Air Liquide HEALTHCARE

EO-70

Clinical
Pocket guide

English

EOVE

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Introduction

The EO-70 Cough Assistance device is an essential element of airway clearance therapy, which is intended to help patients who are unable to independently remove airway secretions and improve their lung volume capacity.

The EO-70 offers INEX and IPPB modes for pediatric and adult patients weighing at least 10 kg (22 lbs).

It could be used either with a mask, mouthpiece or tracheotomy tube.

Clinicians are advised to read the User Manual (Clinician) before using the EO-70 device.

The information in the Pocket Guide is not intended to exceed the instructions in the medical prescription and User Manual.

The EO-70 is considered strictly medical device and is intended to be used by trained and qualified personnel under medical supervision.

Install and configure the EO-70 in accordance with the instructions given in the user's manual.

If any operating and maintenance problems are identified, the local representative should be contacted.

Quick Start

In case of emergency, the ventilation module can be directly turned on simply by pressing the ⏻ button on the module keyboard.

2

To start ventilation
Click on ⟳ on the keyboard.

1

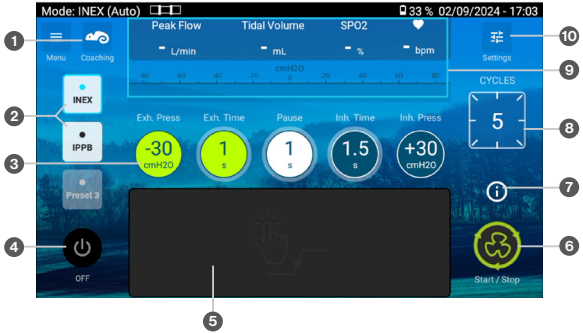
Press ⏻ on the front panel keyboard to turn on the device. The home screen displays.

The EO-70 device

1. Turbine Air Inlet
2. AC Inlet
3. Screen Power Button
4. SpO_2 connector
5. Remote Control connector

1. Display screen
2. Device module
3. EO device housing unit
4. Inspiratory / Circuit Port
5. Keyboard

The home screen



1. Menu and Coaching function
2. Presets buttons
3. Quick settings
4. Power OFF button
5. Manual PAD
6. Start/Stop Therapy
7. Settings info
8. Cycles counter
9. Monitoring panel
10. Settings

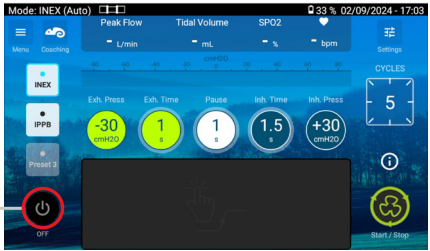
Turn ON/OFF the device

Turn ON the device

Press the
OFF button
+ VALIDATE

Press the
ON button

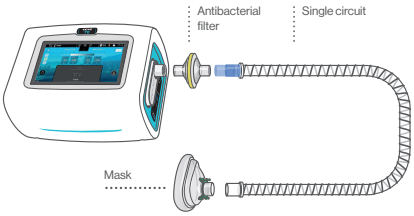
Turn OFF the device



NOTE:
Unplugging from main power does not power off the device. It will continue to run on the internal battery. The device must be turned off manually before disconnecting from AC power for any extended period of time. The EO-70 will automatically turn off after 15 min of inactivity.

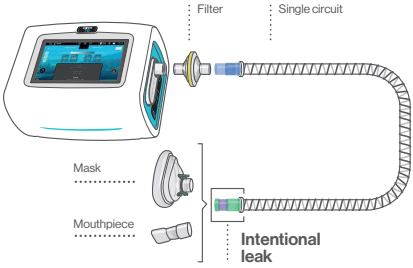
Circuit Configuration

INEX Configuration



1. Attach the antibacterial filter to the inspiratory port of the device.
2. Connect the circuit (22 mm) to the other side of the filter.
3. Perform a circuit calibration.
4. Connect the patient interface to the other end of the circuit.

IPPB Configuration

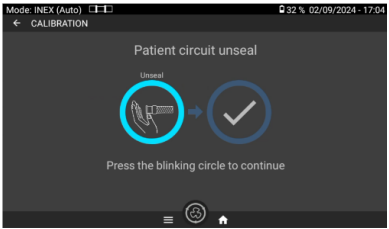


1. Attach the antibacterial filter to the inspiratory port of the device.
2. Connect the circuit (22 mm) to the other side of the filter.
3. Connect the **leak port** to the other side of the patient circuit.
4. Perform a circuit calibration
5. Connect the patient interface to the other end of the circuit.

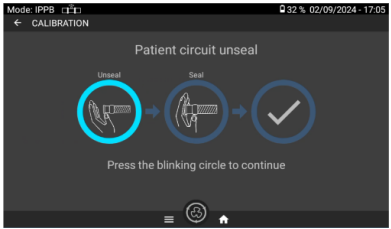
Circuit Calibration

For the EO-70 to provide expected performances, the patient circuit must be calibrated.

INEX mode



IPPB mode



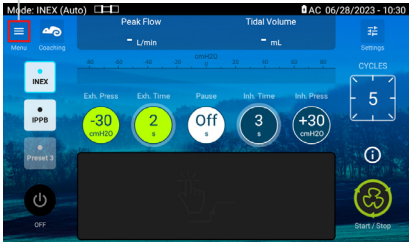
Calibration steps:

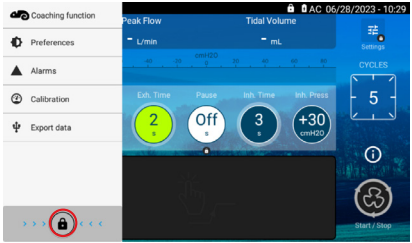
1. Select the mode and connect the circuit and accessories (without patient interface).
2. Access the calibration Menu.
3. For INEX Mode you only need to follow 1 step and for IPPB Mode there are 2 calibration steps.
4. Wait until the circle is completed and exit the calibration menu clicking on “VALIDATE”.

Access the Clinical Menu

Unlock the Clinical Menu

1 Setting menu





1. Click on the icon Menu ☰.

2. Press and hold the button ⏻ until the red circle is completed.

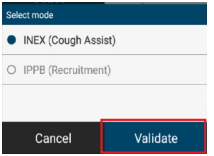
3. Click on Validate.

NOTE:
do not access clinical mode 🔒 unless it is recommended by a healthcare professional.

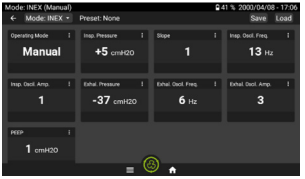
Access the Clinical Configurations

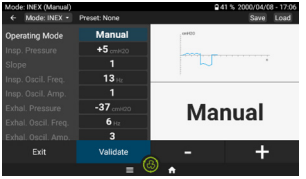
1. Select from the home screen to access settings.
2. Click on the mode selection bar to choose the appropriate mode.

3. A pop up will be displayed to select the mode.
   Click on the desired mode and Validate.



4. Set the treatment parameters on the selected view.





ATTENTION

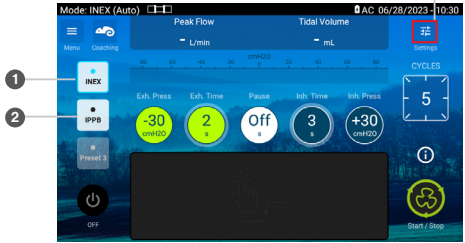
It is not possible to change modes during operation.

Presets Configuration

From the upper band of the clinical menu, you can:

1. Save the active mode as preset and rename the saved preset.
2. Load a previously saved preset (to visualize the settings contained in the preset).
3. A preset (displayed only if a preset is loaded)

It is also possible to change a preset program from the settings menu.



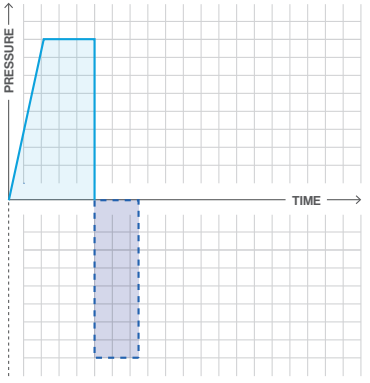
From the Home Screen it's possible to select the pre-configured Preset:

1. Current preset
2. Available preset

INEX mode: Mechanical Insufflation/Exsufflation

Mechanical in-exsufflation provides positive pressure, followed very quickly by negative pressure, which assists coughing.

MI-E simulates coughing due to pressure variation in a non-invasive form.



INEX mode: Automatic mode

In AUTO mode, the device repeats the sequences defined by the clinician according to the following parameters:

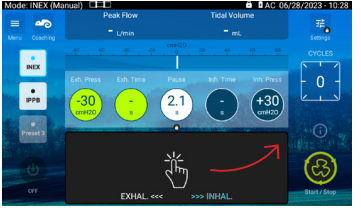
Parameter	Setting
Inspiration pressure (cmH_2O)	5 - 70
Slope	0 - 5
Inspiration time (s)	0.5 - 5
Inspiration oscillations flow (Hz)	OFF / 4 - 20
Inspiration oscillations Amp.	OFF / 1 - 3
Trigger Not compatible with timed Pause.	OFF / 1 - 3
Exhalation Pressure (cmH_2O)	0 to -70
Expiration time (s)	0.5 - 5
Expiration oscillations flow (Hz)	OFF / 4 - 20
Expiration oscillations Amp.	OFF / 1 - 3
Pause (s) Not compatible with Trigger.	OFF / 0.5 - 5 (stay hidden when the trigger is set)
PEEP (cmH_2O)	OFF / 1 to 20
Cycles nb	1 to 20
End of treatment	Inspiration/Exhalation

INEX mode: Manual mode

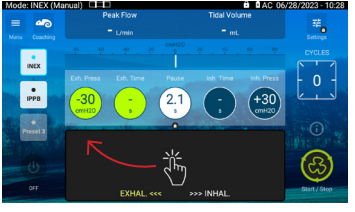
In manual mode, the user controls the insufflation/ exsufflation sequences based on the following parameters:

Parameter	Setting
Inspiration pressure (cmH_2O)	5 - 70
Slope	0 - 5
Inspiration oscillations Flow (Hz)	OFF / 4 - 20
Inspiration oscillations Amp.	OFF / 1 - 3
PEEP (cmH_2O)	OFF / 1 to 20
Exhalation Pressure (cmH_2O)	0 - 70
Expiration oscillations Flow (Hz)	OFF / 4 - 20
Expiration oscillations Amp.	OFF / 1 - 3

Once the treatment has started, place your finger on the black touchpad and slide to the right for insufflation, then to the left for exsufflation. The finger can then slide off the black pad if not released.



Insufflation

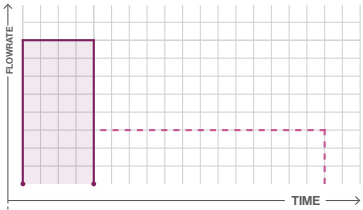


Exsufflation

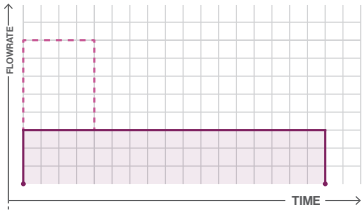
IPPB mode: Intermittent positive pressure breathing

This *recruitment mode* delivers an air volume beyond the patient's current volume.
It enables the patient to reach the inspiratory reserve volume. This improves pre-cough volume and mobilizes the thoracic wall.

The selected flow rate modulates **the inspiratory cycle time**
Two possible options depending on the treatment objective



The **high-flow** setting **effectively delivers** a volume of air over a reduced inspiratory time.



Slow insufflation allows **maximum intake** in all lung areas to reach the inspiratory reserve volume.

IPPB mode: Intermittent positive pressure breathing

This mode controls insufflation flow during insufflation time until maximum pressure is reached. The exhalation is controlled by the PEEP. The trigger function allows the patient to initiate a new cycle during the exsufflation phase.

Parameter	Setting
Inspiration flow (l/min)	5 - 100
Inspiration slope	ON / OFF
Max pressure (cmH_2O)	10 - 50
Inspiration Trigger	OFF / 1 - 8
PEEP (cmH_2O)	OFF / 4 - 20
Exhalation fall	0 - 5
Max inspiration time (s)	0,5 - 20
Treatment time (min)	OFF / 5-30

ATTENTION

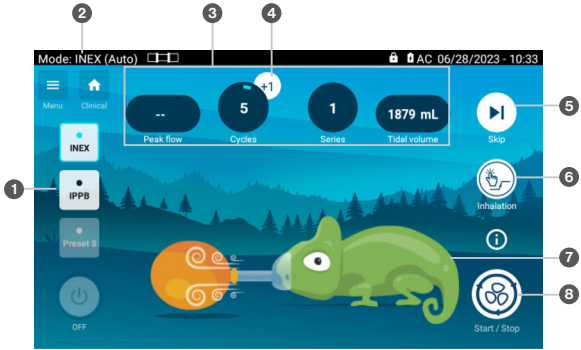
The IPPB mode should always be used with an intentional leak connected to the circuit. For prolonged sessions, we recommend a minimum PEEP setting of 4 cmH20 and an expiratory slope setting of 1.

Coaching function

In order to facilitate the patient's understanding and adaptation to therapy, activate the coaching function.

INEX

1. From Home screen, click on to display the coaching function screen.
2. Select the INEX auto mode pre-configured.

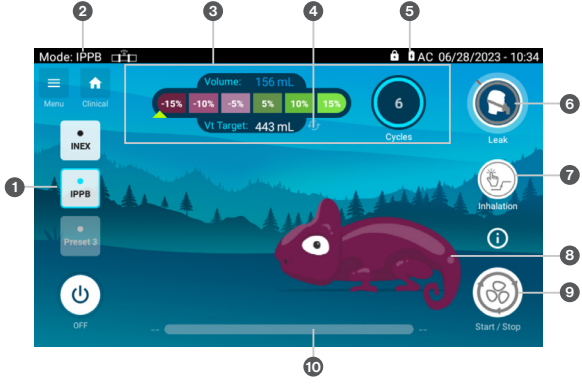


1. Preset mode menu
2. Treatment mode indicator: INEX (Auto) or IPPB
3. Treatment monitoring
4. Cycle addition button
5. Skip button
6. Trigger an inspiration during the treatment
7. Chameleon
8. Start/Stop button

Coaching function

IPPB

To switch to IPPB Mode using the coaching function, select the pre-configured IPPB mode on the Home screen.

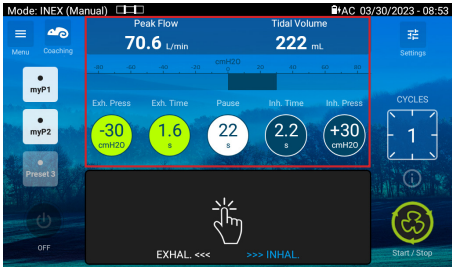


1. Preset mode menu
2. Treatment mode indicator: INEX (manual/Auto) or IPPB
3. Treatment monitoring
4. Reset of the target volume previously defined
5. Number of breaths
6. Leak indicator
7. Trigger button
8. Chameleon
9. Start/Stop button
10. Treatment Time Bar

Data Monitoring

On the Home Screen it is possible to view the data from the last session for:

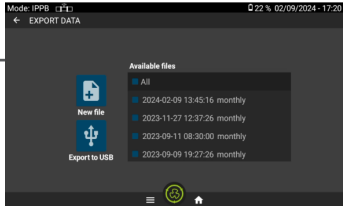
- Inspiratory Tidal Volume (VTI)
- Inspiratory Time (I Time)
- Exhalation Time (E Time)
- Pause Time (P Time)
- Peak Flow



NOTE:

If Oximetry via NONIN Xpod cable (EO-SPO2CBL) is connected, SpO_2 and heart rate (HR) can be monitored.

Data Download



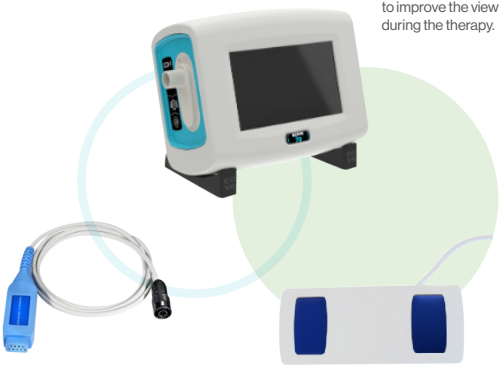
1. Insert a USB key in the USB port at the rear of EO-70
2. In the Menu tab, select “EXPORT DATA”
3. Create a new file if required
4. Select one or more files
5. Export the selected files
6. Import the data for EOVE Clinical Software

To access the EO-70 Clinical Software, please contact your local representative.

Optional Accessories

- The EO-70 is transportable but should not be operated during the transport. Always use the carry bag.
- To attach a control pedal, connect the plug of the remote-control at the rear of the device.
- A vertical support to improve the view during the therapy.

The travel bag eases transport



SpO_2 can be monitored by the Xpod during therapy, ensuring safety in case of desaturation

Footswitch EO-70

Manufactured by

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64000 Pau
France
www.eove.fr

Air Liquide HEALTHCARE

EOVE

Medical device class IIb - CE 0459 - Manufactured by EOVE. Please read the user manual.

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