

VELA[®] ventilator

Comprehensive. Versatile. Proven.

Healthcare providers need solutions enabling them to deliver quality patient care. The VELA[®] ventilator empowers clinicians with a comprehensive range of modalities for pediatric and adult patients.



Advancing ventilation technology with an all-in-one solution

In busy hospitals where versatility is critical, the VELA ventilator empowers clinicians with a comprehensive range of modalities for pediatric and adult patients requiring invasive or noninvasive ventilatory support. Whether in the emergency room, ICU or long-term care, the VELA ventilator has the performance capability and versatility to manage a broad range of patient care settings throughout the hospital.



Comprehensive

- Invasive and noninvasive critical care ventilator
- Pediatric through adult applications
- Advanced settings to treat the most difficult-to-ventilate patient
- Multiple noninvasive modes with automatic leak compensation to provide more ventilatory support options
- Dual-limb noninvasive ventilation helps eliminate CO₂ and rebreathing of exhaled gases
- Apnea backup ventilation with user-selectable breath type
- Intuitive user interface facilitates use
- Integrated end-tidal capnography monitoring

Versatile

- Performs multiple applications from the emergency room to critical care and sub-acute settings
- Operates independent of air sources for greater flexibility
- Portable unit allows patients to stay on NIV therapy during transport
- High pressure O₂ inlet with blender
- Low pressure O₂ inlet with accumulator
- Internal battery capacity of six hours
- Compatible with speaking valves

Proven

- Patented turbine technology with flow capabilities of 180 LPM
- Two-year warranty, with a five-year or 40,000-hour warranty on the turbine
- Accurate, integrated FiO₂ delivery, monitoring and alarms
- Complete 24-hour trended data of all patient parameters
- No scheduled maintenance of the turbine with a low cost of ownership

Intuitive operation

The Simple Touch™ user interface on the VELA ventilator reduces training time, produces consistency in method and enhances clinician confidence.

Mode

Visual display of current mode provides easy and flexible access to all modes of operation

User-selectable patient monitor values

Five monitored parameters selectable from 19 options display continuously on main screen

Main screen

Active matrix, full-color LCD touch-screen features scalable graphic displays

Ventilation settings

Ventilator settings display on all screens

Nebulizer

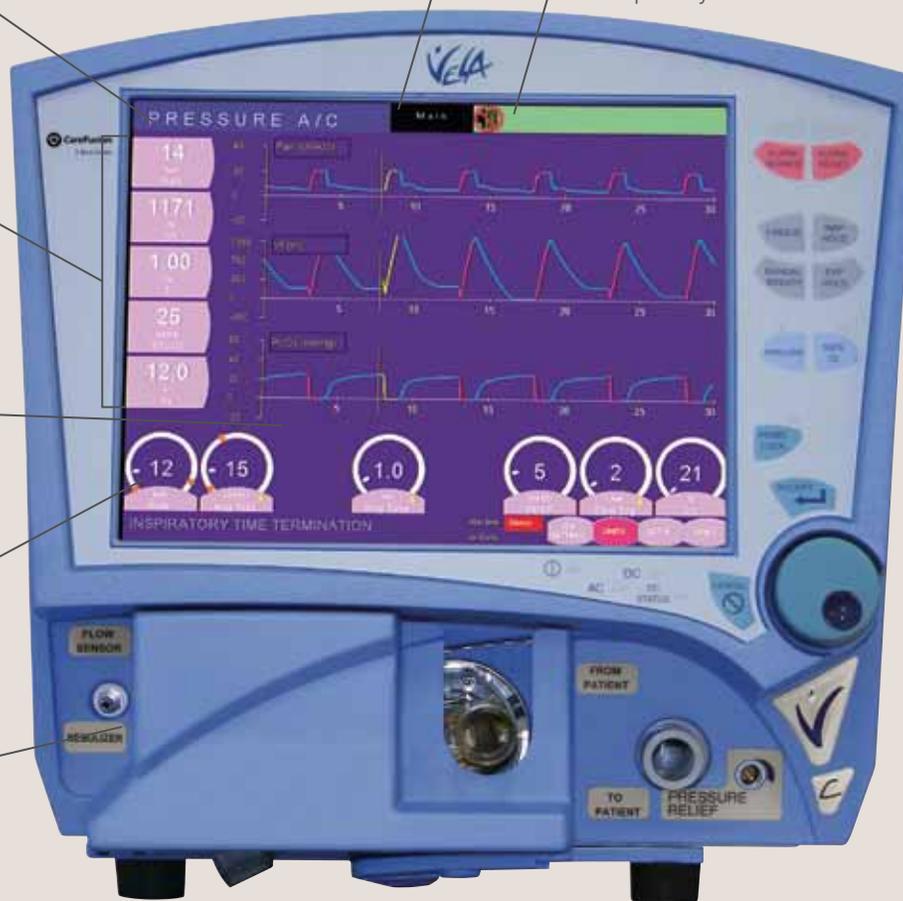
Synchronized on inspiration, nebulization time can be set in increments of one minute for up to 60 minutes

Main

Additional menus can be easily accessed from the main screen

Alarm message window

Alarm messages display visually with audible sound when active according to priority



Complete trended data

An intelligent, scalable display organizes minute-by-minute data into trended histograms and tables for all monitored parameters.



Dedicated monitoring screen

Configurable monitoring screen allows you to match your critical care documentation.



Advanced monitoring options

Integrated end-tidal capnography provides clinicians advanced monitoring to evaluate therapy and assess respiratory disease and airway placement.

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Comprehensive specifications



Setup	
Humidifier	Active and passive humidification
Patient setup	Alphanumeric patient ID
Leak compensation	ON, OFF

Mode	
Mode type	A/C, SIMV, CPAP/PSV, NPPV (AC, SIMV, CPAP/PSV), PRVC
Breath type	Volume, pressure, APRV/BiPhasic
Apnea backup	Volume, pressure

Primary settings	
Rate	2 to 80 bpm
Tidal volume	50 mL to 2.0 L
Inspiratory pressure	1 to 100 cmH ₂ O
Peak flow	10 to 140 L/min, (180 L/min spontaneous maximum)
Inspiratory pause	OFF, 0.1 to 2.0 seconds
Inspiratory time	0.3 sec to 10.0 seconds
Pressure support ventilation (PSV)	OFF, 1 to 60 cmH ₂ O
PEEP	0 to 35 cmH ₂ O
Flow trigger	1 to 20 L/min
%O ₂	21% to 100% FiO ₂
Pressure high/pressure low	0 to 60 cmH ₂ O/0 to 40 cmH ₂ O

Primary settings (continued)	
Time high/time low	0.3 to 30 seconds/0.3 to 30 seconds
NPPV P _{insp}	1 to 40 cmH ₂ O
NPPV PSV	OFF, 1 to 40 cmH ₂ O

Advanced settings	
Bias flow	10 to 20 L/min
Volume limit (available in PRVC/Vsync only)	50 mL to 2.5 L
Assured volume	OFF, 50 mL to 2.0 L
PC flow cycle	OFF to 70%
PSV cycle	5% to 70%
PSV T _{max}	0.3 to 3.0 seconds
Waveform	Decelerating, square
T high sync	0% to 50%
T high PSV	ON, OFF
T low sync	0% to 50%
Sigh	ON, OFF
Vsync	ON, OFF

Manual controls	
Manual breath	One breath
Expiratory hold	Maximum 6 seconds
Inspiratory hold	Maximum 6 seconds
Increase O ₂	100% O ₂ for 3 minutes
MIP/NIF	Maximum 30 seconds
Nebulizer	1 to 60 minutes, synchronized

Alarms	
High pressure	5 to 120 cmH ₂ O
Low pressure	OFF, 2 to 60 cmH ₂ O
Low minute volume	OFF, 0.1 to 99.9 L
High breath rate	OFF, 3 to 150 bpm
Apnea interval	10 to 60 seconds

Alarms continued on next page

Alarms (continued)	
Alarm volume	65 to 85 db at one meter
Low EtCO ₂ ¹	OFF, 1 to 150 mmHg (0.1 to 20 kPa)
High EtCO ₂ ¹	OFF, 5 to 150 mmHg (0.7 to 20 kPa)

Monitored parameters	
Vte	0 to 4,000 mL
Vti	0 to 4,000 mL
Spon Vt	0 to 4,000 mL
Mand Vt	0 to 4,000 mL
Ve	0 to 99.9 L
Spon Ve	0 to 99.9 L
Spon rate	0 to 250 bpm
Rate	0 to 250 bpm
Ti	0.01 to 99.99 seconds
Te	0.01 to 99.99 seconds
I:E	99:1 to 1:99
Ppeak	0 to 140 cmH ₂ O
Pmean	0 to 99 cmH ₂ O
PEEP	0 to 99 cmH ₂ O
O ₂ inlet	40 to 95 psi

Specifications subject to change without notice.
¹ Software activated, hardware to be purchased

WARNING: U.S. Federal Law restricts this device to sale by or on the order of a physician.

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 Yorba Linda, CA

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Monitored parameters (continued)	
FiO ₂	21% to 100%
f/Vt	0 to 500 (b2/min/L)
EtCO ₂ ¹	0 to 150 mmHg (0 to 20 kPa)

Connectivity
 Printer port, video output (VGA), nurse call, Generic Serial Protocol (GSP) and VOXP communication protocol

Battery power
 6 hours of ventilator operation from the standard internal battery

Electrical/pneumatic	
Oxygen input	
High pressure	40 to 85 psig (2.8 to 5.9 bar)
Low pressure	0.5 psig (0.03 bar) maximum
Electrical A/C	90 to 264 VAC, 47 to 65 Hz

Physical/environmental	
Temperature	
Storage	-20° to 60° C (-4° to 140° F)
Operating	5° to 40° C (41° to 104° F)
Barometric pressure	760 to 545 mmHg

Physical	
Weight	38 lb (17.2 kg)
Size	13''w x 12''h x 14.5''d (33.0 cm x 30.5 cm x 36.8 cm)

Advanced features
 NPPV leak compensation

Graphics	
Waveforms	Volume, pressure, flow
Loops	Flow / volume, pressure / volume

Gas blending system	
Air/oxygen blending	21% to 100%

Optional features
 Capnography

