. To configure the second probe associated with the App, proceed as follows:

APPENDIX A - TROUBLESHOOTING

BE COOL EVO M4S SECTION

PROBLEM	POSSIBLE CAUSE / SOLUTION
The device does not turn on.	Batteries completely drained. > Charge the battery and try turning it on after 5 minutes.
When the device is turned off, pressing the power button starts the system with the display off. The red LED flashes for 10 seconds and then turns off.	The battery charge is too low. > Charge the battery.
The device is turned on, with the red LED flashing.	The battery is dead. > Charge the battery (the red LED remains lit).
The device switches itself off.	Completely discharged batteries. > Charge the battery and try turning it on after 5 minutes.
Incomplete or slow charging.	The tool is switched on during charging; power is shared between operation and charger. > Turn off the device to allow it to recharge with the maximum available energy.
The device is turned off, but the white LED is flashing (3 flashes every 5 seconds).	Sleep/Energy Saving Mode: The device is turned on, but has entered power saving mode due to inactivity. > Touch the touch screen to reset the display. Logging active: The instrument is acquiring data in internal memory with the display turned off to preserve battery life. > Press and hold the ON/OFF button for 4 seconds to wake the device from sleep mode.
The device's touch screen is not functioning.	>Ensure that the ambient temperature is within the operating range of the instrument: -10 to +50 °C (-14 to +122 °F). > Instrument locked; Turn the instrument off and on again.
Azerror in pressure sensors.	Non-ambient pressure sensors. > Disconnect the lines and bring the system to ambient pressure before repeating the procedure.
The measured pressure shows " --- ".	The permissible measurement range limit has been exceeded.
Pressure Reading Error (Err.Adc / Err.Monot.).	Sensor to be recalibrated. > Contact the Seitron service center.
The vacuum gauge shows " ---"	- The permissible measurement range limit has been exceeded. - Check that the vacuum gauge is connected to the instrument.
The vacuum measurement shows "cal. err.".	Vacuum gauge pressure sensor calibration error. > Contact the Seitron service center.
The measured temperature shows " --- ".	Check that the clamp-on temperature probe is connected to the instrument. The clamp-on temperature probe is connected to the instrument, but the permissible measuring range limit has been exceeded.
The pressure measurement is inaccurate.	Set the pressure to zero in ambient air.
Pressure leak test: Leak detection.	Actual physical loss or failure to compensate for temperature. > Check the tightness of the SAE brass fittings; make sure the temperature probe is connected to activate compensation.

BE COOL EVO V1S SECTION

PROBLEM	POSSIBLE CAUSE / SOLUTION
The device does not turn on.	Batteries completely discharged. >Replace the batteries.
Flashing red LED (2 flashes per second every 3 seconds).	The batteries are almost empty (approximately 2 hours of battery life remaining). >Replace the batteries.
The device switches itself off.	The remaining battery life is too low. > Replace the batteries.
The display is off, but the white LED is flashing (2 flashes every 5 seconds).	Sleep/Power Saving Mode (instrument not connected): The instrument is turned on, but has entered power saving mode due to inactivity. > Press the ON/OFF button to turn the display back on.
The display is off, but the white LED is flashing (once every 5 seconds).	Sleep/Power Saving Mode (connected device): The device is turned on, but has entered power saving mode due to inactivity. > Press the ON/OFF button to turn the display back on.
The display is off, but the white LED is flashing (2 flashes every 5 seconds) and the green LED is flashing (1 flash every 5 seconds).	Logging active (instrument connected): The instrument is acquiring data in internal memory with the display turned off to preserve battery life. > Press the ON/OFF button to turn the display back on.
The display is off, but the white and green LEDs are flashing (1 flash every 5 seconds).	Logging active (instrument not connected): The instrument is acquiring data in internal memory with the display turned off to preserve battery life. > Press the ON/OFF button to turn the display back on.
The display shows "---" instead of the measured value.	The permissible measurement range limit has been exceeded.
The message "cal. err." appears on the display instead of the measured value.	Pressure sensor calibration error. > Contact the Seitron service center.
Vacuum gauge not detected by the Seitron Smart Analysis app or by Be Cool Evo M4S.	The vacuum gauge is in Sleep mode or connected to another device. > Press the ON/OFF button on the vacuum gauge to reactivate Bluetooth (white LED in advertising mode).

BE COOL EVO T1S SECTION

PROBLEM	POSSIBLE CAUSE / SOLUTION
The device does not turn on.	Batteries completely discharged. >Replace the batteries.
Flashing red or blue LED (2 flashes per second + 3-second wait).	The batteries are almost empty (approximately 2 hours of battery life remaining). >Replace the batteries.
The device switches itself off.	The remaining battery life is too low. > Replace the batteries.
Temperature probe not detected by the Seitron Smart Analysis app or by Be Cool Evo M4S.	The temperature probe is turned off or connected to another device.

SEITRON SMART ANALYSIS APP SECTION

PROBLEM	POSSIBLE CAUSE / SOLUTION
Unable to find the app in the Store	The search key was incorrect. >Specify: Seitron Smart Analysis

APPENDIX B - SPARE PARTS AND SERVICE

Accessories

SBT001	Be Cool T1S temperature probe
POVG02	Be Cool V1S digital vacuum gauge

Spare parts

AJPB01	Li-Ion battery pack 3.7 V 6000 mAh
AAAL05	Power supply 100 .. 240 V~ / 5 VDC 2 A
WCAV0089	USB-A to USB-C adapter cable
AASI01	EU plug
AASI02	USA plug
AASI03	CHINA plug
AASI04	AUSTRALIA plug
AASI05	UK plug
AJKA01	100−240 V~ / 5 VDC 2 A power supply with 1.8 m cable + US plug + USB-A / USB-C adapter cable
AJKA02	100−240 V~ / 5 VDC 2 A power supply with 1.8 m cable + EU plug + USB-A/USB-C adapter cable
WCAP0006	Knurled brass cap 1/4" (female). For pressure gauge, Be Cool Evo M4S
WCAP0007	3/8" knurled brass cap (female). For pressure gauge, Be Cool Evo M4S
ARKT010001SE	Be Cool Evo flexible hoses: - Yellow flexible hose, without valve, 3/8" SAE connection with seals (1 pc) - Yellow flexible hose, with valve, 1/4" SAE connection with seals (1 pc) - Blue flexible hose, with valve, 1/4" SAE connection with seals (1 pc) - Red flexible hose, with valve, 1/4" SAE connection with seals (1 pc)
ARRC010001SE	T-fitting with central connection with 1/4" SAE female swivel fitting and 1/4" SAE male side connections
WCOP4119	Battery cover for temperature probe, Be Cool Evo T1S
WCAP0008	1/4" knurled brass cap (female). For vacuum gauge, Be Cool Evo V1S
WCOP0118AF	Battery cover for vacuum gauge, Be Cool Evo V1S
WGUAR045	Battery compartment gasket for vacuum gauge, Be Cool Evo V1S
WFILX0039	10 replacement filters for vacuum gauge, Be Cool Evo V1S
WVAL000037SE	Be Cool Evo smart kit case

Service centers

Seitron S.p.A. a socio unico
Via del Commercio, 9/11
36065 Mussolente (VI)
Tel.: +39.0424.567842
Fax.: +39.0424.567849
E-mail: info@seitron.it
http://www.seitron.com

APPENDIX C - WARRANTY

In the interest of continuous product development, the manufacturer reserves the right to make changes to technical data and performance features without prior notice.
The consumer is guaranteed against product conformity defects in accordance with European Directive 2019/771 as well as the Seitron warranty policy document.
The full text of the warranty is available from the seller upon request.

Seitron S.p.A. a socio unico
Via del Commercio, 9/11 - 36065 - MUSSOLENTE (VI) ITALY
Tel. 0424.567842 - info@seitron.it - www.seitron.com