

# User Manual – eyeD®

Manual for Operators of eyeD®

## 1. Version History

Version	Date	ID	Comment
01.02.000	05 SEPT 2023	DR	Added Stand-by State Added Wireless Certifications and Statements Added New Battery Charger Type Added Shipment and Handling
01.01.000	30 AUG 20203	DR	Added Different Charger Types
01.00.001	05 MAY 2023	DR	Updated Safety Precautions
01.00.000	05 MAY 2023	DR	Initial Release
00.00.997	04 MAY 2023	DR	Draft Release after Initial Review
00.00.998	02 MAY 2023	DR	Initial Draft Release
00.00.999	28 MAR 2023	DR	Initial Release Based on Old Manual

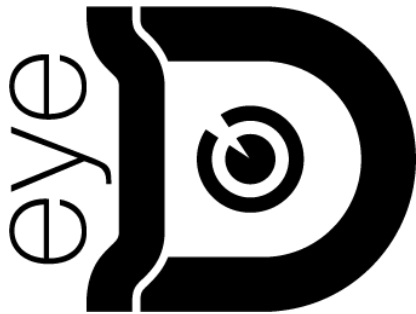
## 2. Contents

<b>1.</b>	<b>Version History</b>	<b>1</b>
<b>2.</b>	<b>Contents</b>	<b>2</b>
<b>3.</b>	<b>Overview</b>	<b>4</b>
<b>4.</b>	<b>Quick Start Guide</b>	<b>5</b>
<b>5.</b>	<b>Parts of eyeD®</b>	<b>6</b>
<b>6.</b>	<b>Indicator Light</b>	<b>7</b>
<b>7.</b>	<b>eyeD® Usage</b>	<b>8</b>
7.1.	Power On	8
7.2.	Stand-by	9
7.3.	Hooking	10
7.4.	Start Measurement	13
7.5.	Measurement	14
7.6.	Unhooking	15
7.7.	Stop Measurement	16
7.8.	Cleaning	17
7.9.	Power Off	18
7.10.	Battery	19
7.10.1.	Discharge	19
7.10.2.	Charge	20
7.10.2.1.	BATTERY CHARGER 29.4V 2A	21
7.10.2.2.	ANSMANN 2000-2001-01	23
<b>8.</b>	<b>User Interface</b>	<b>24</b>
8.1.	Connecting to Wi-Fi	24
8.2.	User interface	25
8.3.	Login	25
8.4.	Default Settings	26
8.5.	Main Screen	28
8.5.1.	Status and Info	29
8.5.2.	Default Settings or Current Unload	30
8.5.3.	Finished Unloads	31
8.6.	Edit Active Measurement	32
8.7.	Detail Screen of Finished Measurement	33
<b>9.</b>	<b>Troubleshooting</b>	<b>34</b>
9.1.	Errors on the Device	34
9.2.	Hardware Error on Device	35
9.3.	Sequence of Starting Measurement	36
<b>10.</b>	<b>Handling and Shipping</b>	<b>37</b>
10.1.	Device Packing	37
10.2.	Battery	38
10.3.	Package Labels	39
10.3.1.	Class 9 - Lithium Battery Label	39
10.3.2.	Package Orientation	39
<b>11.</b>	<b>Storage</b>	<b>40</b>
11.1.	General	40
11.2.	Battery	40
<b>12.</b>	<b>FCC Certification</b>	<b>41</b>

12.1.	Wi-Fi Specifications.....	41
12.2.	4G Specifications.....	41
<b>13.</b>	<b>Safety Precautions.....</b>	<b>42</b>
<b>14.</b>	<b>Appendices.....</b>	<b>44</b>
14.1.	Figures.....	44

### 3. Overview

This document describes the use of the eyeD® for operators.



## 4. Quick Start Guide

- Switch on the eyeD® by pressing the white button (shortly, < 1 second).  
Wait until the orange indicator starts flashing slowly.
- Connect (via Wi-Fi) to the eyeD® with smartphone, tablet...  
Login to eyeD® web interface.  
Set the default settings for the measurement.
- Wait until the white indicator is continuously ON.  
For each measurement/unload/truck:
  - Make sure the eyeD® is empty (no remaining concrete/fibres in the chute) and clean.
  - Hook the eyeD® to the truck.
  - Start the measurement by pressing the orange button (for 5 seconds).  
Check if the white indicator blinks slow for measurement started.  
Observe the unload (e.g., balling).  
Enter mandatory and specific info about the unload in the web interface.  
Make sure the unload is finished and the eyeD® is empty (no remaining concrete).
  - Stop the measurement by pressing the orange button (for 5 seconds).  
Check if the white indicator is OFF.
  - Unhook the eyeD®.
  - Check the measurement results.
- Switch off the eyeD® by pressing the white button for 10 seconds.

## 5. Parts of eyeD®

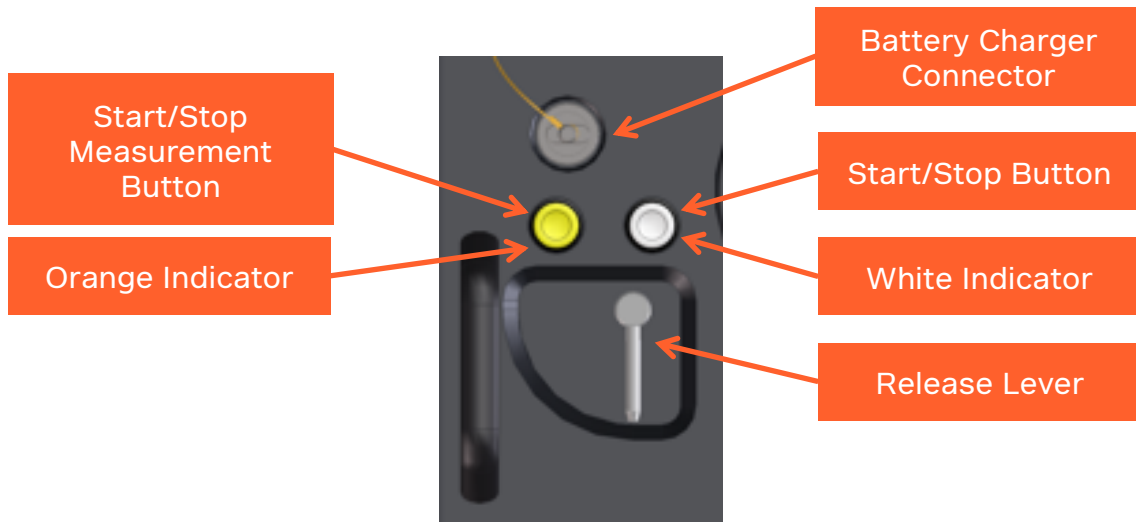
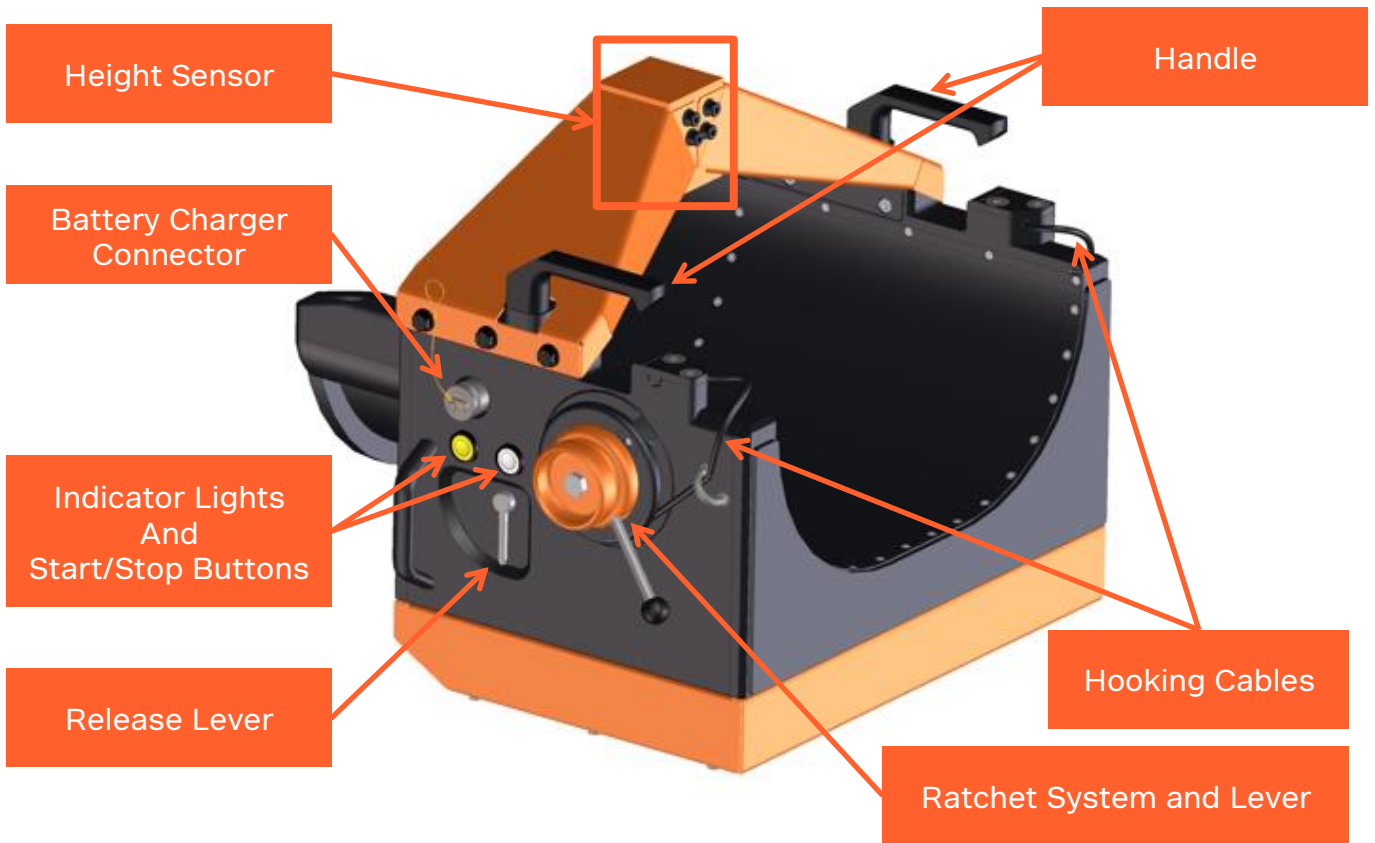




Figure 1 : Parts of eyeD®

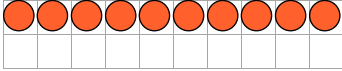
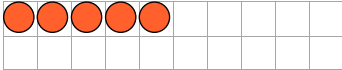
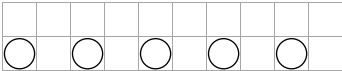
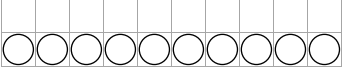
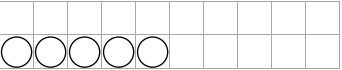
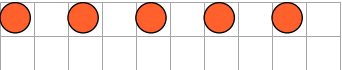
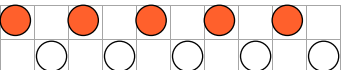
## 6. Indicator Light

The indicator lights on both sides of the device are used to signal the device status to the operator.

Two indicator lights on both sides of the device:

- Orange Indicator: 
- White Indicator: 

Following conditions are possible:

- **Initialization** of eyeD®  
 Orange Indicator Continuously ON.  
White Indicator OFF.
- **Heating Up** of eyeD®  
 Orange Indicator Blinks Slowly.  
White Indicator OFF.
- **Stand-by - No User Login**  
 Orange Indicator OFF.  
White Indicator Blinks Fast.
- **Stand-by - User Login**  
 Orange Indicator OFF.  
White Indicator Continuously ON.
- **Measurement** Active  
 Orange Indicator OFF.  
White Indicator Blinks Slowly.
- **Shutdown or Error**  
 Orange Indicator Blinks Fast  
White Indicator OFF.
- **Shutdown - Battery Empty**  
 Orange Indicator Blinks Fast Alternately.  
White Indicator Blinks Fast Alternately.

## 7. eyeD® Usage

### 7.1. Power On

Switch on the device by pressing the white button (shortly, < 1 second).

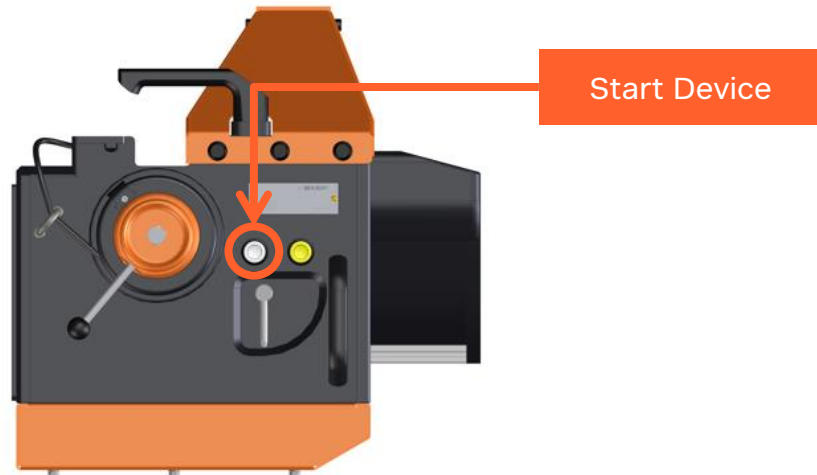
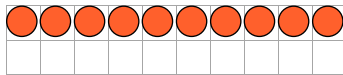


Figure 2 : Power On eyeD®

Immediately after power on, the orange indicator light is continuously on indicating the **initialization** phase.

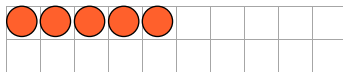
- Initialization of eyeD®



Orange Indicator Continuously ON.  
White Indicator OFF.

After a short while the orange indicator goes slowly blinking indicating the **heat-up** phase.

- Heating Up of eyeD®



Orange Indicator Blinks Slowly.  
White Indicator OFF.

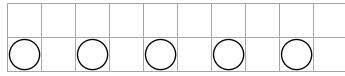
When the heat-up phase is started, the eyeD® is ready to log-in via smartphone, tablet... (Refer to '8. User Interface' for detailed information).



## 7.2. Stand-by

After the heat-up phase (which takes approximately 5 minutes), the eyeD® mode changes to **stand-by** mode. The orange indicator light change to OFF and the white indicator light changes to, either continuously ON or fast blinking indicating the ready state of the eyeD® (Refer to '8.3 Login' for detailed information).

- Stand-by - No User Login



Orange Indicator OFF.

White Indicator Blinks Fast.

- Stand-by - User Login



Orange Indicator OFF.

White Indicator Continuously ON.



Before starting the measurement, it is necessary to log in to the device via smartphone, tablet... (Refer to '8. User Interface' for detailed information).

If No User Login detected, the measurement is not assigned to a specific user and so the measurement will not be visible on the eyeD® web portal.

## 7.3. Hooking

The eyeD® can be hooked to the chute of a mixer by using the ratchets and cables on both sides of the eyeD®. The measurement shall be started manually by pressing the orange button (for at least 5 seconds).



A limited number of chutes with a specific shape (rectangular, too narrow, ...) cannot be fit to the eyeD®.

- Step 1:
  - Loosen the cables by using the release levers on both sides of the eyeD®.
  - Pull the cable while pulling the release lever.



Figure 3 : Hook eyeD® - Releasing Lever and Cables

- Step 2:
  - Make sure the eyeD® is empty and clean.
  - No remaining concrete and/or Dramix® fibres can be left in the chute.



Do NOT hook the eyeD® in this condition.  
Clean and remove the remaining  
concrete first.  
If not cleaned, results will be unreliable.



Clean eyeD®, ready for hooking (if white  
indicator light is continuous ON or fast  
blinking)

Figure 4 : Hook eyeD® - Clean eyeD®

- Step 3:
  - Hook the eyeD® to the chute of a truck-mixer.
    1. Hook the cables over the hooks of the truck-chute.



Figure 5 : Hook eyeD® - Cables

2. Tighten the cables with the ratchets on both sides of the eyeD®. Make sure the eyeD® is centered on the truck/chute.



Figure 6 : Hook eyeD® - Tighten Cables

3. Make sure there's no gap at the bottom to avoid spillage of concrete. If there's a gap, tighten the cables. If that doesn't help it's possible that the eyeD® is not fitted to use on that brand of chute.

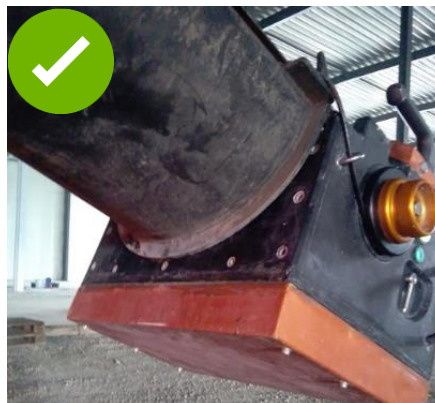
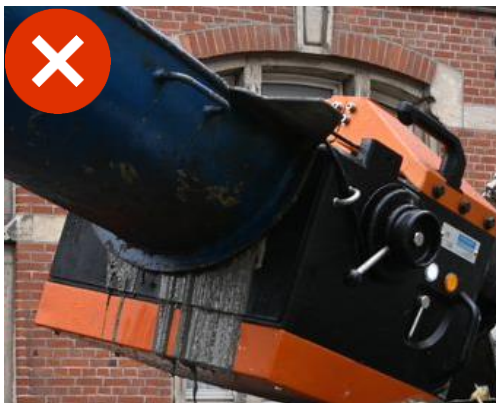


Figure 7 : Hook eyeD® - Correct Hooking

## 7.4. Start Measurement

Before the unload starts, the measurement shall be started manually. Start the measurement by pressing the orange button (for 5 seconds).

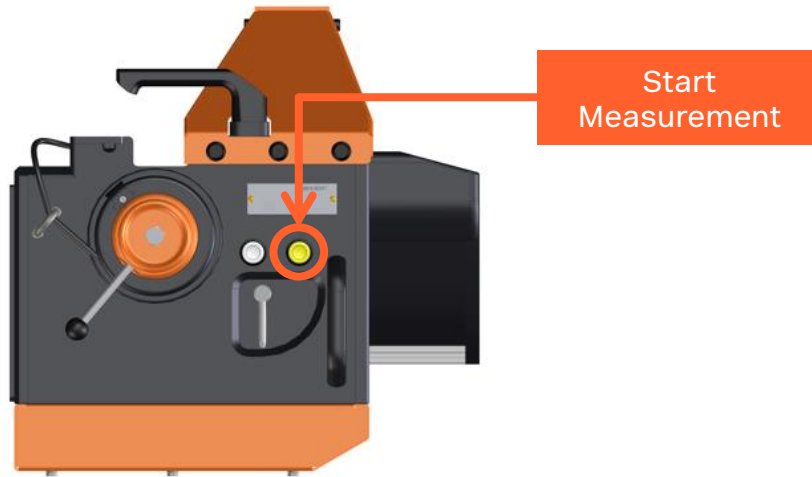


Figure 8 : Start Measurement



The measurement shall be started **before** concrete flows through the eyeD® otherwise the measurement cannot be processed correctly and may not be shown.



Before starting the measurement, it is necessary to log in to the device via smartphone, tablet... (Refer to '8. User Interface' for detailed information).

If No User Login detected, the measurement is not assigned to a specific user and so the measurement will not be visible on the eyeD® web portal.



If the measurement is not started before concrete starts to flow, the device will not be able to process the data and no report will be available.

After starting the **measurement**, the white indicator will be blinking slowly while the orange indicator is OFF.

- Measurement Active



Orange Indicator OFF.

White Indicator Blinks Slowly.

## 7.5. Measurement

During the measurement, enter mandatory data of the measurement using the web interface via a smartphone, tablet... (Refer to '8. User Interface' for more information)

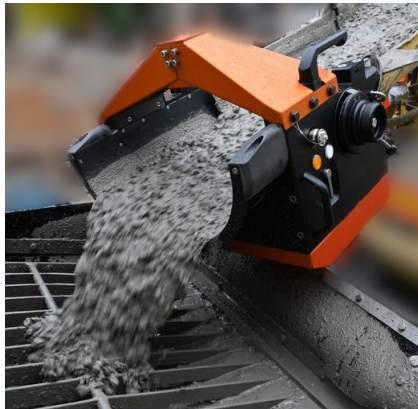


Figure 9 : Concrete Flowing



During a measurement, it is not allowed to put metal parts (e.g., shovel...) through the eyeD®.

During the **measurement**, the white indicator will be blinking slowly while the orange indicator is OFF.

- Measurement Active



Orange Indicator OFF.

White Indicator Blinks Slowly.

## 7.6. Unhooking

After the unload, unhook the eyeD®.

Unhooking can be done by lifting the eyeD® or loosening the cables by using the release levers.

- Pull the release lever to release the cable tension.



Figure 10 : Unhook eyeD® - Release Cables

- Lift the eyeD® and detach it from the truck/chute.



Figure 11 : Unhook eyeD® - Lift and Detach

## 7.7. Stop Measurement

After unhooking the eyeD® device, the measurement shall be stopped manually.



Make sure the unload is finished and the eyeD® is empty (no remaining concrete) before stopping the measurement.

Stop the measurement by pressing the orange button (for 5 seconds).

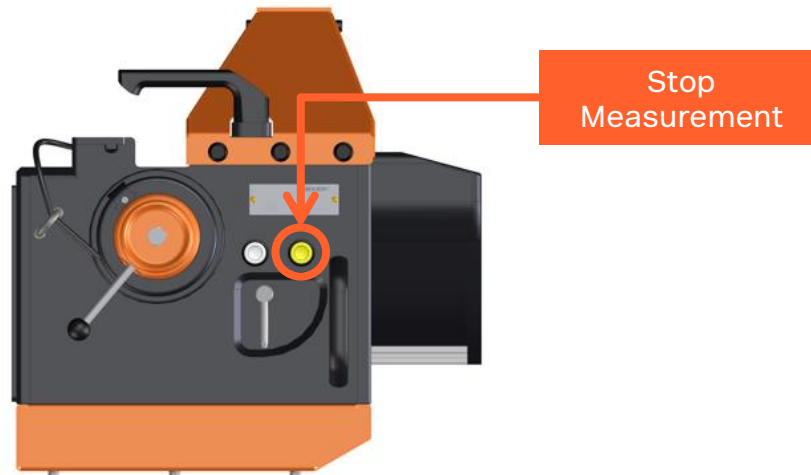
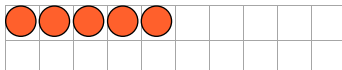


Figure 12 : Stop Measurement

After the measurement has been stopped, the indicators will change to slow blinking orange while the white indicator is OFF. In this short period, the device is starting the processing and **heating up** for new measurement.

- Heating Up of the eyeD®



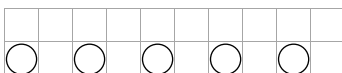
Orange Indicator Blinks Slowly.  
White Indicator OFF.



The heat up phase between two consecutive measurements (30 seconds) is faster compared to initial heat up.

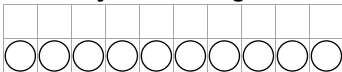
After this phase, the device will go to **stand-by** mode depending on a user is logged in:

- Stand-by - No User Login



Orange Indicator OFF.  
White Indicator Blinks Fast.

- Stand-by - User Login



Orange Indicator OFF.  
White Indicator Continuously ON.



## 7.8. Cleaning

When measurement is finished it's very important to make sure the eyeD® is cleaned. You may use water, hoses and a brush to remove concrete from the device.



Figure 13 : Cleaning the eyeD®

Make sure the height sensor (top of the triangle above the chute) is cleaned properly. Especially the height sensor measurement head shall be cleaned.



## 7.9. Power Off

When measurements are finished the device can be powered off.

Power off the eyeD® by pressing the white button for at least 10 seconds.

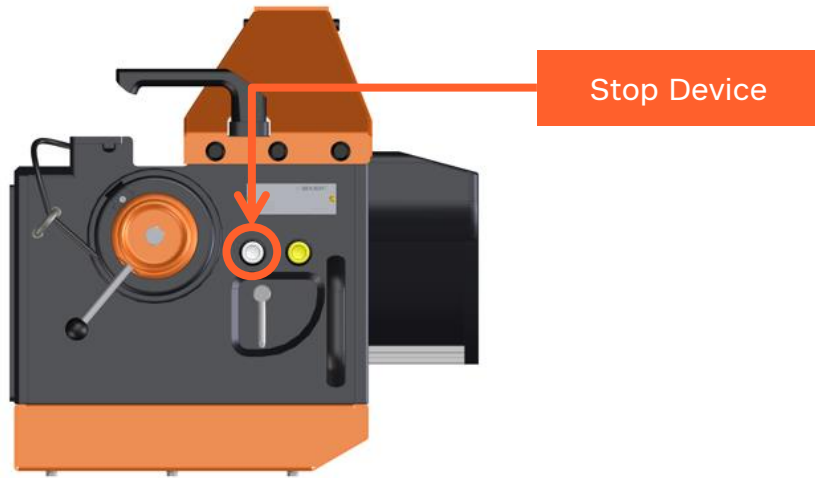
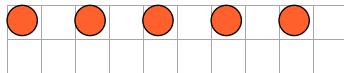


Figure 14 : Power Off eyeD®

Keep pressing the white button until the orange indicator starts flashing fast while the white indicator is OFF. The device will go to **shutdown** mode.

- Shutdown or Error



Orange Indicator Blinks Fast  
White Indicator OFF.

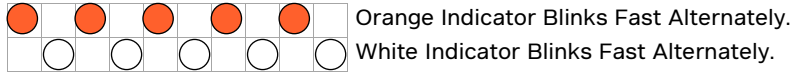
## 7.10. Battery

### 7.10.1. Discharge

Battery power (when fully charged) should be enough to use the eyeD® during a full day. In the hooked state the eyeD® is capable of measuring 8 hours.

Whenever the **battery is empty**, the eyeD® will do an automatic shutdown. This is indicated by the indicator lights by fast alternating blinking orange/white.

- Shutdown - Battery Empty



## 7.10.2. Charge

To charge the battery, connect the battery charger to the charging plug of the eyeD®.



The device shall be powered off before charging.



Charging when the device is powered on will damage the charger or the device!

- Connect the charger cable to the charging connector of the eyeD®.

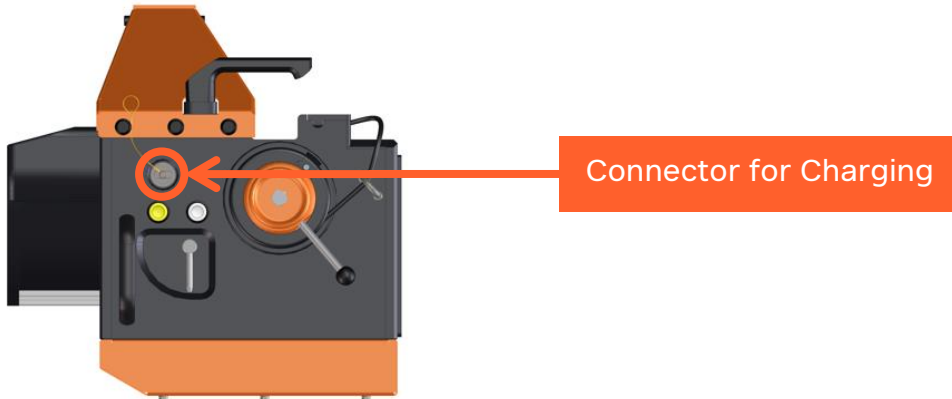


Figure 15 : eyeD® Charging Connector



Always use the charger contained with the eyeD® device.

Using a charger from different type or a charger contained with another eyeD® device is NOT allowed and could lead to battery damage.



Check type of charger below to know the connection sequence!



Check the charger type below to verify the charging state.

7.10.2.1. BATTERY CHARGER 29.4V 2A



Figure 16 : BATTERY CHARGER 29.4V 2A



This type of charger is obsolete and will be replaced by ANSMANN 2000-2001-01 type below (refer to 7.10.2.2. ANSMANN 2000-2001-01).



Always first connect the charger to the main power before connecting to the eyeD®!

This type of charger has two indicator LEDs.



Different versions of this type of chargers are in use. Depending on the version of charger, the indicator LEDs could be at different location. Carefully check the labels on the charger and verify the meaning of the indicator LEDs on top charger.

- Charger Type 1:

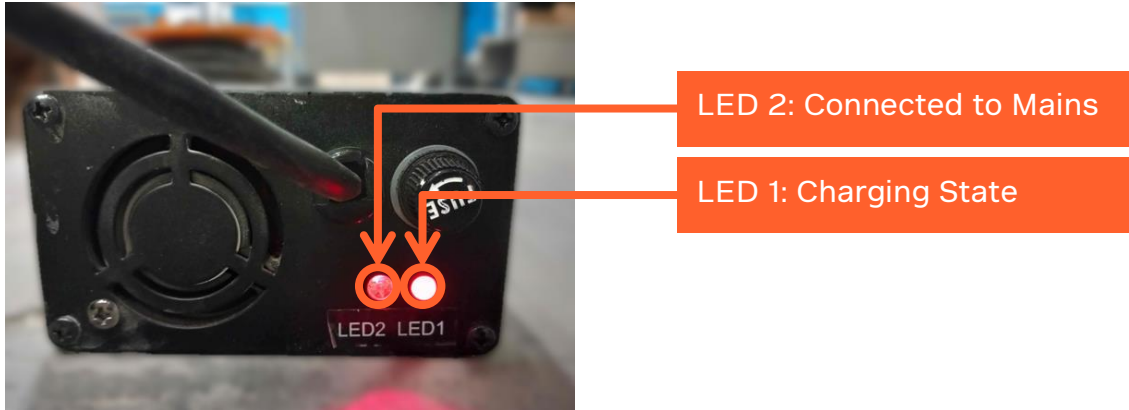


Figure 17 : eyeD® Charger - Type 1

- Charger Type 2:

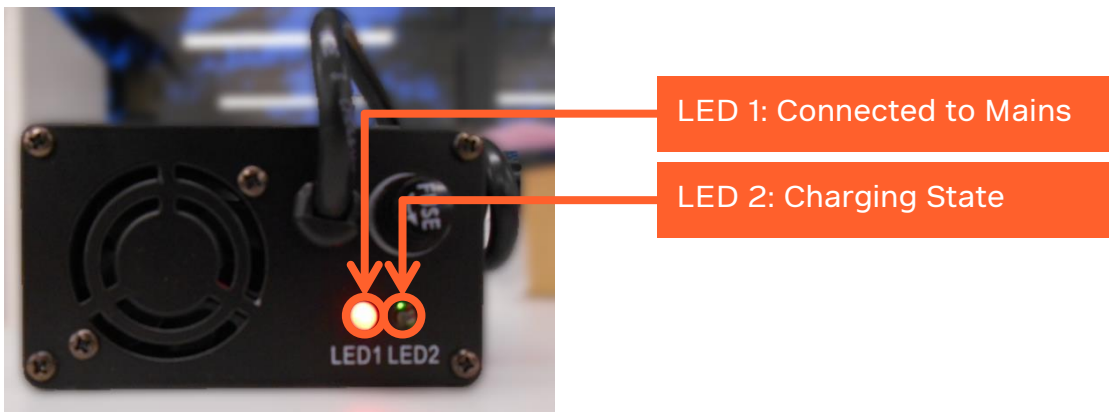


Figure 18 : eyeD® Charger - Type 2



Charging State LED:

- **RED:** Battery Charging
- **GREEN:** Battery Charged

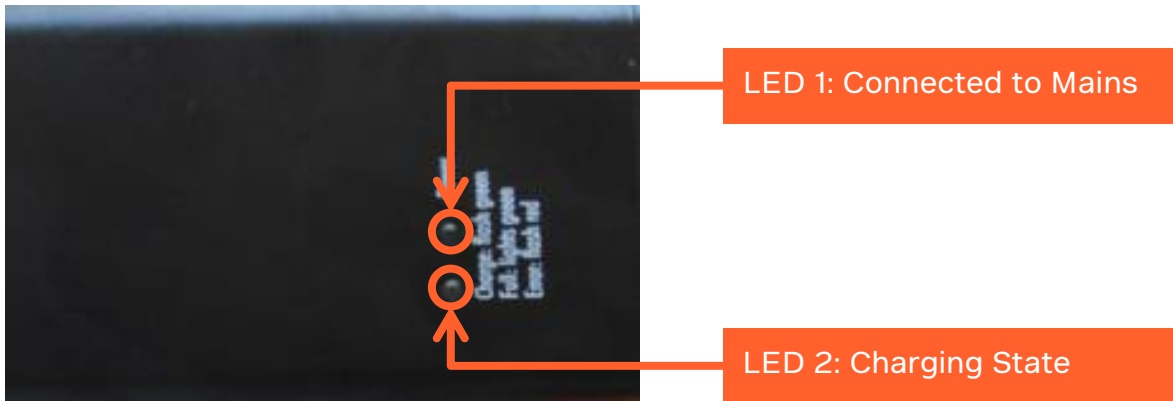


Figure 19 : eyeD® Charger - ANSMANN 2000-2001-01



Disconnect the power supply before making or breaking the connection to the battery.

This type of charger has two indicator LEDs.



Charging State LED:

- **RED:** Error
- **GREEN:** Battery Charged
- **GREEN (Flashing):** Battery Charging

## 8. User Interface

Next to the 2 light indicators, a more extended user interface which can be used from any device capable of Wi-Fi connection and running a browser is available on the eyeD®.



Note that the device cannot be used without this extended user interface since it is needed to enter mandatory data for each measurement.

### 8.1. Connecting to Wi-Fi

The eyeD® has its own Wi-Fi network to which users can connect.

- Network name **eyeD\_xxxbe** (where xxx is the name of the specific eyeD®).
- Password: **1234567890** (same password for every eyeD®)



Since several eyeD® devices can be in use on a jobsite, make sure to connect to the correct eyeD® Wi-Fi network to enter specific measurement data.

As an alternative to manually entering the Wi-Fi credentials, it is possible to use one of the QR codes on the device (if present and readable). Use a QR code read on your smartphone to establish the connection.



Figure 20 : Example of QR code



Connecting to Wi-Fi via QR code may only work on Android devices.



## 8.2. User interface

Once a connection is established with the eyeD® Wi-Fi, it is possible to connect to the user-interface.

Use any browser and enter the following URL <http://192.168.4.1/> (same URL for all eyeD® devices).

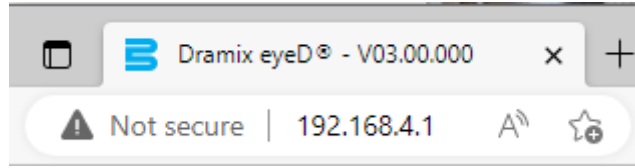


Figure 21 : URL of eyeD®



Connecting to Wi-Fi via QR code may only work on Android devices. Similar to connecting to the Wi-Fi, it's also possible to use the QR code on the device.

## 8.3. Login

Use the credentials (customer ID and pin code) received from your company administrator to login to the eyeD®.

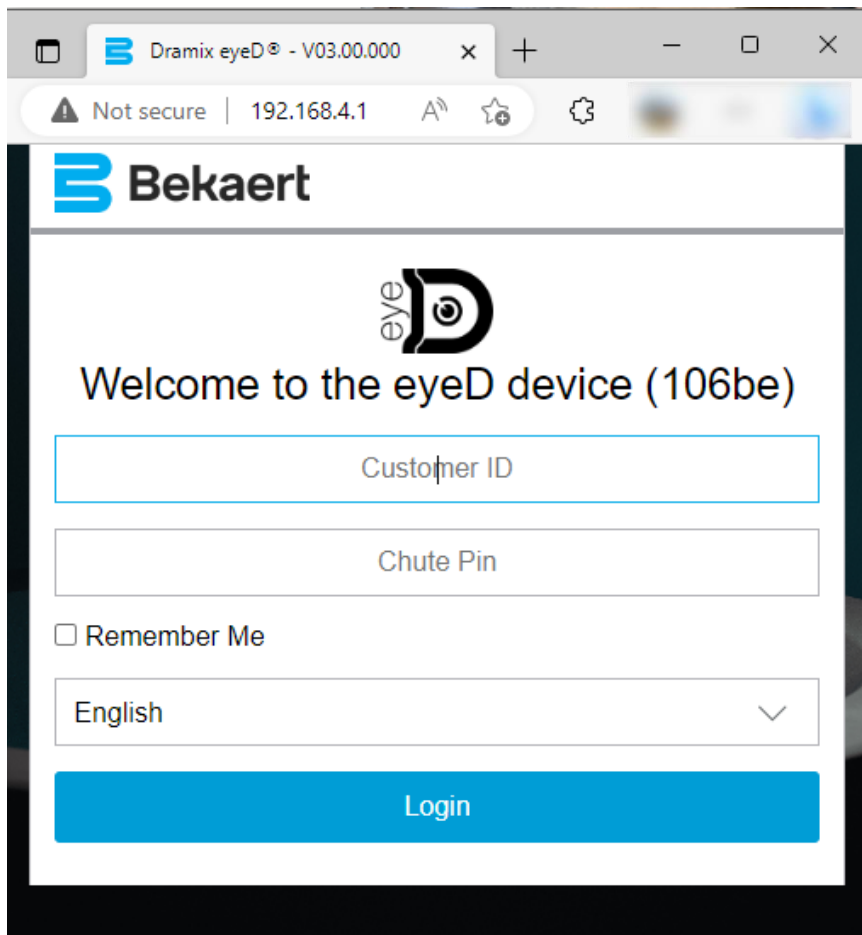


Figure 22 : eyeD® Web Interface - Login Screen

## 8.4. Default Settings

After a successful login, the eyeD® automatically shows the screen with 'Default Settings'. The 'Default Settings' are used as common settings for every measurement done as long as the eyeD® is not powered off. Most settings can be selected from a dropdown list.

The content of the dropdown lists is automatically downloaded from the server and should contain the projects and sectors as defined by the customer admin. If the dropdown lists do not contain the required default settings, a new set of defaults can be created by using the 'Create New Default Settings' button.

The screenshot shows the 'Select Default Settings' web interface. It features a dark blue header with the title and a battery icon. Below the header is a green message box: 'Successfully logged in and welcome to the eyeD.'. The main content area contains several settings:

- Operator:** A dropdown menu with 'Select a value'.
- Project:** A dropdown menu with 'Another Test'.
- Sector:** A dropdown menu with 'Sector 1'.
- Target Fibre Type:** A dropdown menu with '3D 45/50BG'.
- Dosage (kg/m³):** A text input field with 'Target dosage in kg/m³' and a unit selector set to 'kg/m³'.

At the bottom of the form are two buttons: 'Create New Default Settings' and 'Save Defaults'. To the right of the form are three orange callout boxes:

- Top Callout:** 'Use the dropdown lists to select the default parameters for all unloads.' with arrows pointing to the Operator, Project, Sector, and Target Fibre Type dropdowns. It lists: → Operator, → Project, → Sector, → Target Fibre Type, → Dosage.
- Middle Callout:** 'Press the 'Create New Default Settings' if the dropdown list does not contain the required defaults.' with an arrow pointing to the 'Create New Default Settings' button.
- Bottom Callout:** 'Press the 'Save Defaults' button to continue to the measurements screen.' with an arrow pointing to the 'Save Defaults' button.

Below the main interface is a zoomed-in view of the 'Target Fibre Type' dropdown menu, showing a list of options: 3D 45/50BG, 3D 45/50BL, 3D 55/60BL, 3D 65/60BG, 3D 80/60BG, 4D 55/60BG, 4D 65/60BG, and 5D 65/60BG. An orange callout box points to this list with the text: 'Dropdown with list of fibre types.'

Figure 23 : eyeD® Web Interface - Select Default Settings



Project shall be created in advance on eyeD® web portal (<http://eyed.dramix.com>).

When pressing the 'Create New Default Settings' button, a new screen will be opened where additional defaults can be entered.

The screenshot shows a mobile web interface titled "Create New Default Settings". It contains five input fields: "Operator" (Johan), "Project" (Another Test), "Sector" (Sector 1), "Target Fibre Type" (3D 45/50BG), and "Dosage (kg/m³)" (35). At the bottom are two buttons: "Cancel" (red) and "Save New Settings" (green). An orange callout box on the right lists the fields with arrows pointing to them: Operator, Project, Sector, Target Fibre Type, and Dosage. Below the interface, two more orange callout boxes provide instructions: one for the "Cancel" button and one for the "Save New Settings" button.

Operator  
Johan

Project  
Another Test

Sector  
Sector 1

Target Fibre Type  
3D 45/50BG

Dosage (kg/m<sup>3</sup>)  
35 kg/m<sup>3</sup>

Cancel Save New Settings

Enter new values which will be used as defaults for all upcoming unloads.

- Operator
- Project
- Sector
- Target Fibre Type
- Dosage

Press 'Cancel' to return to the previous screen without saving the defaults.

Press 'Save New Settings' to save the entered values and use them as new set of defaults.

Figure 24 : eyeD® Web Interface - Create New Defaults

## 8.5. Main Screen

The 'Main Screen' is divided into 3 parts:

- General info and status on top of the screen,
- Defaults or Unload in the center of the screen,
- List of unloads at the bottom of the screen.

101be		i	Battery
Status	Standby Ready		
SMT eyeD Trials			
<b>Selected Defaults</b>			
Operator	Johan		
Project	Another Test		
Sector	Sector 1		
Target Fibre Type	3D 45/50BG		
Dosage (kg/m <sup>3</sup> )	35 kg/m <sup>3</sup>		
<b>Your Unloads</b>			
Measurement ID	Start	Duration (min)	>
101be_000168	2015-12-04 13:44:22	13.9	>
101be_000167	2015-12-04 13:04:25	8.2	>
101be_000166	2015-12-04 12:19:55	7.6	>
101be_000165	2015-12-04 11:54:18	11.1	>
101be_000164	2015-12-04 11:12:43	21.0	>
101be_000163	2015-12-04 10:27:25	19.9	>
101be_000162	2015-12-04 10:03:20	0.2	>

General Info and Status

Selected Default Settings or Settings of Unload in Progress.

List of Finished Measurements

Figure 25 : eyeD® Web Interface - Main Screen

### 8.5.1. Status and Info

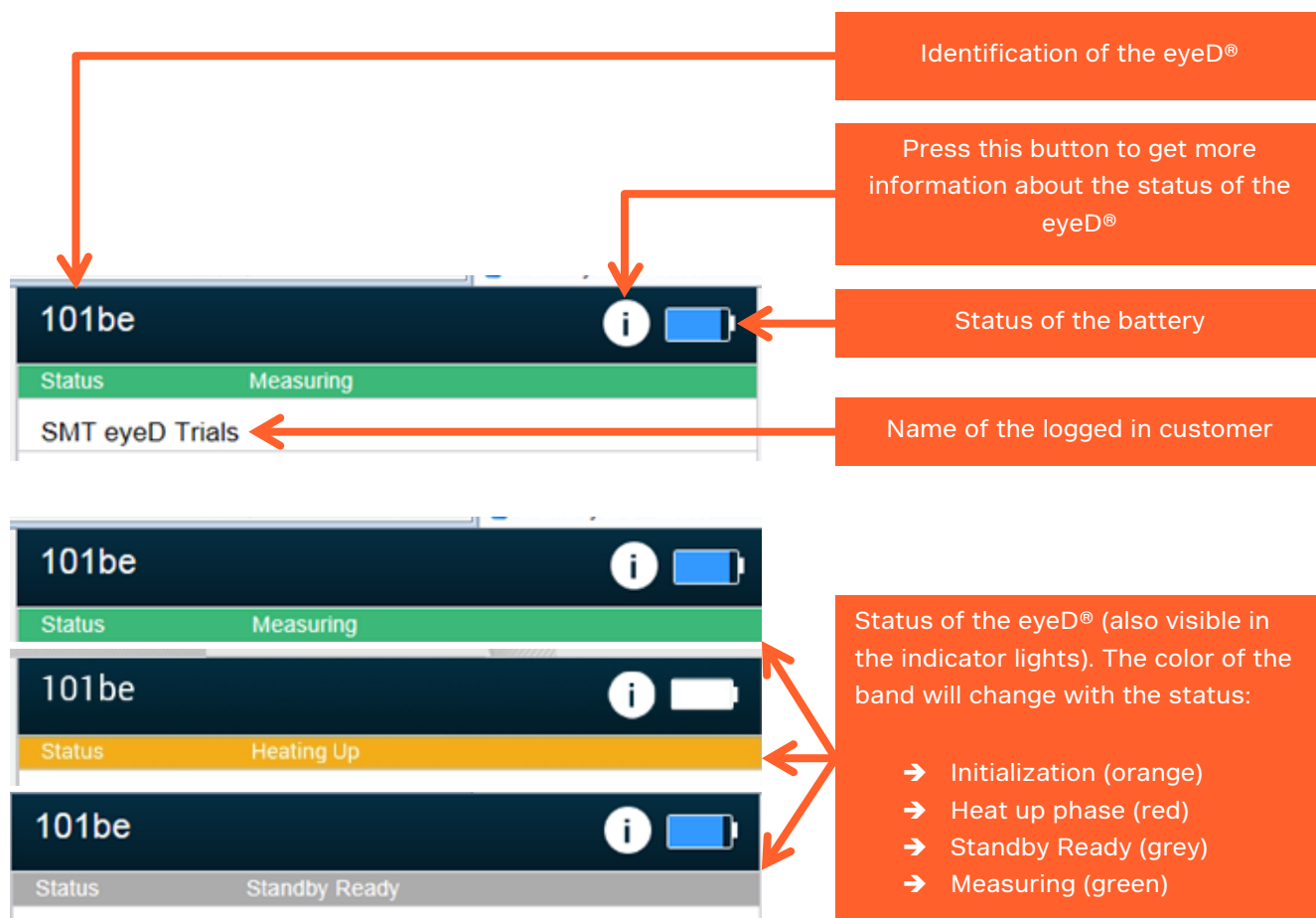


Figure 26 : eyeD® Web Interface - Status and Info Screen

### 8.5.2. Default Settings or Current Unload

Depending on the status of the eyeD®, standby or measuring, the selected default settings or the status of the current load is shown in the center of the screen. The information is very similar. When the eyeD® is measuring it shows unique identification of the measurement. This unique identification is important to retrieve data or contact the Bekaert administrator in case of problems.

The image shows two screenshots of the eyeD® Web Interface. The top screenshot displays the 'Selected Defaults' section, which lists various parameters. An orange callout box with an arrow pointing to the title explains that these defaults are shown when no unload is busy. The bottom screenshot displays the 'Current Unload' section, which includes an 'ID' field highlighted with a red box. An orange callout box with an arrow pointing to the 'ID' field explains that this is the unique identifier of the measurement. Another orange callout box with an arrow pointing to the 'Current Unload' title explains that these settings are shown when the eyeD® is in measurement mode.

Selected Defaults	
Operator	Johan
Project	Another Test
Sector	Sector 1
Target Fibre Type	3D 45/50BG
Dosage (kg/m <sup>3</sup> )	35 kg/m <sup>3</sup>

When no unload is busy, the selected defaults are shown.

Current Unload	
ID	101be_000169
Operator	Johan
Project	Another Test
Sector	Sector 1
Target Fibre Type	3D 45/50BG
Dosage (kg/m <sup>3</sup> )	35

When the eyeD® is in measurement mode, the settings of the unload are shown together with the unique identifier of the measurement.

Unique identifier of the measurement.

Figure 27 : eyeD® Web Interface - Defaults Settings or Current Unload

### 8.5.3. Finished Unloads

The list of unloads is limited to unloads/measurements of the current user. It is not possible to view measurements done by other customers. When a measurement is busy, it is clearly shown in the list and can be edited. The information of finished unloads can no longer be edited or changed.

The list shows for each unload:

- Unique Measurement Identification
- Start Time of Measurement
- Duration of Measurement

The list is always sorted on date and starts with the most recent measurement.

Your Unloads		
Measurement ID	Start	Duration (min)
101be_000168	2015-12-04 13:44:22	13.9
101be_000167	2015-12-04 13:04:25	8.2
101be_000166	2015-12-04 12:19:55	7.6
101be_000165	2015-12-04 11:54:18	11.1
101be_000164	2015-12-04 11:12:43	21.0
101be_000163	2015-12-04 10:27:25	19.9
101be_000162	2015-12-04 10:03:20	0.2

Finished measurements which can no longer be edited.

Your Unloads		
Measurement ID	Start	Duration (min)
101be_000169	2015-12-18 13:26:35	Edit
101be_000168	2015-12-04 13:44:22	13.9
101be_000167	2015-12-04 13:04:25	8.2
101be_000166	2015-12-04 12:19:55	7.6

Active measurement marked in green can be edited.

Figure 28 : eyeD® Web Interface - List of Unloads

## 8.6. Edit Active Measurement

By clicking the 'Edit' button in the list of measurements, the information about the unload can be updated. Some values are copied from the default settings, some values are mandatory and must be entered manually.

**Parameters entered (copied) automatically from the default settings.**

- Operator
- Project
- Sector
- Target Fibre Type
- Dosage

Dosage is a mandatory field which has a default value.

**Mandatory data that needs to be entered manually or reviewed.**

- Dosage
- Target Volume
- Truck Empty → By default this value is always set to 'Empty'.

**Optional data**

- Balling Observed
- Delivery Note
- Remarks

Press 'Cancel' or 'Save Data' to return to the overview screen.

Figure 29 : eyeD® Web Interface - Entering Unload Data

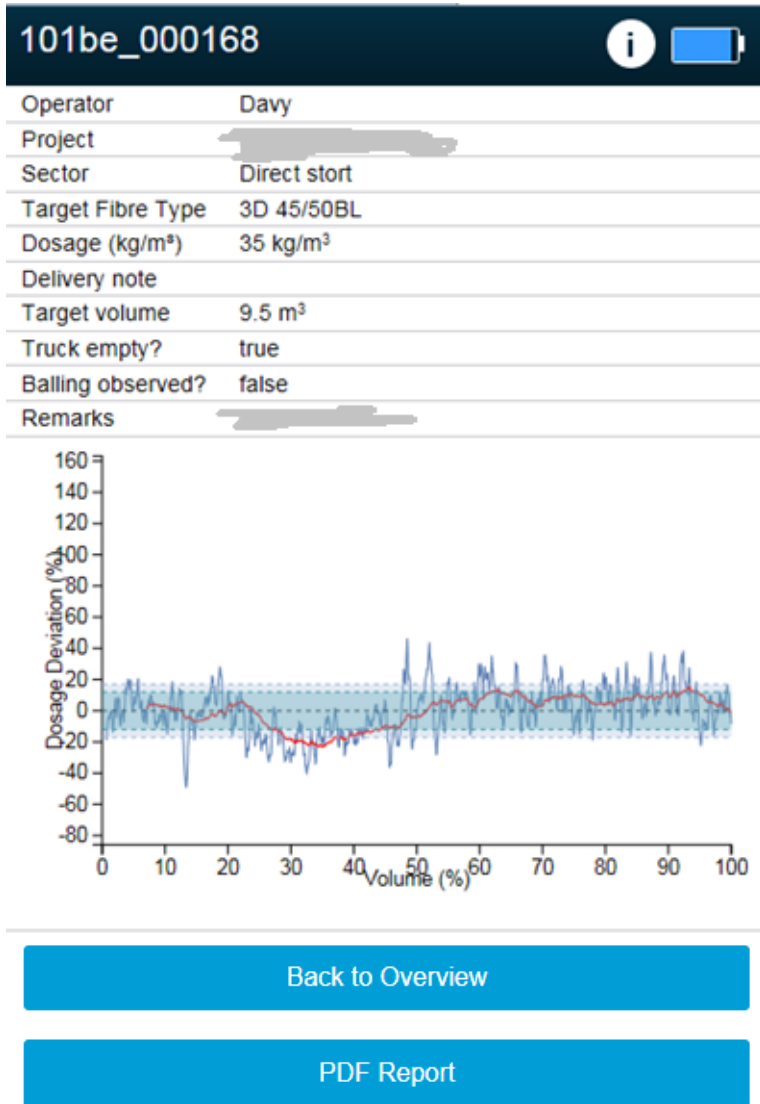


The mandatory fields are needed for correct processing and displaying of measurements.




## 8.7. Detail Screen of Finished Measurement

For each finished unload a preliminary report can be viewed on the tablet or smartphone. Click any finished unload to view a plot of the measured data.



Plot of the distribution of Dramix® fibres in the unload. Both axes are expressed in % and are relative values. Plots with absolute values are only available on the server.

Figure 30 : eyeD® Web Interface - Plot of an unload

 A more extensive report and pdf creation can also made on the server.

## 9. Troubleshooting

During operation some things can go wrong, especially in a rough environment.

### 9.1. Errors on the Device

Whenever an error occurs on the device the user-interface is automatically redirected to the error page. The error page shows, if known, the source of the error and possible solutions to solve the error.

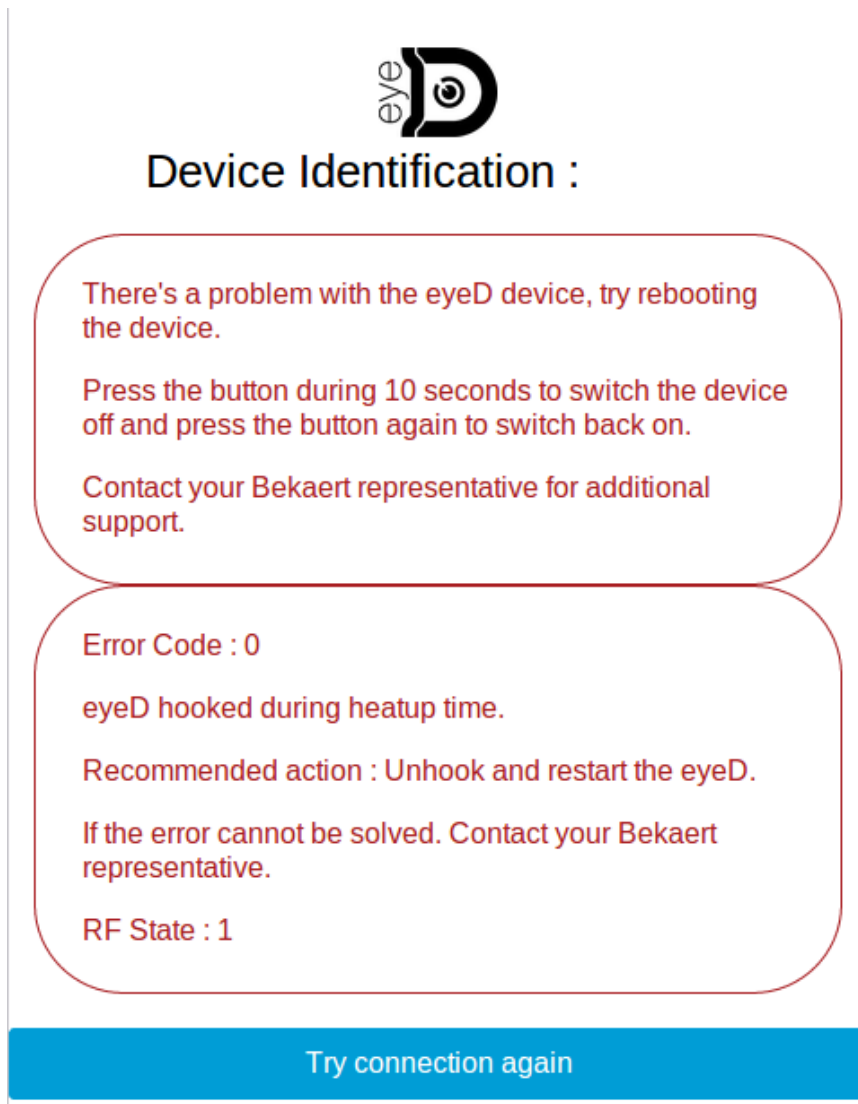
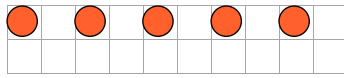


Figure 31 : eyeD® Web Interface - Error on eyeD®

## 9.2. Hardware Error on Device

In case of a hardware error, e.g. height sensor blocked, the device will go to **error** mode and the orange indicator will blink fast while the white indicator is OFF:

- Shutdown or Error



Orange Indicator Blinks Fast  
White Indicator OFF.

In some cases, the problem can be solved by following these simple steps:

- Power Off the eyeD®
- Clean the eyeD®
- Height sensor is clean and concrete or other dirt is NOT blocking the sensor.

The height sensor can be found in top of the triangle above the chute.



Figure 32 : Keep Sensors Clean

- Power on the eyeD®



If the problem is not solved (eyeD® returns to error state) the device must be returned for revision.

### 9.3. Sequence of Starting Measurement

Whenever the correct procedure is not followed the eyeD® will go into error and power down automatically.

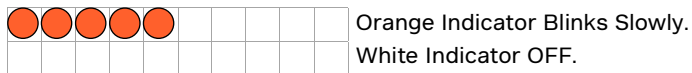
Main reason for this is that a measurement has been started before device was in stand-by state.

- Never start a measurement when the orange indicator light is ON or blinking:

- Initialization of the eyeD®



- Heating Up of the eyeD®

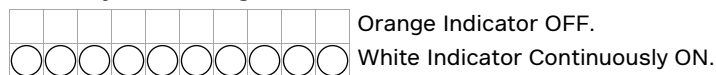


- Only start measurement when eyeD® is in **stand-by** mode. The white indicator light is ON or blinking and orange indicator is OFF in this mode.

- Stand-by - No User Login



- Stand-by - User Login



## 10. Handling and Shipping

### 10.1. Device Packing

The device should be packed, shipped and/or transported in the custom container.



Figure 33 : Device Packing - Custom Container

The device should be secured against movement inside the custom container by means of cushioning material (e.g. protective foam).



The device shall be protected against movement (with cushioning material) to avoid accidental activation during transport!



Figure 34 : Device Packing - Cushioning Material



While transporting, the device shall be in the Power Off state (refer to 7.9. Power Off)!

## 10.2. Battery

The device has a built-in lithium-ion battery.



Cell(s) of battery or battery that has been identified as defective, damaged or that have the potential of producing a dangerous evolution of heat, fire or short circuit are for safety reasons forbidden for transport.

Battery has been tested in accordance with subsection UN38.3. Battery has capacity >100Wh and so belongs to Class 9 of Dangerous Goods. Device shall be handled according to UN3841 (lithium-ion batteries contained in equipment) and PI967 (Packing Instruction) Section I.



Battery Test Summary and Material Safety Data Sheet (MSDS) are available upon request.



As the device contains a lithium-ion battery, when shipping, it shall be threaded as regulated Class 9 Dangerous Goods.



Before transporting lithium batteries, please check all local, national and international applicable laws and regulations.



Regulations are subject to change on annual or biennial basis, therefor always check latest updates and handle accordingly.

### 10.3. Package Labels

At least the following labels shall be available on the custom container.

#### 10.3.1. Class 9 – Lithium Battery Label

According to the Dangerous Goods regulations the following label is required (refer to 10.2. Battery).



Figure 35 : Package Label – Class 9 – Lithium Battery Label



Minimum dimensions for this label are 100 x 100mm.



Color for this label shall be Black on a white background.

#### 10.3.2. Package Orientation

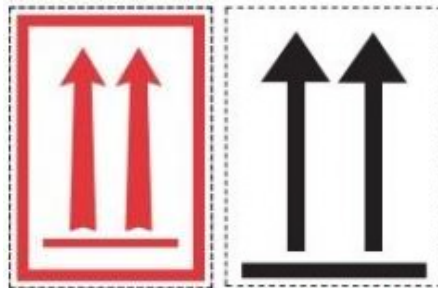


Figure 36 : Package Label – Package Orientation



Minimum dimensions for this label are 74 x 105mm.



Color for this label shall be Red (Pantone Color Number 186U) or Black on a white background.



Must be displayed on two opposite sides.

# 11. Storage

## 11.1. General

The device should be stored in a clean and dry location. The ambient temperature range for the device are:

- Charge: 0°C...+45°C
- Discharge: -20°C...+60°C
- Storage: -20°C...+20°C



Make sure the device is clean before storing for longer period (refer to 7.8. Cleaning).

## 11.2. Battery

To increase the lifetime of the battery, charge the battery completely every 3 months.



If the device is stored for a longer period, charge the battery completely every 3 months.

- Discharge the device by power on (refer to 7.1. Power On) and wait until the battery is completely empty (refer to 7.10.1. Discharge).
- Charge the device completely (refer to 7.10.2. Charge).



Make sure to store the device in the Power Off state (refer to 7.9. Power Off)!



## 12. FCC Certification

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna,
- Increase the separation between the equipment and receiver,
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected,
- Consult the dealer or an experienced radio/TV technician for help.



Changes or modifications of this equipment not expressly approved by Bekaert for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

- This device may not cause interference,
- This device must accept any interference, including interference that may cause undesired operation of the device.

The antenna used for this mobile transmitter must provide a separation distance of at least 20cm from all persons.

For indoor use only.

### 12.1. Wi-Fi Specifications

This device contains FCC ID: PVH0965


This device contains equipment certified under IC ID: 5325A-0965

### 12.2. 4G Specifications

This device contains FCC ID: XMR201903EG25G

This device contains equipment certified under IC ID: 10224A-201903EG25G


## 13. Safety Precautions

 **Before using the device, any part shall be carefully checked for damages.  
The device shall NOT be used if any damaged part is observed.**

 **Any part that is damaged should be properly repaired or replaced by an authorized service center.**

 **Do not attempt to disassemble the device. Only an authorized service center is allowed to repair or replace (parts of) the device.**

 **The device uses a magnetic field to measure.  
Pacemaker wearers shall stay back in 30cm from the device.**

 **Do NOT climb in, on or occupy the device for any purpose.  
Injury from slipping or falling may occur.**

 **Electrical cables and charger shall be installed and used properly and tidy.**

 **Electrical cables and charger shall NOT be used in wet conditions, nor dripping, nor spraying, nor immersed.**

 **Electrical cables and charger shall be used in dry conditions and shall NOT be exposed to any precipitation: rain, snow, mist....**

 **Before connecting the battery charger to a power source, be sure the voltage supplied is the same as the voltage specified on the battery charger.**

 **Do NOT use any other charger or power source to charge the device.  
Only use the battery charger initially supplied with the device.**

 **Never attempt to modify the equipment.**

 **Walk slowly and deliberately while carrying the device.  
Should you lose balance, throw the chute away from your body.**


 **Before hooking the device, always check the proper functioning of the device hooking system (hooking cables, ratchet system, lever...) and the truck chute.  
Never hook the device if any damage observed on hooking system of truck chute.**

 **Do NOT drop or throw chutes into place.**

 **The device is a measurement device and should be handled with care.**

 **Always keep away (hands) from either end to avoid pinch hazards.  
Only use device handles to manipulate the device.**

 **Never walk or stand under the device.  
Ensure that nobody walks or stands under the device.**

 **Ensure that there is careful supervision when this device is used in the presence of children, incapable individuals or pets. The device is NOT suitable for use by persons (including children) with a physical, sensory or mental limitation or a lack of experience and knowledge, irrespective of whether they are being supervised or have been issued with instructions in relation to the use of the device by a person who is responsible for their safety. Always ensure that children cannot play with the device.**

 **Switch OFF the eyeD® device when around (gasoline or diesel)-fuel pumps and before filling your vehicle with fuel.**

 **Switch OFF the eyeD® device in hospitals and any other place where medical equipment may be in use.**

 **Do NOT use the eyeD® device in explosive or hazardous environments.**

## 14. Appendices

### 14.1. Figures

Figure 1 : Parts of eyeD® .....	6
Figure 2 : Power On eyeD® .....	8
Figure 3 : Hook eyeD® - Releasing Lever and Cables .....	10
Figure 4 : Hook eyeD® - Clean eyeD® .....	11
Figure 5 : Hook eyeD® - Cables .....	12
Figure 6 : Hook eyeD® - Tighten Cables .....	12
Figure 7 : Hook eyeD® - Correct Hooking .....	12
Figure 8 : Start Measurement .....	13
Figure 9 : Concrete Flowing .....	14
Figure 10 : Unhook eyeD® - Release Cables .....	15
Figure 11 : Unhook eyeD® - Lift and Detach .....	15
Figure 12 : Stop Measurement .....	16
Figure 13 : Cleaning the eyeD® .....	17
Figure 14 : Power Off eyeD® .....	18
Figure 15 : eyeD® Charging Connector .....	20
Figure 16 : BATTERY CHARGER 29.4V 2A .....	21
Figure 17 : eyeD® Charger - Type 1 .....	22
Figure 18 : eyeD® Charger - Type 2 .....	22
Figure 19 : eyeD® Charger - ANSMANN 2000-2001-01 .....	23
Figure 20 : Example of QR code .....	24
Figure 21 : URL of eyeD® .....	25
Figure 22 : eyeD® Web Interface - Login Screen .....	25
Figure 23 : eyeD® Web Interface - Select Default Settings .....	26
Figure 24 : eyeD® Web Interface - Create New Defaults .....	27
Figure 25 : eyeD® Web Interface - Main Screen .....	28
Figure 26 : eyeD® Web Interface - Status and Info Screen .....	29
Figure 27 : eyeD® Web Interface - Defaults Settings or Current Unload .....	30
Figure 28 : eyeD® Web Interface - List of Unloads .....	31
Figure 29 : eyeD® Web Interface - Entering Unload Data .....	32
Figure 30 : eyeD® Web Interface - Plot of an unload .....	33
Figure 31 : eyeD® Web Interface - Error on eyeD® .....	34
Figure 32 : Keep Sensors Clean .....	35
Figure 33 : Device Packing – Custom Container .....	37
Figure 34 : Device Packing – Cushioning Material .....	37
Figure 35 : Package Label – Class 9 – Lithium Battery Label .....	39
Figure 36 : Package Label – Package Orientation .....	39