better milking advice with

VADIA+

User Manual

Version 4.3

for VADIA+ 1.9.6

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Table of Contents

1. General Description

VaDia + is a software developed by BioControl for Android and iOS which can be used to view current, maximum, minimum and average vacuum in kPa or inHg from VaDia2 device in real time (via Bluetooth) as well update time on the device, view data streaming graph, perform a Pulsator, Fall off Test, create a report, set parameters of VaDia2 device or put the device in deep sleep (transport) mode.

2. Software First Start

2.1. Software installation

The software can be downloaded from Play Store on Android. Go to Play Store and look for VaDia+.

https://play.google.com/store/apps/details?id=com.biocontrol.vadia_lite&hl=pl

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The software can be downloaded from App Store on iOS. Go to App Store and look for VaDia+.

https://apps.apple.com/cg/app/vadia/id1633986826

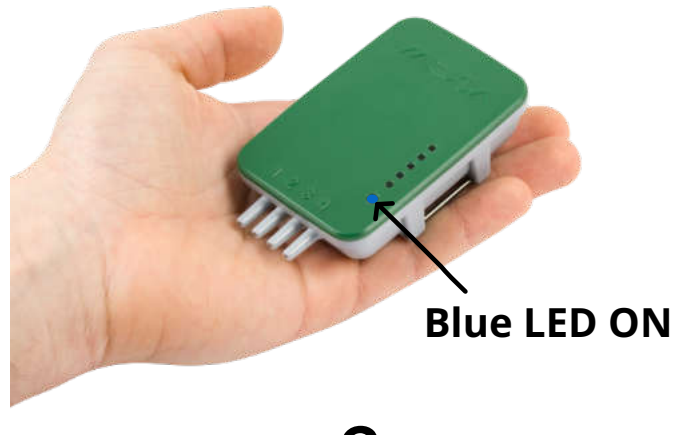
Depending on your phone's settings the application will either update automatically or you will be prompted whether you would like to update the application.

3. Application Features

The main view of the application allows you to manage clients. To find and connect to nearby devices - go to the Devices tab. To view vacuum in kPa or inHg on all 4 channels, go to Analysis - Gauges view. VaDia2 must be in Bluetooth mode to connect to your mobile phone. To activate Bluetooth in VaDia2, rotate your device approximately 90 degrees. Up to 4 devices can be connected simultaneously. Test functions are also available in the Analysis view. To browse tests and create reports go to the Library view.

A

B

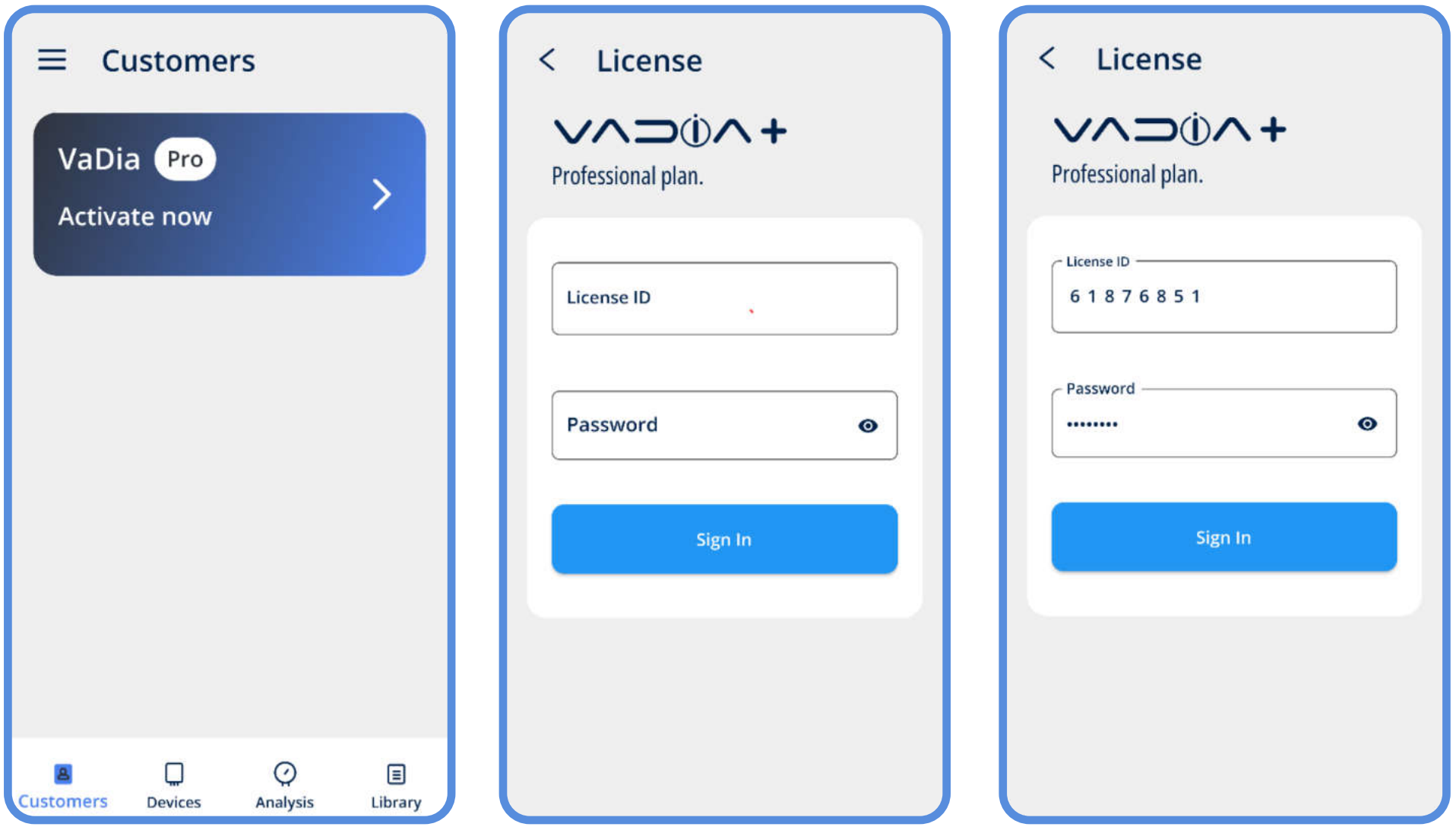


C

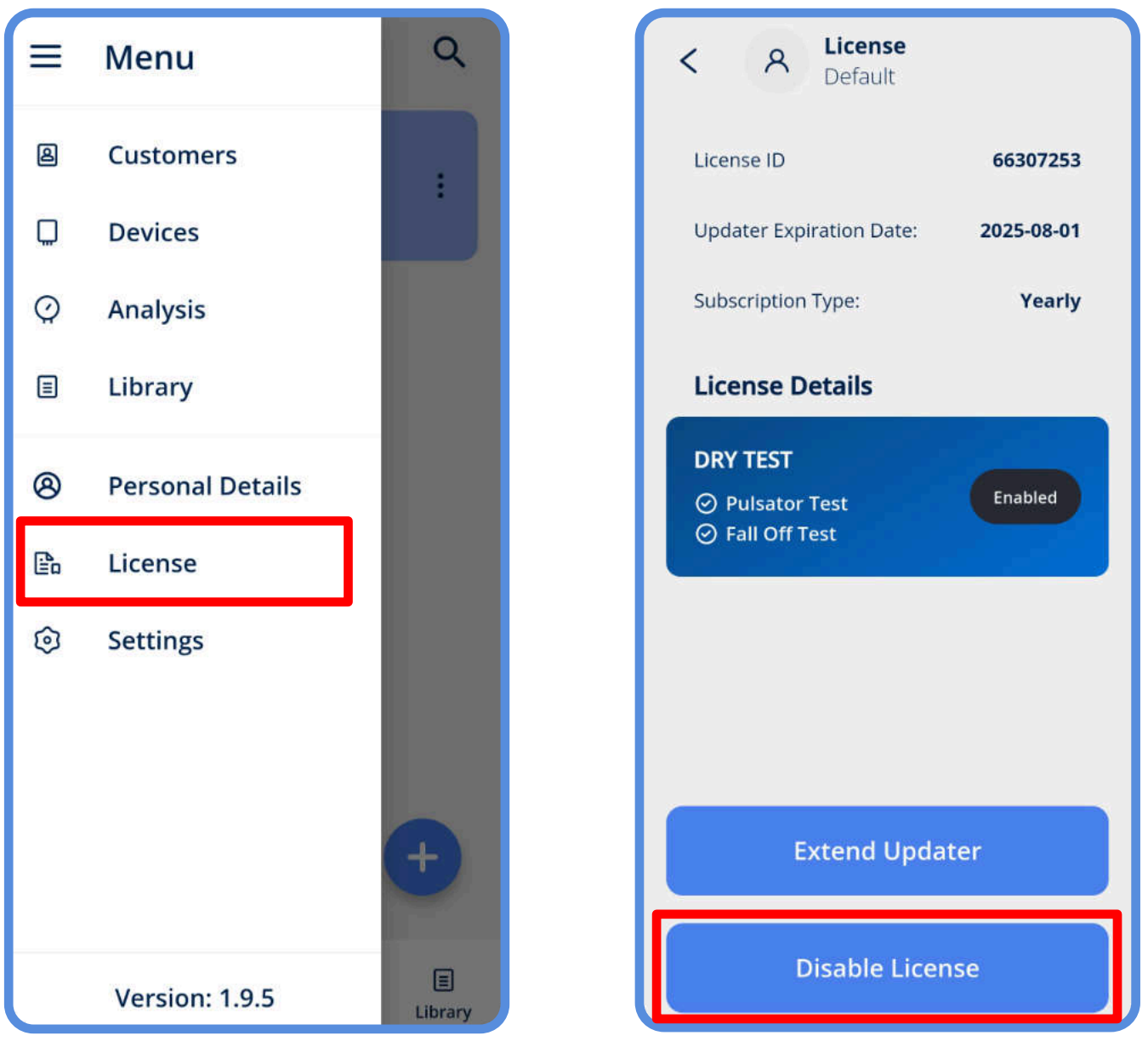
3.1. Activating license

1. Go to **‘Customers’** view and click on the banner

2. Enter license ID and password and press **‘Sign in’**

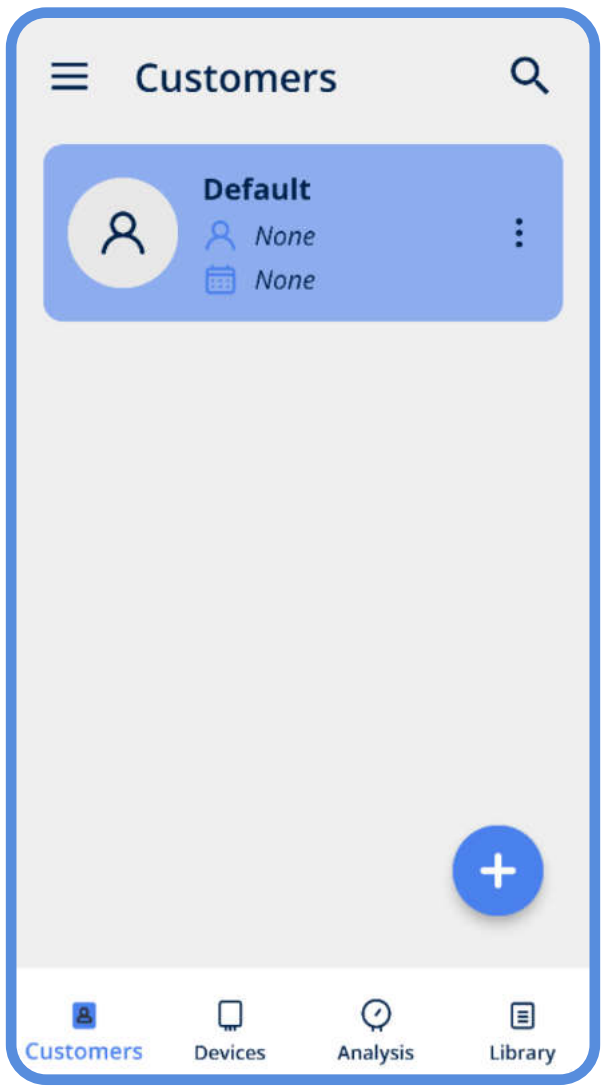


If you want to transfer your license to another device, be sure to deactivate it first by going to the **License** menu and pressing **'Disable License'**.

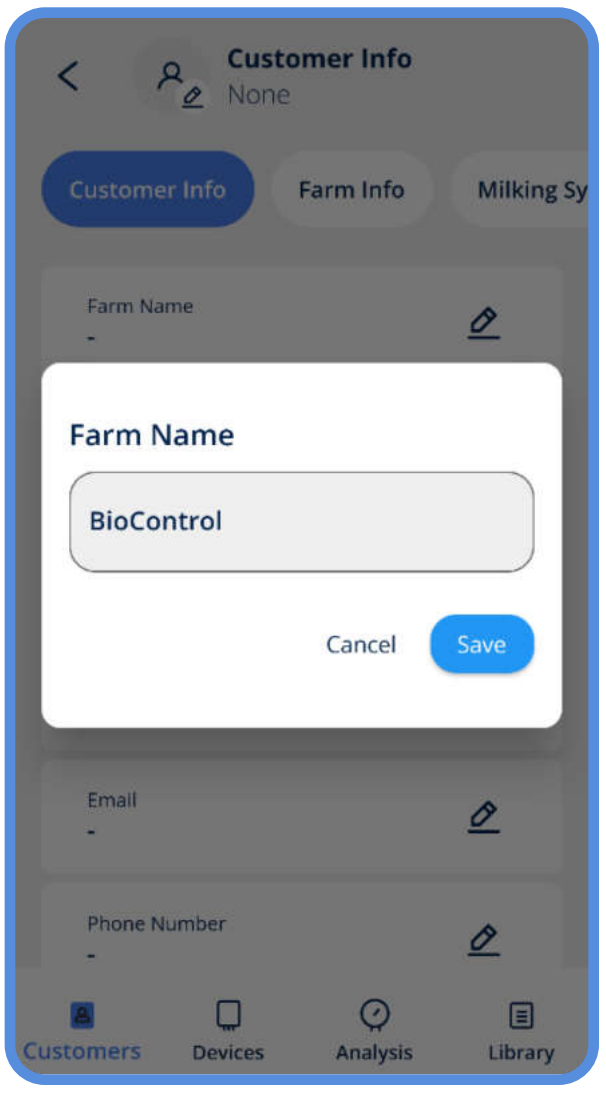


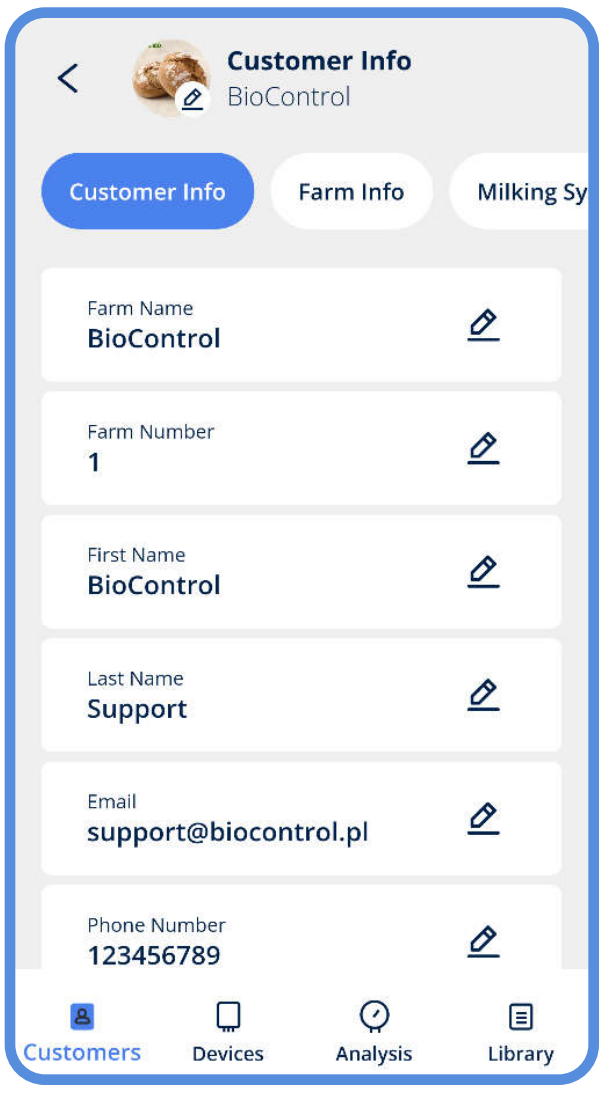
3.2. Managing customers

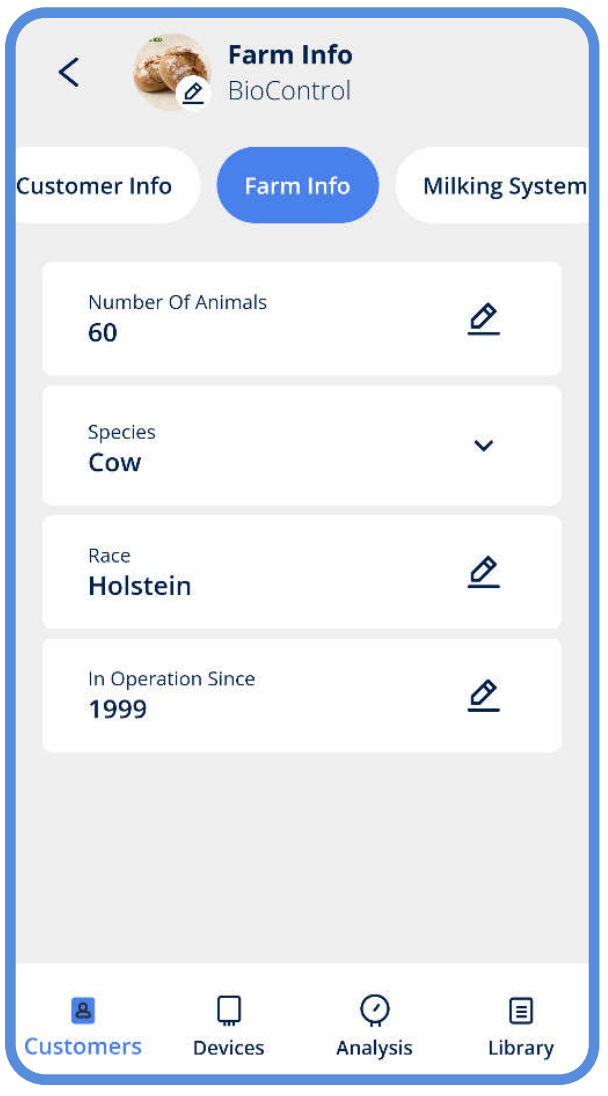
1. To add a customer press the **‘+’** button



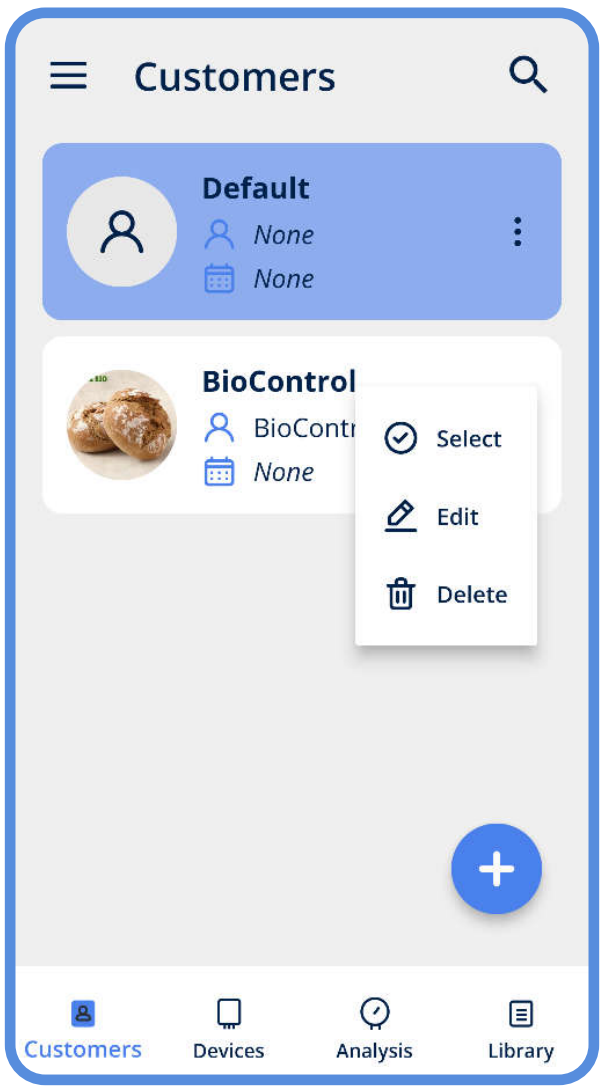
2. Enter information about the customer such as milking system or farm information, select the avatar for the customer by pressing the ‘person’ icon. Changes are automatically saved.





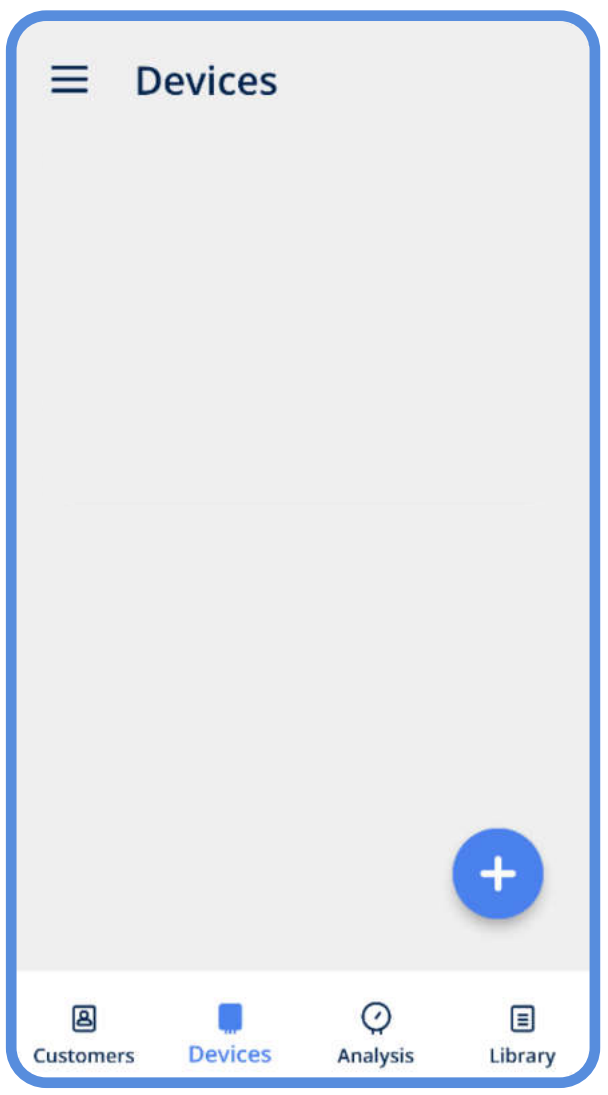


3. To select customer from the list, tap on their tile. To edit customer information, tap and hold their tile. To delete customer – press on the three dots on the right and select ‘**Delete**’ from the list.

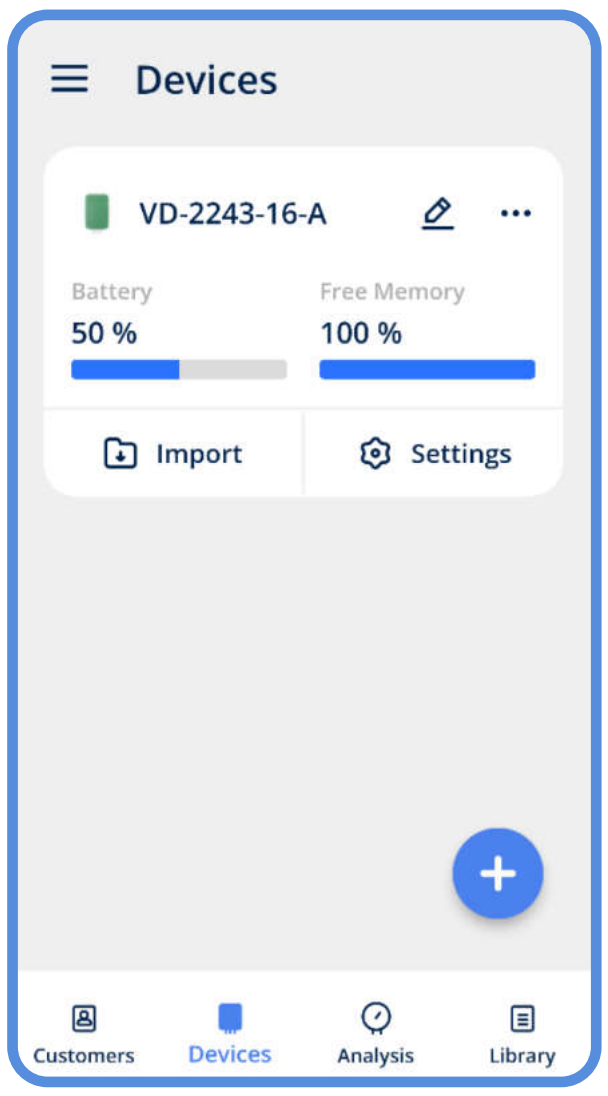


3.3.1. Devices

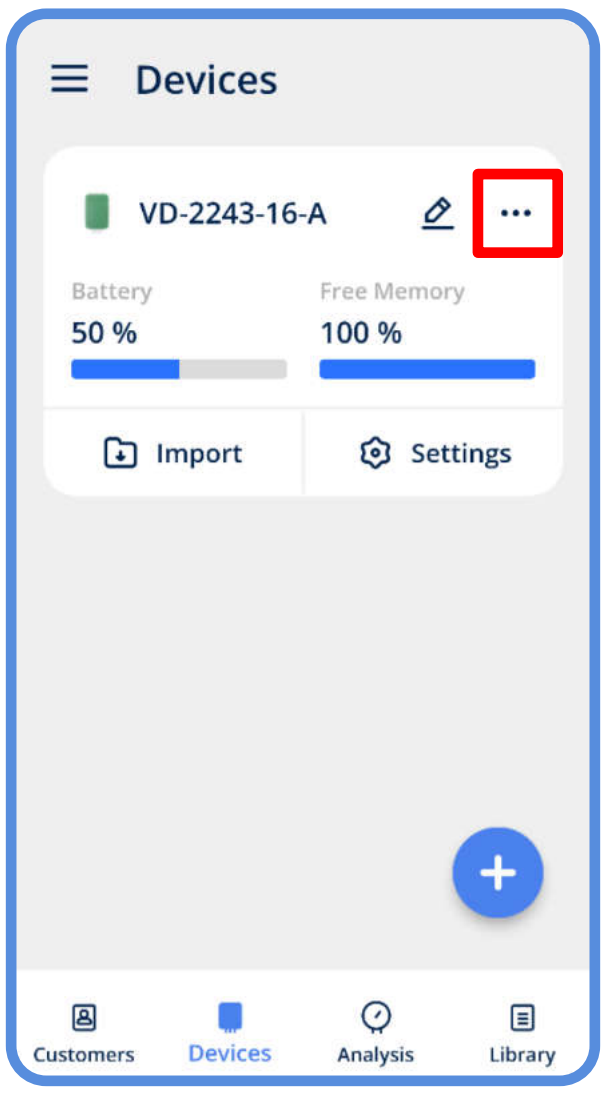
This view allows you to manage your VaDia2 devices. Up to 4 devices can be connected at the same time. Once the device is on the list, whenever the application is launched, it will automatically attempt to reconnect with the device as long as it is near and Bluetooth is turned on. You can also refresh the view by using pull-to-refresh feature.

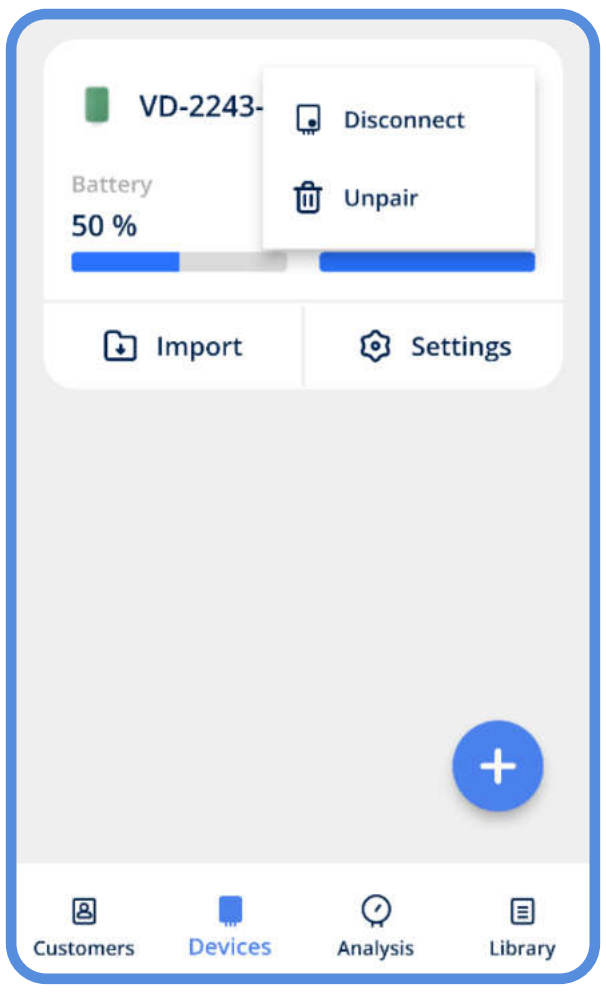


Press ‘**+**’ button at the bottom right to add VaDia2 devices nearby.

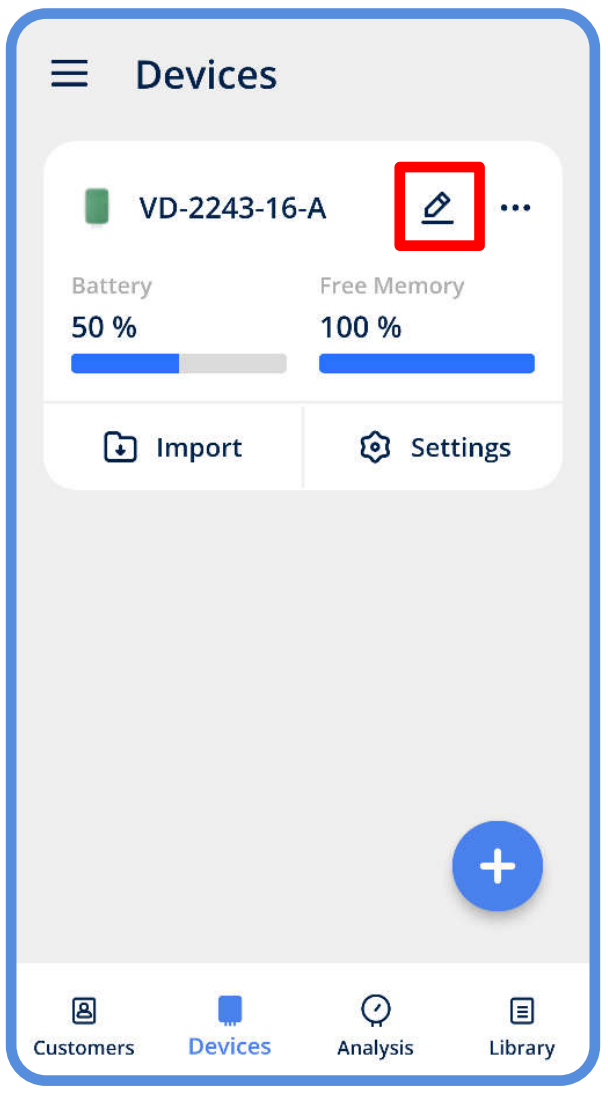


To disconnect or unpair the device, press the three dots at the top right corner of the device tile and select the desired option.

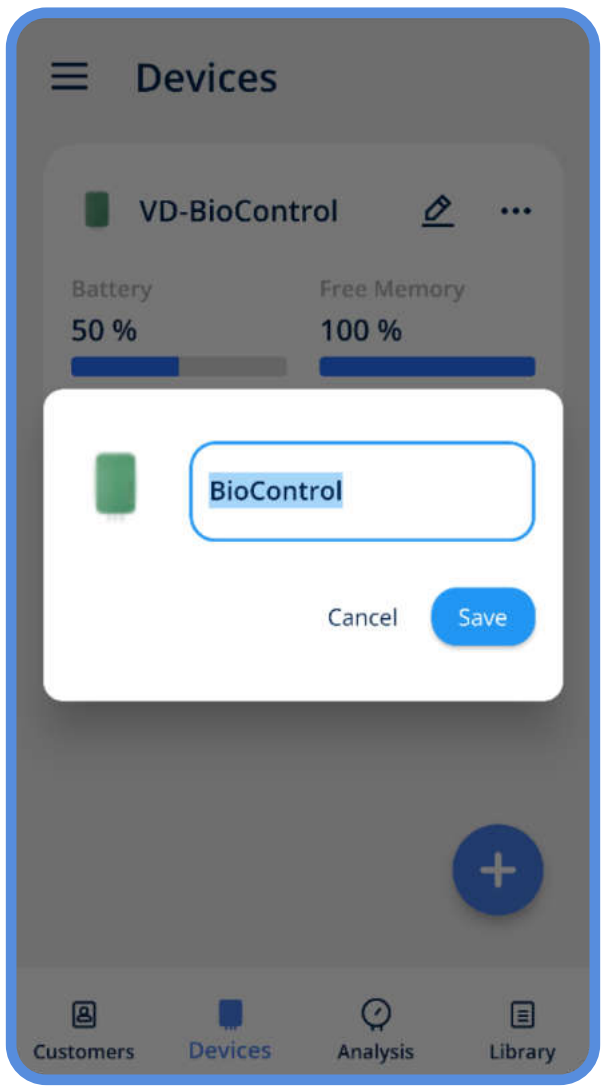




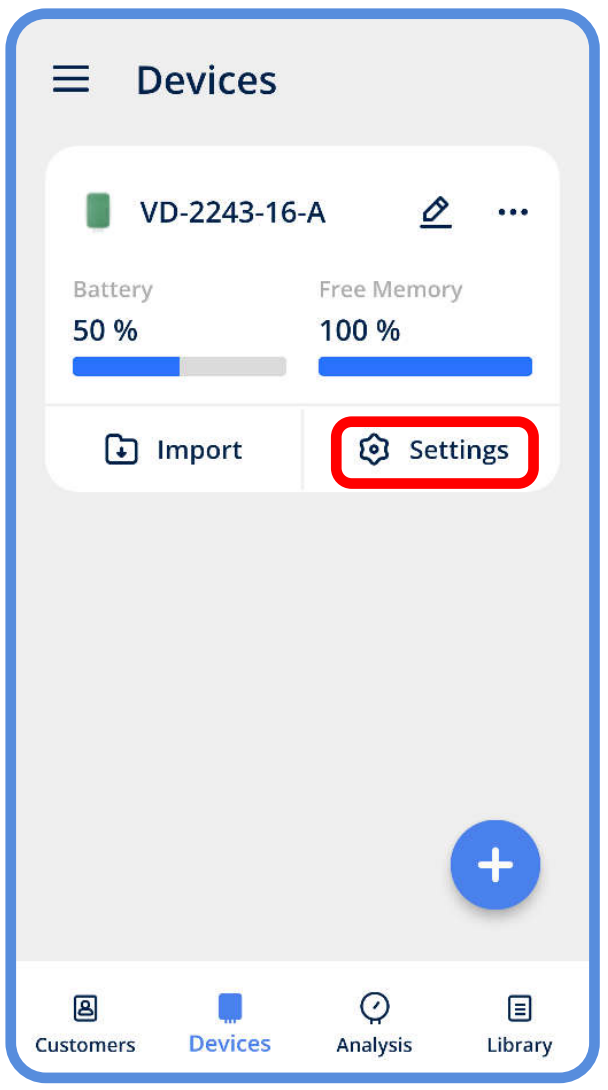
To change the name of the device, press the **‘Edit icon’** next to the device name.



Enter the name of the device and press **‘Save’**. Press **‘Cancel’** to quit editing device name.

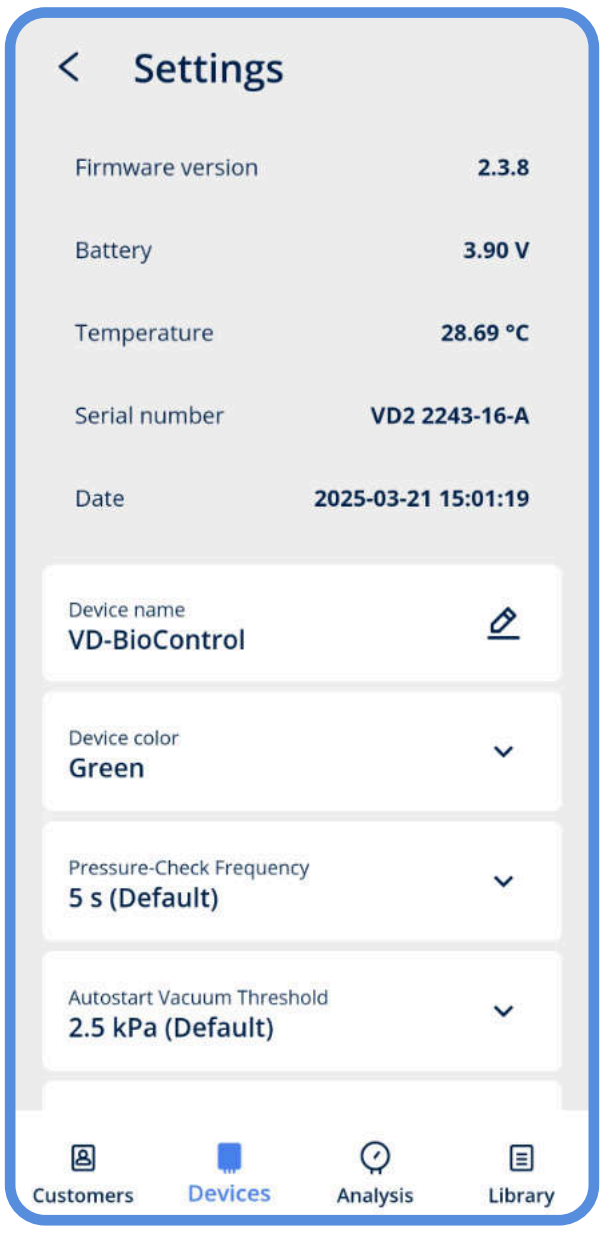


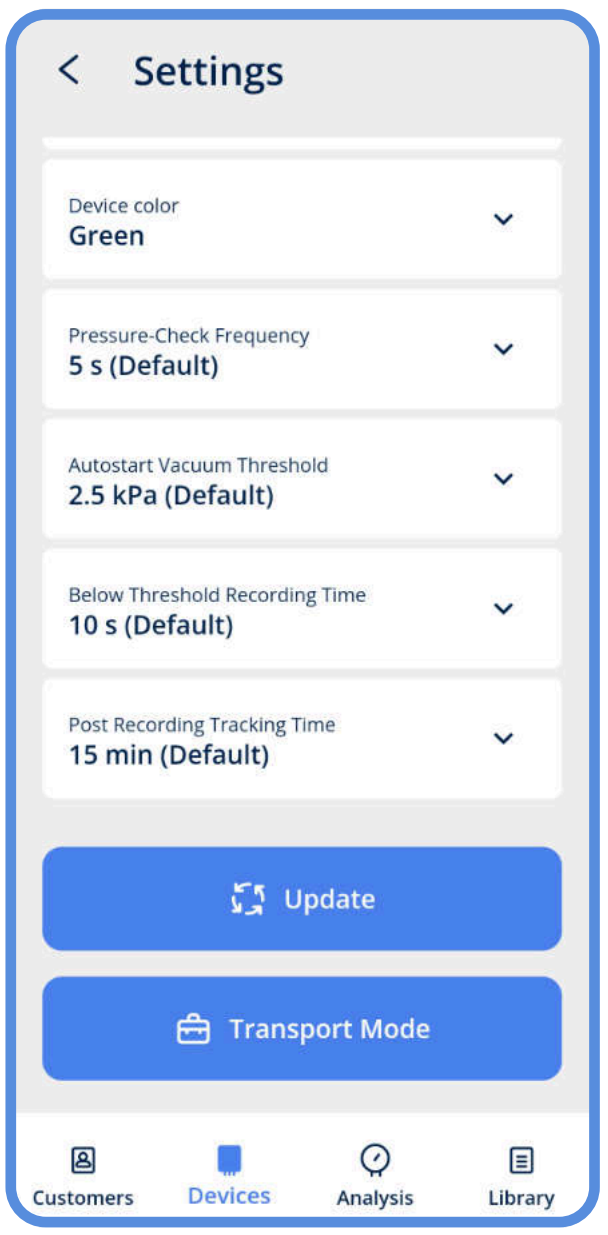
Go to device settings by pressing **‘Settings’** button in the device tile.

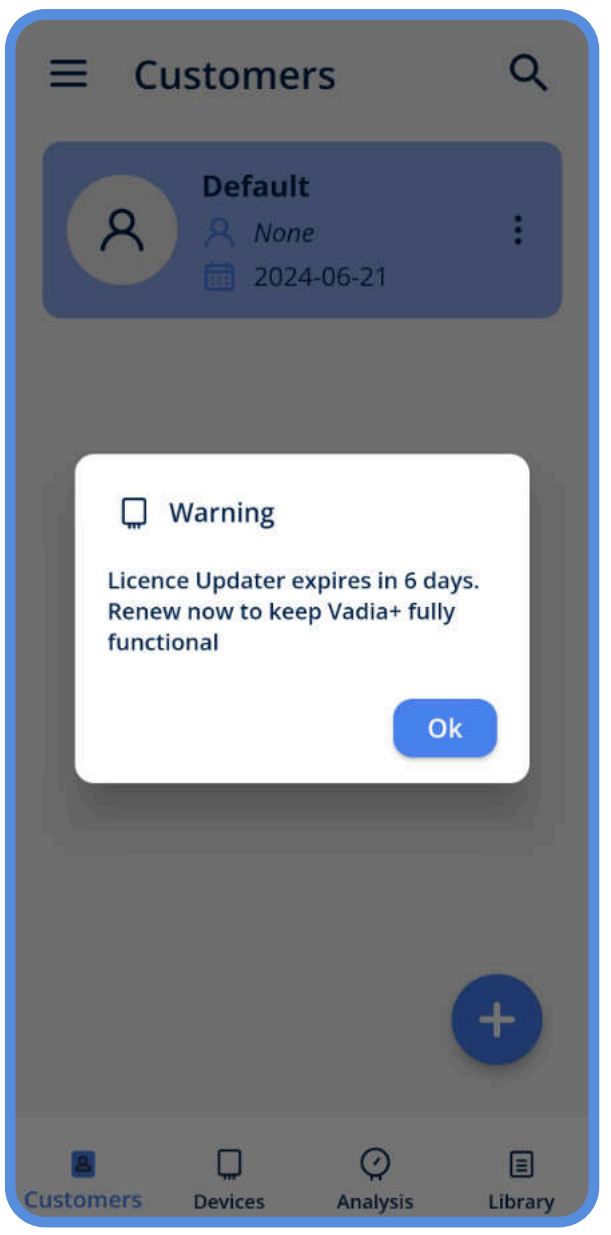


Update - user can update the firmware on the device after selecting the firmware file on their phone (minimum version required 2.x.x)

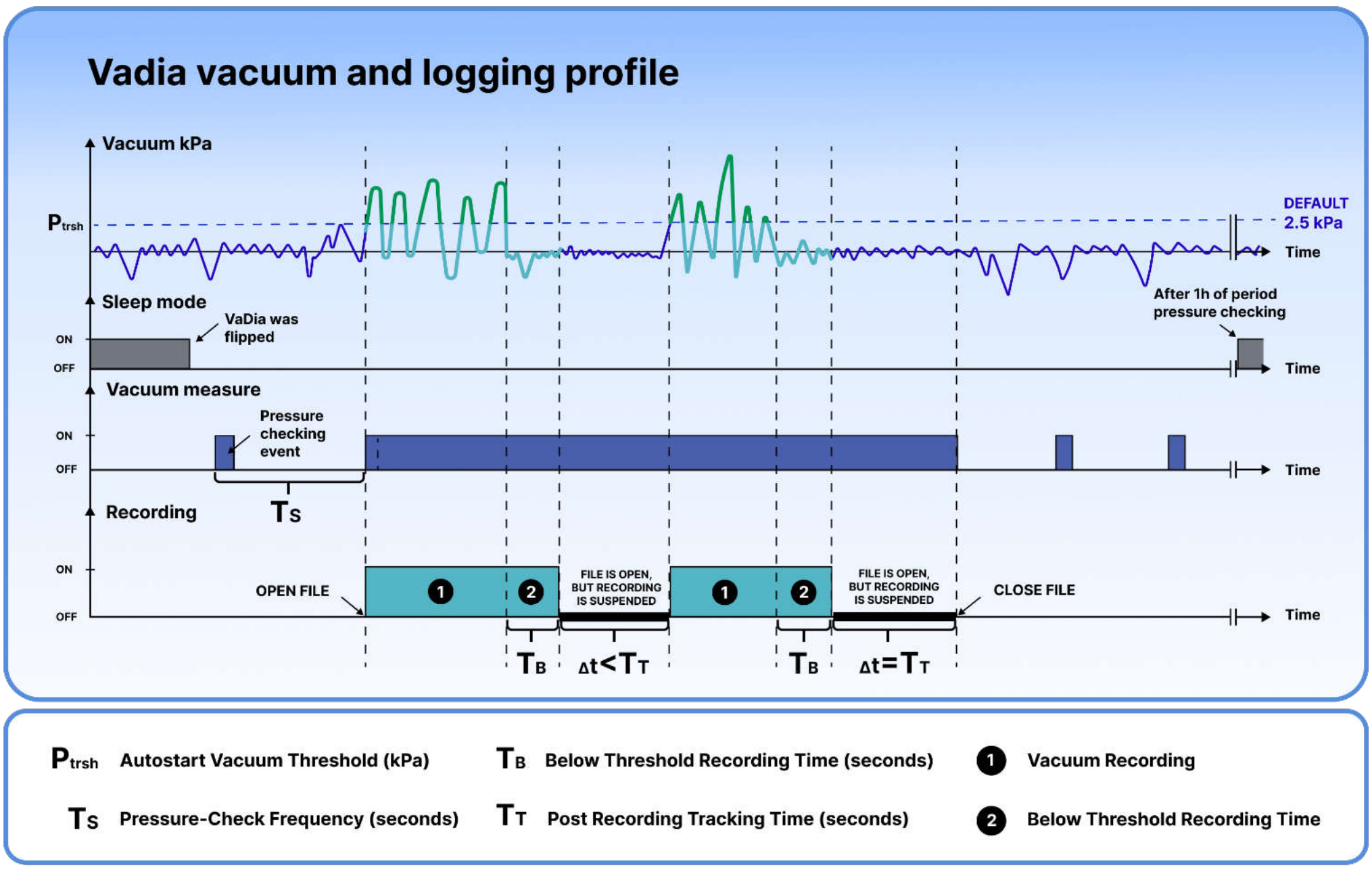
Transport Mode - puts the device in transport mode (deep sleep). To wake up the device user needs to connect it via USB to PC/laptop or power outlet







3.3.2. Parameters



Each parameter has 5 predefined levels. Custom levels can be added and set by the user.

All values used in examples are default VaDia2 values.

Autostart Vacuum Threshold (kPa) [formerly 'Autostart Pressure Threshold']

The vacuum level at which VaDia starts recording data.

Further explanation:

Autostart Vacuum Threshold (kPa) is the vacuum level that triggers the start of data recording.

When the vacuum goes above this threshold, VaDia begins recording automatically.

Example Scenario:

- **Autostart Vaccum Threshold** is set to 2.5 kPa.
- When the vacuum reaches 2.5 kPa, VaDia starts recording.
- The recording continues as long as the vacuum is above 2.5 kPa. If the vacuum drops below 2.5 kPa, the recording process follows the logic of the **Below Threshold Recording Time and Post Recording Tracking Time** parameters.

Why is this useful?

- Ensures VaDia only records when vacuum is at a meaningful level.
- Helps avoid unnecessary data collection when the system is idle.

Pressure-Check Frequency (seconds) [formerly 'Period of pressure sensing']

How often the VaDia "wakes up" to check if the vacuum level has exceeded the set **Autostart Vacuum Threshold**.

This check starts when the vacuum gets below the threshold and continues for 60 minutes.

Further explanation:

Pressure-Check Frequency (seconds) determines how often VaDia "wakes up" to check if the vacuum has exceeded the Autostart Vacuum Threshold. This periodic check occurs only within 60 minutes after the last time the vacuum was detected above the threshold.

Example Scenario:

- **Pressure-Check Frequency** is set to 5 seconds.
- **Autostart Vacuum Threshold** is set to 2.5 kPa.
- VaDia was previously recording data, but the vacuum dropped below 2.5 kPa, so it stopped recording.
- Now, for the next 60 minutes, VaDia "wakes up" every 5 seconds to check if the vacuum has gone back above 2.5 kPa.
- If it detects a vacuum above 2.5 kPa, recording restarts.
- If 60 minutes pass without the vacuum reaching 2.5 kPa, VaDia stops checking until manually activated again.

Why is this useful?

- Prevents unnecessary continuous monitoring, saving battery life.
- Ensures that short-term fluctuations in vacuum can be detected and recorded without requiring constant manual intervention.
- Helps automatically resume recording if vacuum conditions return to an active state within a reasonable time.

Below Threshold Recording Time (seconds) [formerly 'Time of pressure recording']

The time VaDia records data after the vacuum has dropped below the **Autostart Vacuum Threshold**.

If the vacuum rises above the threshold again during this period, recording continues.

If not, the file is saved and closed.

Further explanation:

Below Threshold Recording Time (seconds) defines how long VaDia continues recording after the vacuum drops below the Autostart Vacuum Threshold. If the vacuum rises above the threshold again during this period, recording continues uninterrupted. Otherwise, the file is saved and closed.

Example Scenario:

- **Below Threshold Recording Time** is set to 10 seconds.
- **Autostart Vacuum Threshold** is set to 2.5 kPa.
- VaDia is actively recording because the vacuum is above 2.5 kPa.
- The vacuum suddenly drops to 2 kPa, but instead of stopping immediately, VaDia waits 10 seconds to see if it returns above 2.5 kPa.
- If the vacuum recovers to 3 kPa within 10 seconds, recording continues in the same file.
- If the vacuum stays below 2.5 kPa for the full 10 seconds, VaDia closes the file and stops recording.

Why is this useful?

- Prevent unnecessary file fragmentation due to short-term vacuum drops.
- Ensure complete recordings without frequent stops and starts.

Post Recording Tracking Time (seconds) [formerly 'Time of pressure tracking']

The time VaDia keeps monitoring the vacuum after finishing a recording.

If the vacuum rises above the **Autostart Vacuum Threshold** during this time, recording resumes in the same file. Otherwise, a new file is created.

Further explanation:

Post Recording Tracking Time (seconds) defines how long VaDia continues monitoring vacuum levels after it has stopped recording, If the vacuum rises above the threshold during this period, VaDia reopens the same file and resumes recording. If not, a new file is created when recording starts again.

Example Scenario:

- **Post Recording Tracking Time** is set to 15 minutes.
- **Autostart Vacuum Threshold** is set to 2.5 kPa.
- VaDia has just stopped recording because the vacuum stayed below 2.5 kPa for longer than the **Below Threshold Recording Time.**
- Instead of shutting down immediately, VaDia continues monitoring the vacuum for 15 minutes.
- If the vacuum rises above 2.5 kPa within 15 minutes, VaDia reopens the previous file and resumes recording.
- If the vacuum stays below 2.5 kPa for the full 15 minutes, VaDia creates a new file the next time recording starts.

Why is this useful?

Helps group related data into the same file instead of creating multiple short files.
Reduces the number of separate files when vacuum levels fluctuate frequently.

Below Threshold Recording Time vs. Post Recording Tracking Time

Parameter	Below Threshold Recording Time	Post Recording Tracking Time
Purpose	Determines how long VaDia continues recording after vacuum drops below the threshold.	Determines how long VaDia monitors vacuum after recording stops, to decide if the same file should be reopened.
When It Applies	After vacuum falls below the Autostart Vacuum Threshold.	After a recording session has ended.
What Happens Next?	If vacuum rises above the threshold within this time, recording continues in the same file. If not, the file closes.	If vacuum rises above the threshold within this time, recording resumes in the same file. If not, a new file is created next time recording starts.
Main Benefit	Prevents stopping and starting too frequently due to brief vacuum drops.	Help group recordings into fewer files instead of creating many short recordings.

Simple Analogy:

- **Below Threshold Recording Time** = “Wait a little before stopping, in case vacuum recovers.”
- **Post Recording Tracking Time** = “After stopping, keep watching for a while in case vacuum recovers quickly.”

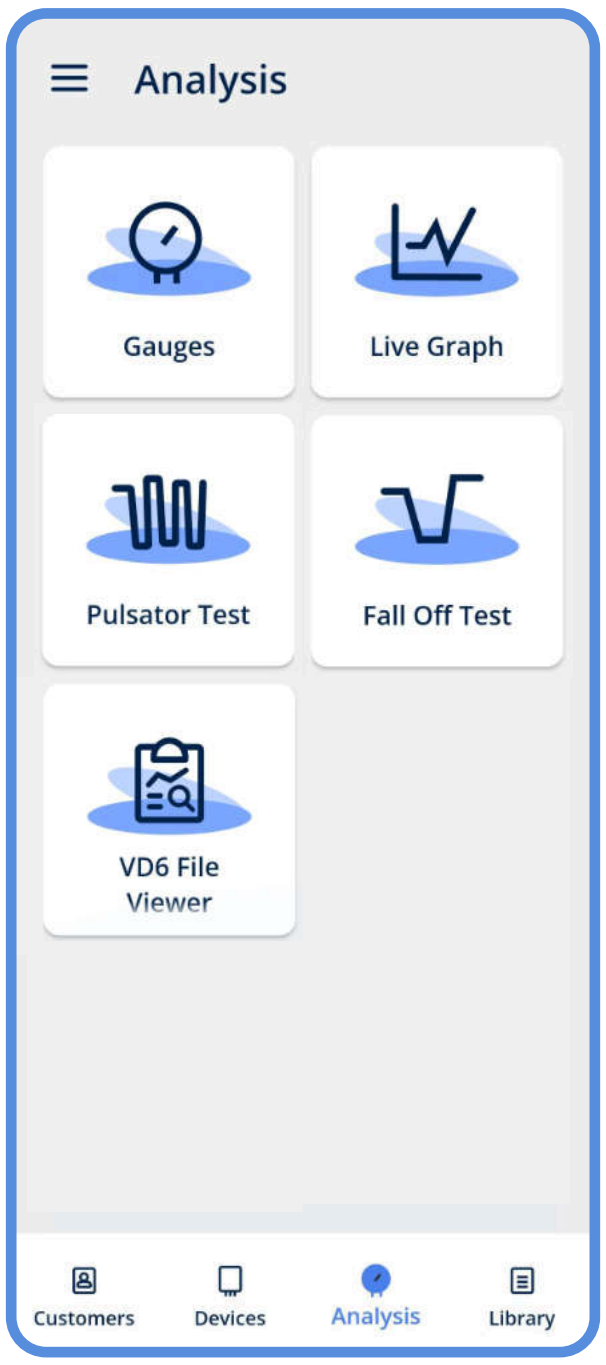
NOTE: If the **Post Recording Tracking Time** is set too long, you won’t be able to access the file until that time has passed. The data file will only become available after the set duration ends.

These parameters work together to optimize recording efficiency and battery life while ensuring important vacuum events are captured.

3.4. Analysis

Analysis view:

- **Gauges** – view current vacuum on all four channels
- **Live Graph** - view live graph from all four channels
- **Pulsator Test**
- **Fall Off Test**
- **VD6 Viewer** – load file from device to display it on the graph



Gauges

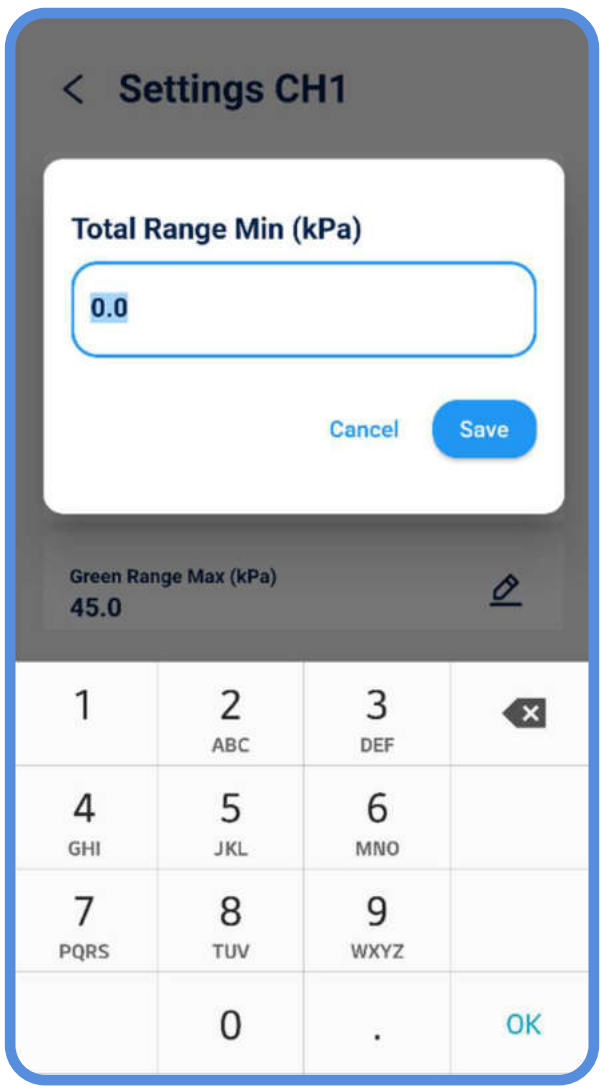
Press **‘Gauges’** to view current vacuum on four channels. To adjust the view and channel values, press the three dots next to desired channel and choose **‘Settings’**. To reset values on the channel, press **‘Reset’**.

When you tap the gauge, it will zoom according to the values set in channel settings:

- System Vacuum **->** green zone +/-1 **->** yellow zone +/-2
- For example, system vacuum is set to 42 kPa, the zoomed green zone will be between 41 and 43 kPa and the yellow zone will be between 40 and 44 kPa.

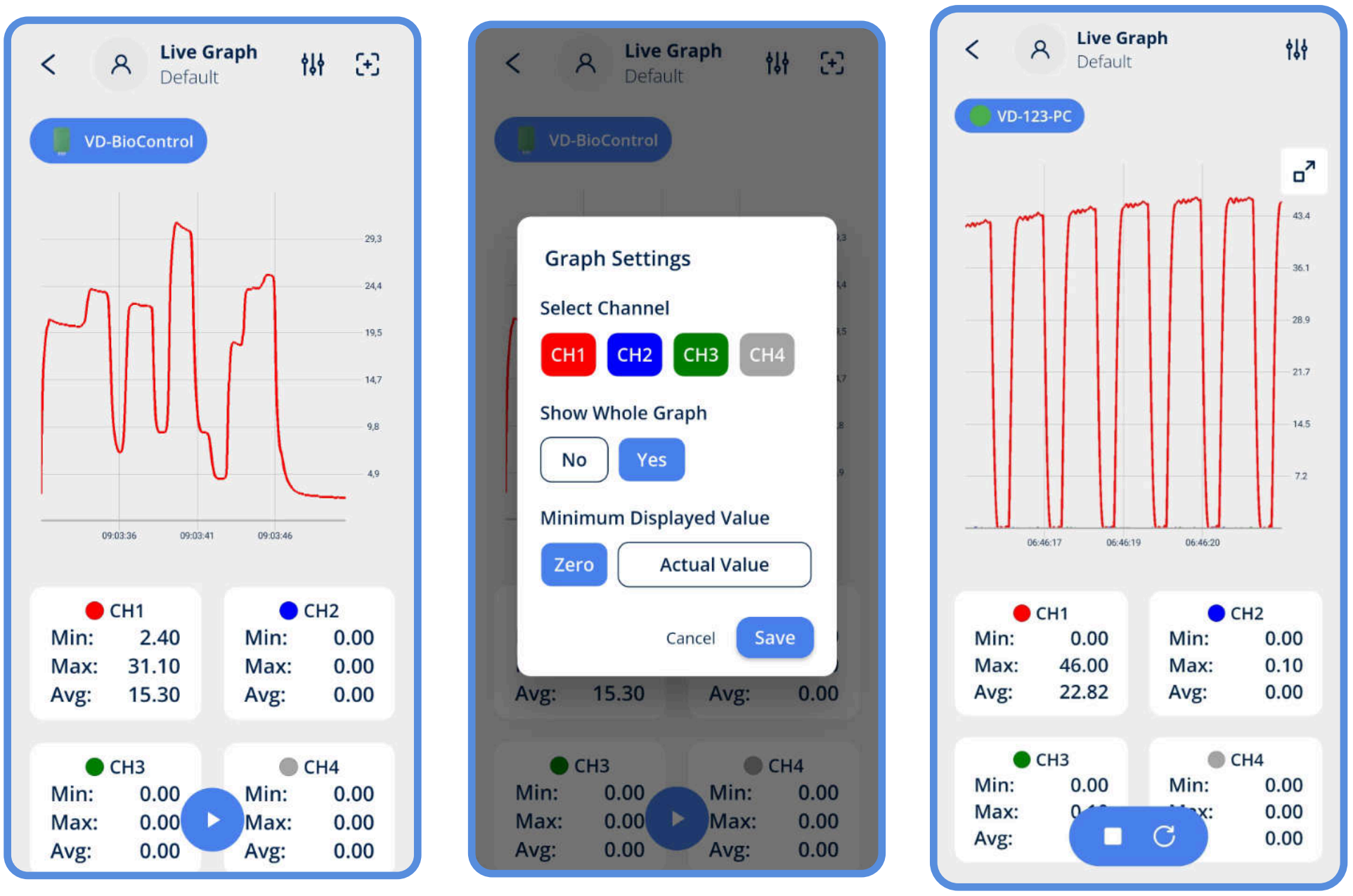
To change values, press **‘Edit’** icon. Changing values here will change the view of the gauges.

Enter the desired value and press **‘Save’** to save changes. Press **‘Cancel’** to leave this view.



Live Graph

Press '**Live graph**' to view data stream on a graph from all four channels. Graph can be paused and zoomed in or out.



Filter Icon - Select the channels displayed on the graph and toggle between showing the entire graph or the last 7 seconds. The minimum displayed value setting only applies when "Show Whole Graph" is set to "No." This setting adjusts the graph scaling to show values from either 0 kPa or the lowest value in the last seven seconds.

Screenshots Icon - Allows you to take a screenshot of the current view.

Square Arrow icon - Reset graph zoom to default.

Pulsator Test

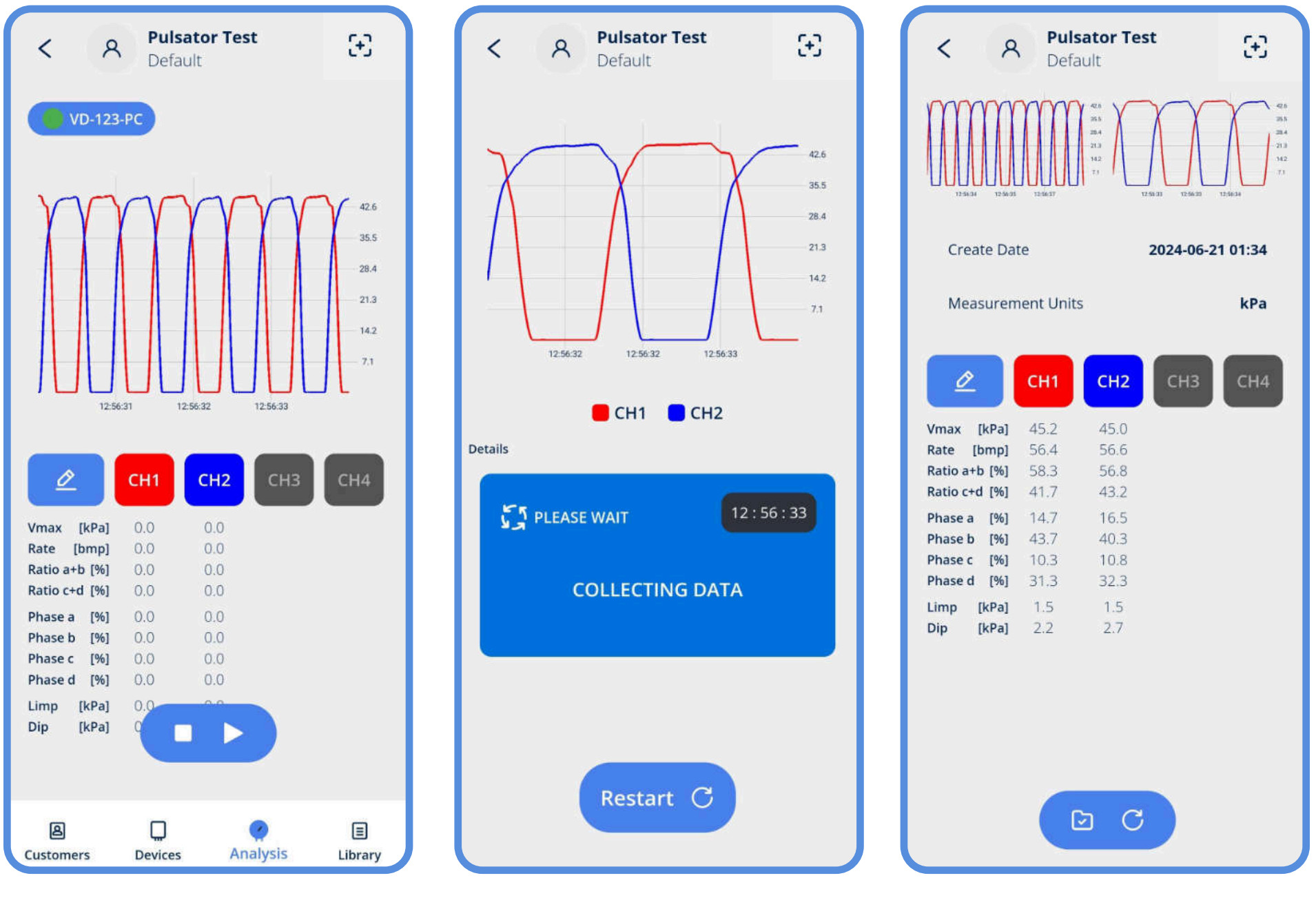
Users can alternate between two ways in which the Pulsator Test can be made: default mode or Fast Save. The mode can be changed in application settings view under "Pulsator Test Type".

Default mode - data is loaded on the graph and pressing the folder icon will trigger save test window.

Fast Save mode - pressing '**Play**' button triggers test start. The application starts collecting data (approximately 7 pulsation cycles and calculates test results)

Pressing [%] icon next to the parameters will toggle between displaying values in [ms] or [%].

Note: Before running a test, be sure to select channels that have data. If there is no data on the selected channels, the test will not be calculated.

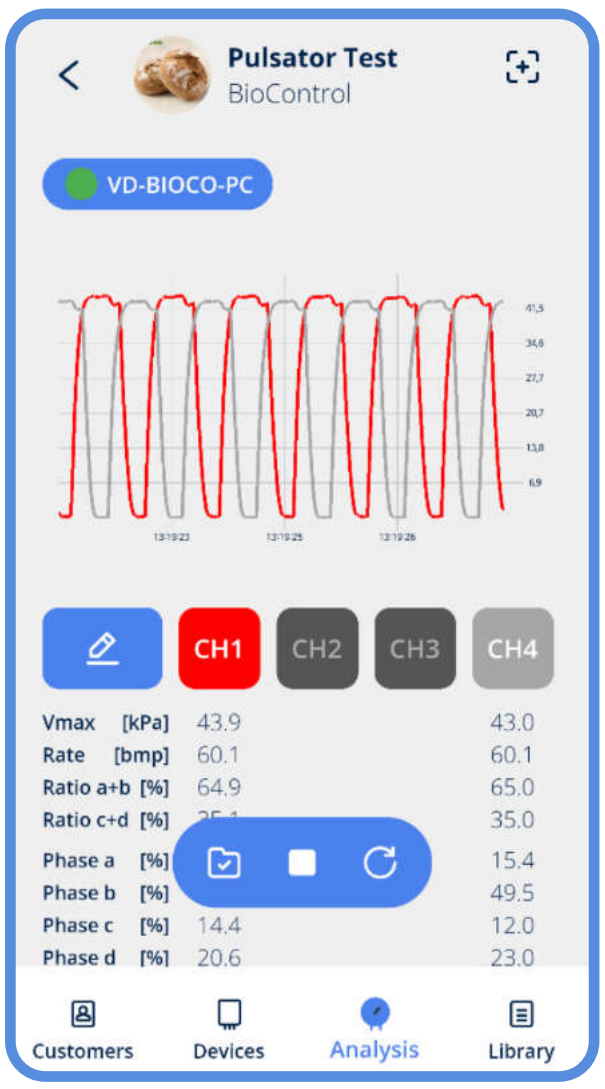


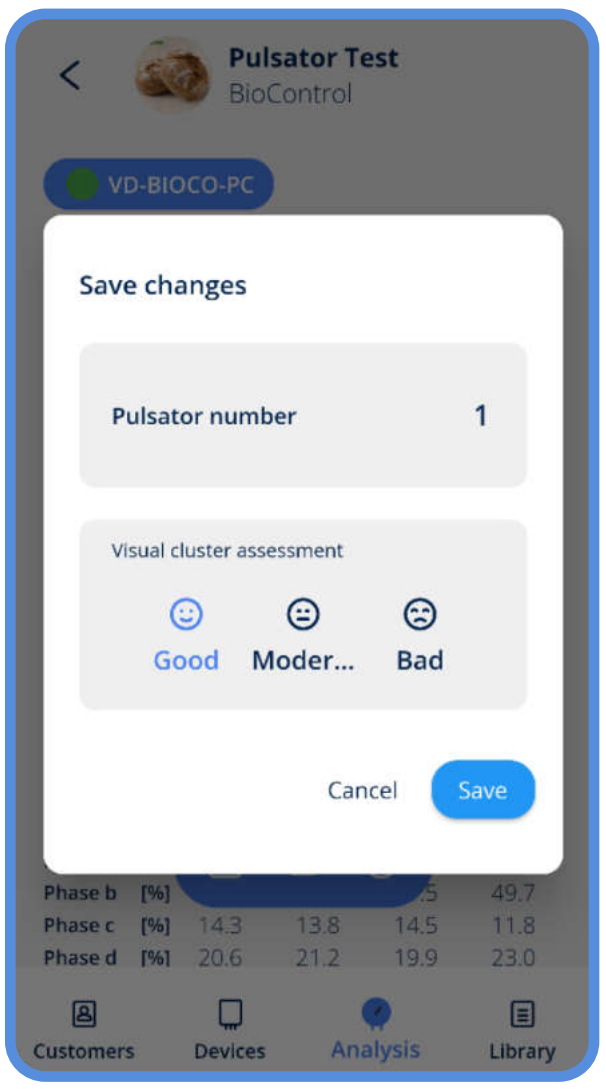
You can edit the channel recommended values by clicking on the **‘Edit’** icon next to channels. You can change the target values by selecting a box in the **‘Value’** column and % deviation by selecting a box in the **‘%’** column.

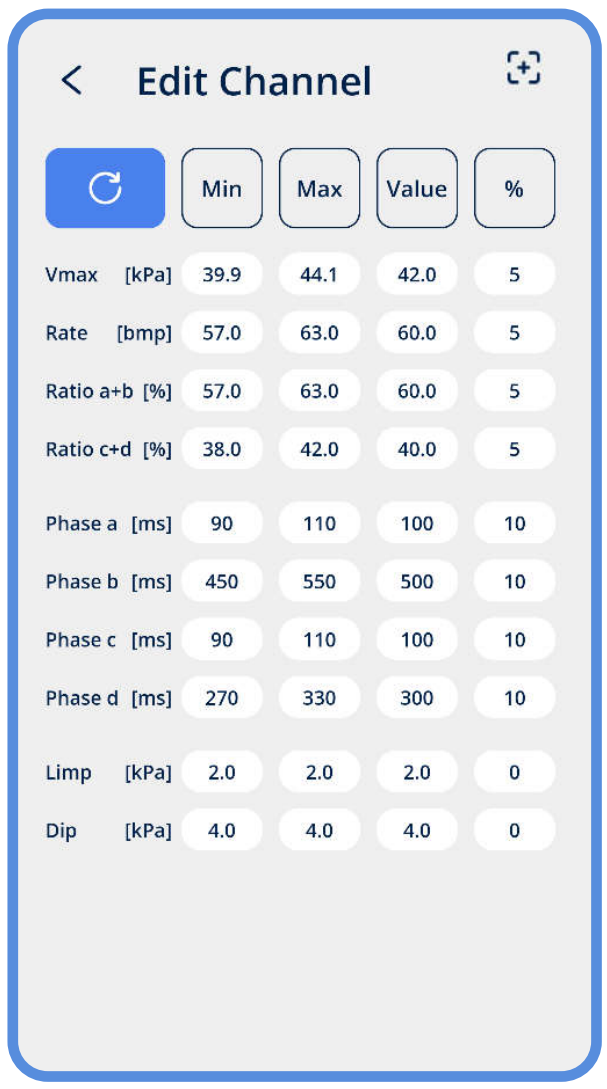
The **‘Refresh’** icon will reset these values to default.

Unless fewer channels are selected, the results from all 4 channels are presented. Pulsator Test number is automatically incremented. Tapping on the Pulsator number will allow you to manually change it.

Data presented in graph view is analyzed online [live] (refreshed every second, data analyzed from last 7 seconds). To perform a Pulsator Test, tap **‘Folder’** icon. By tapping on the channel number you can select active channels. **‘Square’** icon, pauses the graph.



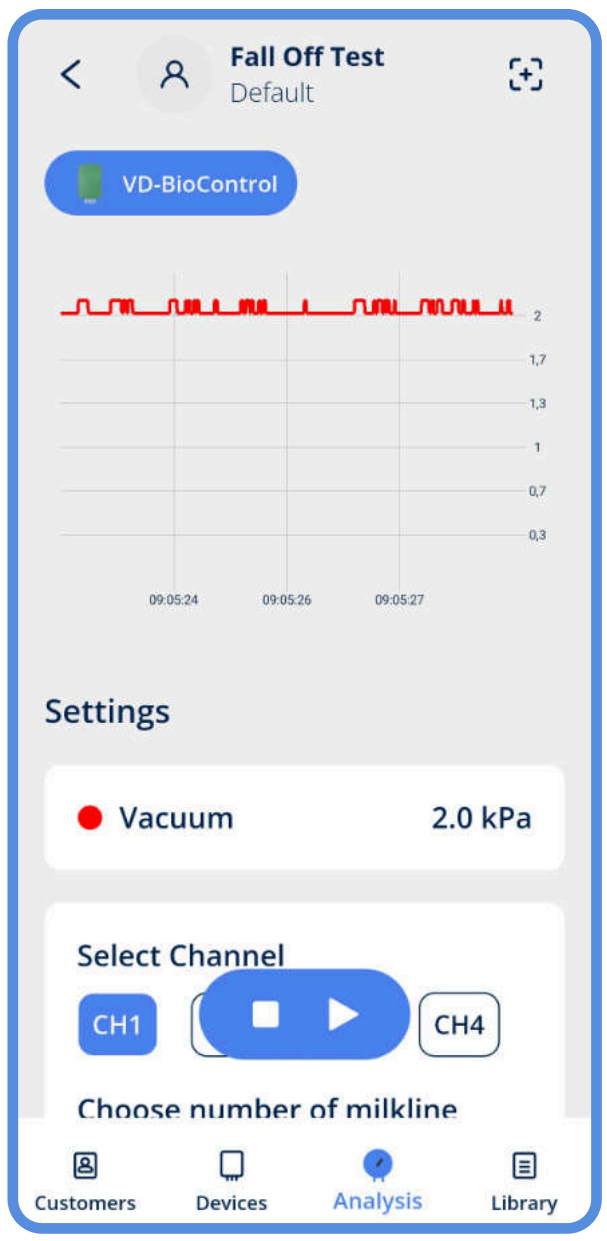




Fall off Test

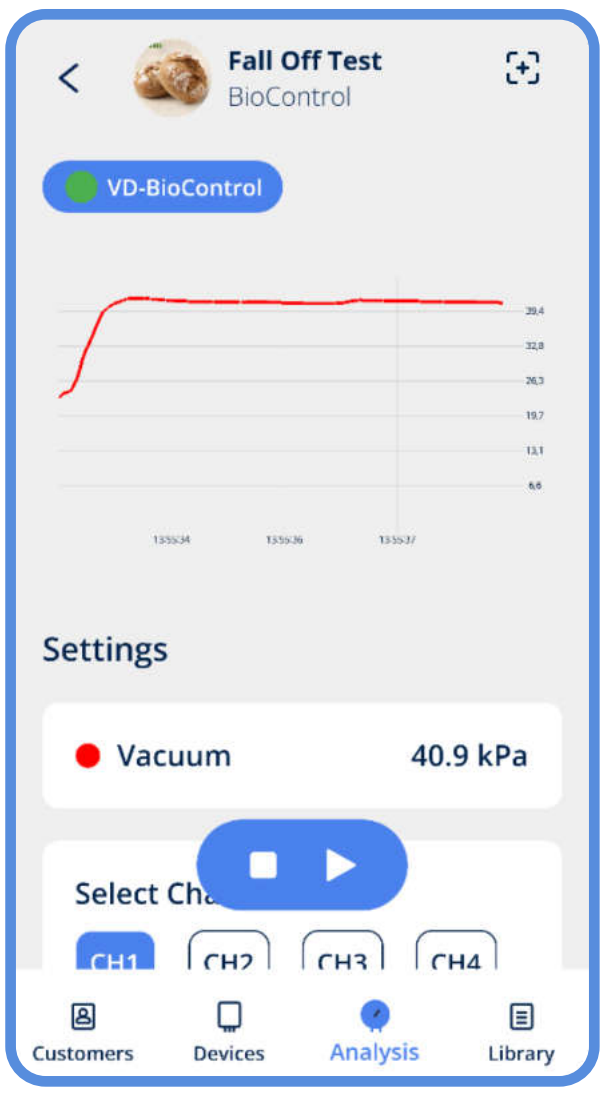
Go to the analysis view and press Fall off Test to enter Fall Off Test screen, you will see the following:

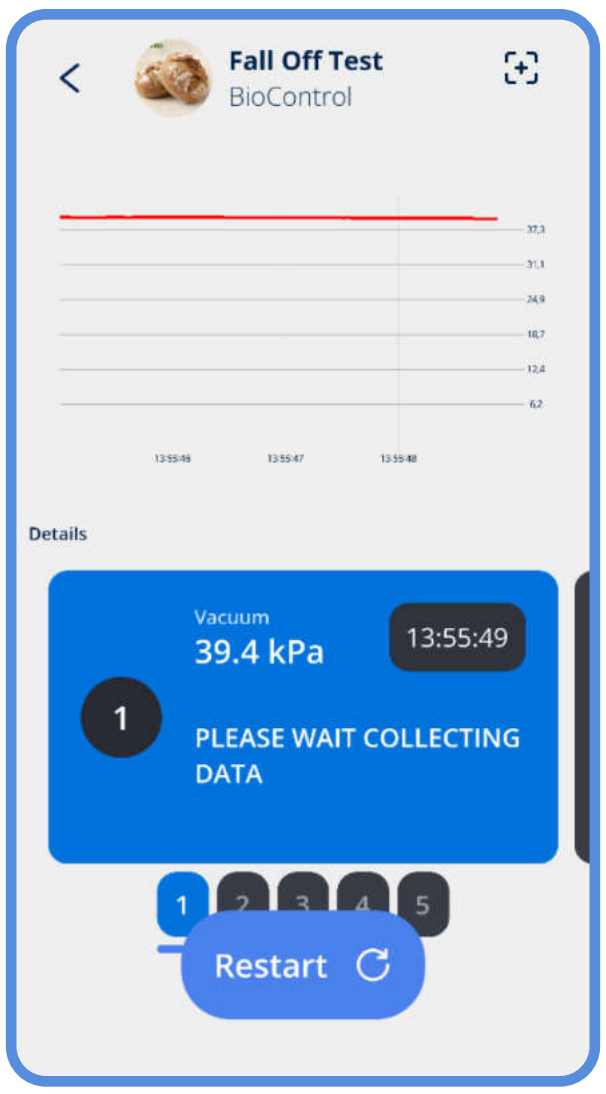
Select the channel on which data is streaming, the number of milkline units and maximum vacuum fluctuation. Afterwards, press “**Start**” icon.

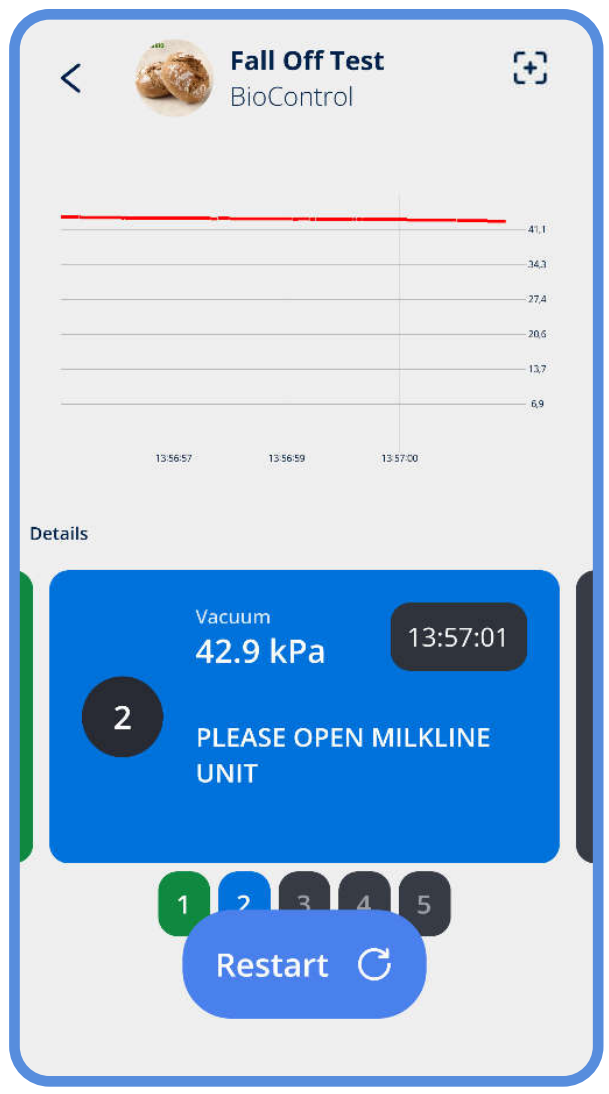


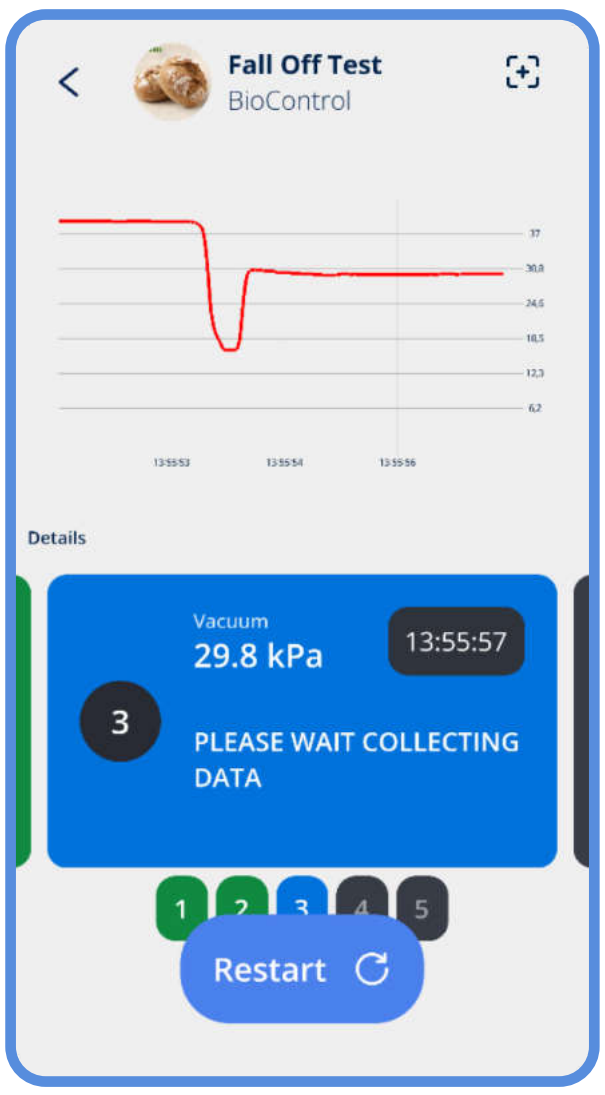
Follow the instructions displayed on screen. They will be displayed in the following order:

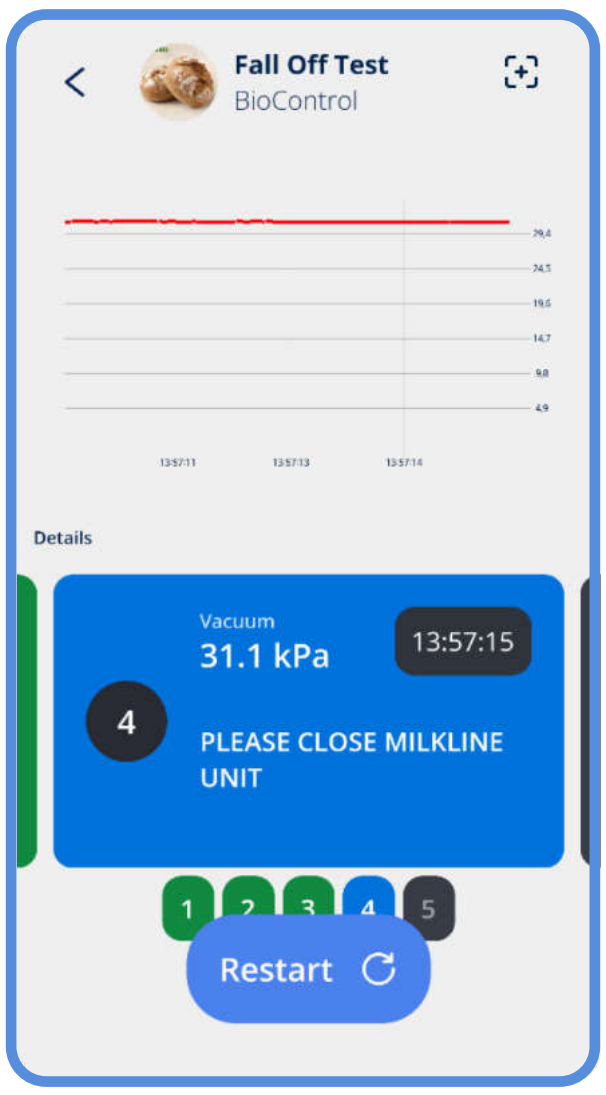
- **Collecting data**
- **Open milkline** – collecting data
- **Close milkline** – collecting data

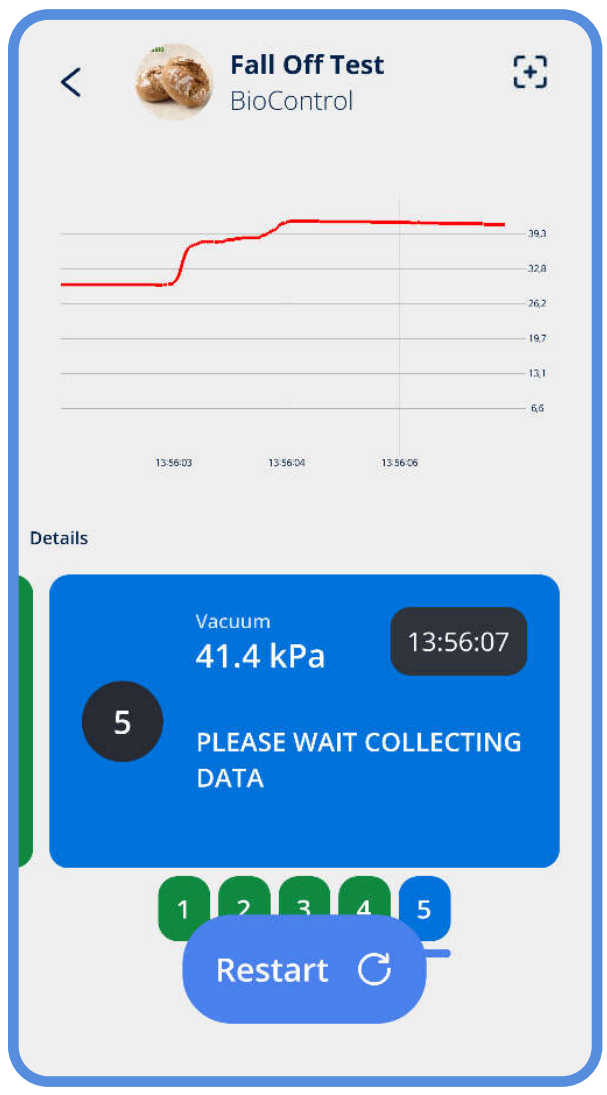




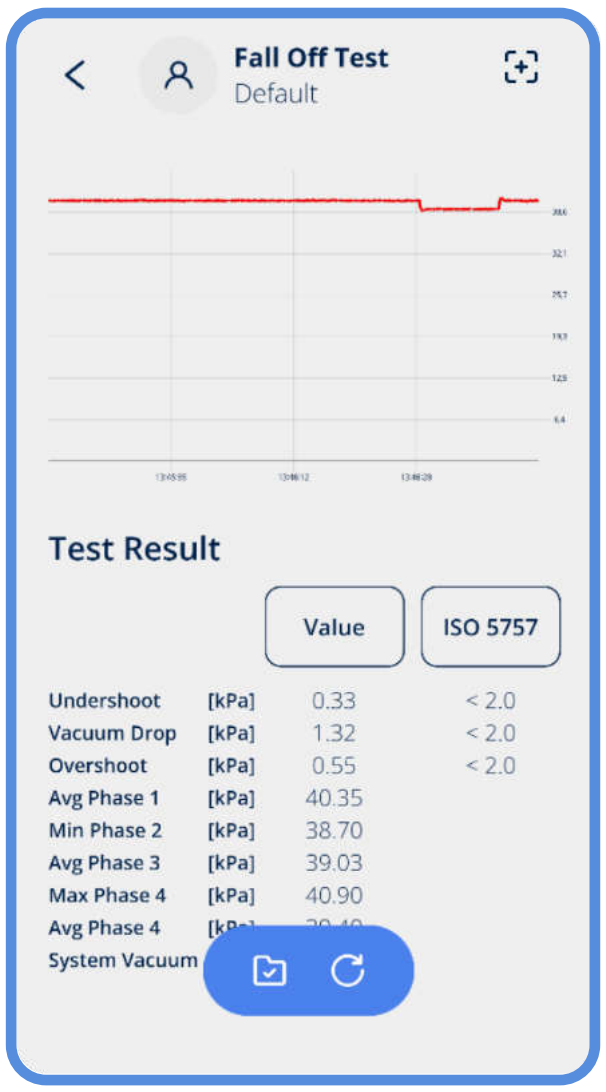








After data collection is complete, test results will be displayed:



Test results are compared with ISO 5707 norm.

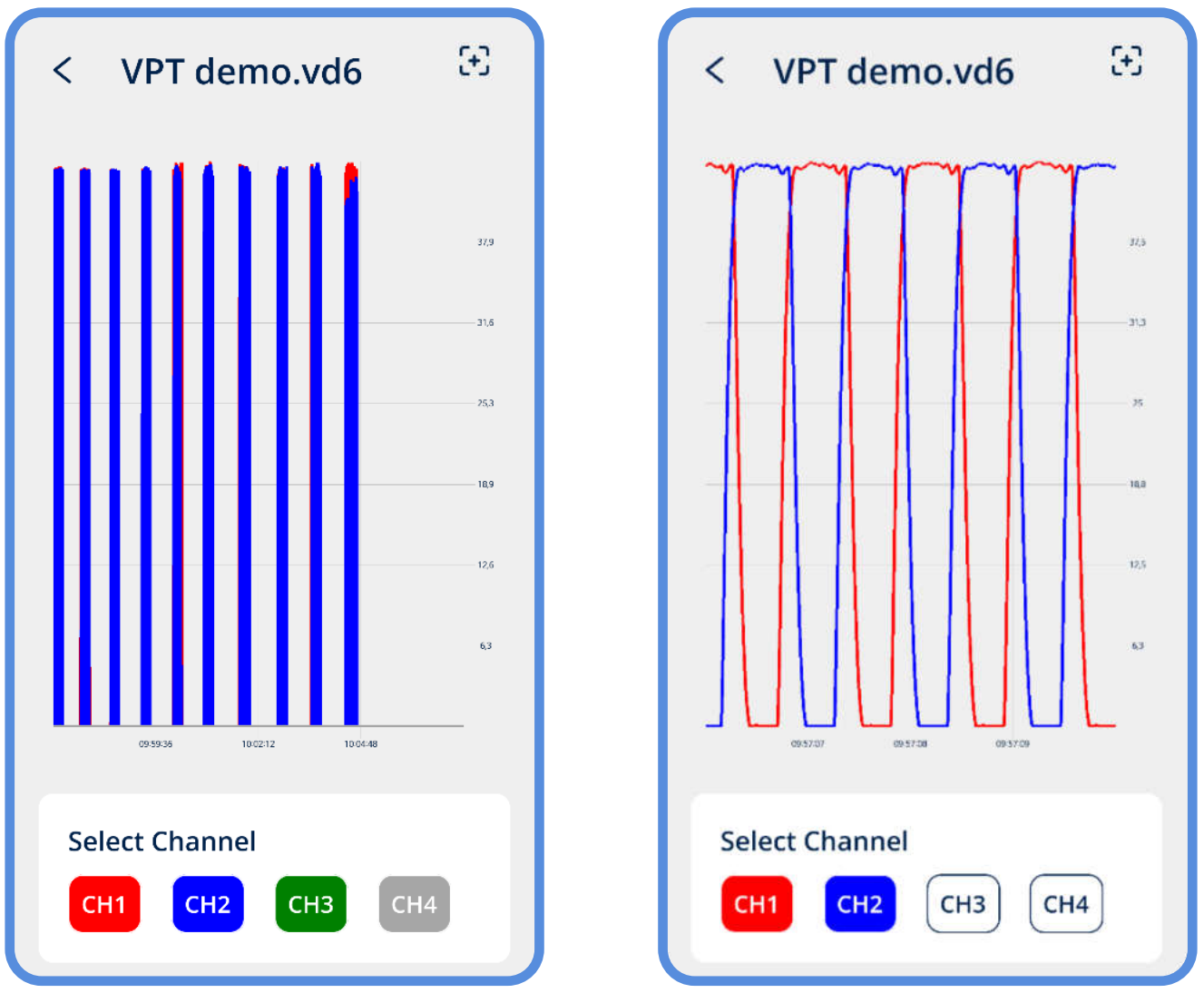
Clicking on the folder icon will save the test. If you are not satisfied with the results, you can repeat the test by pressing the **‘Refresh’** icon.

Test will be saved in Library – Tests view.

VD6 Viewer

Go to Analysis – vd6 Reader view to load previously saved file.

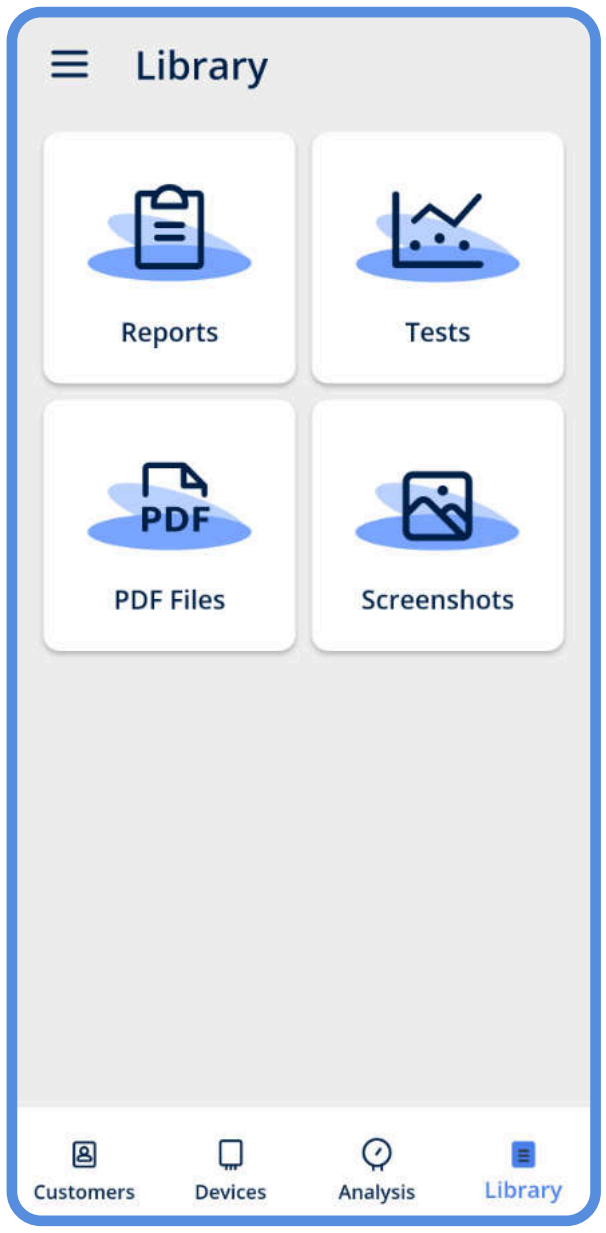
This is an interactive graph, where user can zoom in and out as well as select particular channels to improve data visibility on the graph.



Please note, this feature is only for viewing purposes.

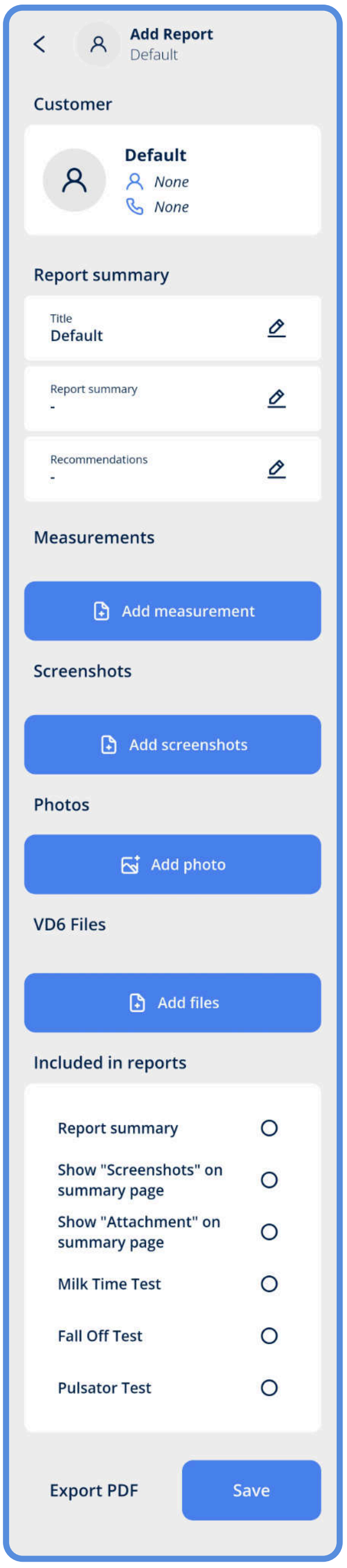
3.5. Library

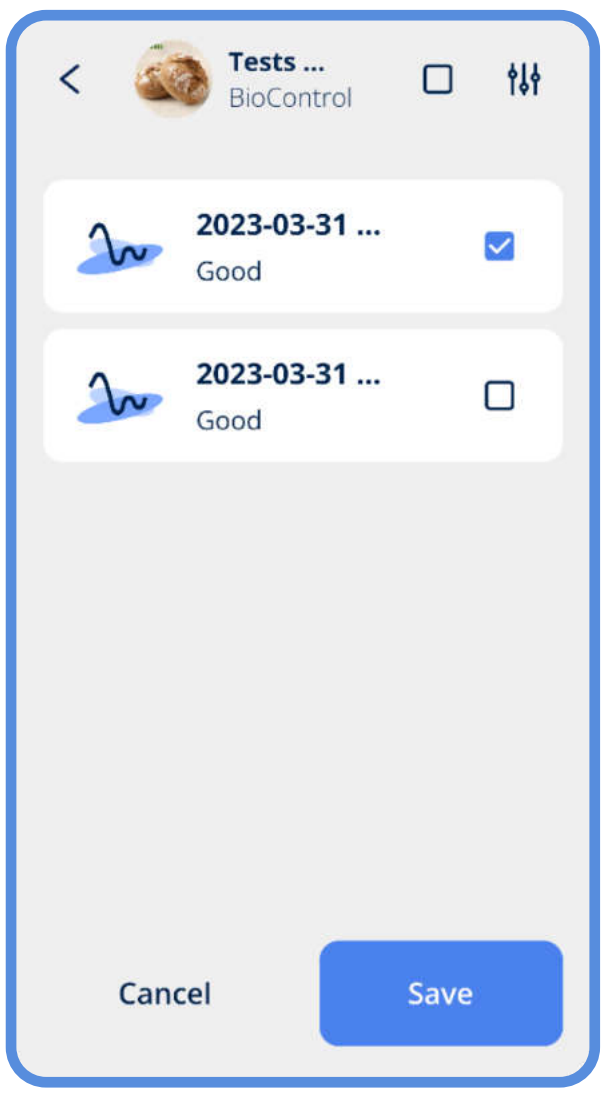
In library view you can access your tests, reports, screenshots, vd6 files and report PDF files.

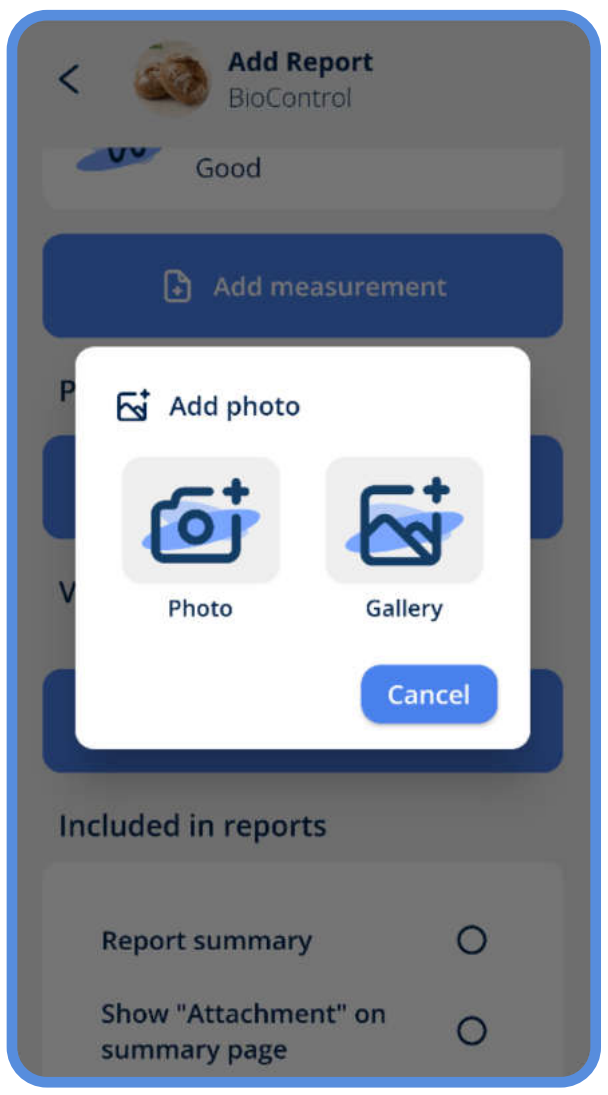


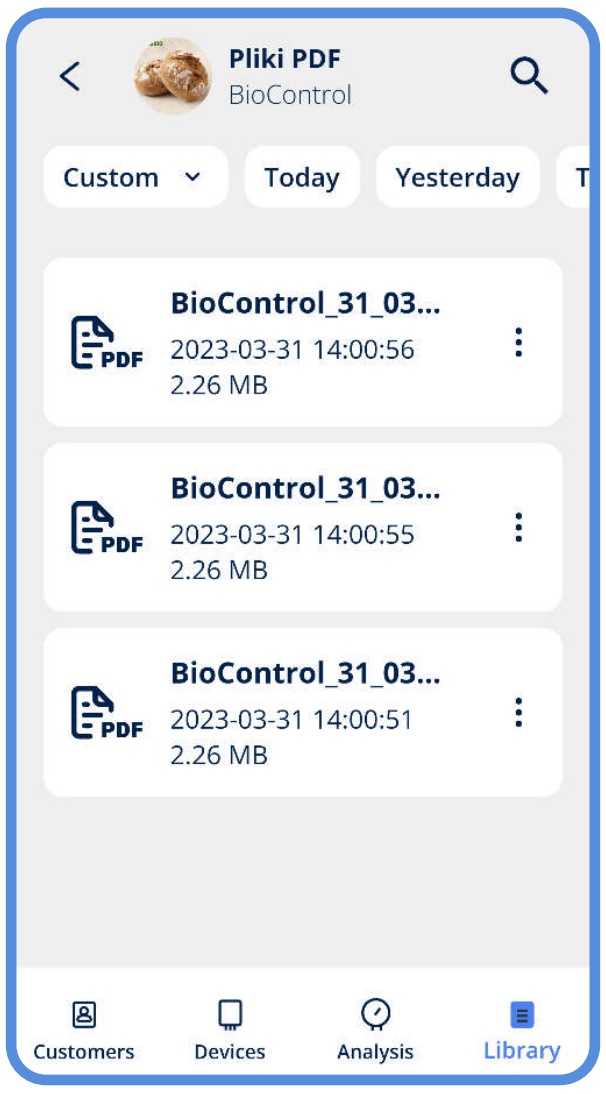
Reports

1. Edit report summary and recommendations fields by pressing the **‘Edit’** icon.
2. Add measurements (test) to be included in the report (all of them can be added by selecting checkbox at the top or you can filter through them using the **‘Filter’** icon)
3. Include photos in the report.
4. Select what is included in the report and press **‘Save’**. The report will be saved and can be later accessed to be edited.
5. Pressing **‘Export’** will generate a PDF report (similar to the one created in Vadia Suite) which can be accessed in Library - PDF Files view.


Add Report
Default
Customer
Default
None
None
Report summary
Title
Default
Report summary
-
Recommendations
-
Measurements
Add measurement
Screenshots
Add screenshots
Photos
Add photo
VD6 Files
Add files
Included in reports
Report summary
Show "Screenshots" on summary page
Show "Attachment" on summary page
Milk Time Test
Fall Off Test
Pulsator Test
Export PDF
Save

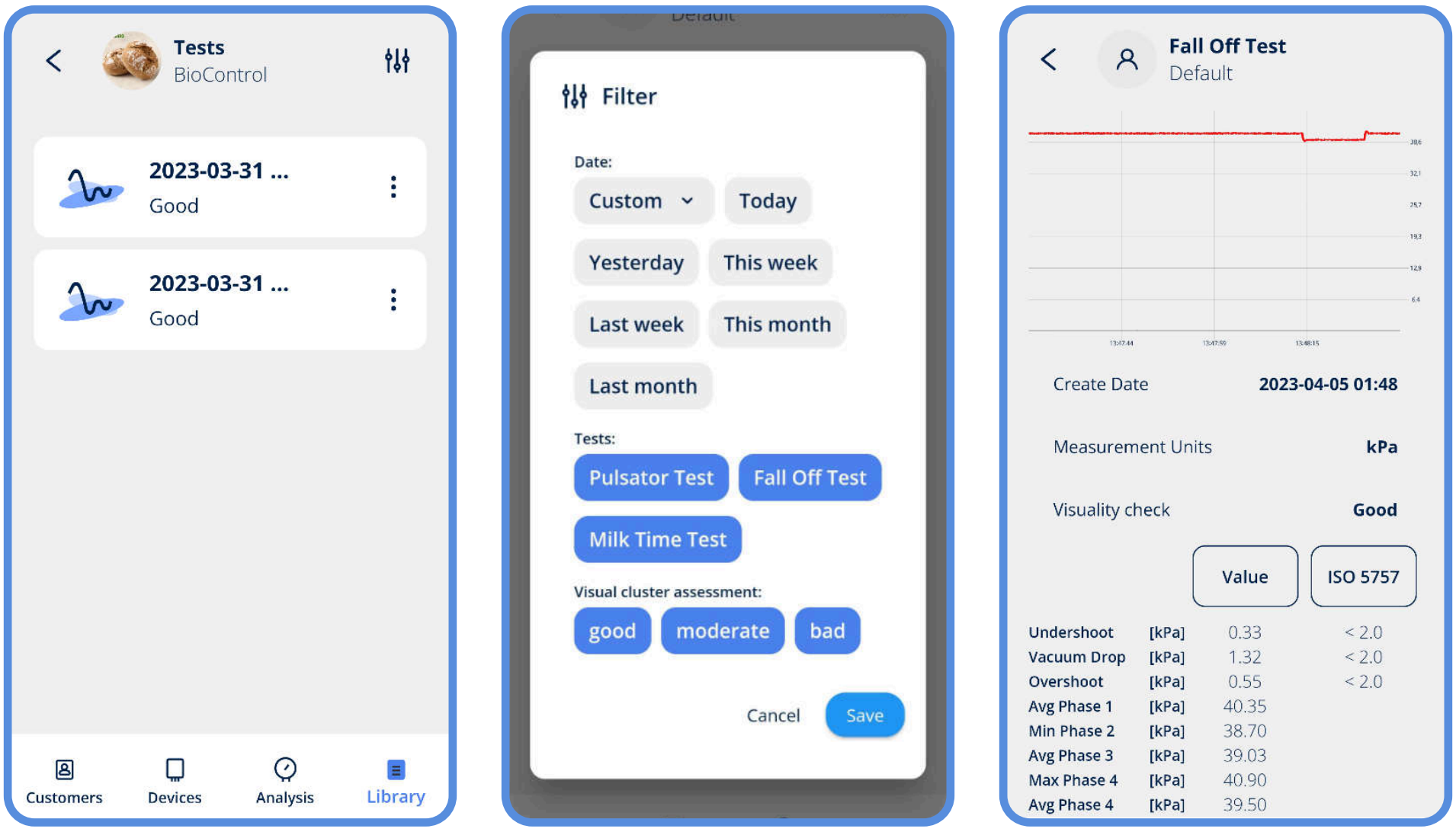

Tests ...
BioControl
2023-03-31 ...
Good
2023-03-31 ...
Good
Cancel
Save


Add Report
BioControl
Good
Add measurement
Add photo
Photo
Gallery
Cancel
Included in reports
Report summary
Show "Attachment" on summary page


Pliki PDF
BioControl
Custom
Today
Yesterday
BioControl_31_03...
2023-03-31 14:00:56
2.26 MB
BioControl_31_03...
2023-03-31 14:00:55
2.26 MB
BioControl_31_03...
2023-03-31 14:00:51
2.26 MB
Customers
Devices
Analysis
Library

Tests and VD6 files

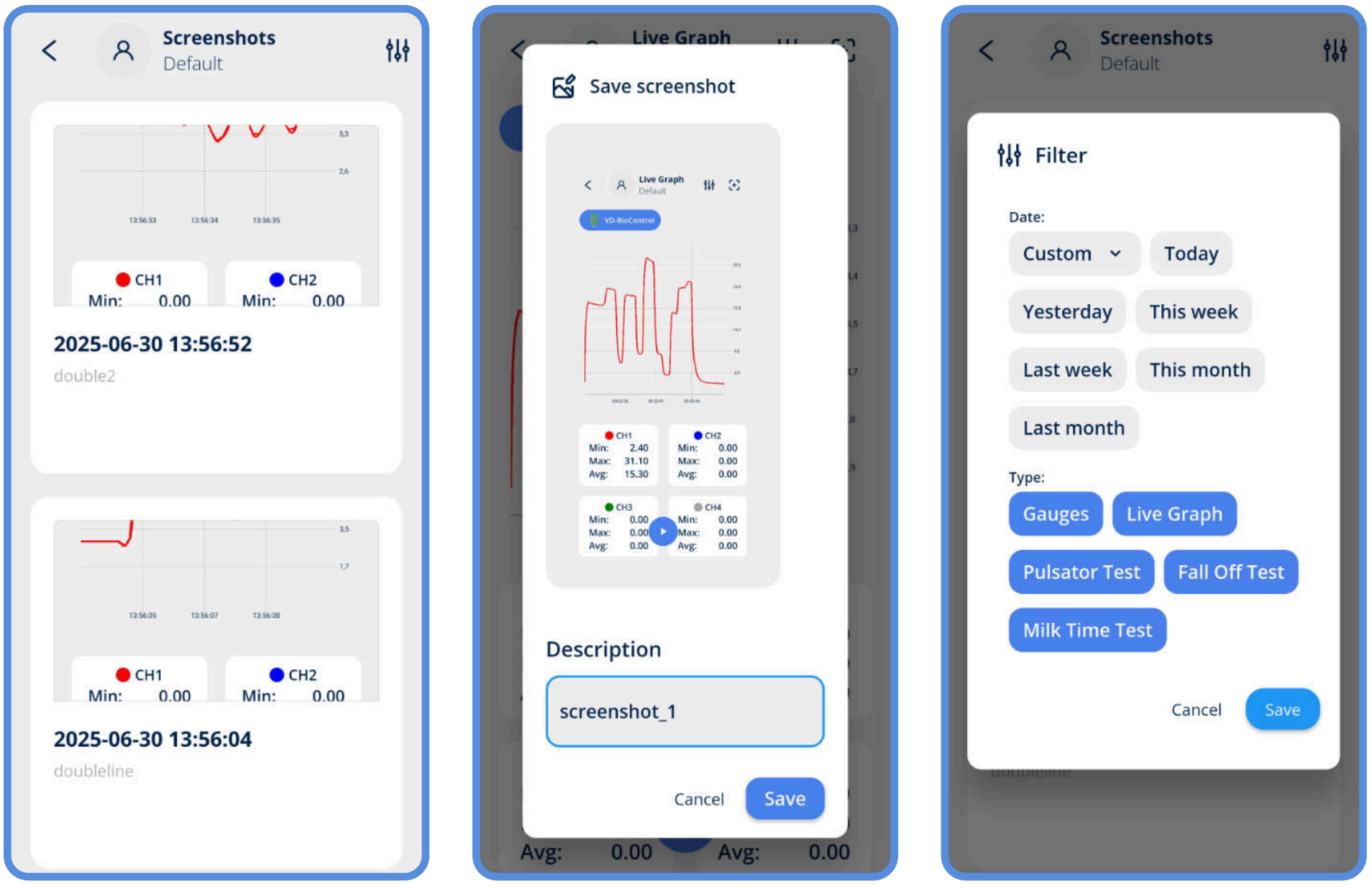
All tests for the selected customers are listed in this view. You can access the test results by clicking on the tile with the test or filter through the tests by clicking on ‘filter’ icon.



All tests for the selected customers are listed in this view. You can access the test results by clicking on the tile with the test or filter through the tests by clicking on ‘filter’ icon.

Screenshots

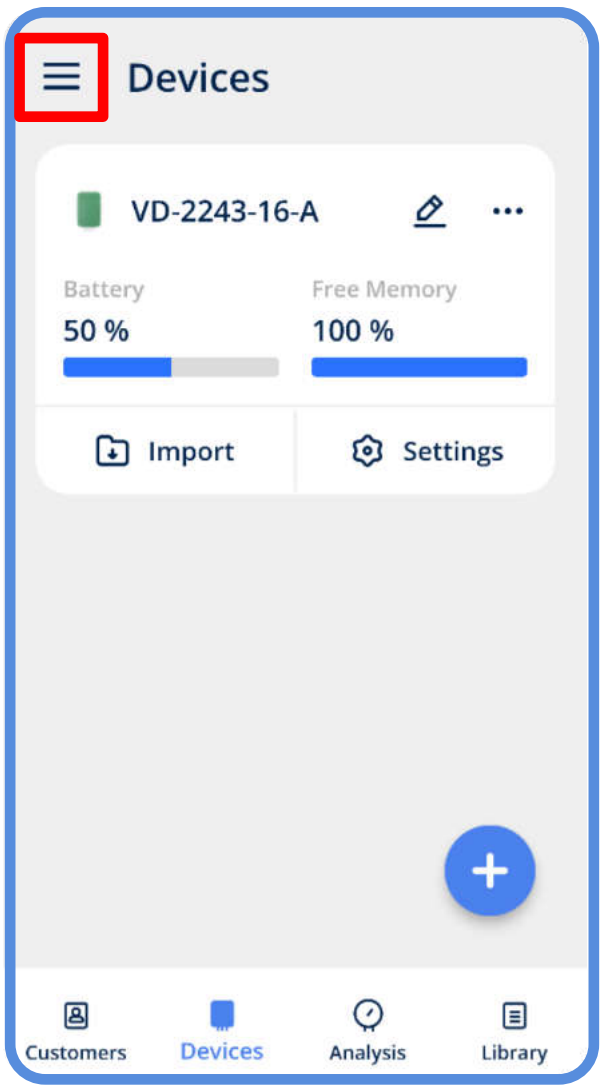
The view shows the screenshots taken, which we can add to the report.



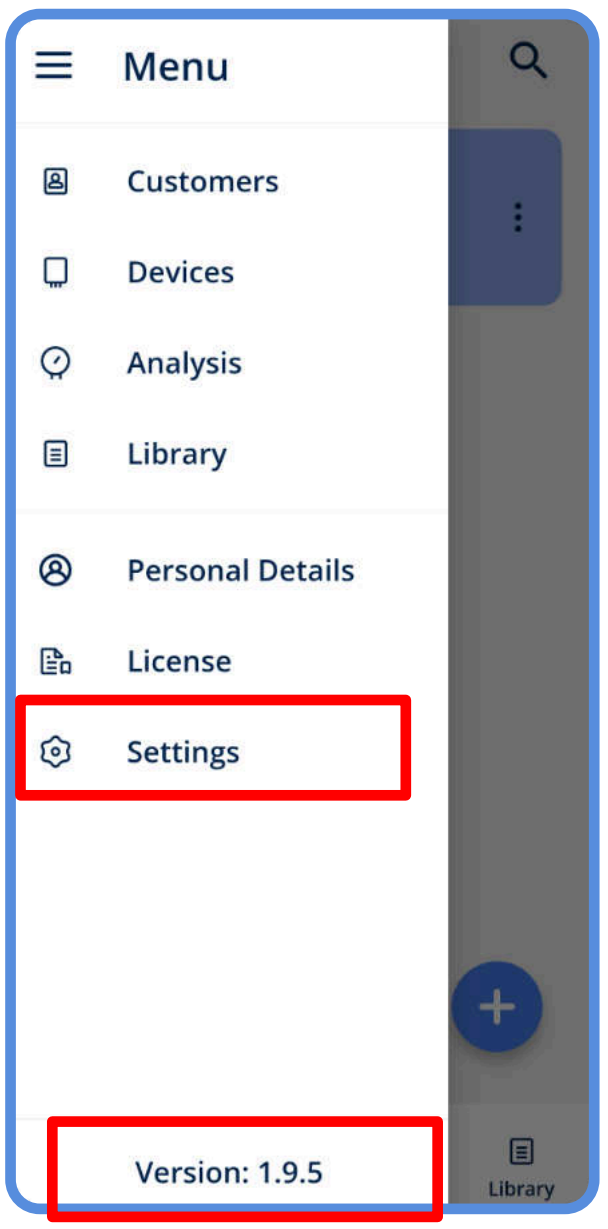
To take a screenshot of the current view, click on the screenshot icon in the top right corner.

3.6. Application settings

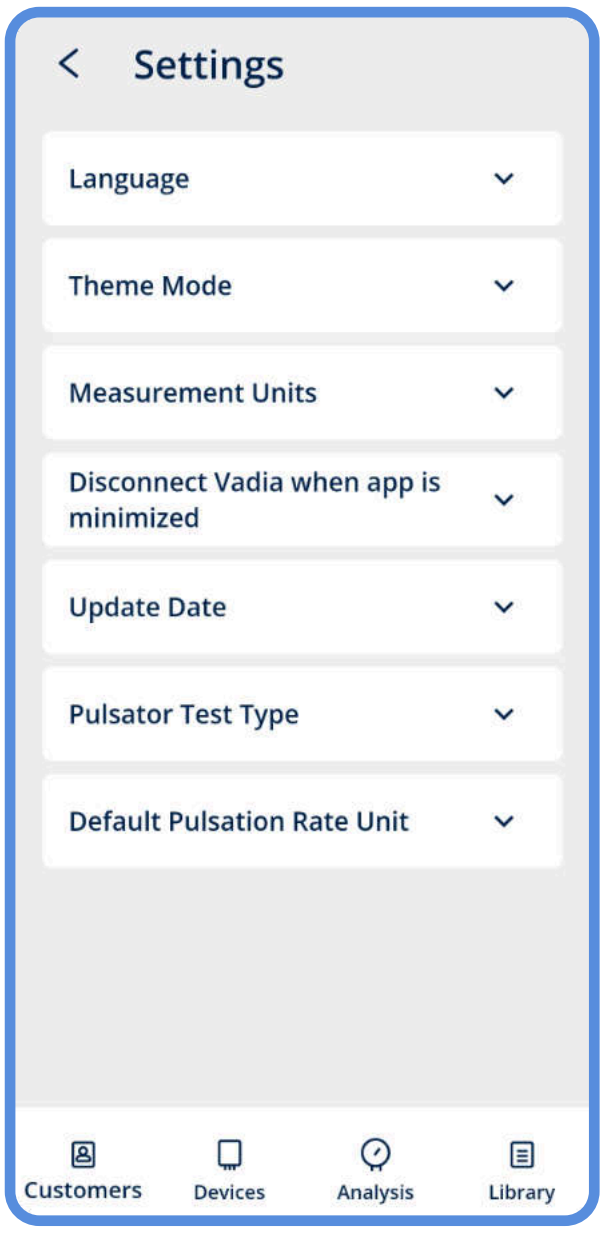
Press the **‘Hamburger’** icon on the top left to slide the menu bar.

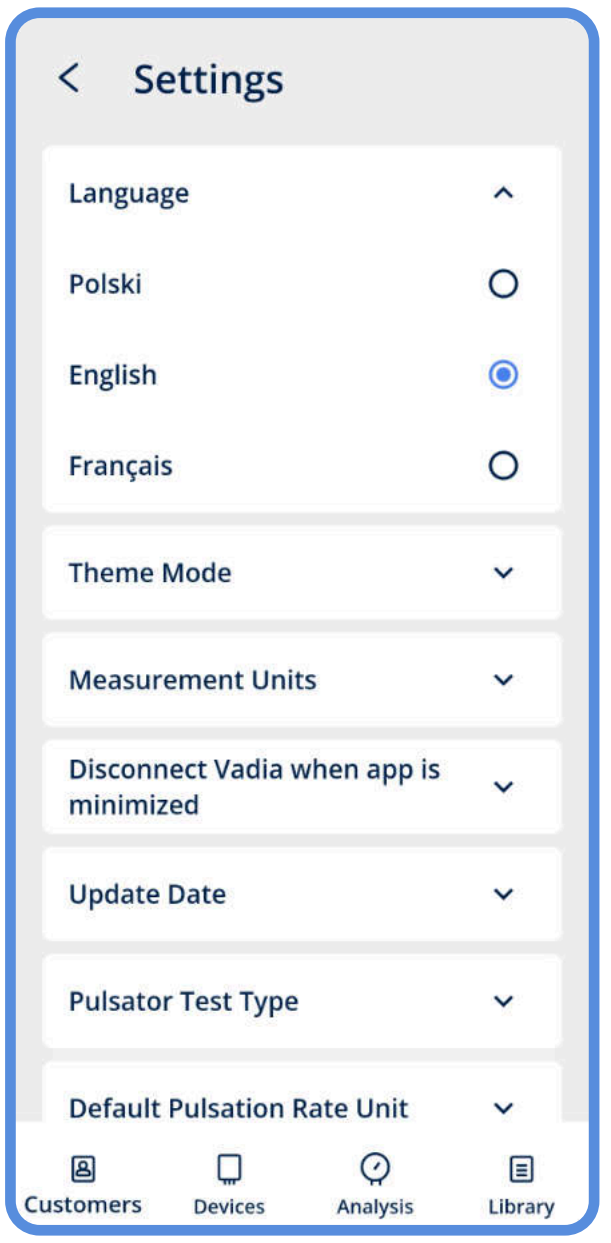


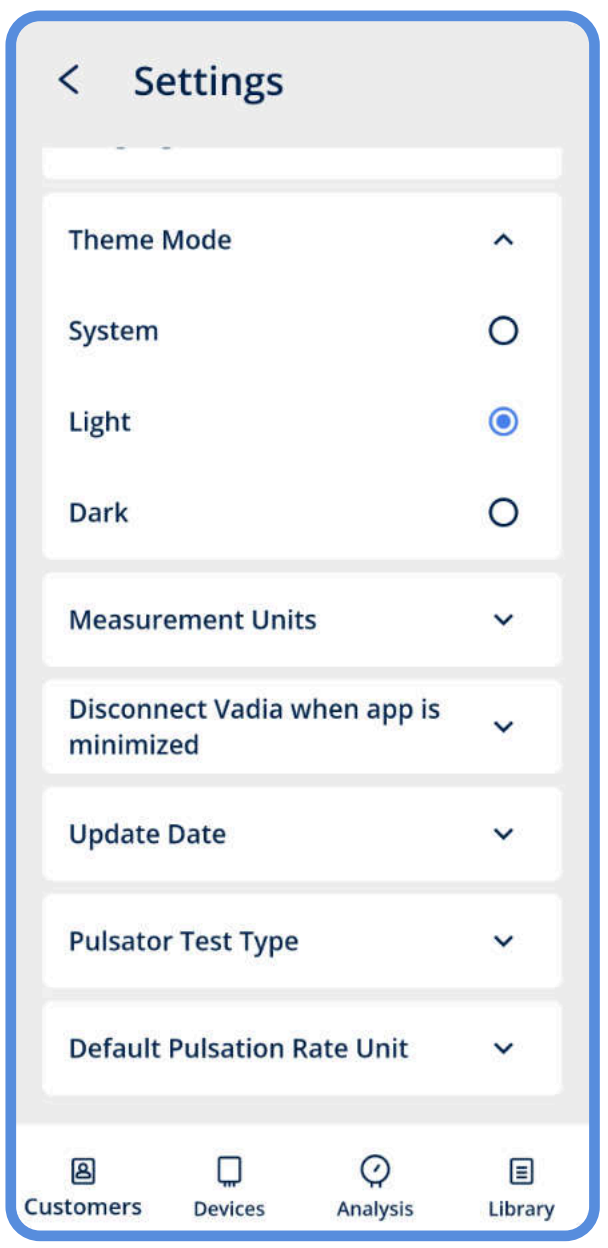
Select **‘Settings’** to go into application settings view. At the bottom, there is a version number displayed.

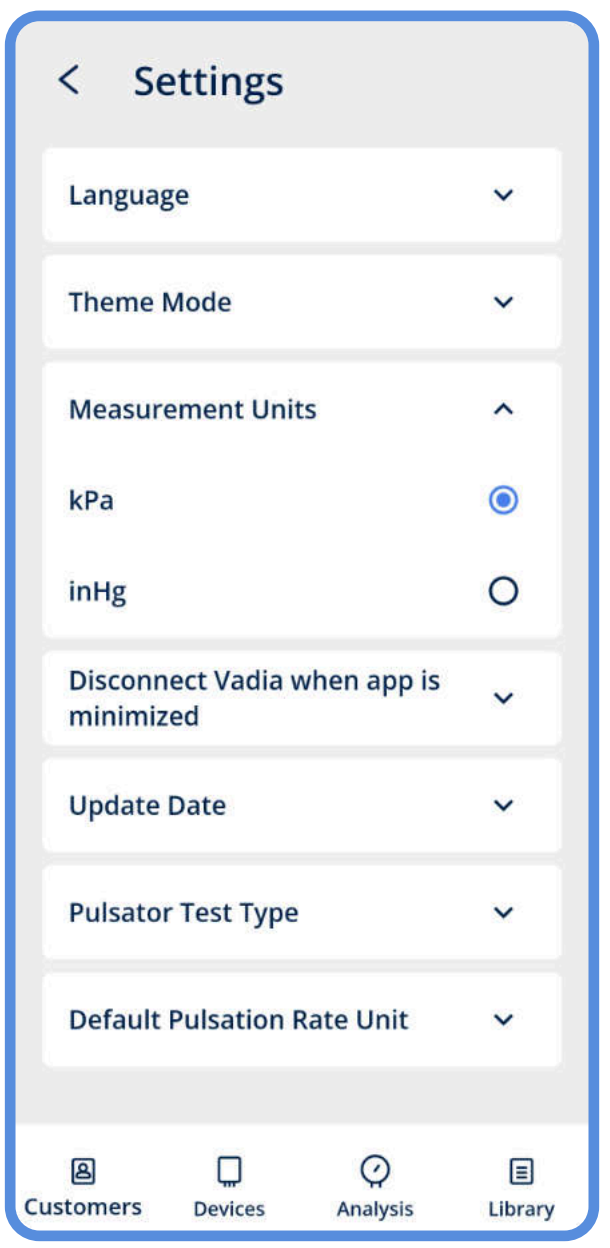


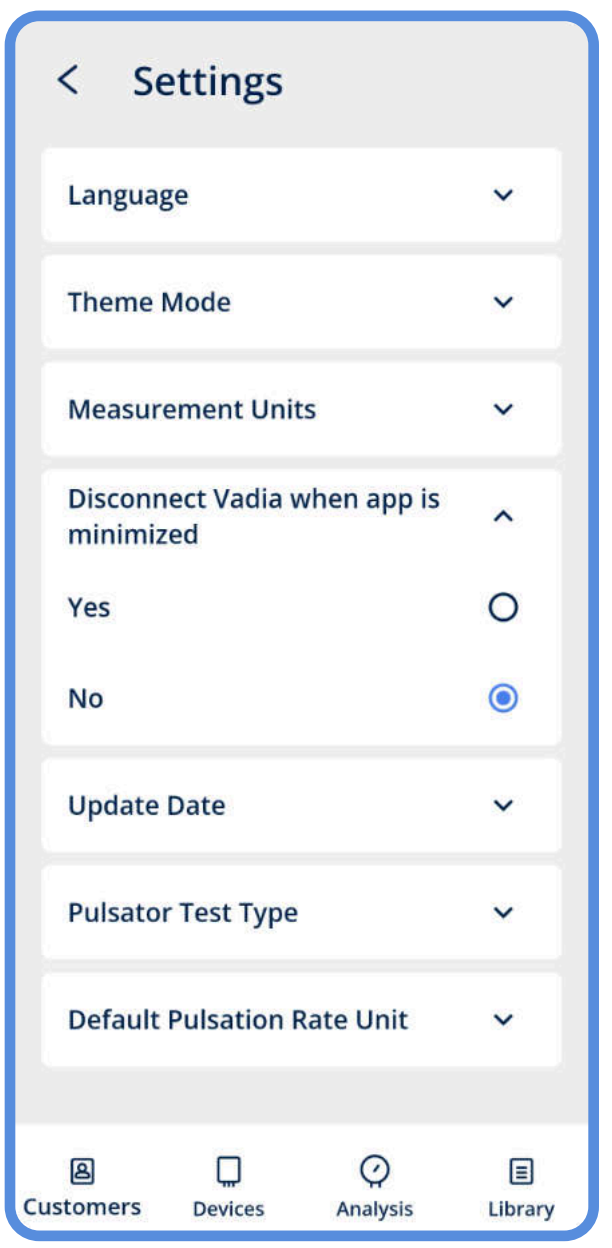
Unfold each setting by pressing on the tile. Set the language, theme mode, select measurement units, decide whether the device should automatically disconnect when app is minimzed, choose date update method and Pulsator Test Type. The date update method will determine whether the date and time will be automatically updated when you connect your VaDia2 to the phone or not. If you choose manual update data mode, you can change the time and date of the device in '**Device settings**'.

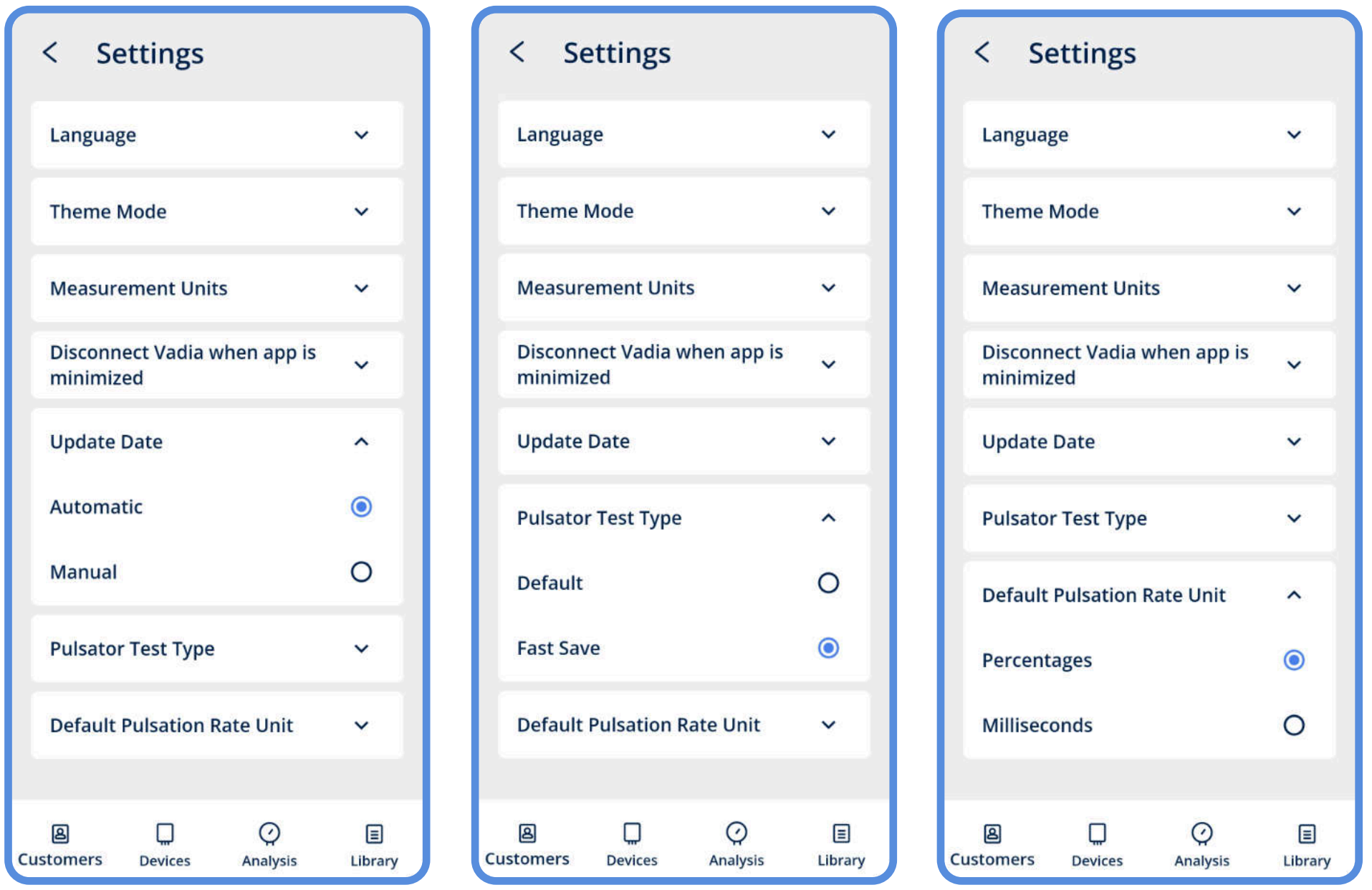




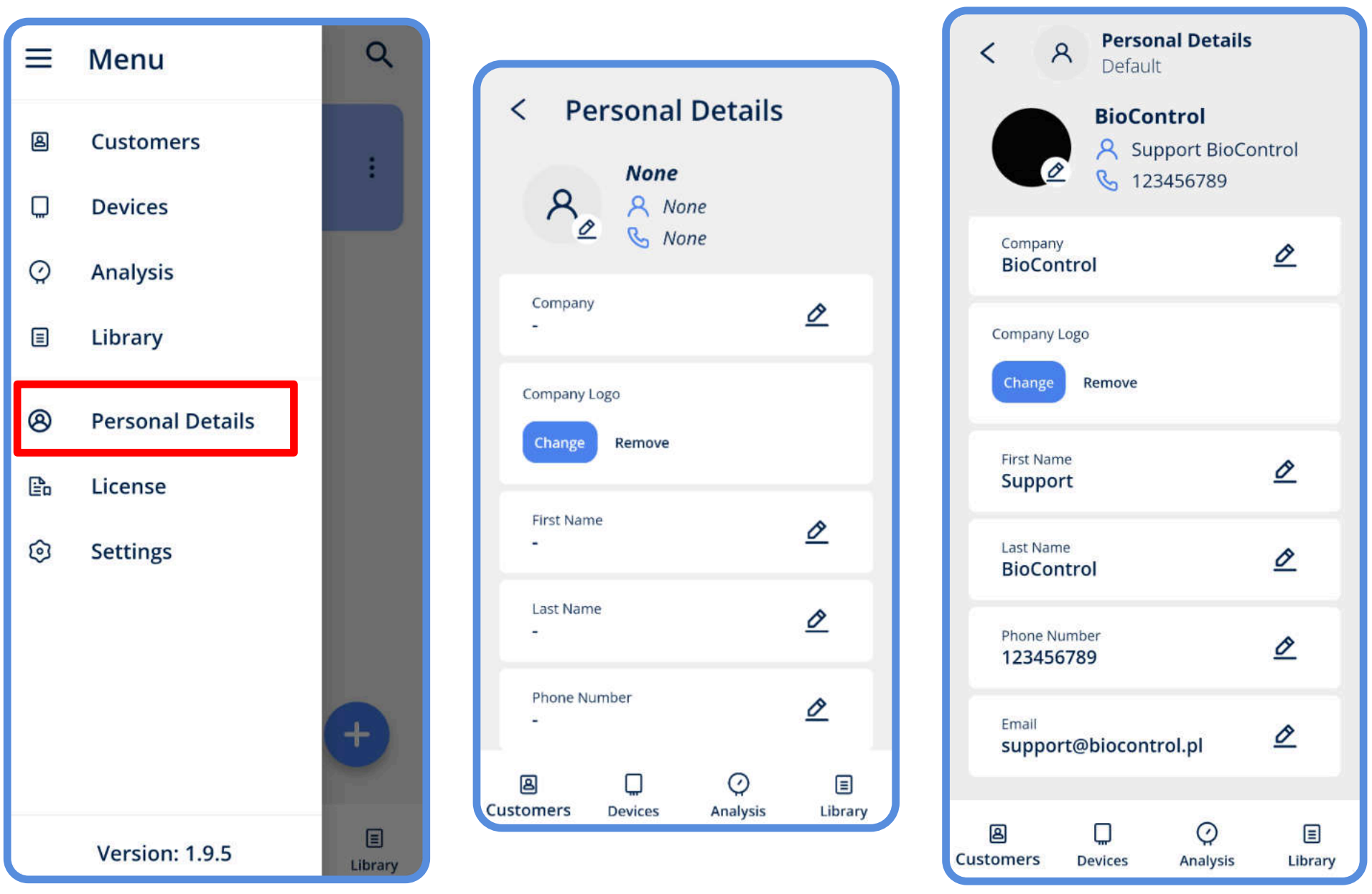








Personal details are advisors information which will appear in the report.

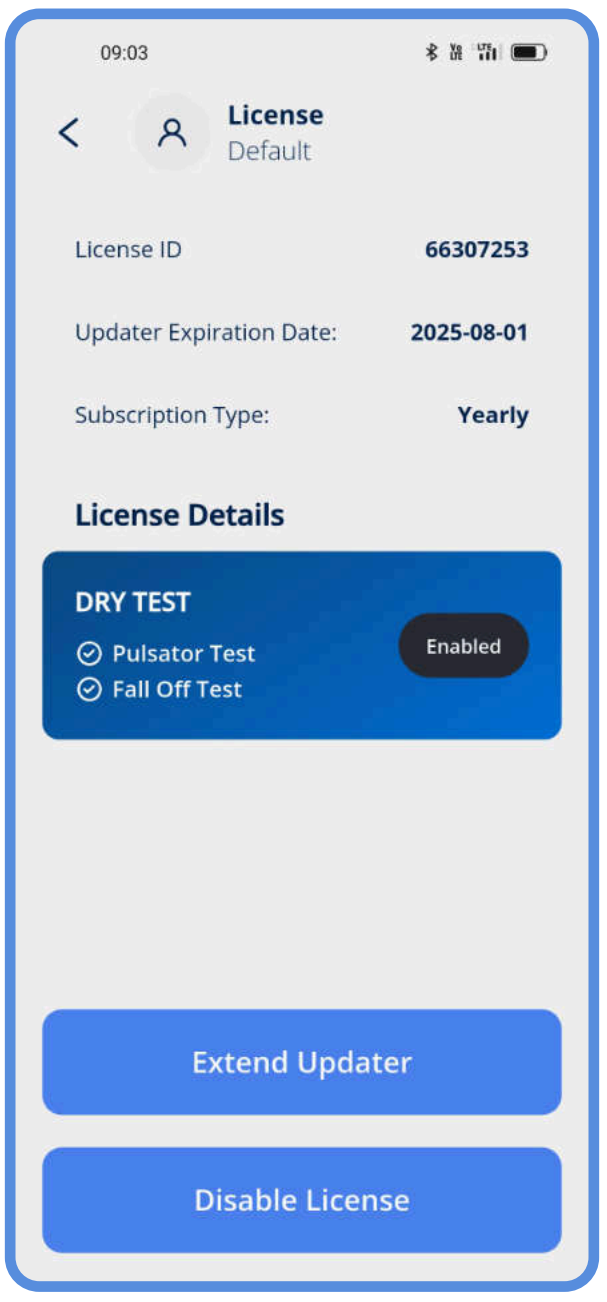


4. License

In the **License** view, you can see your license details:

- **License ID** – unique identifier of your license.
- **Updater Expiration Date** – indicates until when the Updater subscription is active.
- **Subscription Type** – e.g., *Yearly*.
- **Payment Status** – should show *Confirmed* once payment is complete.
- **License Details** – active features such as Pulsator Test and Fall Off Test under *Dry Test*.

To renew your subscription, tap the **Extend Updater** button at the bottom.



Extending Updater – Individual Customers

For private users:

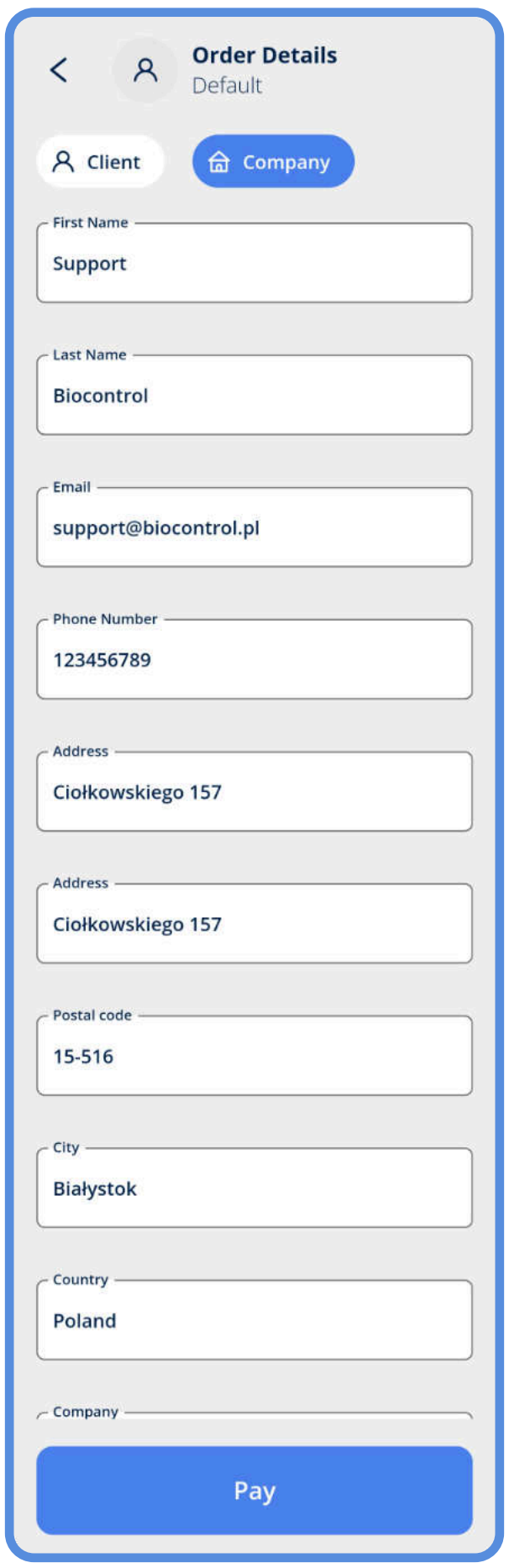
1. Choose the **Client** tab.
2. Fill in your:
   - First and Last Name
   - Email address
   - Phone number
   - Full address: Street, Postal Code, City, Country
3. Tap **Pay** to proceed with the license extension.

Please note that if you purchase the Updater extension as an individual client, you will be charged an additional 23% tax on the final Updater price.

Extending Updater – Company Customers

For business customers:

1. Select the **Company** tab.
2. Enter yours or company representatives:
   - First and Last Name
   - Email address and Phone number
3. Fill in the company address fields (Street, Postal Code, City, Country).
4. **Company Name** and **VAT number** are required.
   - The **VAT number** will be verified using the **VIES system**.
5. Tap **Pay** to complete the transaction.

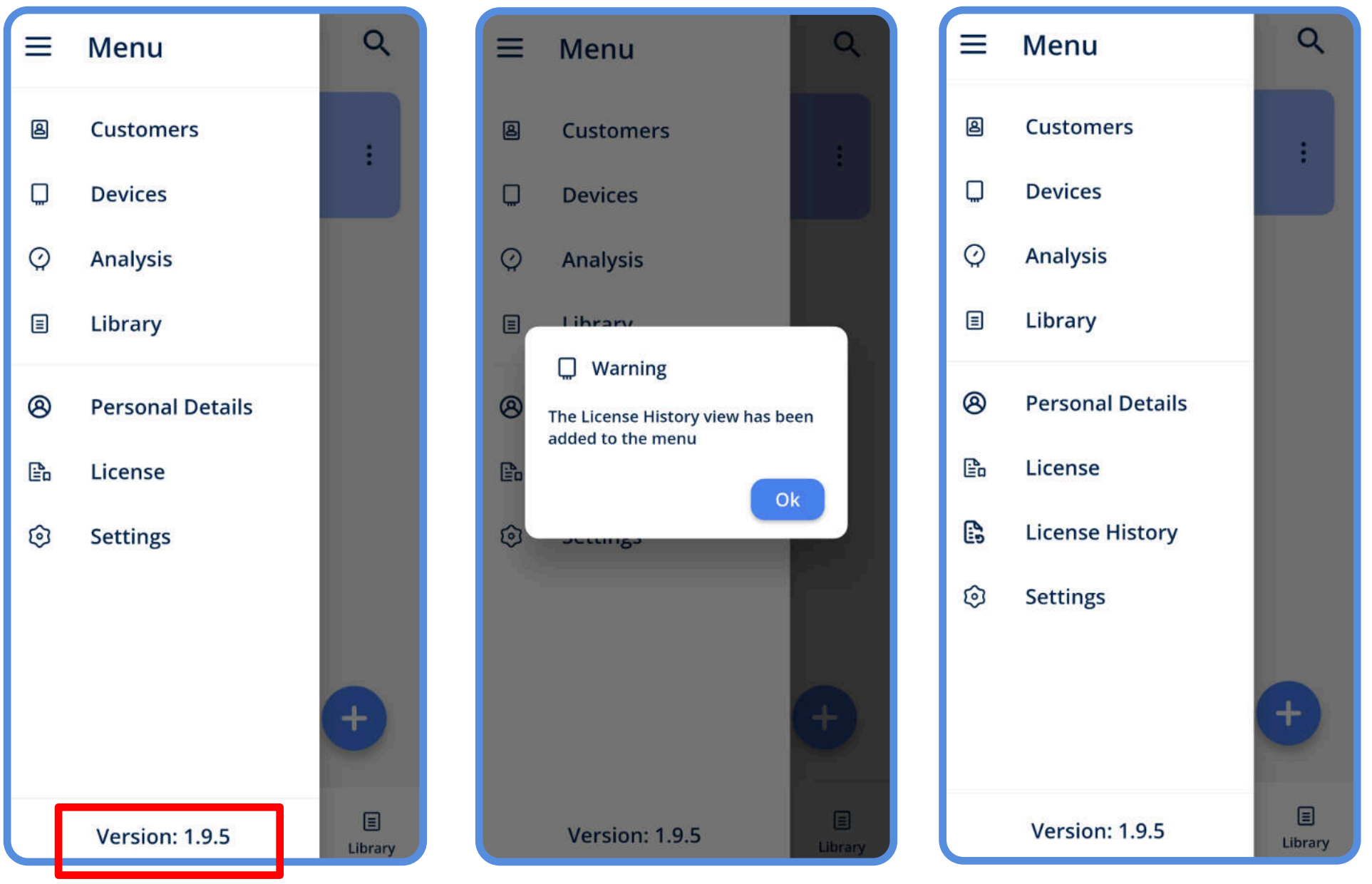


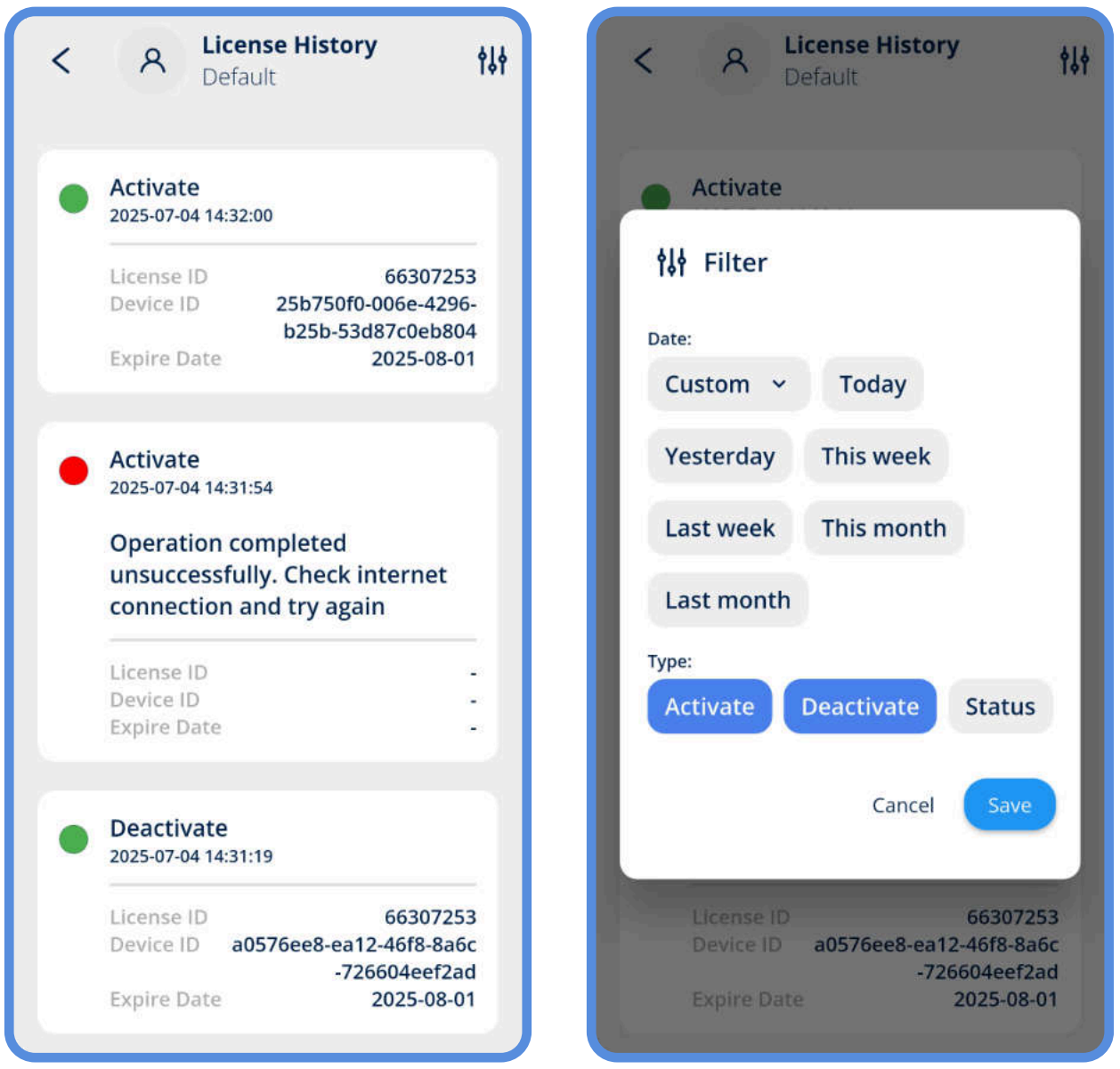
License History

The License History view provides detailed information about your device’s license status and activity, including activation dates and error details.

To access this view, tap the application version number (found at the bottom of the menu screen) six times. This will unlock the view, allowing you to review the full history of your license.

This feature is useful for tracking license usage and confirming activation status.




License History
Default
Activate
2025-07-04 14:32:00
License ID 66307253
Device ID 25b750f0-006e-4296-b25b-53d87c0eb804
Expire Date 2025-08-01
Activate
2025-07-04 14:31:54
Operation completed unsuccessfully. Check internet connection and try again
License ID -
Device ID -
Expire Date -
Deactivate
2025-07-04 14:31:19
License ID 66307253
Device ID a0576ee8-ea12-46f8-8a6c-726604eef2ad
Expire Date 2025-08-01
License History
Default
Activate
Filter
Date:
Custom
Today
Yesterday
This week
Last week
This month
Last month
Type:
Activate
Deactivate
Status
Cancel
Save
License ID 66307253
Device ID a0576ee8-ea12-46f8-8a6c-726604eef2ad
Expire Date 2025-08-01