bellavista®

the art of breathing

Design and performance

Good things can be improved. With this in mind, we have developed a revolutionary new generation of ventilators. bellavista ensures a step into the future for all of our clients. Not only the attractive, elegant outward appearance and outstanding technology, but also the new, groundbreaking operating system, developed closely with leading physicians, set bellavista apart from the competition. bellavista refreshingly redefines ventilation technology with an attractive yet conspicuously discreet design, which stands out from the typical clinical instrumentation and integrates functionality, Swiss quality and high performance with user-friendliness and innovative design.

vista 1000
bellavista

Intelligent aesthetics

bellavista offers a new type of operating experience by allowing individual adaptation of the applications to suit the needs and habits of the user. Whether a patient, nurse, or doctor, the relevant information is immediately visible and available.

Revolutionary operation

Smart touch operation
bellavista's new touch screen simplifies the set-up process and adjustment of ventilator and monitoring values and curves.

By using the direct menu, the user can see the actions available in the selected field, thereby guaranteeing intuitive operation of the device. Various respiratory parameter setting methods are additionally available to the user.

UserView™
The screen displays only relevant information for the selected user. A status indicator simplifies the screen by hiding complicated graphs and figures that could otherwise confuse the patient. The physician, however, sees all values, curves and loops, which enables him/her to rapidly familiarise himself/herself with the patient's condition.

The user interface can be individually customised directly on the screen according to the user's wishes and requirements by positioning each operating component where expected.

Building user confidence
bellavista supports daily use of the ventilator with multimedia capabilities. Wizards and instructional videos displayed directly on the device support the bellavista set-up and operating process. These instruments assist in reducing user anxiety while operating the device.

Videos and pictures detailing health conditions and treatments can be loaded and displayed directly on the ventilator. These informational spots support the patient as well as physician with video and audio functions and ensure comfortable assistance for example during mask fitting. These capabilities enable ventilator acceptance by the patient and increase the chances of successful therapy.

VentilationAssist™
VentilationAssist supports the medical specialist in parameter adjustment when a patient is initially connected to the bellavista ventilator. After entering the relevant patient information (including patient history, age, lung volume, etc) VentilationAssist suggests a suitable ventilation configuration. This suggestion can then be evaluated and adjusted by the medical specialist.

Innovative features

MaskFit™
Experts agree that initial ventilator contact is critical in determining future therapy success. If the patient accepts the ventilator and mask during this first phase, it is very likely that non-invasive ventilation can be used throughout the therapy. If non-invasive therapy is not an option, the consequence is often intubation causing long-term therapy with increased complications.

MaskFit assists the patient and medical specialist during initial contact with the device and mask. With assisted guidance and multimedia support, the patient easily adjusts to ventilation step by step.

WeanVent™
During ventilator weaning, bellavista supports the patient with WeanVent. During this phase, the patient is prepared with targeted measures and training programs that are individually customised by the medical specialist. The entire weaning process is supported by multimedia functions. Real-time patient information and measuring results are continuously available for review and diagnosis during therapy.

ChameleonLook™
The multitude of ventilators with varying user-interfaces presents significant challenges for medical specialists. The consequences encountered by this variety are increased costs for device familiarisation and training.

bellavista's ChameleonLook offers revolutionary support for anyone working with a broad range of ventilators. At the click of a button, the ChameleonLook adapts bellavista's operating surface to an interface that the operator is more familiar with.

ModeAssist™
While the ventilation is running, a new mode or form of therapy can be selected and pre-configured using ModeAssist. Selections of varying ventilation patterns based upon empirical values are available. Changes are only applied when the configuration is complete and the user initiates the new settings.

Innovative features

FlexiView™
The bellavista user interface can be individually customised using FlexiView. This feature allows users to continuously adjust the user interface to their needs and wishes. While the device is in operation, monitoring values and curves can be adjusted and loops can easily be configured.

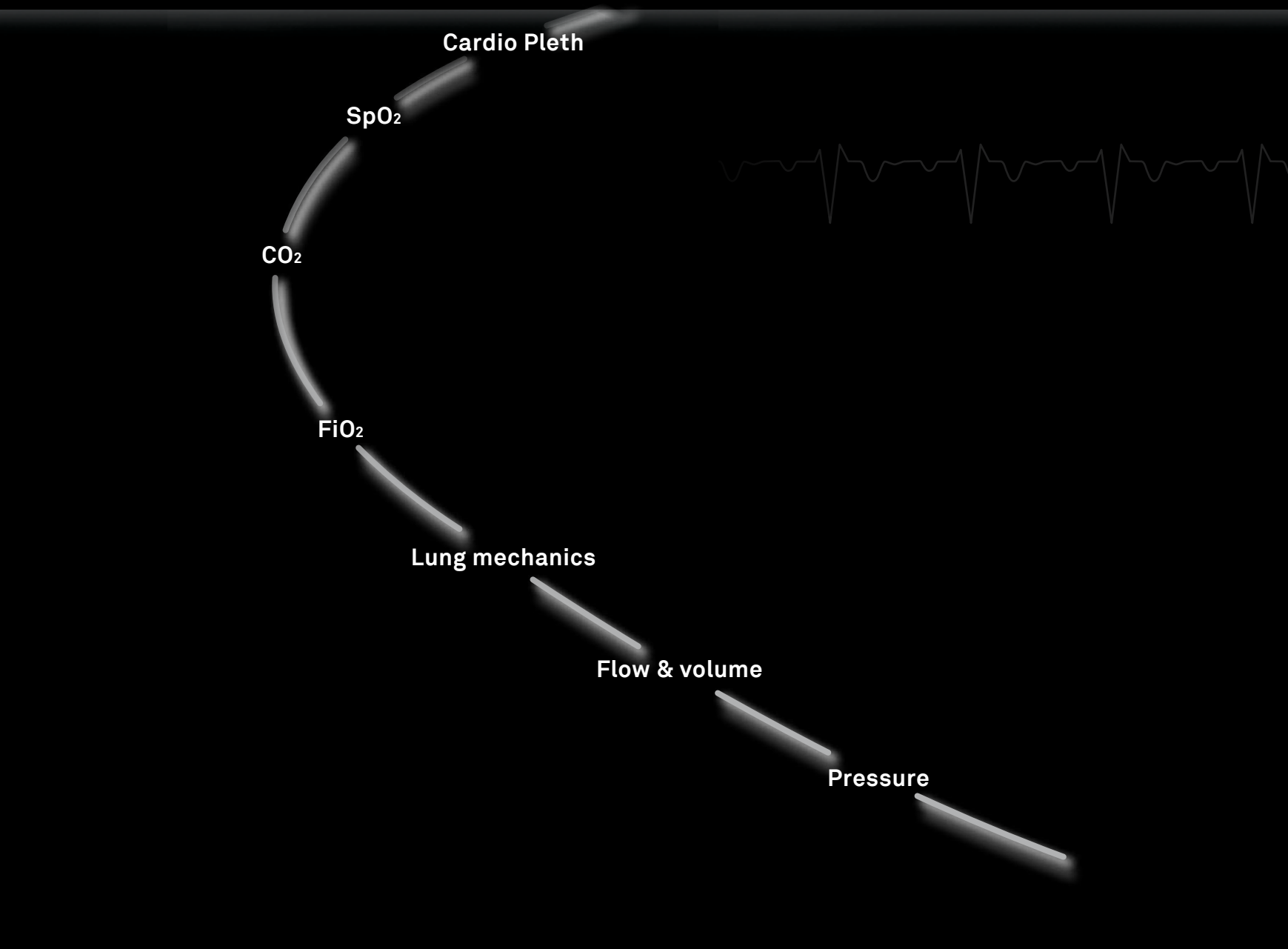
ActiveHelp™
ActiveHelp is easily accessible directly on bellavista's user interface. In every phase of operation, assistance pertaining to the current topic is available by the push of a button. The bellavista ventilator details responses with informative text including pictures, instructional videos or relevant sections from the electronic user manual.

ConnectionAssist™
Correctly connecting and operating bellavista is detailed step-by-step with ConnectionAssist. All interfaces have a ConnectionAssist button next to them. When this button is pushed, information appears on the screen describing the function of the selected connection.

An adequate pneumological examination requires a substantial diagnosis. During this process, parameters from various machines must be correlatively analysed. bellavista is the world's first ventilator where all the sensors necessary for a reliable pneumological diagnosis are either integrated in the device or attachable.

All relevant parameters are displayed and recorded polygraphically and simultaneously. This allows the specialist to make a reliable diagnosis quickly and simply and evaluate critical changes in the patient's condition.

With a complete record of all patient parameters, a detailed post-analysis can be determined. The ArtefactFinder supports the physician in evaluating the data displayed and reliably highlights irregularities.



World premier in diagnostics and monitoring

Standard parameters
The flow, volume and pressure parameters give insight into respiratory tract obstructions, compliance dysfunctions and leakages. Alarm parameters can be comfortably adjusted directly on the touch screen.

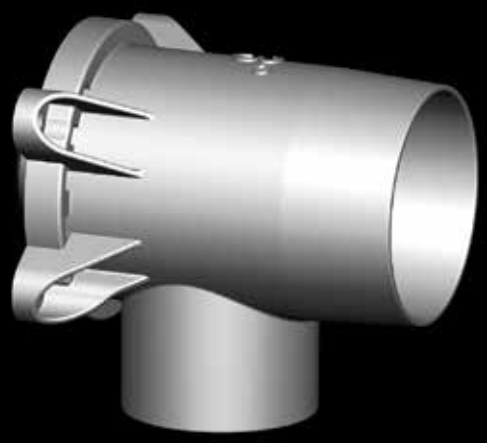
Capnography
The integrated capnograph enables simple monitoring of the tubus and indicates potential pulmonary embolism.

Lung mechanics
The quantitative analysis of the respiratory system must be accompanied by an understanding of the complex reciprocal effect between patient and ventilator. This analysis delivers important clinical information about lung function and the course of a disease and allows the medical specialist to customise ventilator settings for the individual patient.

Blood gas monitoring
Pulse oximetry, the transcutaneous measurement of SpO_2, is crucial in recognizing the quality of ventilation. Blood gas monitoring simplifies long-term monitoring and avoids invasive arterial blood gas analysis.

Ventilators providing high-performance for every type of therapy are rare. For years the devices used at home were dramatically different from those used in hospitals. bellavista combines the advantages of the proven, classic proportional valve technology of ICU ventilators, with the high-performance blower technology primarily used in non-invasive ventilation. Thus, bellavista offers a ventilation platform for all applications; for non-invasive and invasive ventilation, for children and adults, at home and in the hospital.

Top ventilation performance



Ventilation and synchronisation
The proportional valve technology patented for bellavista enables optimal synchronisation between the ventilator and patient and regulates an exact air dosage for each breathing phase. bellavista's superior exhalation performance also increases patient comfort.

Various types of therapy
Pressure and volume controlled ventilation modes give the user the greatest flexibility in selecting the appropriate therapy. For anxiety-free and assisted mask adjustment, bellavista offers the MaskFit mode which provides multimedia assistance to doctors and patients.

The DayNight mode enables patients to switch independently between two different types of prescribed therapies. This accommodates the physiological differences of the lung functions and optimises the patient's comfort.
The DayNight mode also takes into account differing therapies at the relevant time of day and adjusts the ventilation appropriately.

Oxygen
Depending on the clinical diagnosis and therapy, the air provided can be mixed with a precise dose of oxygen. bellavista supports all O_2 supply systems available in the market.

Medication therapy support
An integrated medication nebuliser permits exact dosages of medication in accordance with the chosen therapy. The intelligent control system can adapt the dosage patterns. Customised modes such as pressure and volume controlled sighs or targeted administration of manual breath can further promote patient weaning off the ventilator.

The appropriate device for every application. The bellavista model 1000 is available in two separate basic versions in order to accommodate varying ventilator applications – bellavista 1000 and bellavista 1000e. Each version distinguishes itself through unique attributes and advantages. Several features are available separately or after an initial purchase.

	1000	1000e
Area of application		
Intensive care unit (ICU)	•	•
Subacute / Intermediate care unit (IMC)	•	•
Emergency Room (ER)	•	•
Intrahospital transfers	•	•
Ventilation		
Non-invasive (High Performance NIV)	•	•
Invasive	•	•
Neonatal	○	•
Pediatric	•	•
Adult	•	•
Single limb breathing circuit	•	•
Dual limb breathing circuit	•	•
Ventilation modes		
Pressure controlled		
CPAP, PCV, P-A/C, PC-SIMV, PSV, beLevel, APRV	•	•
CPAP, S, S/T, T, P-A/C	•	•
Volume controlled		
VCV, V-A/C, VC-SIMV	•	•
PLV (Pressure Limited Ventilation) on all volume controlled modes	•	•
Oxygen		
Basic Oxygen Therapy	•	
Advanced Oxygen Therapy	□	•
Oxygen flush	□	•

	1000	1000e
ExpertVentilation™ package		
Single & multiple sighs	□	•
Manual breath	□	•
Inspiratory hold	□	•
Expiratory hold	□	•
AutoPEEP	□	•
NIF (Negative Inspiratory Force)	□	•
Vtrapped (trapped volume)	□	•
P0.1 (occlusion pressure)	□	•
ATC (fully configurable)	□	•
bellavistaModes (beModes)		
SingleVent™	•	•
Backup Ventilation	•	•
TargetVent™	□	•
DualVent™	□	•
DayNight™	□	•
MaskFit™	□	•
WeanVent™	□	•
Special features		
UserView™	•	•
FlexiView™	•	•
UserAssist™	•	•
VentilationAssist™	•	•
Various monitoring and trending views	•	•
ConnectionAssist™	•	•
ActiveHelp™	•	•
ChameleonClassic™	□	•
ChameleonGreen™	□	•

• included in delivery
○ optionally available
□ optionally available, included in the ClinicSuite™ package

Overview

		1000	1000e
Monitoring			
Standard parameters			
Pressure	Ppeak, Pplateau, Pmean, PEEP	•	•
Volume	Vti, MVi (MinVol), Vti/kg, MVi/kg, Vte, MVe (MinVol), Vte/kg, MVe/kg	•	•
Timing	Rate, Ti, Te, I:E, Ti/Tot	•	•
Oxygen	FiO_2	•	•
Curves	Pressure, Flow, Volume incl. Ptrach curve if ATC is enabled	•	•
	Up to three curves	•	
	Up to eight curves & loops		•
	Curve freeze	•	•
	Curve cursor	•	•
Leak	Leak flow, Auto-Leak™	•	•
Pulse oximetry	Pulse rate, SpO_2 saturation, Cardio pleth curve	○	○
Capnography	$inCO_2$, $etCO_2$, CO_2-curve	○	○
SBE	% Spont	•	•
ExpertMonitoring™			
Volume	MVi spont	□	•
	MVe spont	□	•
Timing	Rate spont, Ti support,	□	•
SBE	%Spont 1h, %Spont 8h	□	•
WOBimp	Work of Breathing imposed	□	•
PTP	Pressure Time Product	□	•
P0.1	breath-by-breath occlusion pressure	□	•
Tobin Index	RSBI (Rapid Shallow Breathing Index)	□	•
Leak	% Leak	□	•
Curves	Up to eight real time curves	□	•

		1000	1000e
Patient info			
Patient info sheet		•	•
Diagnostics			
Correlated diagnostic data		•	•
Oxygen fraction FiO_2		•	•
Diagnostic Package Pulse Oximetry		○	○
Diagnostic Packages Capnography		○	○
Diagnostic lung mechanics			
Curves	Proximal flow & volume	□	•
Loops	P/V (pressure/volume)	□	•
	P/F (pressure/flow)	□	•
	F/V (flow/volume)	□	•
	Loop freeze	□	•
	Loop cursor (inflection points, ...)	□	•
	Reference loop	□	•
	Loop overlay	□	•
Parameters	Rinsp, Rexp, Cstat, Cdyn, C20/Cdyn, CDyn/kg, CStat/kg	□	•
Trending			
Standard trending (all monitoring parameters)		•	•
Real time trending (all curves)		□	•
Alarms			
Alarm log		•	•
Ventilation alarms		•	•
System alarms		•	•
Auto self-test		•	•

	1000	1000e
Data transfer / Central Monitoring (PDMS)		
USB-stick	•	•
Screenshot (on USB-stick)	•	•
bellavista ConfigurationSuite™	•	•
Philips VueLink™ and IntelliBridge	□	•
Operation and signals		
Giant screen (13,3")	•	•
Touch screen operation	•	•
360° multicolor signals	•	•
Stereo loudspeakers	•	•
Ergonomics		
Compact design	•	•
Innovative bellavista operating concept	•	•
Ergonomic colour design	•	•
Integrated carrying handle	•	•
Integrated mounting possibilities	•	•
Low noise design	•	•
Technology		
Multiprocessor architecture	•	•
Redundant safety components	•	•
Low power design	•	•
Proportional valve technology	•	•
High performance turbine	•	•
Oxygen	•	•
External medication nebulizer	○	○

	1000	1000e
Extension modules		
beBay™	•	•
Humidifier	○	○
Software upgrades		
Software upgrade via USB interface	•	•
iVista software download	•	•
Maintenance		
Minimal maintenance	•	•
Easy air filter exchange	•	•
ServiceAssist™	•	•
Easy to clean surface	•	•
Support		
Test and diagnostic tools	•	•
Training		
Integrated multimedia applications	•	•
Tutorial videos	•	•
Integrated electronic user manual	•	•

Overview

Technical data		1000	1000e
Ventilation settings			
Pinsp (IPAP)	0 .. 60 mbar	•	•
	0 .. 80 mbar	□	•
Psupport	0 .. 60 mbar	•	•
	0 .. 80 mbar	□	•
PEEP (EPAP)	0 .. 40 mbar	•	•
CPAP	4 .. 30 mbar	•	•
Rise time	0 .. 2000 ms	•	•
Ramp	Off, 5 .. 45 min	•	•
Tidal volume	40 .. 2500 mL	•	•
	10 .. 2500 mL	□	•
	2 .. 2500 mL	○	○
Body Weight	6 .. 250 kg	•	•
	1.5 .. 250 kg	□	•
	0.4 .. 250 kg	○	○
Peak flow	260 L/min	•	•
Flow pattern	Square, Dec., Dec. 50 %	•	•
Breathing frequency	1 .. 100 bpm	•	•
	1 .. 150bpm	□	•
Inspiration time	0.1 .. 10 s	•	•
I:E ratio	1:599 .. 49:1	•	•
Inspiration trigger (flow)	0.1 .. 20 L/min	•	•
Inspiration trigger (pressure)	0.1 .. 15 mbar	•	•
Expiration trigger	5 .. 90 % of insp. peak flow	•	•
	Auto-Synch™	•	•
Apnea backup	off, 2 .. 100 s	•	•
Oxygen	5 levels	•	
Advanced Oxygen Therapy	21 .. 100 % FiO_2	□	•

Technical data		1000	1000e
Technical specifications			
Weight	9.1 kg	•	•
Dimensions (w x h x d)	35 x 22 x 33 cm	•	•
Ambient temperature	5 .. 40 °C	•	•
Ambient humidity	10 .. 90 % r.H.	•	•
Ambient pressure	600 .. 1100 hPa	•	•
Energy supply			
Wide range power input	100-240 VAC / 50-60 Hz / 80 W	•	•
Low voltage input	24 VDC / 3.5 A (Typ.)	•	•
Battery operation	4-6 h (internal)	•	•
Intelligent battery management		•	•
Green power mode		•	•
Oxygen connector			
Wide range oxygen inlet	0 .. 7 bar/0 .. 100 psi	•	•
Interfaces			
Coded plug connections		•	•
100 MBit ethernet		•	•
beBus™		•	•
USB 2.0 interfaces		•	•
Serial ports		•	•
Nurse call		•	•

• included in delivery
○ optionally available
□ optionally available, included in the ClinicSuite™ package

2008 Good Design Award of The Chicago Athenaeum, USA
Design Award of the Federal Republic of Germany 2010

300.960.000 | 10.13

All ® and ™ labelled brands and products are property of the company imtmedical and can not be used without written consent. Subject to changes.

imtmedical

imtmedical ag Gewerbestrasse 8 9470 Buchs Switzerland
T +41 81 750 66 99 www.bellavista-ventilator.com

MADE IN
SWITZERLAND