

Envólio Pro

User Guide & Warranty Document



**This is a controlled document.
Any unauthorized access, redistribution,
reposting and reproduction is strictly prohibited.**

**This document must not be copied in whole or in
part, without written permission from
Blackfrog Technologies Pvt. Ltd.**

The purpose of this document is to help the user understand Emvólio and its functions and operations, and set up Emvólio for safe transportation of vaccines and biologicals. This document also outlines the warranty terms and conditions applicable for Emvólio.

It is important that you read and adhere to all the safety instructions, warnings and cautions contained in this manual prior to using Emvólio.

Instructions	5
Conventions	5
Problem Reporting Instructions	5
Introduction	6
Safety Information	7
Emvólio Usage: Do's	7
Emvólio Usage: Dont's	7
Setting up your Emvólio	8
Unpacking Emvólio	8
Inspection	8
Using Emvólio	9
Know your Emvólio	9
Using Emvólio	13
Common Usage Indications	17
Device Settings	18
Emvólio Maintenance	25
Troubleshooting	27
Device Reset Process	27
Basic Troubleshooting	27
Problem Reporting Instructions	28
Online Portal	29
Technical Specifications	30
Warranty Terms & Conditions	31

This section outlines the general conventions and instructions to be followed when using this document.

Conventions:

The following are the common typographic conventions used in this document:

- *Italics: indicates captions/remarks on graphical and pictorial content.*
- **Bold: Indicates important information/concepts to be remembered.**
- Note: This indicates important information that should be remembered when using Emvólio. It is indicated by the 'i' symbol.
- Caution: This denotes caution to be exercised when performing a certain operation, which if ignored, can result in device/equipment damage when operating Emvólio. It is indicated by the 'warning' symbol.



Problem Reporting Instructions:

For resolving any issue(s) that may be encountered during normal operation of the device, please refer to Page. 27 of this document for common troubleshooting steps.

For additional support, repairs and documentation, perform the following actions:

- Document the issue: Record any details of the issue(s) occurring on the device.
- Contact Blackfrog Technical Support team through any of the following means:

Email: support@blackfrog.in

Mob: +91 72043 76004

Phone: 0820 - 2572478

Emvólio is a portable medical-grade refrigerator that provides a platform for delivery of vaccines and other biologicals which require strict temperature controlled transport environments. Emvólio can maintain a temperature of between 2°C to 8°C for 12+ hours on the field*.

Technical Specifications:

Parameter	Value
Model	Emvólio Pro
Dimensions (L x B x H)	30cm x 20cm x 41cm
Weight	6.7 Kg
Payload Capacity	1.8 L
Operating Ambient Temperature	-20°C to 65°C
Operating Humidity	Upto 100%
Battery	Li-Ion, Upto 311Wh
Charging Time	4 hours

Salient Features:

- 0.5°C Accuracy of sensor and control.
- Corrosion Resistant material used in construction of cold chamber.
- On-board display for monitoring temperature, battery and product status.
- Audio & Visual warnings during temperature excursions and low battery situation.
- IOT based remote location tracking, temperature and statistics measurement.



*The battery life of the device may vary with changes in ambient temperature.

This section provides safety and warning information which you must be aware of before using Emvólio.

Emvólio Usage: Do's

- **Please clean the device and the cold-chamber before each use.**
- **Please ensure device is fully charged before use.**
- **Please ensure device lock and multipurpose backpack locks are secured before transportation.**
- **Please pay attention to device indications during usage.**
- **Please keep the device upright at all times.**

Emvólio Usage: Dont's

- **DO NOT cover the top cap of the device or insert object(s) through the top and side vent holes.**
- **DO NOT disassemble device and/or its accessories.**
- **DO NOT apply excessive force on the hinge and lock mechanism.**
- **Avoid exposing the device to direct sunlight during usage and storage.**
- **DO NOT charge product near areas with Flammable substances/Fire Hazards.**



Failure to observe the above instructions during operation of the device may lead to device/equipment damage.

This section helps you understand how to setup your Emvólio for operation.

2.1 Unpacking Emvólio

The following items are shipped along with your Emvólio:

Item	Specification	Quantity
Product	Emvólio Pro	One
Charger + Power Cord	110-240V, 50-60 Hz	One Each
Standard Accessories	Multipurpose Backpack	One
Documentation	User Guide & Warranty Card	One

The accessories for Emvólio can be purchased through Blackfrog Technologies Pvt. Ltd.

2.2 Inspection

An Inspection is important and should be done when the Emvólio is delivered to avoid any warranty issues.

Do the following checks to identify any damages done if any during shipping:

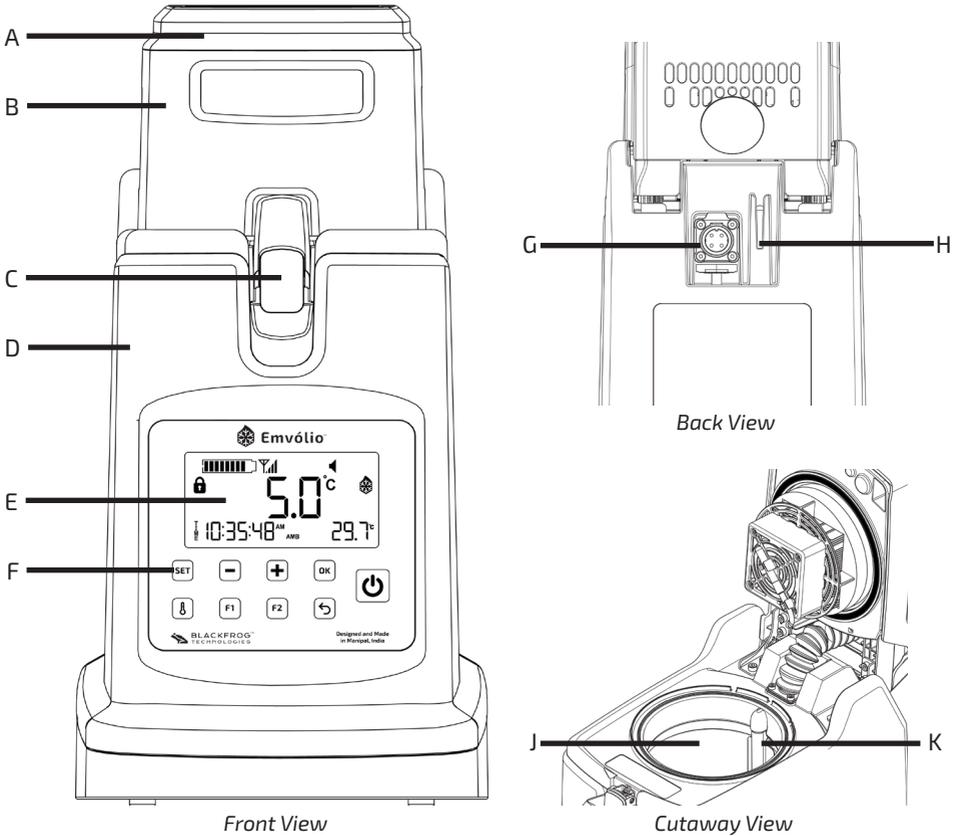
Initial Checks	Status
Check for sealed box/Box opened by authorised personnel from Blackfrog Technologies	OK / NOT OK
All contents present in the box	OK / NOT OK
Check for any external damages on the product	OK / NOT OK
Check for any loose parts on the product	OK / NOT OK



In case of any damage observed on the device or its accessories, please contact the Blackfrog Technical Support Team.

3.1 Know your Emvólio

The various components of Emvólio are as follows:



A. LED Indicator

B. Top Cap

C. Lock

D. Body

E. LCD Display

F. User Interface

G. Charging Port

H. Ambient Temperature Sensor

J. Cold Chamber

K. Temperature Sensor

3.1.1 Body

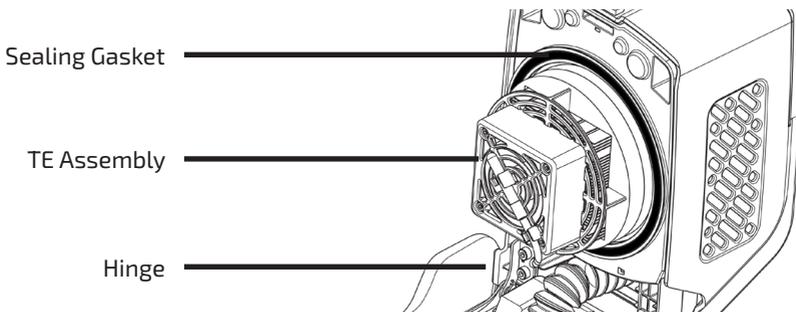
The body of the device is manufactured out of PC ABS, with rugged build quality to ensure that the contents are safe from physical, chemical and thermal stresses during transport. The body has the cold chamber, instrumentation, control system and battery pack assembled inside it. The body also has an ambient temperature sensor embedded in the side.

3.1.2 Cold Chamber

The temperature-controlled cold chamber of 1.8L capacity is manufactured with food grade Stainless Steel, to ensure that the chamber will not undergo corrosion or react with any of the typically transported bio-chemical solutions. The chamber is sealed by the Top Cap assembly, and a gasket and locking mechanism ensure proper sealing of the chamber.

3.1.3 Top Cap Assembly

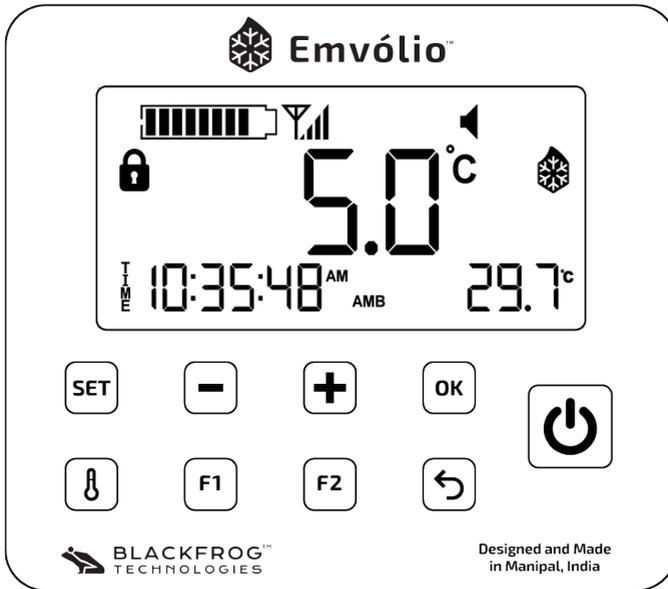
The Top Cap assembly on the device contains the Thermo Electric Assembly which functions as a heat pump, extracting heat from the cold chamber and dispersing it to the atmosphere. The Top Cap assembly also functions as a lid to provide access to the cold chamber. It is connected to the body through a hinge, to enable easy loading/unloading of contents from the chamber.



The top cap assembly consists of small instruments crucial for proper functioning of the device. Proper care must be taken during handling the product to avoid damage to the wires or hinge.

3.1.4 User Interface

The user interface on the device consists of a custom LCD display and switches to control various functionality of the device.



The LCD displays the following parameters:

- Current temperature of the chamber
- Battery Level
- Mode of operation. (Heating/Cooling)
- Lid Open warning
- Mute & Flight Mode Indicator
- Charging Indicator
- Set Temperature & Top, Bottom, Average & Ambient Temperature Display
- Date & Time Display
- Network Signal, Wi-Fi, Bluetooth & Location Indicators

There are nine switches provided on the device, which are as follows:

SET	Used for entering Settings Menu
+ & -	Used for adjusting values
OK	Used for confirming actions
F1, F2, Temperature, Back	Used for additional functionality
POWER	Used to Switch the device On/Off

The functions that can be adjusted on the device are as follows:

- Switching the device ON/OFF
- Setting the temperature of the chamber.
- Setting Date/Time
- Enabling/Disabling Flight Mode & Device Mute
- Changing Temperature Units of the display (°C or °F)

3.1.5 Control System

The chamber temperature is maintained through a custom algorithm, which allows for fine control of temperature in the range of 0.5°C. The control boards also incorporate a GPS tracker and a data logging system which enables remote monitoring of device parameters through a dashboard.

3.1.6 Battery

The battery on-board Emvólio is a Lithium-Ion battery rated at 311Wh, with a cycle life of 1500 cycles. It can sustain the device operation continuously for more than 12 hours, beyond which the device must be plugged in for charging. The battery is charged via a standard 110V to 240V, 12V DC battery charger. The charger can also power the device operation for continuous usage[#].



[#]The device is meant to be used for transporting contents requiring refrigeration in a safe and controlled manner. This device is not intended to replace WHO mandated ice-lined refrigerators. Doing so may lead to significant depreciation in the device life.

3.1.7 Accessories

The following optional accessories can be configured with the product:

- Foam Absorption Pad: A thin foam-based one-time use pad placed at the bottom of the chamber which soaks up any form of spillage. It ensures less chances of contamination and easier cleaning.

3.2 Using Emvólio

3.2.1 Placing Device in the Multipurpose Backpack

The following steps have to be followed to place the device in the provided multipurpose backpack:

- a. Place the Device and backpack on a flat surface.
- b. Ensure that the middle and top harnesses of the backpack are open.
- c. The device User Interface must be aligned to the cutout provided in the backpack.
- d. Gently lift the device using the handholds provided at the bottom.
- e. Place the device in the backpack and ensure that the device is seated correctly. Person 1 can place the device while Person 2 can adjust the backpack as required.
- f. Fasten the middle strap and the top harness.

The device is now ready for usage.



Please ensure that the harnesses of the backpack are securely locked before transporting. Failure to do so may result in damage to the device.

3.2.2 Switching the device On/Off

The following steps have to be followed to switch the device On:

- a. Ensure that the device user interface is facing towards you.
- b. Press the power button for 3-5 seconds.
- c. The device display and LED indicator will turn on, indicating that the device is powered on.

Repeat the above steps to switch off the device. The device display & LED indicator will turn off, indicating that the device is powered off.

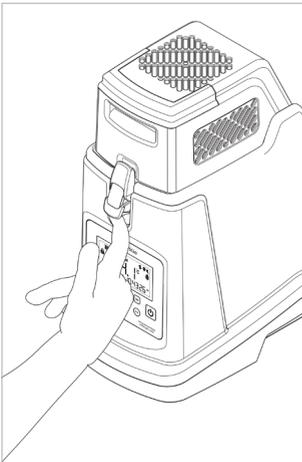
3.2.3 Storing Contents in the Chamber

The following steps have to be followed to store or retrieve any contents from the cold -chamber of the device:

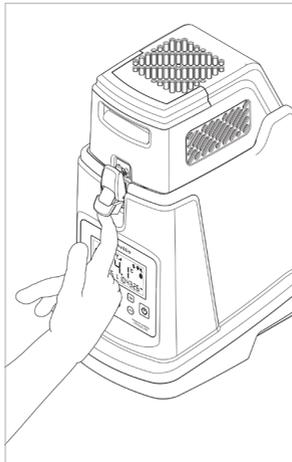
- Unfasten the clips and open the harness of the backpack.
- Open the Top Cap of the device to access the cold-chamber.
- Place/retrieve contents from the cold chamber.
- Close the top cap of the device and lock it in place.
- Fasten the top harness of the device.

1. Opening Envólio

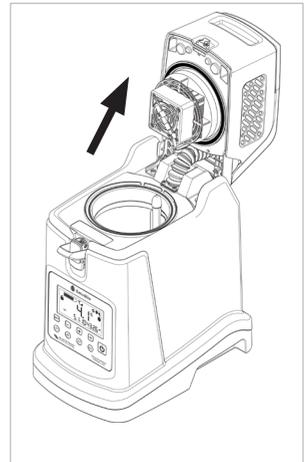
- a. Place one hand on the device body and hold the lock with your other hand.
- b. Lift the lock with an upward motion to unfasten the lock from the top cap. The top cap is now unlocked and free to move.
- c. Gently lift the top cap backwards on the hinge using the thumb hold on the cap, and rest it at the end position. The cold chamber is now accessible to place/ remove contents.



Step a: Holding the lock



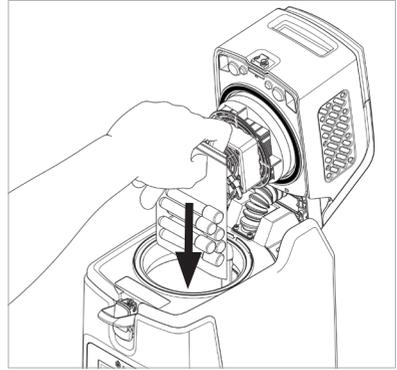
Step b: Lifting the lock



Step c: Lift Top Cap

2. Loading Contents

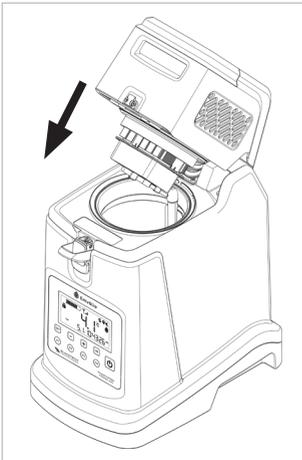
Now deposit the samples/contents that need to be refrigerated into the cold chamber. Ensure the sensor in cold chamber is not damaged during loading the contents.



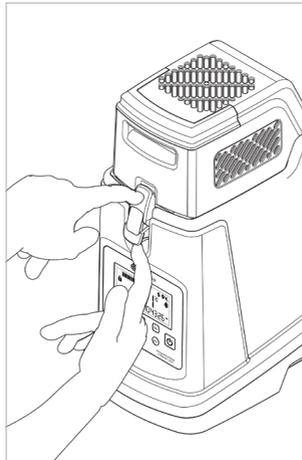
Placing contents in the cold-chamber

3. Closing Emvólio

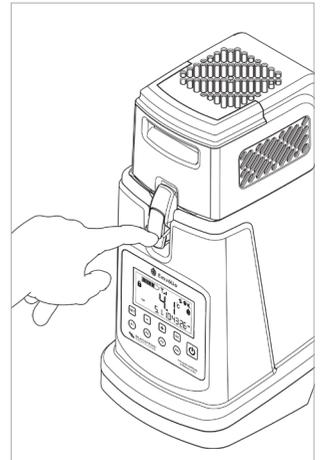
- a. Gently close the top cap back to the closed position using the thumb hold provided on the cap.
- b. Once the top cap is in a closed position, hold it in place with your hand. Lift the lock with an upward motion with your other hand.
- c. When the lock is lifted completely, push the top part of the lock inward and return the lock to the normal position. The top cap is now securely locked.



Step a: Close the Top Cap



Step b: Toggle the lock



Step c: Device is locked

4. Retrieving Contents

- a. Repeat step 1.
- b. In step 2, carefully remove the samples/contents from the cold chamber, while ensuring that the sensor in the cold chamber is not damaged by the contents during removal.
- c. Repeat step 3 to close the device lid.



Ensure the contents are placed in a manner such that they are not at risk of moving around during transport and leading to breakage. Usage of zip-lock bags to contain any glass vials is recommended.

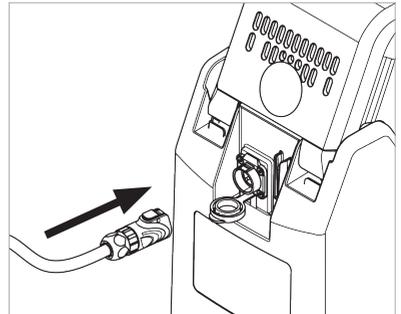


Before the contents are transferred from a stationary refrigerator onto Envólío, it is recommended that the system be pre-cooled to the desired temperature. This may take about 10- 15 minutes depending on the ambient temperature of the surroundings. This process will ensure there is no freeze-thaw cycle for the contents.

3.2.4 Charging the Device

The following steps have to be performed to set the device for charging:

- a. Use the flap on the charging port cover to remove it and access the charger port.
- b. Insert the cable from the charger into the charging port while ensuring the correct orientation of the cable plug to the port.
- c. Switch on power to the charger.
- d. The display/LED indicator on the device will indicate the status of charging.



Connecting the charger to the device.



The charger is designed to fit in only one orientation. **DO NOT** force the charger plug into the charging port on the device. **DO NOT PULL** the charger wire when it is connected. Doing so may result in damage to the product.



Only use the charger supplied with the device for charging. Use of any third-party charger may lead to damage to the device.

3.3 Common Device Indications

This section covers the common indications provided by the device during regular usage, and the information indicated by these indications.

3.3.1 LED Indicator

The LED indicator is used as a quick indicator of the cold-chamber status during operation. It also indicates the charging of the device in powered-off state. The following are the indications provided through the LED indicator:

LED Indicator glowing RED	This indicates that the cold-chamber temperature is outside the safe range (2°C - 8°C).
LED Indicator glowing GREEN	This indicates that the cold-chamber temperature is within the safe range (2°C - 8°C).
LED indicator glowing WHITE with animation	This indication is displayed when the device is powered off and placed for charging. This indication will turn off after the device is fully charged.

3.3.2 Buzzer

A buzzer is installed onboard Emvólio to provide indications on functioning of the device. The following are the indications provided by the buzzer:

Buzzer beeping every 10 seconds	This indicates that the cold-chamber temperature is outside the safe range (2°C - 8°C).
Buzzer stops beeping	This indicates that the cold-chamber temperature is within the safe range (2°C - 8°C).



The LED indication is accompanied by the buzzer during normal operation. Device Mute function can be selected to enable silent operation of the device if required. Please refer to section 3.4 on selecting Device Mute function.

3.3.3 Display Indications

Indication	Indicated by	Description
Cold-Chamber Temperature	Main Temperature Display	The current (lowest) temperature of the cold-chamber.
Battery Level	Battery Icon	The current battery level of the device.
Device Charging	Charging Icon	The device is currently charging.
Top Cap Open	Lid Open Icon	The top cap of the device is open.
Cooling Mode	Envólio Icon	The device is currently in cooling mode.
Device Locked	Lock Icon	The device settings are password-protected.
Date/Time	Date/Time Display	The current date/time is displayed.
Sensor Temperatures	SET TEMP/AMB/ TOP/BOT/AVG	Displays the Set temperature and Ambient, Top, Bottom & Average sensor temperatures.
Flight Mode	Airplane Icon	The device is in flight mode.
Device Buzzer Sound	Speaker Icon	The device buzzer sound is switched on/off.
SIM Network	Network Signal Strength Icon	This indicates the network signal strength available for the device SIM card.
Wi-Fi	Wi-Fi Icon	This indicates that the device Wi-Fi network is being used.
Bluetooth	Bluetooth Icon	This indicates that the device Bluetooth network is being used.
Device Issues	Warning Icon	This indicates any possible issues observed in the device systems during usage.



Press Temperature button to toggle between SET TEMP, AVG, AMB, TOP & BOT sensor temperatures.



Based on device configuration, the indications displayed on the LCD screen may vary.

3.3.4 Warning Indications

The warning indication will be displayed on the LCD when a performance issue is detected during usage. The warning icon will blink to indicate the following potential issues detected in the system:

- **Battery Temperature Warning:** The warning icon will be displayed when the battery temperature exceeds the lower/upper limit for performance.
- **System Temperature Warning:** The warning icon will be displayed when the system board temperature exceeds the lower/upper limit for performance.
- **Cooling Mechanism Issue:** The warning icon will be displayed when the cooling mechanism temperature exceeds the lower/upper limit for performance.

If the warning icon blinks during regular usage, perform the following actions:

- Document the issue: Record any details of the issue(s) occurring on the device.
- Contact Blackfrog Technical Support team through any of the following means:

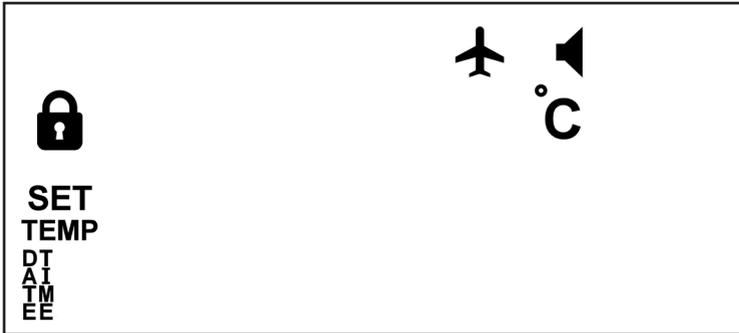
Email: support@blackfrog.in

Mob: +91 72043 76004

Phone: 0820 - 2572478

3.4 Device Settings

Setting	Indicated by	Description
Set Temperature	TEMP	Temperature to be maintained in the cold chamber
Date & Time	DATE / TIME	The date & time displayed on the device
Password	Lock Icon	The password to enter the device settings menu
Flight Mode	Airplane Icon	Enable or disable flight mode for the device
Device Sound	Speaker Icon	Enable or disable the device buzzer sound
Temperature Units	°C or °F	Toggle the temperature units between °C and °F



Device Settings Menu Overview

3.4.1 Entering Settings Menu

The following steps have to be performed to enter the device settings menu:

- a. Ensure that the device is switched on, and the user interface is facing you.
- b. Press SET button. The lock symbol will blink, indicating the device is now in password mode.
- c. Press OK to enter password input menu.
- d. Use + or - button to adjust the 1st digit as required. After selecting the first digit, press OK to confirm the selected value. The first digit is now confirmed and the next digit of the password is automatically highlighted.
- e. Repeat the process to select and confirm the second digit of the password. On pressing OK, the second digit is confirmed and the next digit is highlighted.
- f. Repeat the process of selecting the value of the third digit. The password is now entered. Press OK to confirm the password and enter the settings menu.
- g. If the correct password is entered, the device will display the settings menu.



In case of a wrong password, the device will display ERR on screen. Repeat the above steps while entering the correct password to enter the settings menu.



To modify a previously entered digit, press the Back button to move back one digit. Use + or - button to enter the correct value and follow the subsequent steps indicated.

3.4.2 Adjusting Set Temperature

The following steps have to be performed to set the cold-chamber temperature of the device:

- a. Enter device settings menu (refer section 3.4.1)
- b. Use + or - buttons to toggle options until TEMP icon is selected. This is indicated by the SET and TEMP icon blinking on the display. Press OK to enter Set Temperature menu.
- c. Use + or - buttons to modify the set temperature value as required. Press OK to confirm changes and return to main settings menu. The device cold-chamber set temperature is now modified.



To exit without saving any changes, press the Back button until the device enters main settings menu.

3.4.3 Changing the Password

The following steps have to be performed to change the password of the device:

- a. Enter device settings menu (refer section 3.4.1)
- b. Use + or - buttons to toggle between options until password option is selected. This is indicated by a blinking SET and Lock icon on the display.
- c. Press OK button to enter the password change menu. The first digit is automatically highlighted.
- d. Use + or - buttons to change the value of the 1st digit as required. Press OK to confirm the selected value. The next digit of the password is automatically highlighted.
- e. Repeat the process to select and confirm the second digit of the password. On pressing OK, the next digit of the password is automatically highlighted.
- f. Repeat the process to select the value for the third digit of the password.
- g. Press OK to confirm the new password and return to main settings menu. The device password is now successfully changed.



To modify a previously entered digit, press the Back button to move back one digit. Use + or - button to enter the correct value, and follow the subsequent steps indicated above.

3.4.4 Changing the temperature units

The following steps have to be performed to change the temperature units displayed on the device:

- a. Enter device settings menu (refer section 3.4.1)
- b. Use + or - buttons to toggle options until the temperature unit icon is selected. This is indicated by a blinking SET and °C or °F icon.
- c. Press OK to enter temperature unit selection menu.
- d. Use + and - buttons to toggle between °C and °F units. This is indicated by the selected icon blinking on the display.
- e. After selecting the required unit, press OK to confirm changes and exit to main settings menu. The device temperature unit setting is now successfully changed.



To exit without saving any changes, press the Back button until the device enters main settings menu.

3.4.5 Adjusting the device sound setting

The following steps have to be performed to adjust the device sound setting:

- a. Enter device settings menu (refer section 3.4.1)
- b. Use + or - buttons to toggle between options until the device sound option is selected. This is indicated by the SET and Speaker icon blinking on the display. Press OK to enter device sound setting adjustment menu.
- c. The sound settings are as follows:

Press + button to enable device buzzer. The display will show ON to indicate that device buzzer function is enabled.

Press - button to disable device buzzer. The display will show OFF to indicate that the device buzzer function is disabled.

- d. After selecting the required setting, press OK to confirm changes and return to device main settings menu. The device sound setting has now been successfully modified.



To exit without saving any changes, press the Back button until the device enters main settings menu.

3.4.6 Adjusting the Date

The following steps have to be performed to adjust the date displayed on the device

- a. Enter device settings menu (refer section 3.4.1)
- b. Use + or - buttons to toggle between options until the Date option is selected. This is indicated by the SET and DATE icon blinking on the display.
- c. Press OK to enter date adjustment menu. The current date is displayed on screen in DD:MM:YY format.
- d. Use + or - buttons to adjust the day value as required. Press OK to confirm changes. The system will automatically highlight the month value, indicated by the blinking characters.
- e. Repeat the process to select and confirm the required month value. On pressing OK, the year value is automatically selected.
- f. Repeat the process to select and confirm the required year value.
- g. After selecting all values, press OK to confirm changes and return to main settings menu. The device date is now successfully modified.



To modify a previously entered digit, press the Back button to move back one digit. Use + or - button to enter the correct value, and follow the subsequent steps indicated above.



To exit without saving any changes, press the Back button until the device enters main settings menu.

3.4.7 Adjusting the Time

The following steps have to be performed to adjust the time displayed on the device:

- a. Enter device settings menu (refer section 3.4.1)
- b. Use + or - buttons to toggle between options until the time option is selected. This is indicated by the SET and TIME icon blinking on the display.
- c. Press OK to enter time adjustment menu. The current time is displayed on screen in HH:MM:SS AM/PM format.
- d. Use + or - buttons to adjust the hour value as required. Press OK to confirm changes and automatically highlight the minutes value, indicated by the blinking characters.

- e. Repeat the process to select and confirm the required minute value. On pressing OK, the seconds value is automatically selected.
- f. Repeat the process to select and confirm the required seconds value. On pressing OK, the AM/PM value is automatically selected.
- g. Press OK to select the appropriate AM/PM indicator. On pressing OK, the changes will be confirmed and the system will return to main settings menu. The device time is now successfully modified.



To modify a previously entered digit, press the Back button to move back one digit. Use + or - button to enter the correct value, and follow the subsequent steps indicated above.



To exit without saving any changes, press the Back button until the device enters main settings menu.

3.4.8 Adjusting the device flight mode setting

The following steps have to be performed to adjust the device flight mode setting:

- a. Enter device settings menu (refer section 3.4.1)
- b. Use + or - buttons to toggle between options until the flight mode option is selected. This is indicated by the SET and Airplane icon blinking on the display. Press OK to enter flight mode setting adjustment menu.
- c. The flight mode settings are as follows:
Press + button to enable device flight mode function. The display will show ON to indicate that device flight mode function is enabled.
Press - button to disable device flight mode function. The display will show OFF to indicate that the device flight mode function is disabled.
- d. After selecting the required setting, press OK to confirm changes and exit to device main settings menu. The device flight mode function has now been successfully modified.



To exit without saving any changes, press the Back button until the device enters main settings menu.

Envólio is designed to ensure minimum maintenance by the user. However, the following maintenance procedures must be done by the user on a regular basis.

Task	Instructions	Schedule
Disinfecting the cold chamber	Cleaning with 75-90% isopropyl alcohol	In case of spills
Cleaning the cold chamber	Wipe clean the cold chamber with a dry cloth.	Daily/Before every use.
Cleaning the TEA Assembly	Clean accumulated dust in the TEA assembly using a brush / blower.	Occasionally (Once in a month)
Cleaning the device	Wipe clean with a clean dry cloth	Occasionally (Once in a month)

4.1 Cleaning the Device

During regular usage of the product, the device has to be cleaned at regular intervals to ensure reduced chances of contaminants in the chamber.

The steps to be followed to clean the device are:

- a. Take a clean dry cloth.
- b. Wipe the body of the device gently to remove any dust present on the surface.
- c. Clean the gap between the backpack and device body to remove any external debris accumulated there.
- d. Open the device and clean the cold chamber and the surrounding areas gently.

The device is now ready for use.



Ensure that the temperature sensor and its parts are not affected during cleaning.



If cleaning device after an extended period of time, please remove device from backpack and clean both device and backpack using the same guidelines.

4.1.2 Cleaning the Cold Chamber

During regular usage of the product, cleaning the cold chamber has to be performed before every use to ensure best performance and reduced chances of contaminants in the chamber.

The steps to be followed to clean the cold chamber are:

- a. Take a clean dry cloth.
- b. Wipe the Cold chamber to remove any dust or debris.
- c. Clean the surrounding areas of the cold chamber on the device body as required.

The device is now ready for use.



Ensure that the temperature sensor and its parts are not affected during cleaning.

4.1.3 Cleaning spills in the Cold Chamber

In case of any accidental spills of biologicals in the cold chamber, the following steps have to be performed to sanitize the device for usage:

- a. Remove any spillage/debris inside the chamber using an appropriate cloth/tool.
- b. Sanitize the chamber using 75-90% Isopropyl Alcohol.
- c. Wipe with a clean cloth to remove any remnants of cleaning materials.

The device is now ready for use.



Ensure that the temperature sensor and its parts are not affected during cleaning.

The following steps describe basic troubleshooting of issues that may occur during operation of Emvólio. In case of any issues encountered during operation of the device, you can perform the following steps for basic troubleshooting of the device.

In case of continued performance issues, the Blackfrog Technical Support Team can be contacted to resolve the issue.

5.1 Device Reset Process

The following steps have to be performed to reset the device:

- a. Ensure that the device is powered on.
- b. Unfasten the clips holding the harness in place, and open the device top harness.
- c. Gently lift the device out of the backpack.
- d. Carefully bend the device backward to access the reset pinhole at the bottom.
- e. Use the provided reset tool to press the reset button. The device will be reset.
- f. If the reset button is pressed with device in power-off condition, the device will reset and continue to be in power-off condition. If the reset button is pressed with device in power-on condition, the device will reset and return to power-on condition.
- g. Check if the issue has been resolved. If issue is successfully resolved, replace the device in the backpack and continue usage.

In case the issue is not resolved, contact Blackfrog Technical Support Team.



Do not press the reset button more than once during the reset process.

5.2 Basic Troubleshooting Processes

5.2.1 Erratic Temperature Display

In case the temperature displayed on the display is incorrect, perform the following steps:

- a. If the temperature display behaves erratically, reset the device (refer section 5.1 for reset process)
- b. In case of the temperature display not working after basic troubleshooting, contact Blackfrog Service Team.

5.2.2 Display not responding

In case the device display is not turning on/responding, perform the following steps:

- a. Press the Set/OK/Power/Temperature Adjustment buttons on the user interface and wait for display to respond.
- b. In case the display does not respond, press and hold the Power switch for 3 Seconds to check if the device is On/Off.
- c. In case the display does not respond, perform a reset of the device (refer to section 5.1 for the reset process)
- d. In case of the display not working after basic troubleshooting, contact Blackfrog Technical Support Team.

5.2.3 Device cooling function not working

In case the cooling function of the device is not functioning, perform the following troubleshooting steps:

- a. Re-adjust the temperature of the cold chamber from the user interface and check for cooling.
- b. In case of cooling function now working, perform a reset of the device (refer section 5.1 for the reset process)
- c. In case of the cooling function not working after basic troubleshooting, contact Blackfrog Technical Support Team.

Problem Reporting Instructions:

For additional support, repairs and documentation, perform the following actions:

- Document the issue: Record any details of the issue(s) occurring on the device.
- Contact Blackfrog Technical Support team through any of the following means:

Email: support@blackfrog.in

Mob: +91 72043 76004

Phone: 0820 - 2572478

The device is supplemented by an online portal which relays the device information and live readings to the user. The portal offers the customer to view current ongoing consignments, past consignments, live device location, status and alerts. The portal also allows user to download reports after completion of consignment trips.

For more information on portal features, usage instructions and troubleshooting, download the Online Portal user manual from blackfrog.in/downloads.

Parameter	Value
Model	Envólio Pro
Adjustable chamber temperature range	-10°C to 20°C
Accuracy of maintained temperature	±0.5°C
Operating time	12+ hours*
Operating ambient temperature	-20°C to 65°C
Operating humidity	Upto 100%
Initial cool down time	<20 minutes**
Dimensions (L x B x H)	30cm x 20cm x 41cm
Weight	6.7 Kg
Payload Capacity	1.8 L
Battery Capacity	Li-Ion, 311Wh
Charging Time	4 hours
Charging Ambient Temperature	5°C to 40°C
IP Rating	IP56
Device Life	10 Years***
Input Voltage	110-220V AC

*Under test conditions of 43°C ambient temperature and 5°C chamber temperature.

**At an ambient temperature of 35°C.

***Battery life of the device after 10 years is 70% of the original capacity.

1. Definitions

Unless the context otherwise requires, the following terms would have the prescribed meanings:

Blackfrog: Blackfrog Technologies Private Limited, a company duly registered under the Companies Act, 2013 having its registered office at D.No.3-72(E) Korgi Village, Hosmata Post, Kundapur, Udipi, Karnataka 576231, India (hereinafter referred to as "Blackfrog/ Company").

Product(s): Envólío Pro, Multipurpose Backpack & Charger distributed by Blackfrog, either directly or through its Authorized Dealers. List of Authorized Dealers can be obtained from the Company's offices or website.

Customer: An end-user (a person, firm, company or legal entity) which purchases the Product(s) from Blackfrog or its Authorized Dealers.

Blackfrog's warranty for the Product(s) is only against any defects in the manufacturer's material or workmanship i.e., defects caused due to irregularities in their manufacture, which provide for the repair of the defective Products(s).

2. Warranty Period

Product(s) is covered under a two-year standard warranty from the date of Product(s) purchase by the customer.

3. Warranty Terms

Warranty is provided only on Product(s) which are directly purchased from Blackfrog or Authorized Dealer.

Warranty claim may only be made to Blackfrog or its Authorized Service Centers or authorized dealers. List of Authorized Service Centers and authorized dealers can be obtained from the Company's offices or website.

The following would be checked at the time of claim:

- Customer Invoice Date
- Presence of the Warranty Sticker
- Presence of legible Asset number on the Product(s) at the time of claim.

If a Customer transfers the ownership of product(s) to another end user, the remainder of the warranty period may also transfer to the new owner. Customer(s) shall be required to provide proof of purchase as a pre-condition for availing the warranty of the Product(s).

Within the warranty period, Blackfrog or its authorized service centers will repair or replace any defective part(s) of the Product(s), if required, to rectify the problem in the Product(s). Blackfrog reserves the right to use re-engineered part(s) with performance parameters equivalent to the similar new part(s), for performing the warranty services. The defective replaced part(s) shall become the property of Blackfrog.

In the event of repairs or replacement of any part(s), during the warranty period, the warranty of the Product shall thereafter continue only for the unexpired period of original warranty.

The Warranty of the product(s) shall be rendered null and void if:

- The Product is physically damaged.
- The Product is modified, repaired, maintained and/or opened, disassembled by any party other than Blackfrog or its Authorized Service center
- The Product is operated and/or maintained in ways other than recommended by Blackfrog in the user manual (including the Product Usage Training Video). Product operation outside the usage parameters stated in the user manual provided with the product.
- Any malfunction in the Product resulting from inadequate safekeeping or storage.

- Any malfunction in the Product resulting from exposure of the Product to dirt, sand, water including rust / fungus inside the Product, fire and/ or shock beyond the levels of IP56 rating.
- The Asset number or Warranty sticker of Product is removed, mutilated or tampered with.
- Any damage to the Product arising out of use of any accessories other than those supplied by Blackfrog.
- Defect is the result of physical breakage, electric connection or electrical faults external to the Product(s).

4. Limitation of Liability

Blackfrog makes no other express warranty either in writing or otherwise and expressly disclaims all warranties and conditions not stated in this limited warranty. Blackfrog does not warrant that the operation of the Product(s) will be uninterrupted or error-free. To the extent allowed by the Indian laws, Blackfrog disclaims all implied warranties or conditions, including any implied warranties or conditions of merchantability, merchantable quality, and fitness for a particular purpose.

Blackfrog's maximum liability under this limited warranty is limited to the price of the Product(s) or the cost of repair or replacement charges, whichever is lower.

Except as indicated above, in no event will Blackfrog be liable for:

- a. Indirect damage caused due to improper functioning of the Product, including but not limited to lost profits or savings, loss of data, lost revenue, or any other commercial or economic loss of any kind, or special, incidental, or consequential damages.
- b. Any consequential loss or damage to the Customer's stored materials in the Product however caused.
- c. Any other incidental damages due to malfunction of the Product.
- d. Any claim made by a third party or made by a Customer on behalf of a third party.
- e. Any damage that occurs as a result of Customer's failure to follow the directions in the User manual.

- f. Any damage that occurs as a result of usage of the Product(s), beyond the general and device alerts prompted by the Product(s).
- g. Damage, fault or failure due to alteration or repairs made by anyone other than Blackfrog, or the use of accessories other than those authorized by Blackfrog.
- h. Damage, fault or failure due to causes beyond our control including, but not limited to, repairs necessary due to operator negligence, improper installation, damage caused by spillage of stored materials, wrong usage of electrical supply and voltage, corrosive surroundings, chemical reaction, failure to maintain the Product, accident, mishandling, misuse, tampering, vandalism, theft, power failure, static, normal wear and tear, pests, vermin, foreign matter entering the Product, inadequate or excess power supply, unusual atmospheric conditions, or acts of war or acts of God.
- i. Damage, fault or failure due to improper transportation, inappropriate storage conditions, reconfiguration of the Product or any damage caused because of conditions at your location
- j. Products where the Asset number or Warranty Sticker is removed, defaced or made illegible, secondhand sets.
- k. Cosmetic defects, including but not limited to fading of color, corrosion, scratches, dents, rust, stains.
- l. Any utilization of Product that is inconsistent with either the design of the Product or the way Blackfrog intended the Product to be used including but not limited to cross contamination of material due to any reason whatsoever.
- m. Any installation and/or modifications that prevents normal functioning of the Product.
- n. Damage resulting from unauthorized or improper use or installation of third-party Product(s).

Blackfrog reserves the rights to charge the Customer for any reasonable and applicable costs and expenses (at prevailing rates) relating to or arising out of the repair or replacement under these excluded circumstances.

This limitation of liability applies in all circumstances i.e., when damages are sought, a claim made under this limited warranty or as a tort claim, a contract claim, or any other claim. This limitation of liability cannot be waived or modified by any person. This limitation of liability will be effective even if Customer has advised Blackfrog/ its representative of the possibility of any such damages or even if such possibility were reasonably foreseeable.

5. Service Support for SIM Card

The Product is inclusive of an annual maintenance of the SIM card for a period of one year from the date of purchase of the Product.

Repair or replacement for the SIM card, if necessary (to be evaluated by the Company or its authorized personnel), installed with the Product will be carried out through the Company or Company's Authorized Service Partners. The list for the same can be obtained from the Company's offices or its website.

The Company or its Authorized Service Center or its dealer will provide general service and technical support to all its Customers in accordance with the prevalent service and technical support policies for the SIM Card manufacturer. Levels of service and support provided may vary from product(s) to product(s).

6. Governing Laws

Any disputes arising in connection with this Limited Warranty shall be governed by the laws of India. The courts of Karnataka shall have the exclusive jurisdiction over disputes arising hereunder.



Copyright © 2021 Blackfrog Technologies Pvt Ltd

Developed and Printed in India.

Publication Year: 2022

Version 1.3

Contact Us:

Email: sales@blackfrog.in

Mob: +91 72043 76004

Phone: 0820 - 2572478

Web: www.blackfrog.in



An ISO 13485:2016 Certified Medical Devices Company

Blackfrog Technologies Pvt. Ltd.

#4, 4th Floor, Advanced Research Centre, Madhav Nagar, Manipal,
Karnataka, India – 576104.