



Azeer Intensive Care Ventilators Elisa Family



CM920149 Rev. 03

Distribution and Service
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elisa 300 / elisa 500

Quick Guide

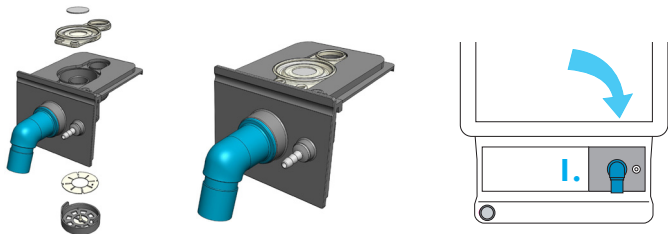
- 1.) Ventilator set-up
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- 3.) Initial parameter settings based on Default ventilation
- 4.) Switching between HFOT, invasive and noninvasive ventilation
- 5.) Switching ventilation modes and parameters
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Before putting the elisa 600 / 800 devices into service, please read the Basic Instructions for Use and Supplement A.

1.) Ventilator set-up

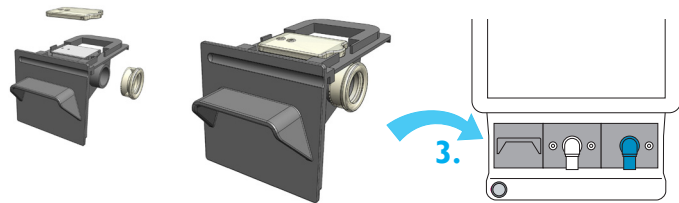
1. Check **inspiratory valve** for correct assembly and install.



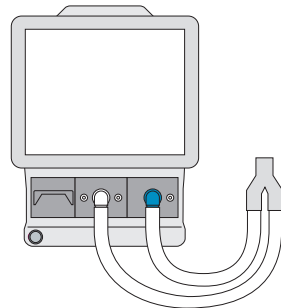
2. Check **expiratory valve** for correct assembly and install.



3. Check **expiratory flow sensor** for correct assembly and install.

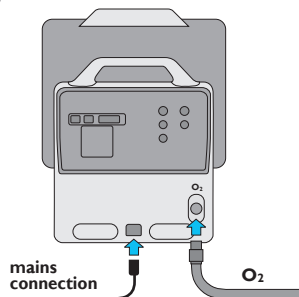


4. Connect **breathing circuit**.

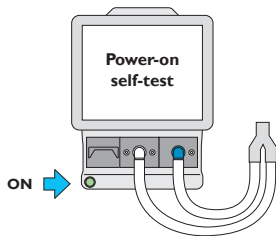


2.) Ventilator set-up

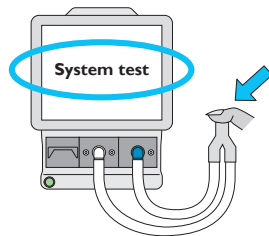
1. Connect O₂ and mains connection



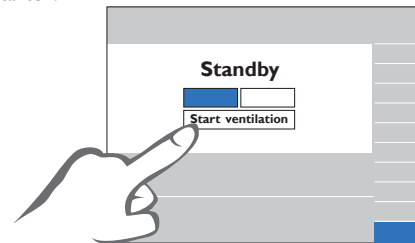
2. Switch the device on, power-on self-test will be performed.



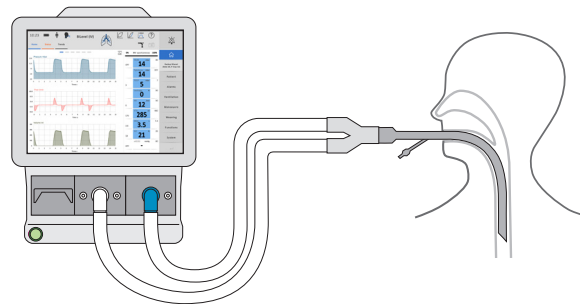
3. Perform system test with Y-piece closed.



4. Press „Start ventilation“ and confirm with „Enter“. Ventilation will be started.

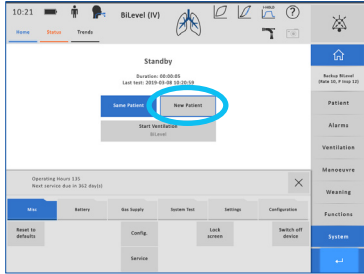


5. Connect the patient. Patient will be ventilated.

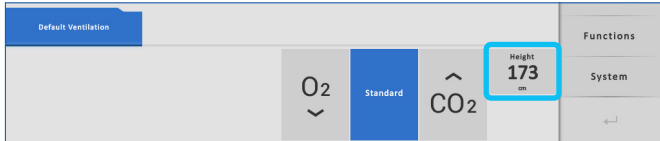


3.) Initial parameter settings based on Default Ventilation

1. Select and confirm “New patient” to use the default ventilation function.

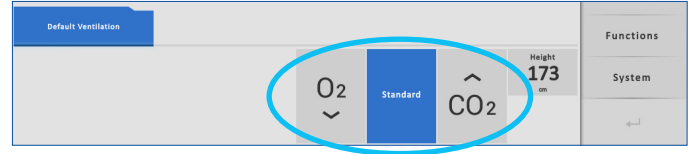


2. Enter the patient's **height** and confirm.



3. Main cause of ventilation therapy: select

- severe **hypoxia** (O₂ ↓),
- severe **hypercapnia** (CO₂ ↑), or
- extrapulmonary cause (**standard**).

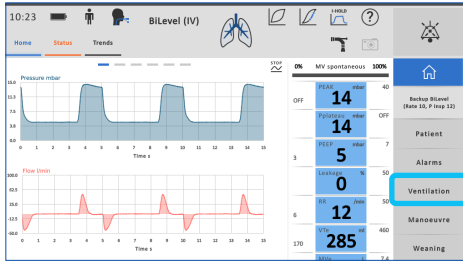


4. Default ventilation activates the ventilation mode that was assigned to the **first tab** in the configuration level.

BiLevel	Mandatory BiLevel	PLV	VCV	Optional BiLevel	CPAP
O ₂	PEEP	Rate	P insp	T insp	Flow Trigger
30	5.0	12	12	1.50	5.0
%	mbar	/min	+PEEP	s	l/min

4.) Switching between HFOT, invasive and non-invasive ventilation

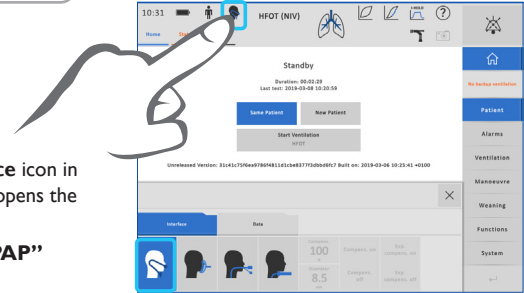
1. The device must be in Standby mode to switch between invasive and non-invasive ventilation or HFOT.
If applicable, stop the current ventilation by tapping the **“Ventilation”** button ...



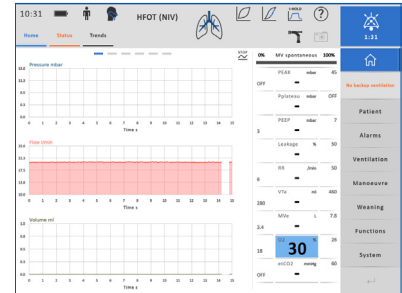
2. ...and after this the **„Stop ventilation“** button. Tap **„Enter“**, then confirm the additional safety prompt.



3. Tapping the **Interface** icon in the Standby screen opens the Interface menu.
Tap the **“Nasal CPAP”** button....

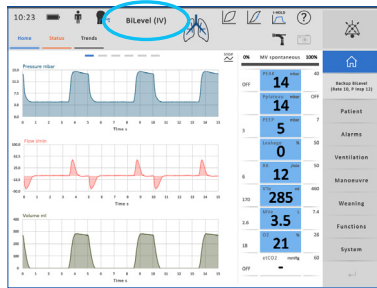


4. ...to perform high-flow oxygen therapy (HFOT).
Start the ventilation.



5.) Switching ventilation modes and parameters

1. If you start the ventilation with **“New patient,”** the device will automatically switch to the ventilation mode that was assigned to the **first tab** in the configuration level.



2. Tap the **“Ventilation”** button to display the pre-set modes in the configuration level. Tap the **new mode**.



3. If the new mode includes additional setting parameters, these will be **highlighted**.

Check the default settings and adapt them to the clinical situation.

BiLevel	Mandatory BiLevel	PLV	VCV	Optional BiLevel	CPAP	ALPV	PSV	Functions
O2	PEEP	Rate	Vt	T insp	Flow Trigger	Pmax	Tplateau	System
30	5.0	12	360	1.50	5.0	35	0.50	
%	cmbar	/min	ml	s	Units	cmbar	s	

4. Activate the new mode by selecting the **“Change mode: Manual”** and **„Enter”** buttons.

When switching from pressure-controlled to volume-controlled modes, you can also use the **Wizard**, which recommends a pressure or volume setting on the basis of the determined measuring values.

Change Mode: Wizard

Change Mode: Manual

Stop Ventilation

✕

BiLevel

Mandatory BiLevel

PLV

VCV

Optional BiLevel

CPAP

ALPV

PSV

O2

PEEP

Rate

Vt

T insp

Flow Trigger

Pmax

Tplateau

30

5.0

12

360

1.50

5.0

35

0.50

%

cmbar

/min

ml

s

l/min

cmbar

s

WEANING

Functions

System

↩

6.) PEEPfinder

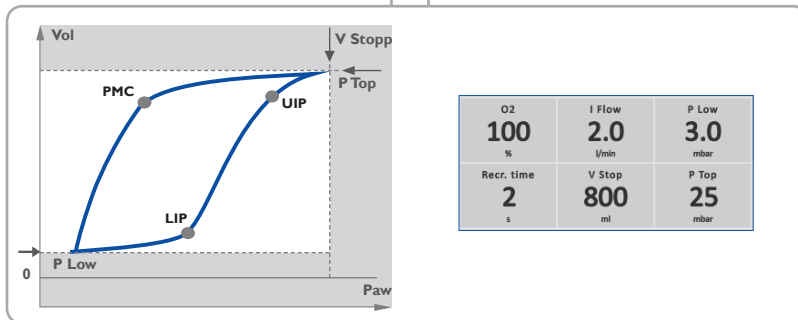
1. Observe device requirements

- Successfully performed system test to measure the breathing circuit
- Uninterrupted ventilation in the last 60 seconds
- Exclusively mandatory ventilation without phases of spontaneous respiration
- No PEEPfinder manoeuvre performed in the last 60 seconds
- No non-invasive ventilation
- No significant leakage of the overall system

2. Observe patient requirements

- Mandatory ventilation
- Adequate haemodynamic conditions
- Sufficient sedation depth
- No contraindications

3. Open **PEEPfinder** with the “Manoeuvre” button.



4. Set safe window for manoeuvre:

- Start range: **P Low**
- Maximum measuring range: **P Top**
- Maximum volume (safety criterion): **V Stop**
- Flow: **I Flow**
- If pre-oxygenation phase is necessary: **O₂ concentration**
- If recruitment desired: **Recruitment time**

5. Start PEEPfinder

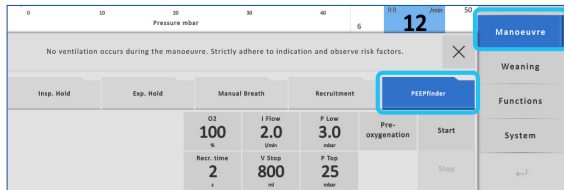
Start measuring manoeuvre directly (“Start”) or with “Pre-oxygenation”

6. Interpreting measured values and curve with clinical assessment, for example:

- **LIP** or $LIP + 2 \text{ cmH}_2\text{O}$ = necessary PEEP
- **UIP** = maximum plateau pressure or maximum inspiration pressure
- **PMC** = necessary PEEP
- **C20/C** below 0.8: sign of hyperinflation of the lung

7.) Recruitment with PEEPfinder

1. Open **PEEPfinder** with the “**Manoeuvre**” button.



2. Set recruitment time (maximum 45 seconds).

O2	I Flow	P Low
100 %	2.0 l/min	3.0 mbar
Recr. time 2 s	V Stop 800 ml	P Top 25 mbar

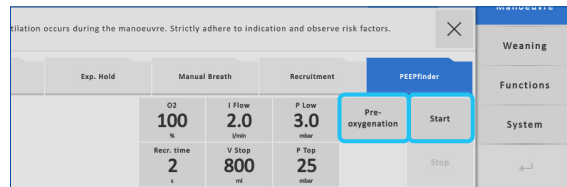


Note

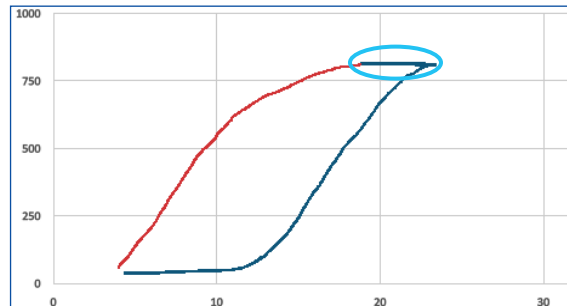
Recruitment can cause significant side effects such as pneumothorax, blood pressure instability, hypoxia and others and therefore requires a medical risk-benefit analysis.

3. Start PEEPfinder

Start directly with “Start” or with “Pre-oxygenation”.

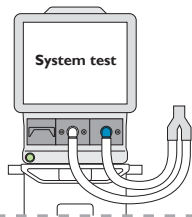


4. **Recruitment will** start after the end of inspiration. The recruitment phase will be shown in the same colour as the inspiration phase in the graphic display.



8.) Setup with AnaConDa system

1. Connect **breathing circuit** to the ventilator (1), perform **system test**.

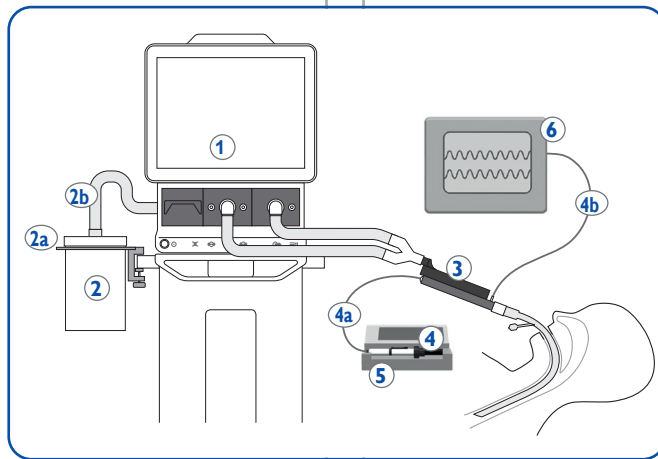


2. Attach **holder** (2a) for **FlurAbsorb** (2) anaesthetic gas filter to the intensive care ventilator and use **tube** and **adapter** from the accessory kit (2b) for connection to the ventilator.

3. Use fill adapter to fill the **AnaConDa** syringe (4).

4. Insert **AnaConDa** syringe (4) into **syringe pump** (5).

5. Connect **AnaConDa** syringe (4) to **AnaConDa** (3) via anaesthetic gas line (4a)



6. Connect **AnaConDa** (3) to anaesthetic gas monitor (6) via **gas sampling line** (4b).



Ensure **proper position** of the AnaConDa device:

- Black side up,
- patient side lower than device side

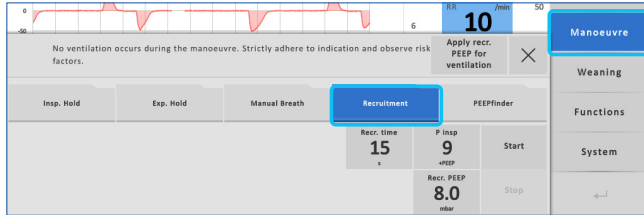


Check all connections for **leaks!**

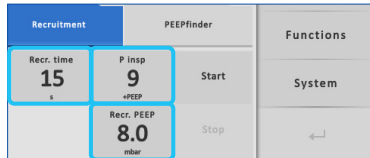
7. Tap the „**Functions**“ field, then „**AnaConDa**“. Choose „AnaConDa“ or „AnaConDa S“, activate the function using „On“ and „Enter“.

9.) Recruitment via recruitment manoeuvre

1. Open the “**Recruitment**” manoeuvre with the “Manoeuvre” button.



2. Set recruitment parameters: Recr. time, P insp as well as Recr. PEEP.



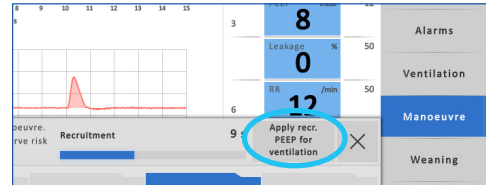
Note

Recruitment can cause significant side effects such as pneumothorax, blood pressure instability, hypoxia and others and therefore requires a medical risk-benefit analysis.

3. Start the manoeuvre with “**Start**” and “**Enter**”. You can interrupt the manoeuvre at any time with “**Stop**” and “**Enter**”.



4. You can “**Apply the recruitment PEEP for the ventilation**”.



10.) Short FAQ - Error diagnostics

ERROR PATTERN	ALARM MESSAGES DURING OPERATION	SYMPTOMS DURING VENTILATION	CAUSE
Inspiratory valve: Inspiratory valve membrane is missing	1014 "Fault Internal Expiratory Flow Measurement Ventilator Unit"	"Disconnection" alarm, maximum flow, no pressure build-up	Safety valve cannot close, no discernable expiration flow
Inspiratory valve: Metal disc is missing	1031 "Deviating Expiratory Pressure"	High leakage or "Disconnection" alarm	Safety valve cannot close, insufficient pressure
Expiratory valve: Membrane is missing	1031 "Deviating Expiratory Pressure"	No pressure build-up	Expiratory valve cannot generate pressure
Expiratory valve: Hard disc and silicone disc are missing	1031 "Deviating Expiratory Pressure"	No pressure build-up	Expiratory valve cannot generate pressure
Expiratory valve: Hard disc is missing	1031 "Deviating Expiratory Pressure"	No pressure build-up	Expiratory valve cannot generate pressure
Expiratory valve: Silicone disc is missing	No error or 1063 "Major Leakage in Breathing Circuit"	Normal ventilation possible, compensation of leakage through byflow	Expiratory valve is not tightly sealed
Expiratory valve or expiratory flow sensor sealing ring is missing	1014 "Fault Internal Expiratory Flow Measurement Ventilator Unit"	High leakage or "Disconnection" alarm	High leakage, not enough expiration flow
Expiratory valve or expiratory flow sensor sealing ring is pushed on too far	depending on the size of the leak 1014 "Fault Internal Expiratory Flow Measurement Ventilator Unit" or no error	High leakage or "Disconnection" alarm	High leakage, not enough expiration flow
Expiratory flow sensor sealing plate is missing	1014 "Fault Internal Expiratory Flow Measurement Ventilator Unit"	Increased leakage, if leakage can be compensated normal ventilation is possible	High leakage, not enough expiration flow

ERROR PATTERN	ALARM MESSAGES DURING OPERATION	SYMPTOMS DURING VENTILATION	CAUSE
Expiratory flow sensor sealing plate rotated by 180°	1014 “Fault Internal Expiratory Flow Measurement Ventilator Unit”		No measurement of expiration flow possible
Inspiratory valve and expiratory valve interchanged	1014 “Fault Internal Expiratory Flow Measurement Ventilator Unit”	“Disconnection” alarm, maximum flow, no pressure build-up	No pressure build-up and no inspiration flow possible

ERROR PATTERN	POSSIBLE CAUSES	REMEDY
Required reading, ventilation mode, function, parameter or curve is not displayed.	The desired function or display has not been configured for the user on the configuration level.	Please contact the responsible person in your ward or your service technician.
Measured PEEP value is different from set value.	Valve bar or breathing circuit were exchanged but no system test was carried out.	Carry out a system test.
Measured PEEP value is different from set value.	The PEEP membrane is contaminated with medication residue after a drug nebulization procedure (the expiratory filter is missing or unsuitable, or the selected replacement interval is too long considering the nebulization intensity or osmolarity of the applied medication).	Exchange expiratory valve Install suitable expiratory filter for drug nebulization or choose a shorter replacement interval.
Implausible (high) ventilation pressure	Increased flow resistance due to accessories or due to the present combination.	Replace breathing circuit, replace filter, remove/avoid condensation in breathing circuit.