



Set Up and Start Up Guide

bellavista™ 1000 and bellavista™ 1000e

Dual Limb Circuits

1

Gather equipment

Active Humidification:

- bellavista™ iflow sensor 200 S, adult/paediatric or iflow 40 S, neonatal sensor (single patient use)
- Dual limb circuit for active humidification
- Humidification chamber
- Temperature probe and heated wire adapter (specific to the humidifier being used)
- Sterile water bag for humidification
- Bacterial/viral filter for inspiratory limb
- Optional following hospital guidelines: bacterial/viral filter for expiratory limb at ventilator side

Passive Humidification:

- bellavista™ iflow sensor 200 S, adult/paediatric or iflow 40 S, neonatal sensor (single patient use)
- Dual limb circuit for passive humidification
- Bacterial/viral filter for inspiratory limb
- Optional following hospital guidelines: bacterial/viral filter for expiratory limb at ventilator side
- 1 x Heat Moisture Exchanger (HME) at endotracheal tube end
OR
- 1 x Heat Moisture Exchange and bacterial/viral filter (HMEF) at endotracheal tube end

bellavista™ iflow sensor



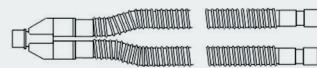
Dual limb circuit for active humidification + humidification chamber



Bacterial/viral filter



Dual limb circuit for passive humidification



HME

HMEF



2

Gather exhalation valve

- For single patient use - dual limb adapter will be in place - need a bellavista™ single patient use exhalation valve OR
- For reusable - clean reusable integrated exhalation valve cassette (refer to cleaning guide for reusable integrated exhalation valve)

Dual limb adapter + single use exhalation valve



Reusable integrated exhalation valve cassette



3

Attach single use exhalation valve to the dual limb adapter

OR

Attach clean integrated exhalation valve cassette and lock into place

Dual limb adapter + single use exhalation valve



Reusable integrated exhalation valve



4

For single patient use exhalation valve, attach tubing to red port

OR

For reusable integrated exhalation valve, ensure tubing is attached from side of integrated exhalation valve to red port (1000e)

Dual limb adapter + single use exhalation valve



Reusable integrated exhalation valve



5

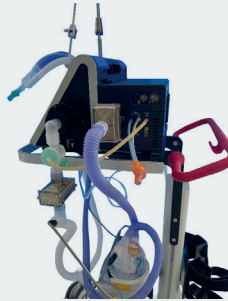
Active Humidification:

- Attach bacterial/viral filter to the inspiratory port
- Attach the dry side tubing to the filter on the inspiratory port and attach to the humidification chamber
- Attach the inspiratory tubing to the other port on the humidification chamber
- Attach the expiratory limb to the exhalation valve (optional to attach bacterial/viral filter according to hospital guidelines)
- Connect the temperature probe and heated wire adapter to the inspiratory and expiratory limbs and connect to the humidifier

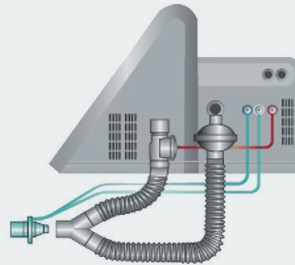
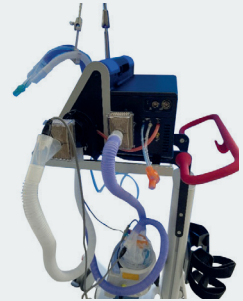
Passive Humidification:

- Attach bacterial/viral filter to the inspiratory port
- Attach the inspiratory tubing to the filter on the inspiratory port
- Attach the expiratory tubing to the expiratory valve (optional to attach bacterial/viral filter according to hospital guidelines)

Dual limb adapter
+ single use
exhalation valve



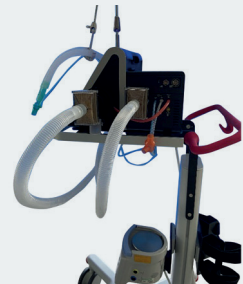
Reusable integrated
exhalation valve



Dual limb adapter
+ single use
exhalation valve



Reusable integrated
exhalation valve



6

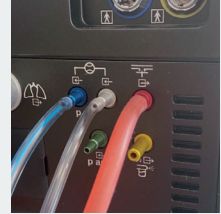
Separate tubing on iflow sensor and attach the blue tubing to the blue port and clear tubing to the silver port on bellavista™.

Hook orange calibration adapter onto this tubing – this is required for the circuit and flow sensor test.

Dual limb adapter + single use exhalation valve



Reusable integrated exhalation valve



7

Attach the iflow sensor to the proximal end of the wye piece.



*

If nebulisation is required, add valved T-piece (002061) and chamber with 7" tubing with (002431) to the circuit and attach to the nebulisation port on the bellavista™ side.

Before commencing nebulisation, place this adapter behind the wye on the inspiratory limb to connect to the circuit.



8

Locate the power button on the left-hand side of the ventilator and press it once. Power up takes approximately 90 seconds, during the power-up process, bellavista™ automatically performs a system test.

If any irregularities should arise, the bellavista™ generates an alarm signal and the power-up process is discontinued.

Once the ventilator is switched on, you will need to perform a circuit test (see Section 14).

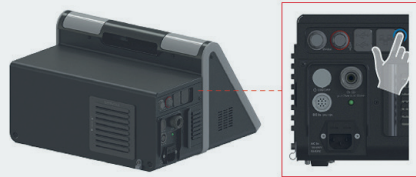


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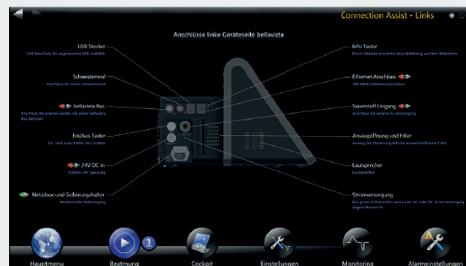
Connection Assist

For further information, press the info button (<<i>>) on the left- or right- hand side of bellavista™.

On the screen, you will see the side of the device with the info being pressed. Here you will find explanations of the various connection ports and how to connect the several circuit configurations.



Info button



9

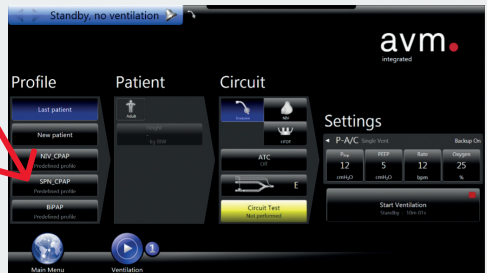
Once turned on, the 'Start Screen' will appear.

There are four sections – 'Profile', 'Patient', 'Circuit' and 'Settings'.

Under 'Profile', select 'New Patient'.

If the ventilator had been on a patient and was on standby, 'Last Patient' can be selected and the previous ventilation settings can be resumed.

Up to 20 profiles can be saved with 3 displayed at any time underneath 'New Patient'.



10

Under 'Patient', select Adult, Paediatric or Neonatal.

Input height and sex to calculate the ideal body weight.

A lung injury can be input if known and this will adjust the initial ventilation settings.



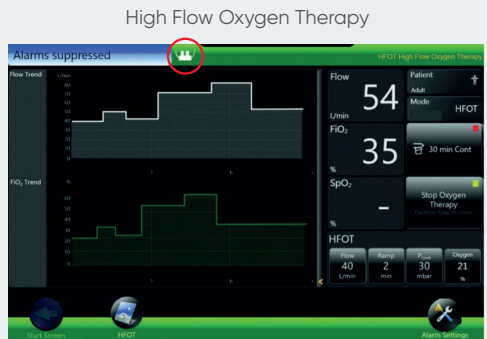
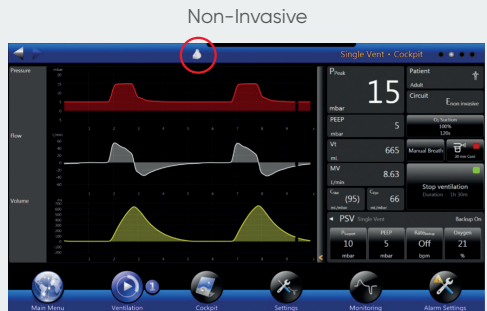
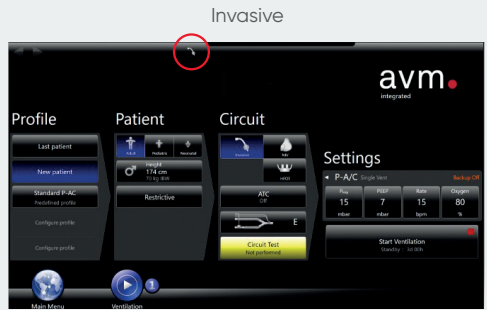
Under 'Circuit', select Invasive, Non-Invasive 'NIV' or High Flow Oxygen Therapy 'HFOT' and nCPAP for neonatal.

Invasive mode will display a picture of an endotracheal tube at the top of the screen and a black border.

Non-Invasive 'NIV' and nCPAP will display a picture of a mask at the top of the screen and a blue border.

High flow oxygen therapy 'HFOT' will display a picture of high flow nasal cannulas at the top of the screen and a green border.

For the circuit type, a dual limb circuit will be circuit "E".

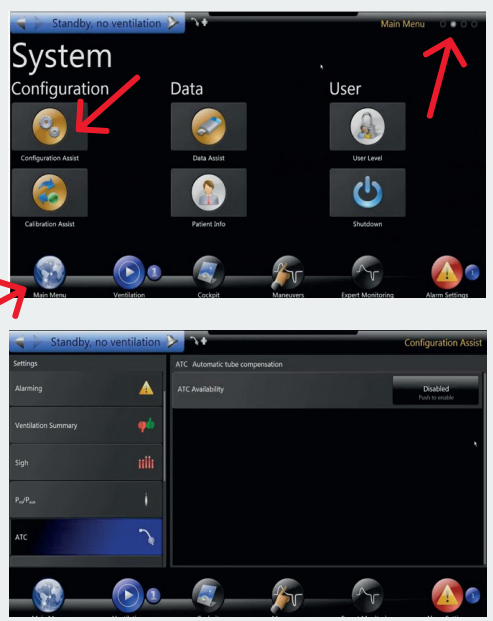


12

To enable the Automatic Tube Compensation (ATC) - enter the 'Main Menu', swipe the screen once or press the second dot in the top right corner of the screen.

Select 'Configuration Assist'. Scroll to find 'ATC'. Press to enable.

Return to 'Start Screen'.



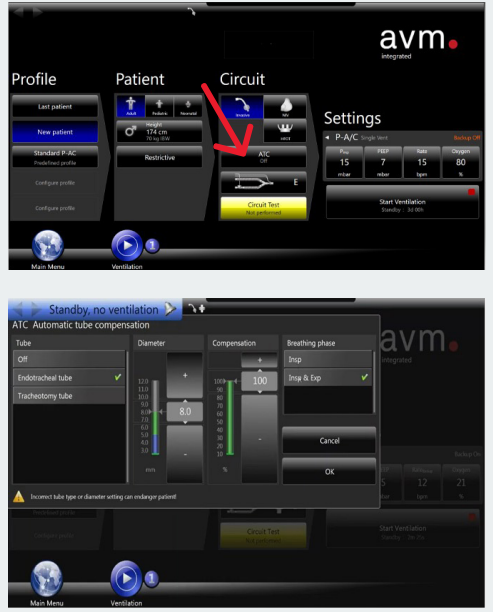
13

Automatic Tube Compensation (ATC)

Press 'ATC'.

Input the endotracheal tube or tracheostomy tube size.

You can select for inspiratory or inspiratory + expiratory compensation.



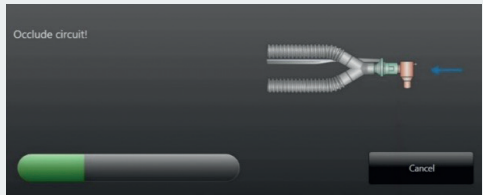
14 Circuit Test

Select the 'Circuit Test' button to perform the circuit test. It will appear yellow until the circuit test has been completed.

Press 'Start' and follow the instructions.



- 15 With the acoustic signal, insert the blind plug (occluded end of the orange calibration adapter) into the flow sensor until the leak test has been successfully completed with the next acoustic signal.



- 16 As soon as indicated, reverse the flow sensor - turn and connect the sensor with the adapter in the opposite direction.



- 17 When prompted, remove the orange adapter and turn the flow sensor forward. Keep the end open.

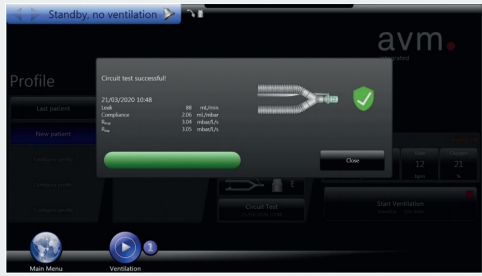
Ensure the flow sensor tubing is running alongside ventilator tubing.

The circuit test is completed with the next acoustic signal.



18 When the test is complete, it will display a green tick if passed.

If it fails, it will indicate failure in red.



19 The 'Circuit Test' tile will now appear black and displays the date and time of the last test.



20 Under 'Settings', select the arrow to expand the settings section.



21 Once the initial ventilation settings are confirmed, press 'Start Ventilation'.

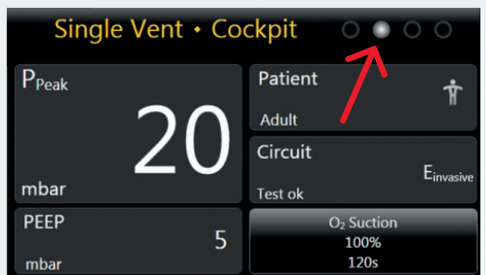
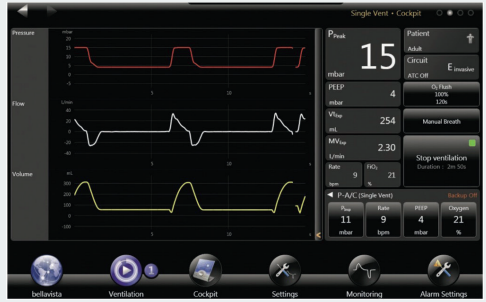


22 Once ventilation has been commenced, the 'Cockpit' screen will appear and provides monitoring waveforms and settings.

This screen is customisable, press and hold a parameter to remove or change.

4 dots at the top right of the 'Cockpit' screen indicate 4 different screens.

The 'Cockpit' is the second screen out of four. If there are 3 screens only, the 'Cockpit' will be the first screen.



23 The first screen (option expert ventilation) is the 'Manoeuvres' screen.

In the first tab, inspiratory and expiratory holds can be performed.

The second and third tab is reserved for the 'Lung Recruitment Tool' option.



24 The third screen is the 'Settings Assist' where changes to ventilation settings or modes can be changed.

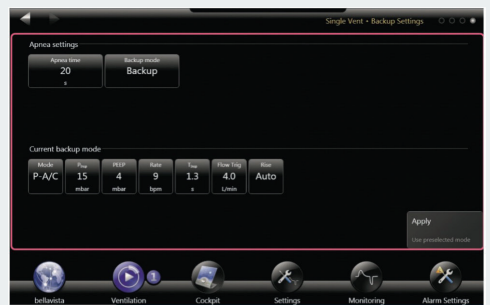
The top waveform represents the current ventilation.

The bottom waveform is displaying the changes in timing and cycling when settings are changed.

When you have changed your settings touch 'Apply' to confirm your changes.



25 The fourth screen is the 'Backup Settings' screen to enable/disable 'Apnoea Backup' and change backup ventilation settings.



26 AnimatedLung

To view the AnimatedLung, press and hold the panel on the left hand until the context menu appears and choose "Change or Add value" and select 'Animated Lung'. This can be configured on the cockpit or monitoring screen.

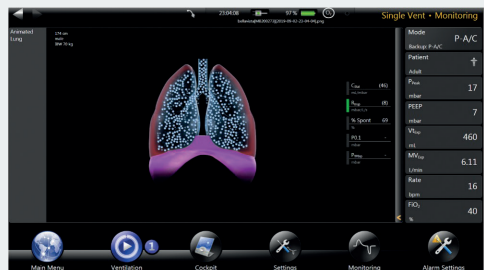
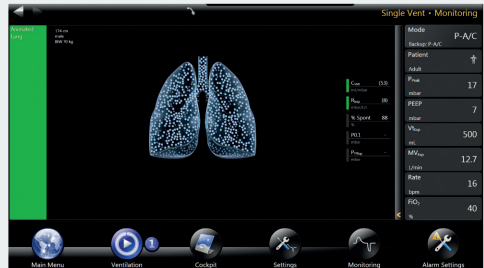
The AnimatedLung is a visual cue to increase situation awareness and displays resistance and compliance of the patient.

Redness around the trachea indicates an increased resistance or obstruction, the severity of the increased resistance is displayed in two steps showing an increase in airway resistance.

A decreased compliance is shown in three different steps showing a broader red boundary around the ventilated area.

Spontaneous trigger attempts are symbolised through the appearance of a diaphragm.

Changes won't occur in real time, compliance and resistance values are averaged over eight breathing cycles.



27 The 'Alarm Settings' screen is located in the bottom right corner.

When a parameter is outside the set alarm limit, it will be highlighted in red or yellow. The corresponding tile on the 'Cockpit' screen will also be highlighted in red or yellow.

To change any alarm limits on the alarm limits screen, select the corresponding alarm and move the slider to the desired values and touch apply to confirm the new limits.

Three dots in the top right corner represent three screens.

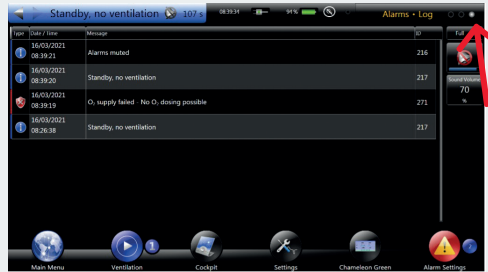


28 There are 3 types of alarms. To silence the alarm for 120 seconds, press the 'bell' icon on the alarm banner.

Symbol	Description
	High priority: immediate action required to avert a life-threatening situation. Continuous alarm tone and red alarm lights
	Medium priority: prompt action required to avert a life-threatening situation in good time. Intermittent alarm tone and yellow alarm lights
	Info message contains information for the user, not requiring any immediate action. The user must take appropriate precautions, however. Short tone, blue alarm lights

29 The second screen in 'Alarm Settings' will show any current alarms.

The third screen will show an alarm history log with alarm codes.



30 Functions such as 'O₂ Suction' and 'Manual Breath' can be found from the 'Cockpit' or by entering the 'Ventilation' menu at the bottom of the screen.

If the nebulisation function is available, a button for 'Nebulisation' will also be available here.

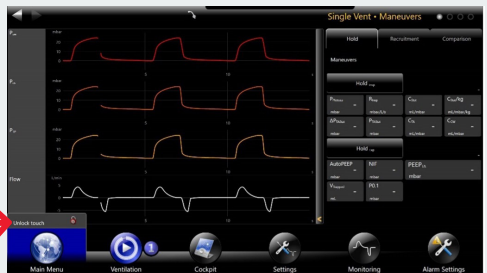
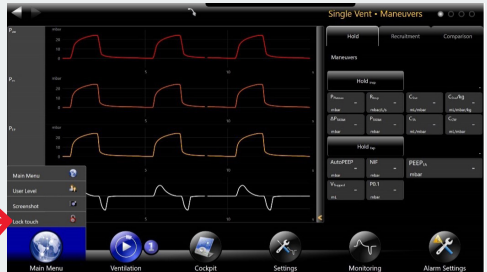


31 To stop ventilation, press stop ventilation and slide across the confirmation window. This will take you back to the 'Start Screen'.

If you press 'Start Ventilation' again, it will resume with the last settings.



32 To lock the screen, press and hold the 'Main Menu' button and select 'Lock Screen'. To unlock, press and hold the 'Main Menu' button and press 'Unlock Screen'.

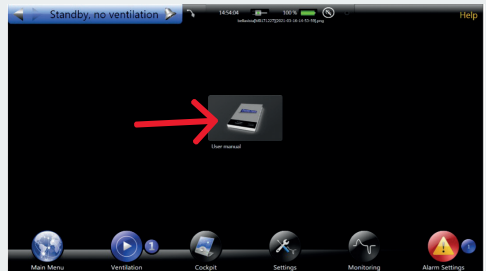
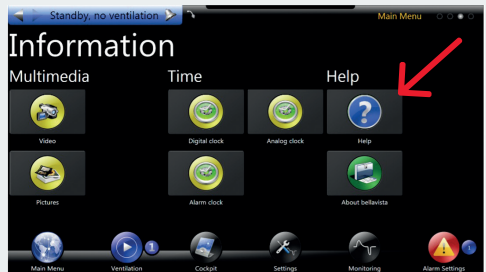


33

To access the in-built user manual:

Press and hold any parameter and press 'Request Help'. This will take you to the 'User Manual'.

Alternatively, press 'Main Menu', swipe the screen twice to find 'Help'. Press 'User Manual'.



34 Non-Invasive Ventilation

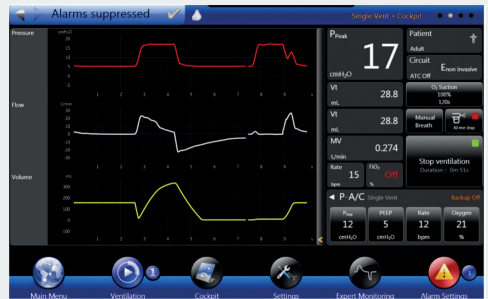
To change to non-invasive (NIV) mode from the 'Start Screen', select 'NIV', adjust the mode and settings.

Press 'Start Ventilation'.



35 A blue border will appear around the screen to indicate Non-Invasive 'NIV' mode.

Initially all patient related alarms are suppressed for 120 seconds to allow fitting of the mask without disturbance.



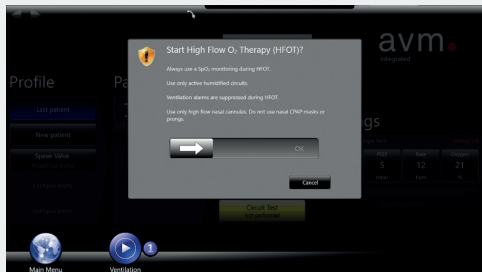
36 High Flow Oxygen Therapy

To change to high flow oxygen therapy mode, select 'HFOT'.

An alert message will appear to inform that you are exiting Invasive and Non-Invasive modes. It states:

- Always use SpO₂ monitoring during HFOT
- Use only active humidified circuits
- Ventilation alarms are suppressed during HFOT
- Use only high flow nasal cannulas. Do not use nasal CPAP masks or prongs.

Slide to confirm after reading the instructions.




37 Press 'Start Oxygen Therapy' after adjusting your settings.


Flow delivery can be set up to 80L/min. To go higher than 60L/min, confirm by touching the padlock and adjust the flow rate.

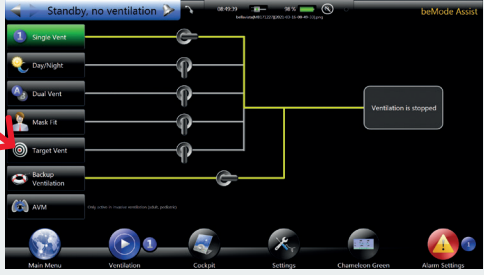



How to activate 'Target Vent' (PRVC)

- 1 From any screen, select 'Main Menu'.


- 2 Select 'beMode Assist' from the first screen of the main menu.


- 3 Select 'TargetVent'.

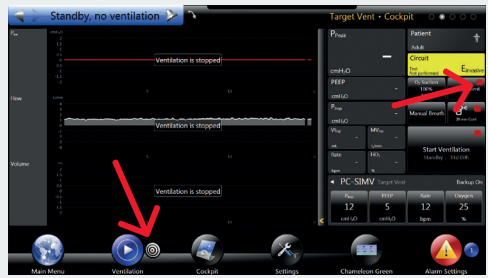

- 4 This will take you to the 'Cockpit' screen. Press 'Activate TargetVent'.



5

To activate TargetVent, press the 'TargetVent' button.

The 'TargetVent' graphic will appear next to the 'Ventilation' tile.



6

Once TargetVent light is green, Target Vent mode is enabled.



7

To change 'Target Vent' ventilation mode, select the 3rd screen on the top right corner and select either P-A/C, PC-SIMV or PSV modes.

Adjust the settings for this mode and press apply.

Always check the alarm settings accordingly.

Return to the 'Cockpit' by swiping the screen backwards once or pressing the 2nd screen on the top right.

Press 'Start Ventilation' once the settings are confirmed.



8

The 4th screen is a 'bathtub' graphic for TargetVent, which depicts the relationship between inspiratory pressure and target volume.

If 'TargetVent Maximum/Minimum Pressure Alarm' appears, consider changing the 'Volume Target' or 'PlnspMax/PlnspMin' setting.



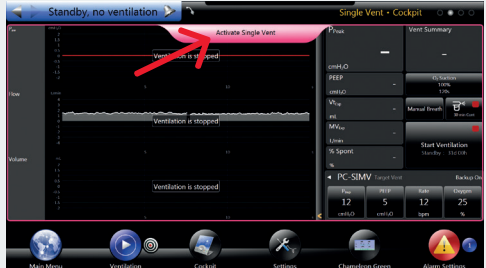
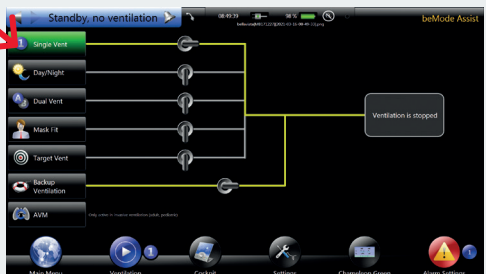
9

To turn off 'TargetVent', press 'Switch off Target Vent' and light will turn red.

Press 'Main Menu', 'beMode Assist' and select 'Single Vent'.

Press 'Activate Single Vent'.

All TargetVent modes are available for Non-Invasive ventilation as well.



Maintenance - O₂ Sensor Calibration

1 To perform 'O₂ Sensor Calibration'

Press the 'Main Menu' button in the bottom left of the screen.



2 Swipe the screen once or press the second dot in the top right corner of the screen.



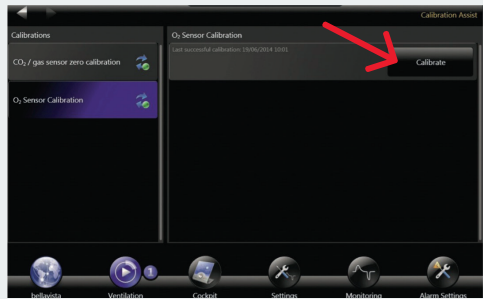
3 Select 'Calibration Assist'.



4

Select 'O₂ Sensor Calibration' and press 'Calibrate'. The calibration can take up to a few minutes to complete.

If you must calibrate due to an alarm during ventilation, please note that the FiO₂ will drop to 21% during calibration time. If the condition of the patient does not allow this, consider disabling the oxygen sensor until a calibration can be performed.

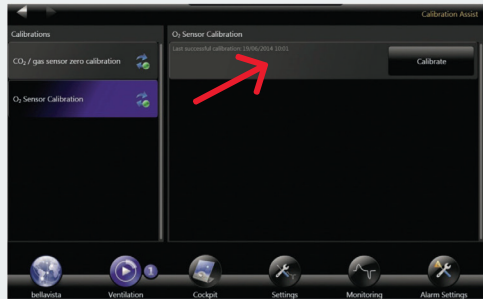


5

You do not have to stay on this screen during calibration.

Once the calibration is complete, it will display a date and time that the last successful calibration occurred.

Press the 'Main Menu' button and then 'Start Screen' to return to the 'Start Screen'.

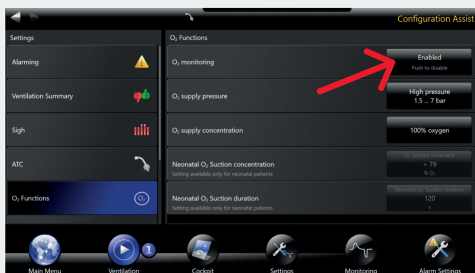


*

To disable the oxygen sensor

Press 'Main Menu', swipe the screen once and find 'Calibration Assist'. Scroll to find 'O₂ Functions'. Press 'O₂ monitoring', press to disable and slide across to confirm "Switch off oxygen monitoring".

On the 'Cockpit' screen, the FiO₂ parameter will now display 'Off' in red. Always provide an alternative oxygen measurement when the O₂ sensor is disabled.



Maintenance – HEPA Filter and Cooling Filter

1

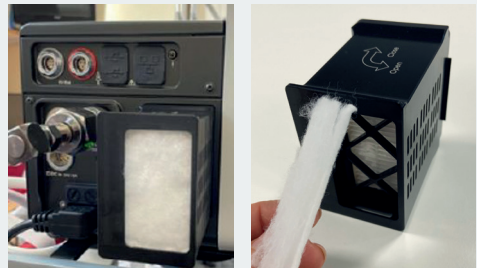
When bellavista™ is equipped with a HEPA filter, check that the HEPA filter is correctly in place. Check that both the filter mat and cartilage are in date.

As it is a turbine driven ventilator, air is drawn in from the ambient environment through this filter. The magnetic HEPA filter will attach onto the air inlet of the ventilator.



2

The fluffy side should face outwards and collects larger particles. The dense side faces inwards and collects smaller particles (PM10). This gets changed once a month.



3

The cartilage filters 99.995% of particles out of the air intake and is changed every 3 months.



4

The grate at the back of the ventilator houses a cooling filter. Slide the grate upwards to open. This mat needs to be changed every month.



REF 301.100.000, 301.100.100



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