
Dräger

Evita XL – Short guide

August 2019, Lübeck

01

Evita XL – System overview

Evita XL – Short guide

This Evita XL short guide is intended for informational purposes only. It is not a replacement or substitute for the Instructions for Use.
The completion of this guide does not relieve you from reading and understanding the current versions of the instructions for use associated with the relevant device.
It is also not a replacement for mandatory instructions or training courses.

Evita XL – System overview
Control panel

Touch-sensitive screen for selecting and confirming settings

Flow sensor behind flap

Gas exhaust port (EXHAUST – NOT FOR SPIROMETERS)

Flow sensor flap (thermal cover)

Expiratory valve with expiratory connector port (GAS RETURN)

Latch for expiratory valve

Audio paused 2 min. or **Alarm Silence**; key for suppressing the alarm tone for two minutes

Alarm Limits key for setting alarm limits

Ventilator Settings key for setting ventilation mode and ventilation parameters

Unassigned key for future functions

Sensor Parameter key for calibrating sensors and for switching monitoring on or off

System Setup key for configuring device functions

Start/Standby key for switching between operation and standby mode

Rotary knob for selecting and confirming settings

Locking screw for protective cover (behind it: O2 sensor and ambient air filter

Inspiratory connector port (GAS OUTPUT)

Nebulizer connection

Evita XL – System overview
Back panel

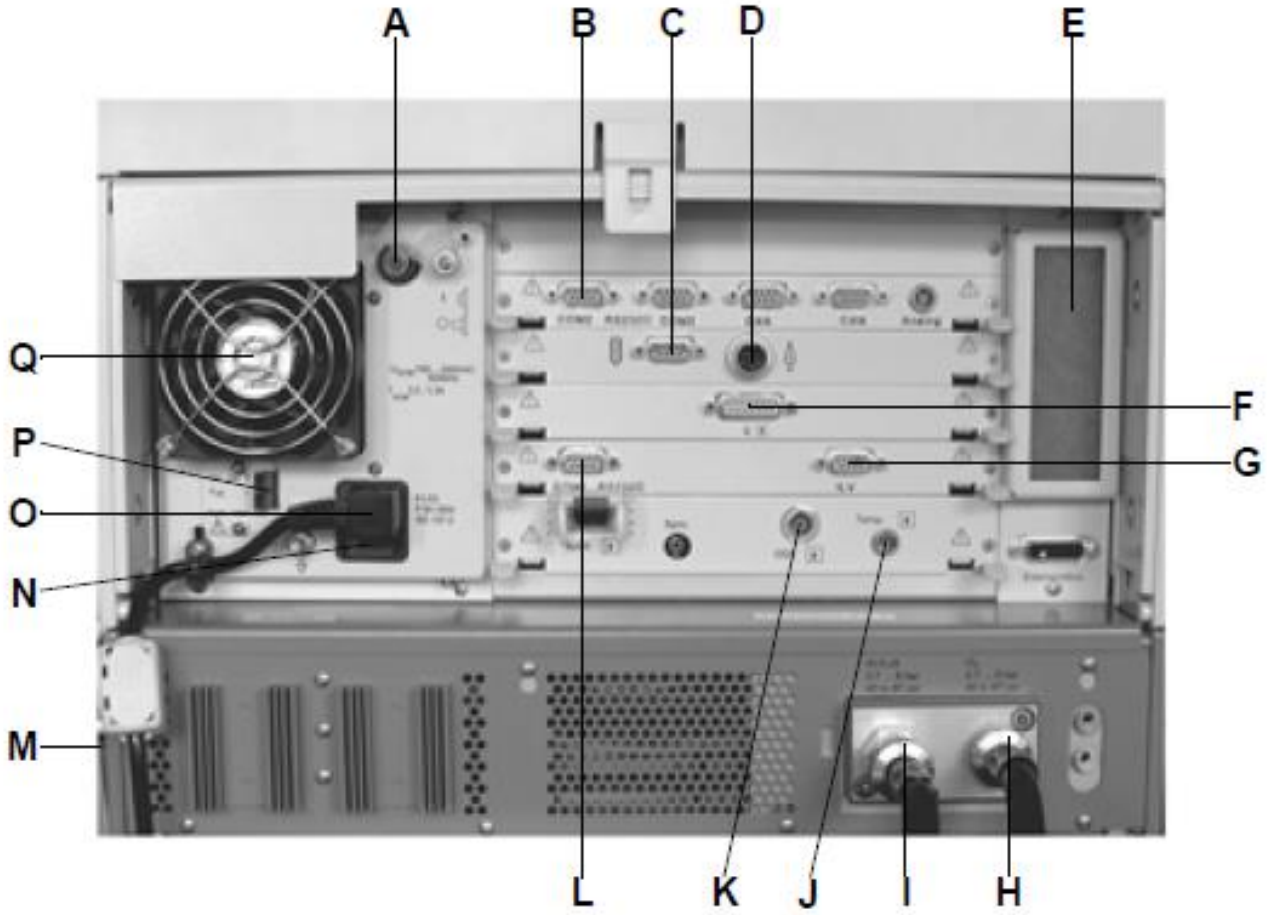
Q: Fan

P: DC socket

O: Connector for power cable

N: AC fuses

M: Rating plate
(not visible) on the left-hand side panel



A: Power switch with protective flap

B: COM 2, COM 3 ports for RS 232, 2 CAN interfaces and analog interface (optional)

C: Connection for Remote Pad (optional)

D: Connection for nurse call (optional)

E: Cooling-air filter

F: Connection for neonatal flow sensor (optional)

G: ILV socket for the connecting cable for independent lung ventilation with two ventilators

H: Connection for O2

I: Connection for medical air (Air)

J: Temp socket for temperature sensor

K: CO2 socket for CO2 sensor (optional)

L: COM 1 RS 232C port for RS 232 interface, e.g., for printer

02

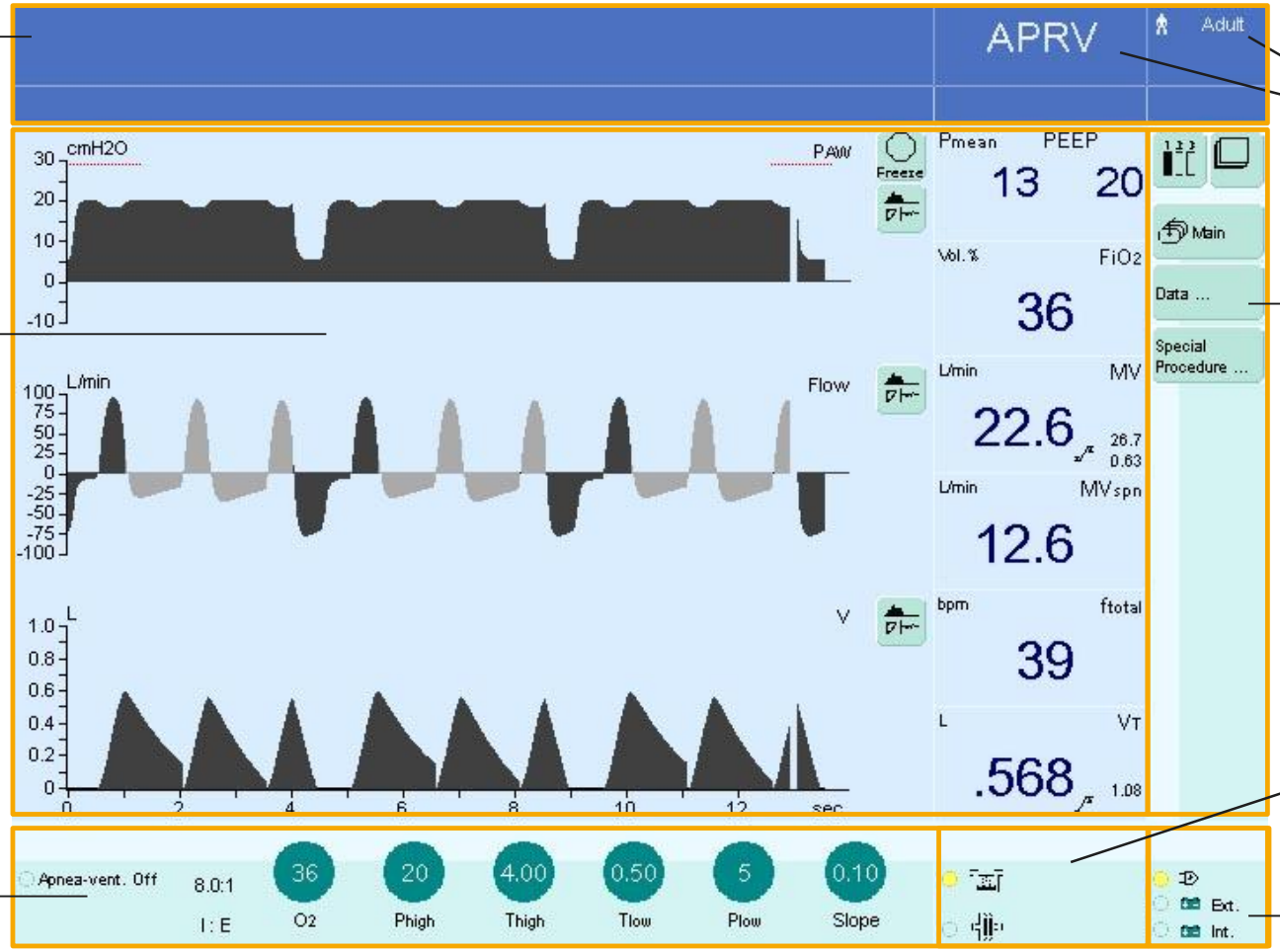
Evita XL – Operating concept

Evita XL – Operating concept
Main screen

Header bar with the following fields: **Alarms**, **messages**, and **instructions for the user**

Monitoring area with waveforms, loops, trends, and measured values. The display can be configured.

Therapy bar with therapy controls for the **ventilation parameters** of the active **ventilation mode** and its **additional settings**.



Header bar with therapy status:
- **Patient category**
- **Therapy type** (ventilation or O2 Therapy), ventilation mode, and additional settings

Main menu bar with buttons for opening **dialog windows** and **activating functions**

Field for **device status** with type of **humidification**

Power supply display

Evita XL – Operating concept on-screen controls

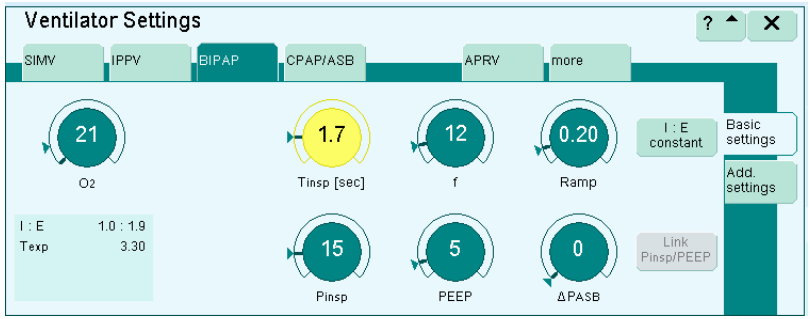
The touch-sensitive screen controls are used in the same way as real keys

Touching the screen controls with a fingertip

– is equivalent to pressing a key

Settings are made and confirmed by

– turning and pressing the central rotary knob



Rotary knob:
Touch – turn - confirm

Status of screen controls is indicated by colors	
Grey	Not available
Yellow	Available
Pale green	Available but not active
White	Not usable
Dark green	Available and active

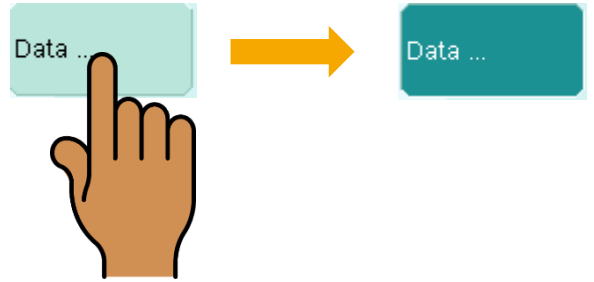
Evita XL – Operating concept on-screen controls

Screen keys: selecting functions <u>without</u> confirmation

Example:

– press the >> Data << key

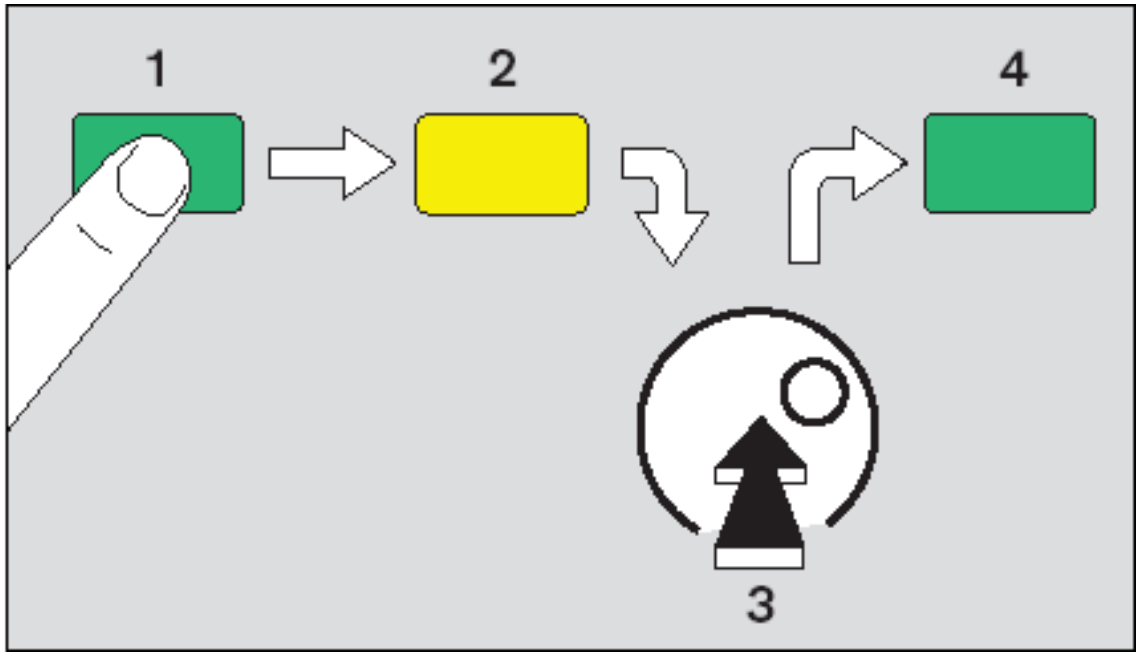
– the key turns dark green showing that the function is active



Evita XL – Operating concept on-screen Controls:

Screen keys: function selection with confirmation

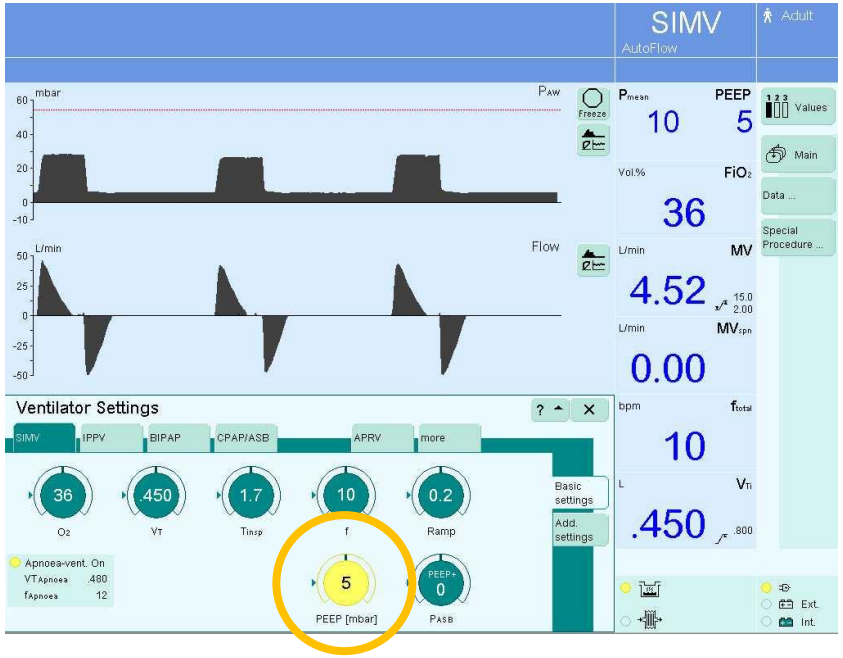
– To quit/close window press >> X <<
– To cancel the setting
  - touch the screen key again or
  - touch another screen key



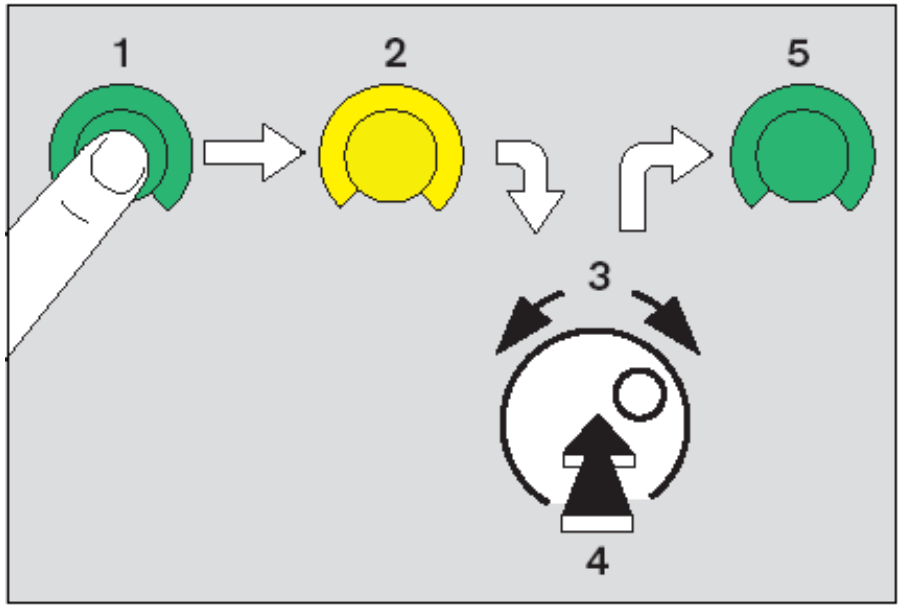
1 select = touch key
2 screen key turns yellow
3 confirm = press rotary knob
4 screen key turns pale/dark green

Evita XL – Operating concept on-screen controls

Screen keys: setting parameters



– E.g. setting PEEP
  - touch the PEEP key (knob turns yellow)
  - turn the rotary knob for the required value
  - confirm the setting by pressing the rotary knob

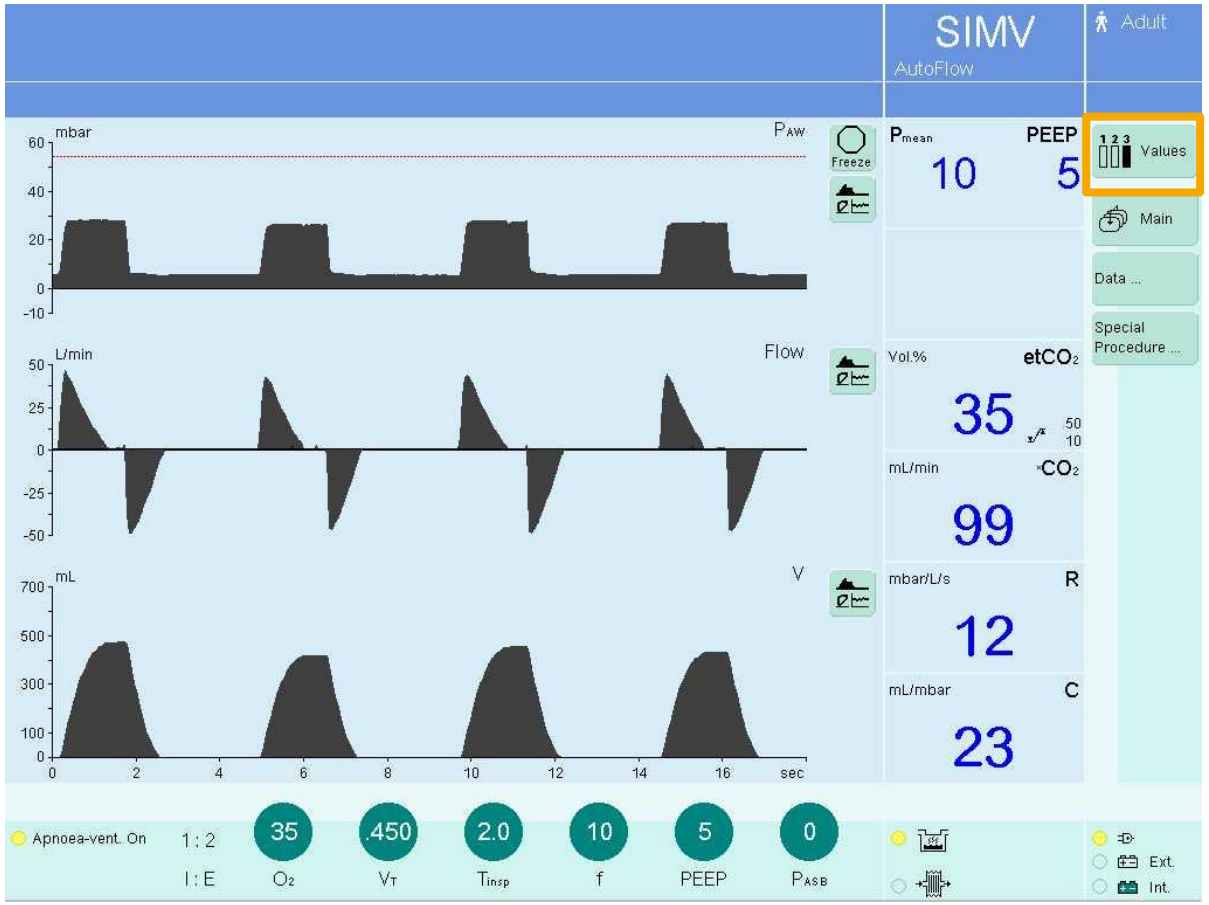


1 select = touch
2 screen key turns yellow
3 set = turn rotary knob
4 confirm = press rotary knob
5 screen key turns pale/dark green

Evita XL – Operating concept on-screen controls

3 sets of values

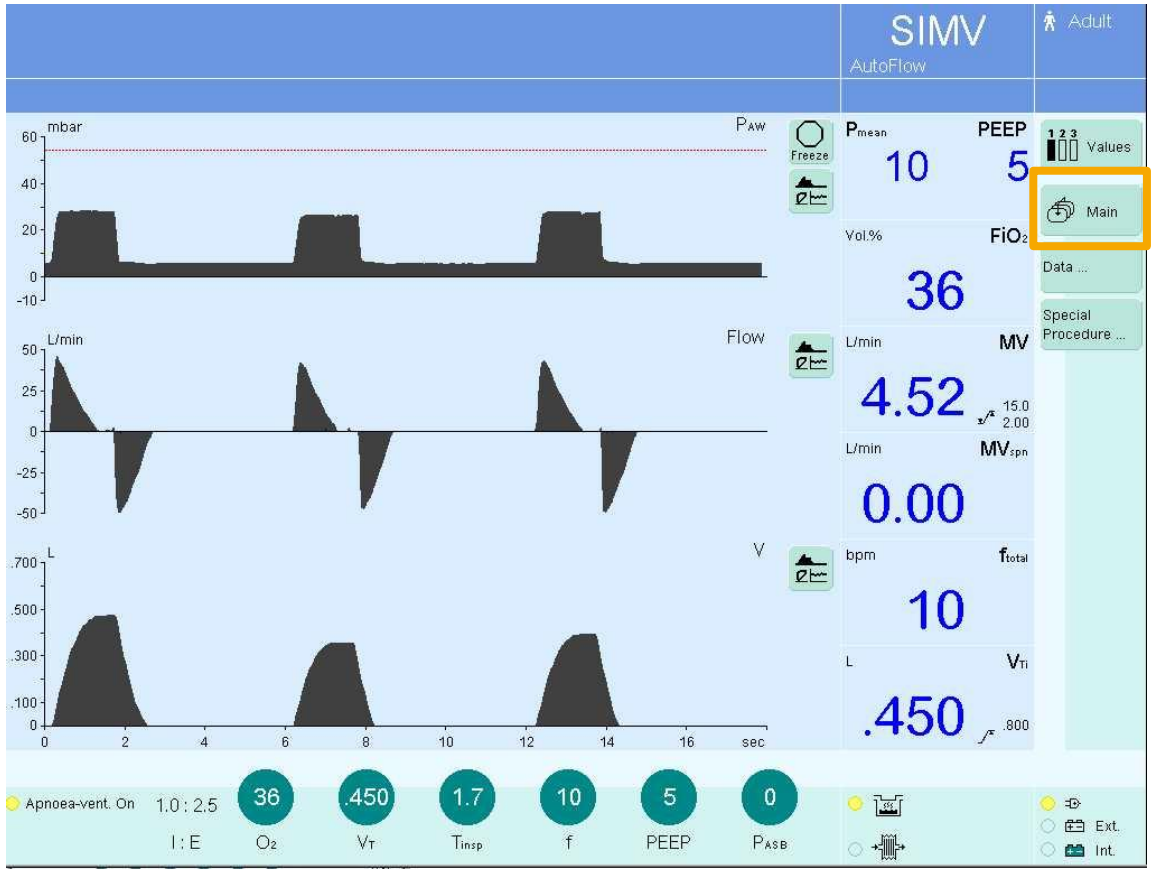
Values 



Evita XL – Operating concept on-screen controls

Standard screen page: display the ventilation status

Main screen 

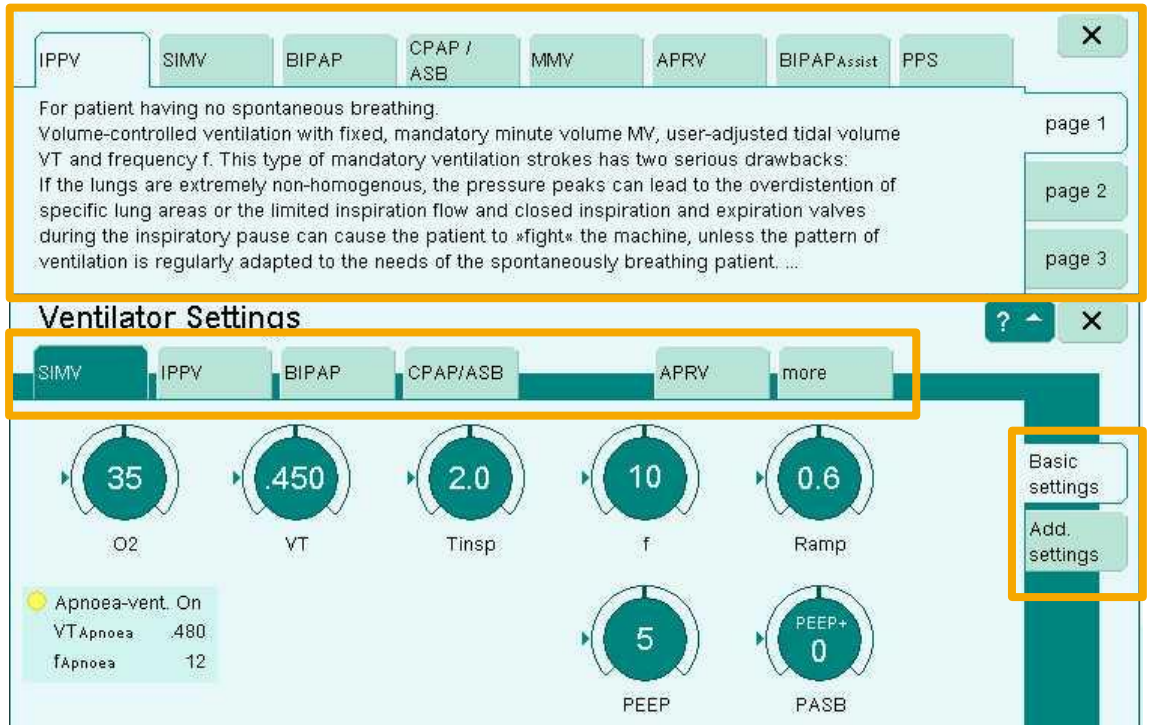


Main screen

Evita XL – Operating concept on-screen controls

Settings

- Directly accessible settings: easy and quickly to operate
- Direct access to all ventilation modes
- Help function



Evita XL – Operating concept on-screen controls

Measured values

Data: 

- Values
  - Customised table to adapt the order of measured values to clinical needs
  - Two tables with fixed order of displayed measured values
  - Effective ventilator settings always visible

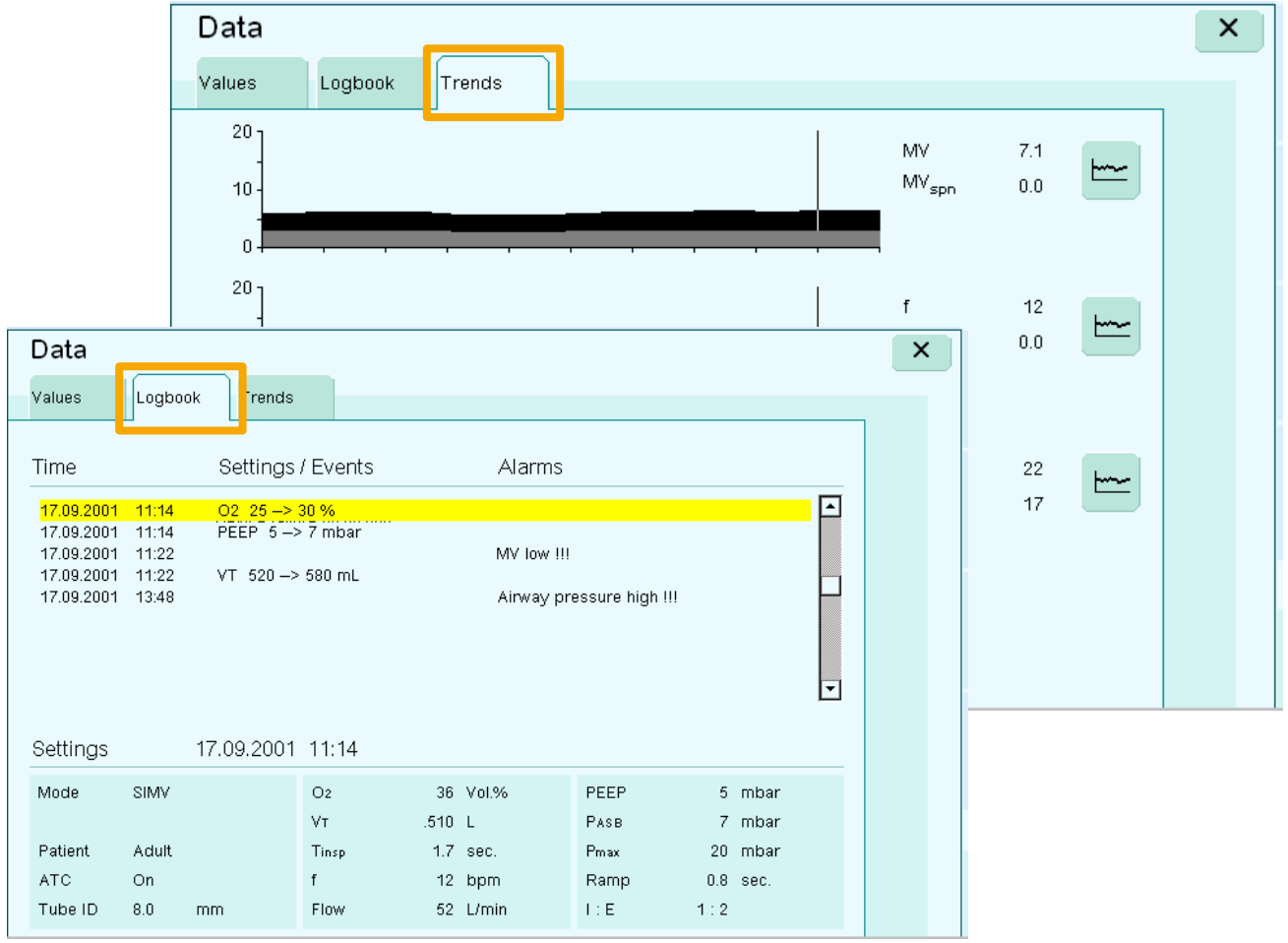
Evita XL – Operating concept on-screen controls

Measured values

Data: Data ...

– Trends:
  - Eight pre-configurable parameters over 24 h
  - Three trends simultaneous
  - Cursor function
  - Trends and logbook are interlinked

– Logbook
  – All alarms and events listed
  – Background alarms listed
  – Marker for background alarms
  – Alarm silence ON and OFF listed



03

Evita XL – Starting up

Evita XL – Starting up
Checking readiness for operation

The readiness for operation check

The readiness for operation check consists of the

- Device Check:
  - Check for completeness of ventilator assembly
  - Test of the back-up alarm (power failure alarm)
  - Test of the expiratory valve
  - Test of the Air/O2 switchover valve
  - Test of the safety valve
  - Calibration of the flow sensor
  - Calibration of the NeoFlow sensor (optional)
  - Calibration of the O2 sensor
  - Zero calibration of the CO2 sensor (optional)
- Airtight Check
  - Leakage test of the breathing circuit
  - Determination of breathing circuit compliance and resistance
- DC power pack option:
  - Changeover test to battery operation

Evita XL – Starting up
Checking readiness for operation

Performing the Device Check

The **Device Check** can only be performed in **Standby** mode.
Prerequisite:

1. The **Start / Standby** dialog window must be open.
2. Touch the **Check** tab to start the check and follow the instructions on the screen.
3. Evita XL displays the date and result of the last Device Check and Airtight Check.
4. Touch the **Device Check** tab. To start the Device Check touch the **Check** button.

Evita XL performs the test steps.

Evita XL – Starting up
Checking readiness for operation

Performing the Airtight Check

The **Airtight Check** must be performed after the following actions:
– Device Check
– Change of the breathing circuit
– Change of breathing gas humidification:

5. Touch the **Airtight Check** tab. To start the Airtight Check touch the **Check** button and follow instructions on the screen.

Evita XL – Starting up
Checking readiness for operation

Testing the DC power pack option

Changeover test to battery operation:
– Pull out the power plug.
If the DC power pack option is available, Evita XL switches over to internal or external battery mode and does not interrupt operation.

If the DC power pack option is not available, the audible power failure alarm is triggered.
– Plug in the power plug again.
The device switches to mains operation.

After successful checking of readiness for operation, Evita XL is ready for use.

04

Evita XL – Operation

Evita XL – Operation
Selecting the patient

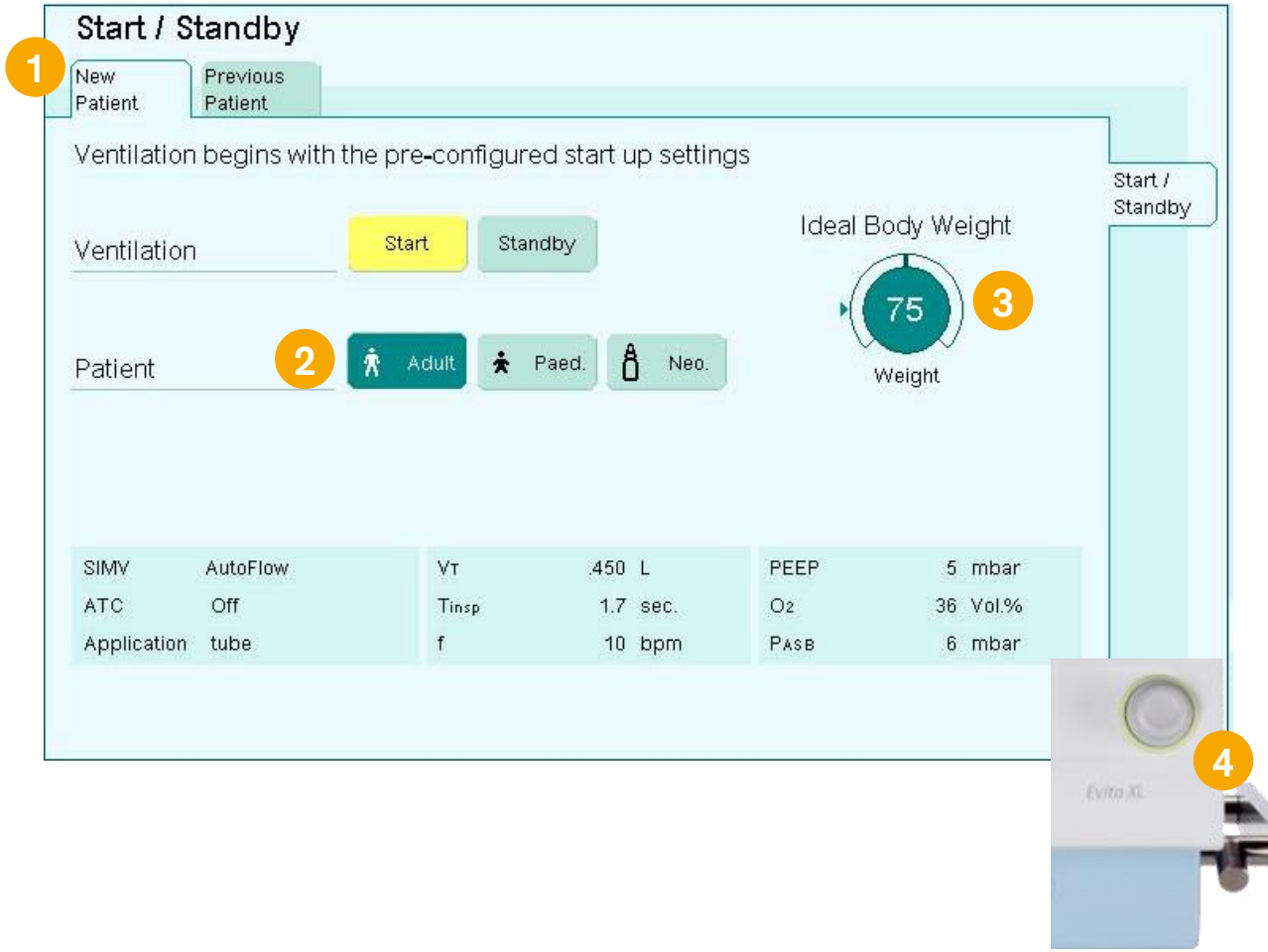
Selecting the patient: Admitting a new patient

After switching on Evita XL, the operator can select between:
– Admitting a new patient
– Using the settings of the previous patient

Admitting a new patient
Prerequisite: The **Start / Standby** dialog window must be open.
Evita XL must be in **Standby** mode.

1. Touch **New Patient** tab. Depending on the patient category:
2. Touch **Adult**, **Ped.**, or **Neo.** key
3. Touch **Ideal Body Weight** key
4. Turn **rotary knob** to enter the **ideal body weight** [kg], press **rotary knob** to **confirm**.

Evita XL determines the tidal volume VT and respiratory rate f based on the ideal body weight and displays these values in the lower part of the dialog window.



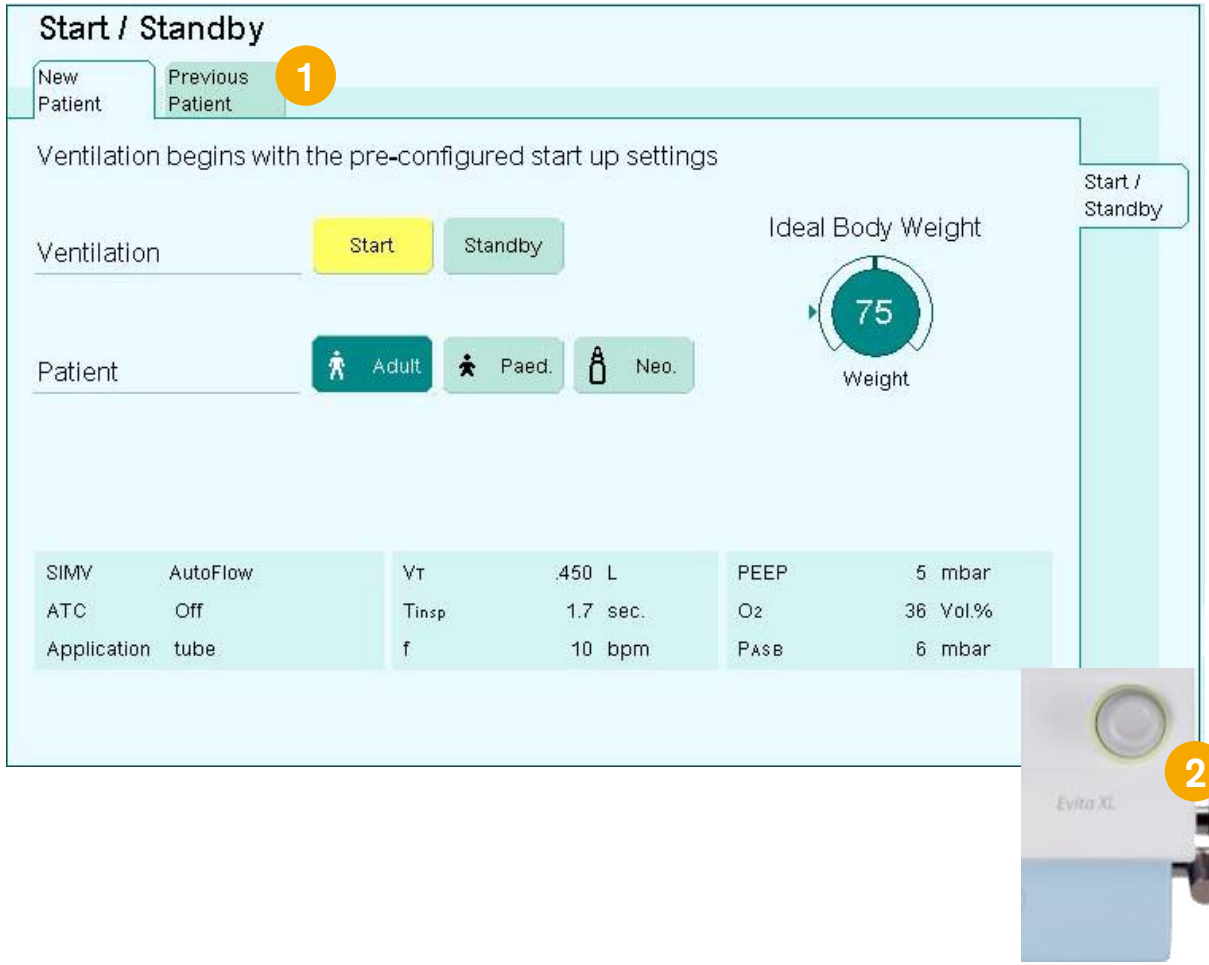
Evita XL – Operation
Selecting the patient

Selecting the patient: Using the settings of the previous patient

After switching on Evita XL, the operator can select between:
– Admitting a new patient
– Using the settings of the previous patient

Using the settings of the previous patient
Prerequisite: The **Start / Standby** dialog window must be open.
Evita XL must be in **Standby** mode.

1. Touch **Previous Patient** tab
2. Press **rotary knob** to **confirm**.



Evita XL – Operation
Starting ventilation

Opening ventilation settings

The Ventilator Settings dialog window can be opened as follows:

1. Press **Ventilator Settings** key or
2. Touch a **therapy control** in the therapy bar.

Evita XL opens the Ventilator Settings dialog window..

Evita XL – Operation
Starting ventilation

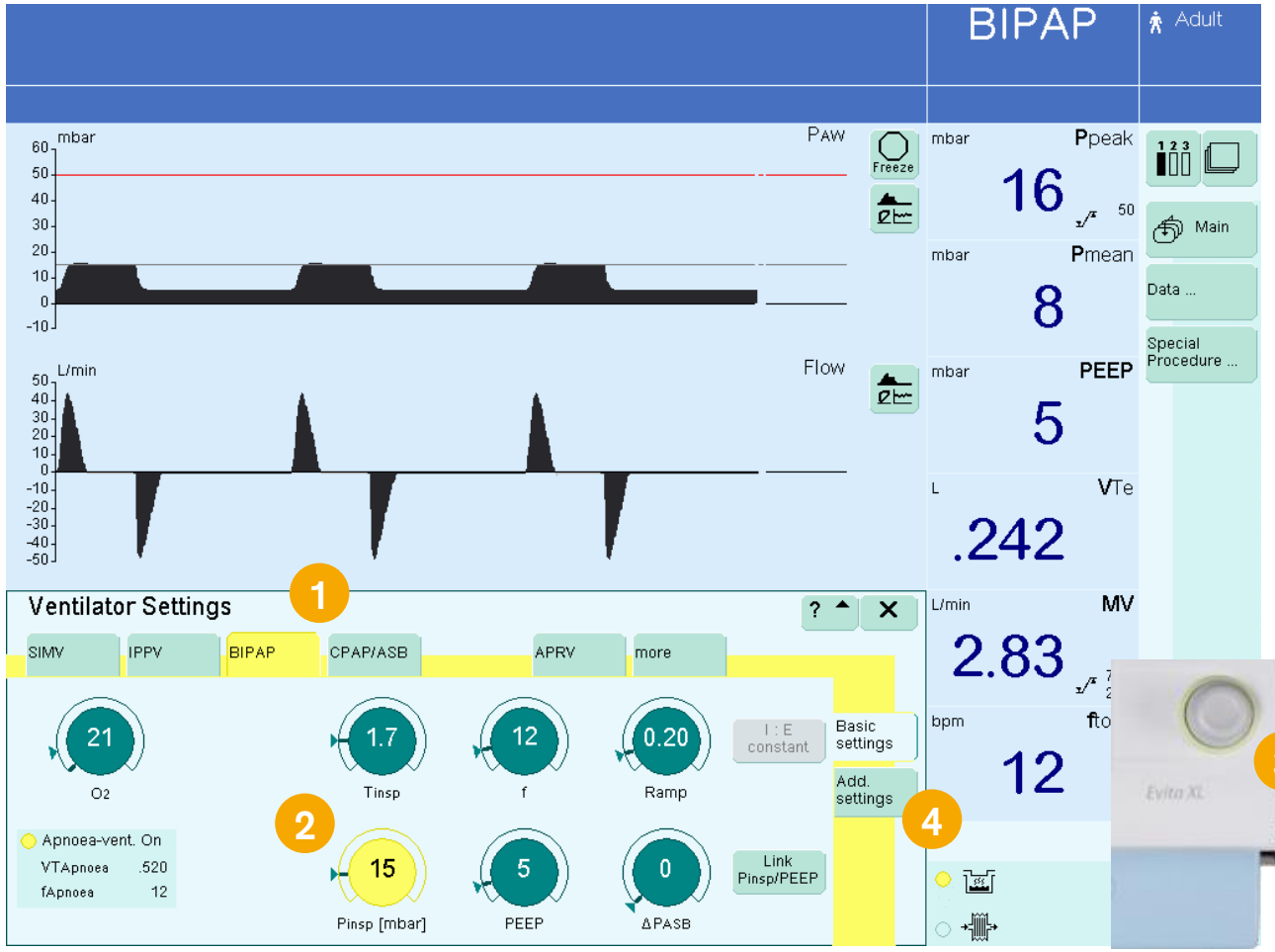
Changing the ventilation mode

1. Touch the **relevant ventilation tab**, e. g., BIPAP*/SIMV+.
   The tab turns yellow.
2. If necessary, set the **ventilation parameters**.
3. **Confirm** the ventilation mode by **pressing the rotary knob**.
   The color of the tab changes to dark green.

The ventilation mode is active. The settings are effective for the patient.

Setting additional functions

4. Touch **Add. settings** tab



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04

Evita XL – Alarms

Evita XL – Alarms

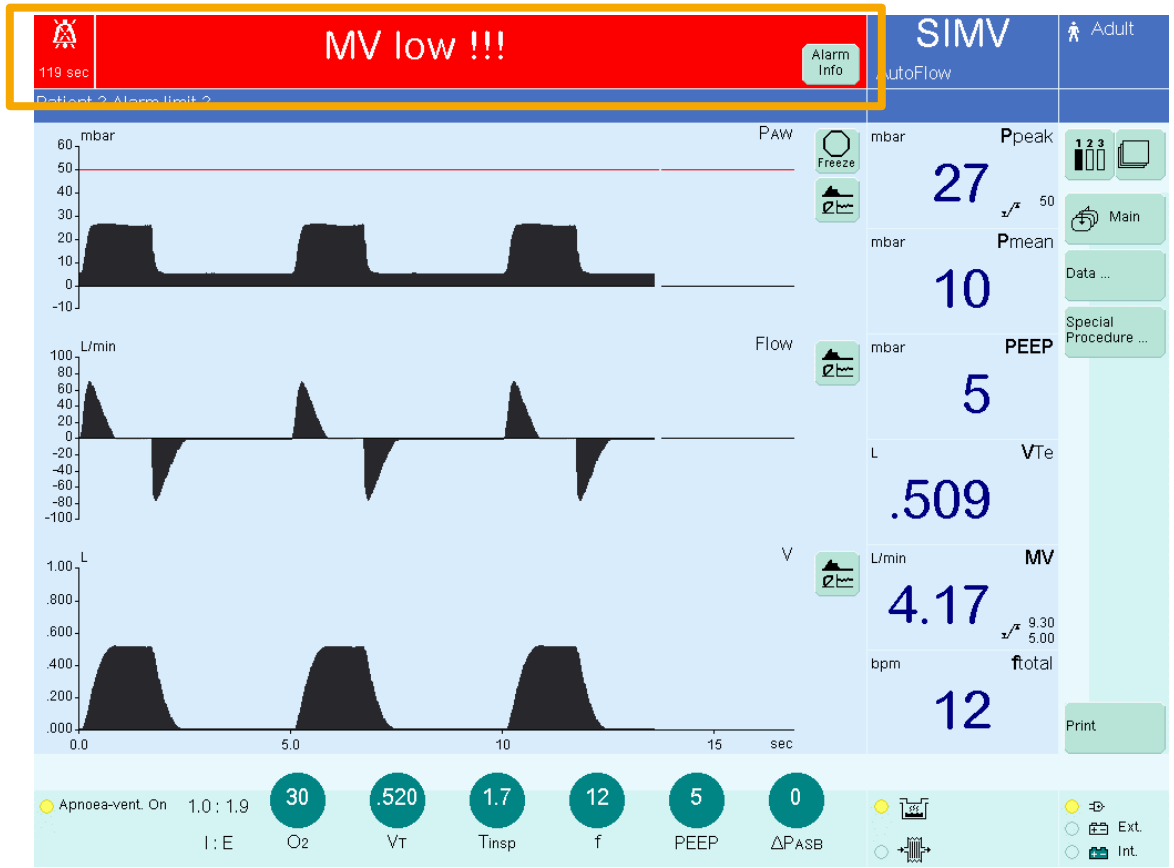
On-screen alarm messages

In the event of an alarm, the relevant alarm message appears in the alarm message field.

Alarm priorities

Evita XL assigns the alarm message its respective priority.
It marks the text with exclamation marks and differently colored backgrounds. Evita XL generates the corresponding alarm tone sequences.

Warning	!!!	High-priority alarm message	five-tone alarm sequence which is sounded twice and repeated every 7 seconds
Caution	!!	Medium-priority alarm message	three-tone alarm sequence which is repeated every 20 seconds
Note	!	Low-priority alarm message	two-tone alarm sequence which is sounded once



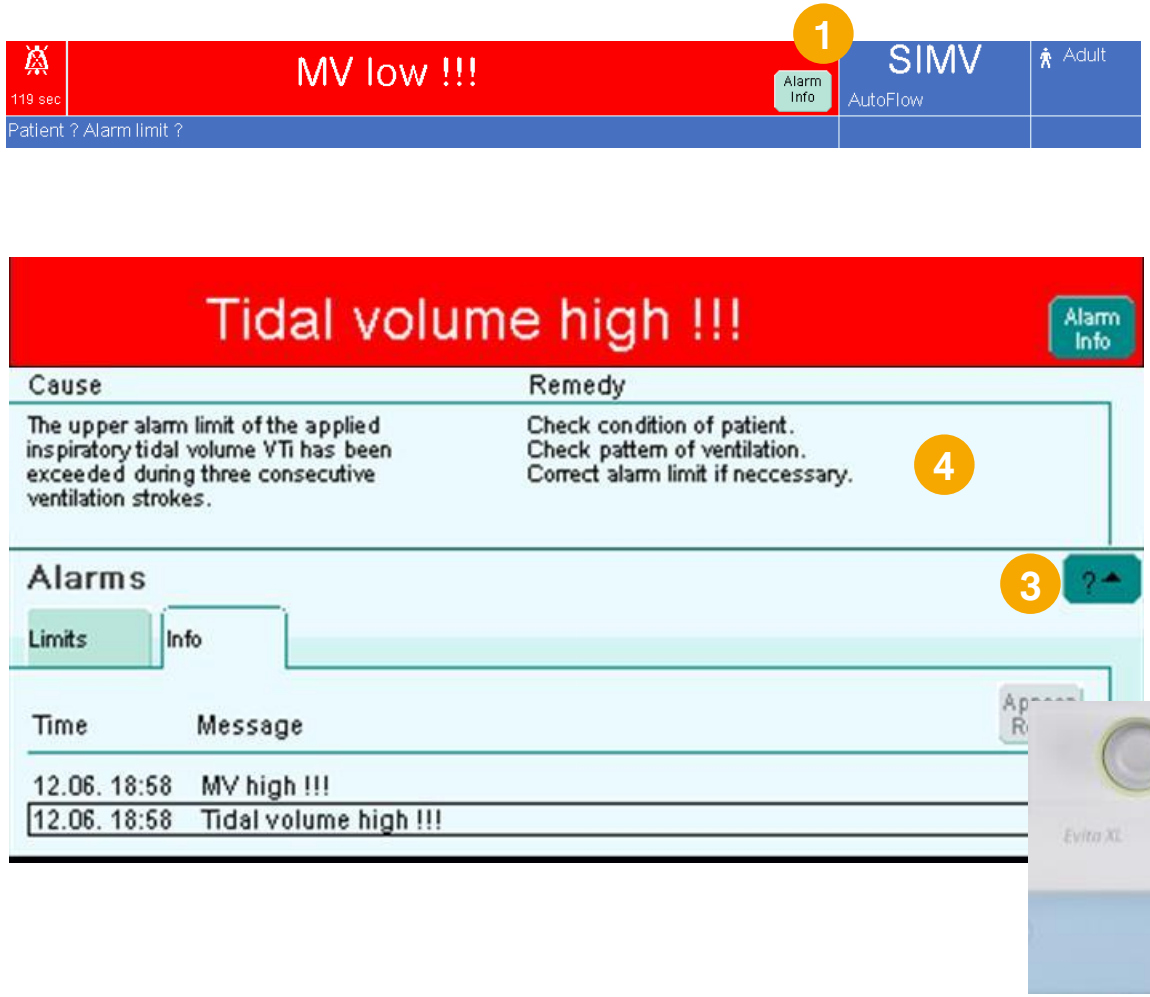
Evita XL – Alarms

Displaying alarm information

1. Touch **Alarm Info** key
All currently active alarm messages are displayed.
2. Using the **rotary knob**, select the alarm message.
3. Touch key **?**
4. The cause and remedy of the alarm message are displayed.

Remedy the fault.

The alarm tone ceases when the fault has been remedied.
Medium- and low-priority alarm messages disappear automatically.
High-priority alarm messages remain displayed in the color of the header bar and must be acknowledged.



Evita XL – Alarms

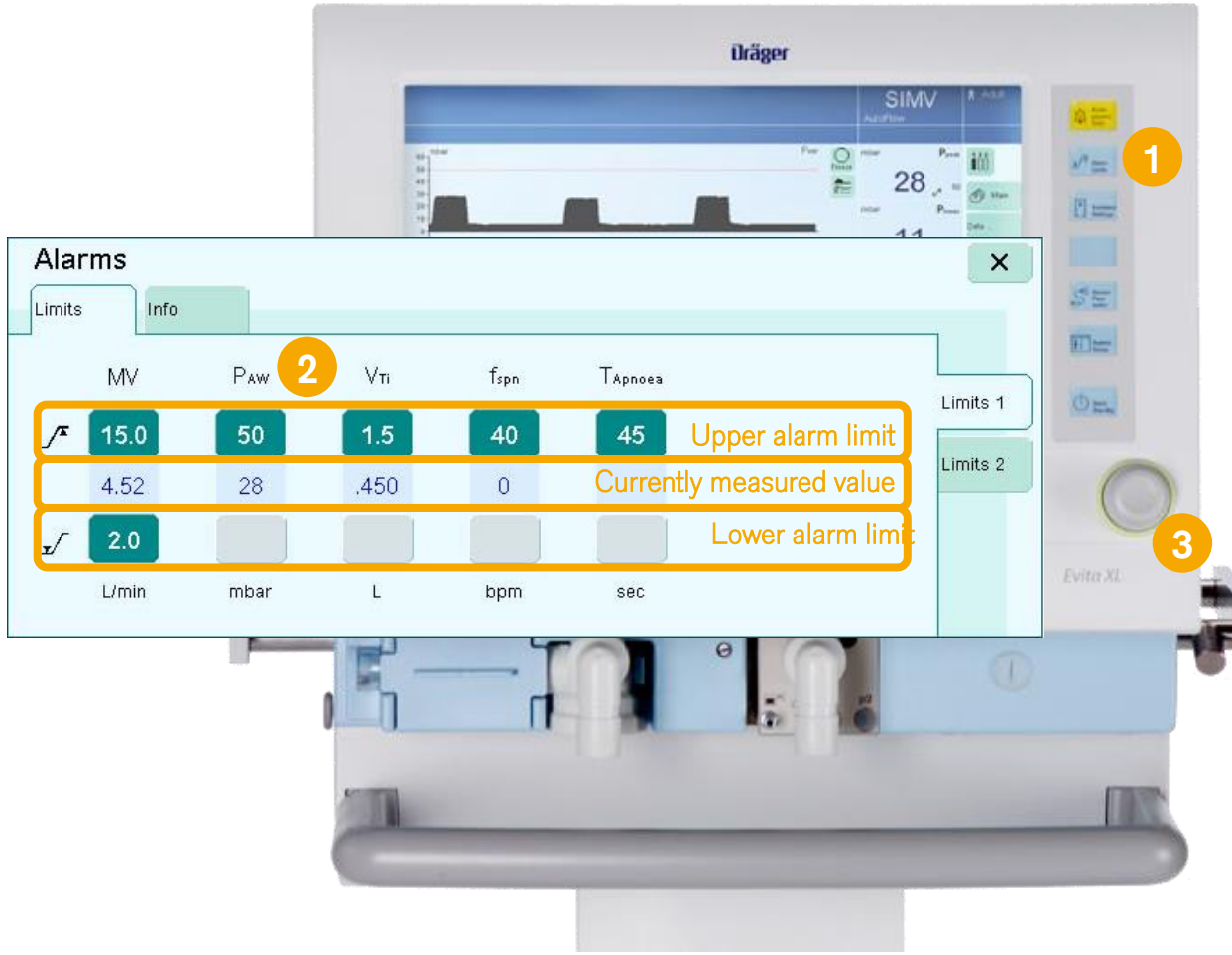
Setting alarm limits

1. Press **Alarm Limits** key. Evita XL opens the Limits page.
   The set alarm limits and the current measured value are displayed.

Setting alarm limits

2. Touch the **key** for the respective **alarm limit**, e.g. Paw.
   The key will turn yellow.
3. Turn the **rotary knob** to set the value and
   press rotary knob to confirm.
   The key turns green.

The new alarm limit is effective.



04

Evita XL – Cleaning, disinfection, and sterilization

Evita XL – Cleaning, disinfection, and sterilization

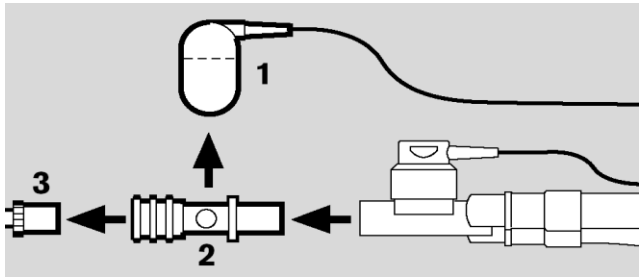
Disassembling components and reprocessing

Before disassembling components

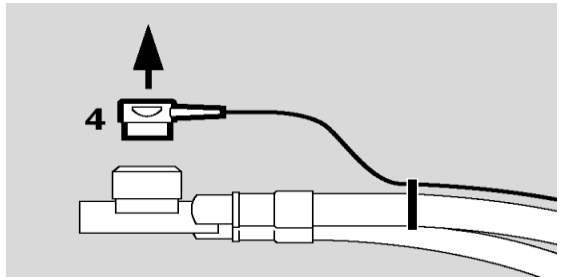
- Switch off both device and breathing gas humidifier, and remove their power plugs from wall outlets.
- Drain water traps and breathing circuit.
- Empty water container of the breathing gas humidifier.

Evita XL – Cleaning, disinfection, and sterilization

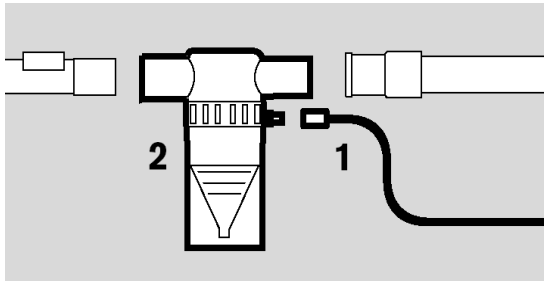
Disassembling



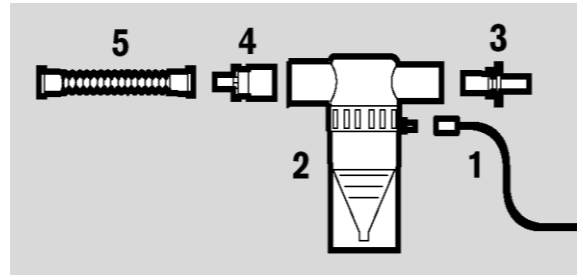
CO_2 sensor: Unplug sensor connector at the back of Evita XL; Remove CO2 sensor (1) from cuvette; Remove CO2 sensor cuvette (2) from Y-piece; Remove ET-tube connector (3) from cuvette.



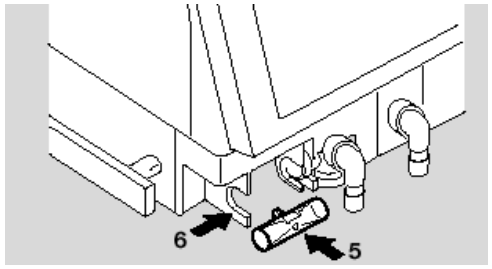
Temperatur sensor: Unplug sensor connector at the back of Evita XL.; Remove temperature sensor (4) from Y-piece or from its mounting on the pediatric breathing circuit. Do not pull on cable.



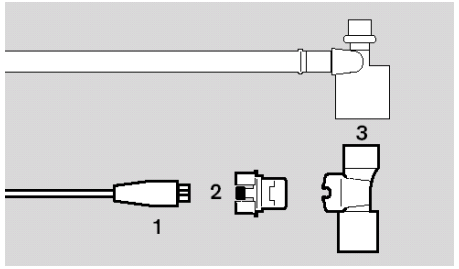
Nebulizer: Detach nebulizer hose (1) from the medication nebulizer (2) and from the nebulizer port on the device; Remove medication nebulizer (2) from the breathing circuit; Disassemble medication nebulizer in accordance with relevant Instructions for Use.



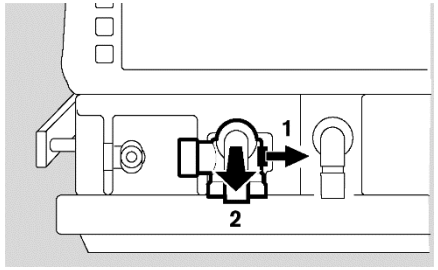
Nebulizer: Detach nebulizer hose (1) from the medication nebulizer (2) and from the nebulizer port on the device:; Remove medication nebulizer (2) from the breathing circuit; Pull catheter connector (3) from the nebulizer inlet; Pull adapter (4) from of the nebulizer outlet. Pull corrugated hose (5) from the adapter (4); Disassemble medication nebulizer in accordance with relevant Instructions for Use.



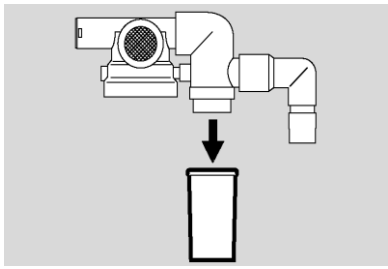
Flow sensor: Open flow sensor flap; Push flow sensor as far as possible to the left and remove it.



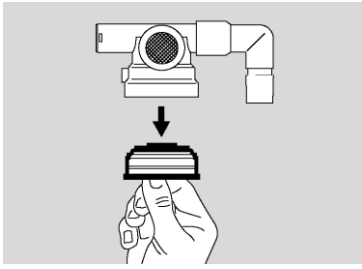
Neonatal flow sensor: Unplug sensor connector at the back of Evita XL; Disconnect the flow sensor cable (1) from the neonatal flow sensor; Press the buttons (2) on both sides while pulling the flow sensor insert (3) out of its housing. Pull housing out of the Y-piece.



Expiration valve: Push the catch (1) to the right while at the same time pulling out the expiratory valve (2).



Reusable expiration valve: If using the reusable expiratory valve, remove the optional collection container and flow sensor sleeve from the water trap.



Reusable expiration valve: Unscrew cap by hand and remove together with the diaphragm assembly. Do not disassemble expiratory valve any further.

Evita XL – Cleaning, disinfection, and sterilization

Disassembling

Use surface disinfectant:
– Aldehydes
– Quaternary ammonium compounds

– To avoid the possibility of damage to material, do not use any disinfectants based on:
– Alkylamine-based compounds
– Phenol-based compounds
– Halogen-releasing compounds
– Strong organic acids
– Oxygen-releasing compounds

Evita XL – Reprocessing list

Applicable to non-infectious patients. The list is merely intended as an approximate guide. The instructions of the hospital´s hygiene officer shall prevail and must be observed by the user!
WARNING: For infectious patients, all parts that conduct breathing gas must be additionally sterilized after disinfection and cleaning. The list is merely intended as an approximate guide. The instructions of the hospital´s hygiene officer shall prevail and must be observed by the user!

Components which can be reprocessed	Recommended reprocessing intervals	Machine cleaning and disinfection	Manual cleaning	Manual disinfection	Sterilization
Evita XL basic device	after each patient	No	Outside	Outside	No
Trolley, hinged arm, gas supply hose	after each patient	No	Outside	Outside	No
Breathing hoses, Y-piece, water traps, collection containers, adapter parts for the medication nebulizer	after each patient/weekly	Yes	Possible	Possible	Yes
Reusable expiratory valve and, if necessary, individual parts	after each patient/weekly[1)]	Yes	Possible	Possible[2)]	Yes
Disposable expiratory valve	Dispose of after each patient/weekly				
Spirolog flow sensor	daily	No	Outside	Yes	No
SpiroLife flow sensor	daily	No	Outside	Yes	Yes
Neonatal flow sensor insert	daily	No	Outside	Yes	Yes
Neonatal flow sensor housing	daily	Yes	Possible	possible	Yes
Temperature sensor	daily	No	Outside	Outside[5)]	Yes
CO2 sensor	daily	No	Outside	Outside[6)]	No
Reusable cuvette of the CO2 sensor	daily	Yes	possible	possible	Yes
Disposable cuvette of the CO2 sensor	Dispose of after each patient/weekly				
Test filter for CO2 sensor	daily	No	Outside[6)]	outside	No
Breathing gas humidifier	after each patient/weekly	In accordance with separate Instructions for Use			
Medication nebulizer	In accordance with separate Instructions for Use				
Bacterial filter	In accordance with separate Instructions for Use				

1) Nebulizing may lead to formation of more extensive deposits requiring more frequent replacement.
2) Additionally treat the expiratory valve after disinfection, see page.
5) Do not bath-disinfect.
6) Do not bath-disinfect. Wipe-disinfect, e.g., with 70 % ethanol. For additional information,

Thank you

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