

VITAE[®] 40

Advanced ventilation
in the palm of your hand



scale 1:1

FROM THE IDEA
TO THE PATIENT

 **HERSILL**
Medical Devices

Ventilation modes:

Volume:

- Volume Controlled ventilation:
VCV, VCV-ACV, VCV-SIMV, VCV-SIMV-PS⁽¹⁾
- Adaptive Pressure with Volume Guaranteed ventilation⁽¹⁾:
APVG, APVG-ACV, APVG-SIMV, APVG-SIMV-PS

Pressure:




- Pressure Controlled ventilation (+NIV):
PCV, PCV-ACV, PCV-SIMV, PCV-SIMV-PS (biPAP)⁽¹⁾
- Continuous Positive Airway Pressure & Pressure Support Ventilation:
CPAP (+NIV)
CPAP-PS (+NIV and ventilation in apnea) (PSV)⁽¹⁾
- Manual (Volume ventilation with manual trigger and configurable PEEP).

O₂ Flow (+ Capnography)

Suitable for standard oxygen-therapy and for HFOT (O₂ – Air blender: 3 - 80 L/min, 40 - 100 % FiO₂) and/or capnography

CPR (in accordance to ERC and AHA Guidelines):

- CPR ventilation:
CPR-PCV
- CPR assistants:

CPR Semi-Auto	CPR Auto	CPR Auto-Compressor
Assistant 30-2 / 15-2 with manual ventilation trigger and metronome	Assistant 30-2 / 15-2 with automatic ventilation trigger and metronome	Assistant with automatic ventilation trigger synchronized with an automatic chest compressor
		

Monitoring:

- Ventilation curves:
Real time: Pressure/time, Flow/time, CO₂/time⁽²⁾
Loops: Volume- Flow, Pressure-Volume, Flow-Pressure, VCO₂ (SBCO₂)⁽³⁾
- Ventilation trends:
Pip, VMe, Cdyn, EtCO₂⁽²⁾, V'CO₂⁽³⁾, V'alv⁽³⁾
- Ventilation parameters:
Pip, VTe, F, Fspont, VMe, VTi, InCO₂, EtCO₂, Pplat, Pavg, Cdyn, O₂ consumption, Leak rate (VTi vs VTe), Timer
- Volumetric capnography parameters⁽³⁾:
ViCO₂, VeCO₂, VCO₂, V'CO₂, VDaw, VDalv, VDphys, VD/VT, PACO₂, FECO₂, PECO₂, VD/VT (Bohr), Valv, V'alv
- FiO₂ (estimated)
- Alarms: Specific interface with dedicated buttons in the touchpad
- Battery level

Ventilation settings:

- Tidal Volume: 5 to 3000 (50 to 1500 mL in Volume modes)
- Ventilation frequency: 3 to 80/min
- I:E relation: 2:1 to 1:8
- PEEP: 0 to 25 mbar
- Inspiratory pressure: 5 to 60 mbar
- Maximum pressure: 5 to 60 mbar
- Pressure support: 5 to 60 mbar
- FiO₂: 40 to 100 % O₂ (increments 10%)
- Trigger: 1 to 15 L/min
- Inspiratory time: 0.4 to 5.0 s
- Inspiratory pause: 0 to 60%
- Ramp: 0.1 to 2.0 s
- Non invasive ventilation (NIV): No / Yes

- Inspiratory flow: max. 120 L/min
- Breathing circuits options: Reusable and single-patient, adult and pediatric
- Power supply: 10 - 30 V_{DC} (0.6 A)
Optional: AC/DC power supply (100 - 240 V /50 - 60 Hz)
- Gas supply: O₂ : 2.7 - 6.9 bar (internal gas consumption <0.1 L/min)
- Battery autonomy: Up to 12 hours (5 h internal batt.^(*) + 7 h Pluscel batt.⁽⁵⁾)
- Screen: TFT color 4.3" (95 x 54 mm), with night vision options
- Communications: Bluetooth, Wifi⁽⁴⁾
- Enclosure protection: IP44
- Size & Weight: 227 x 125 x 65 mm; 1.4 Kg (including battery)
- Fresh air intake filter: 0.65 µm (> 98% at 95 L/min)
- Maximum limited pressure protection device: 105 hPa (105 cmH₂O)
- Operation conditions: -20 to +50 °C, 0 - 95% humidity, up to 4000 m height (built in altimeter and thermometer for corrections)
- Mechanical strength: 30g (compliant with mechanical vibrations and impact for helicopters, fixed aircrafts and ambulances)
- EMC protection: Compliance with conducted and radiated test for helicopters, fixed wing aircrafts and ambulances
- Airworthiness: According to standards IEC, ISO, EN and RTCA D0-160G
- Lithium-free battery^(*): Internal battery in NiMH, free of reactive compounds compliant with new air transport regulations

Options

- ⁽¹⁾ Advanced ventilation modes • ⁽²⁾ Capnography (Masimo™ main stream)
⁽³⁾ Volumetric capnography • ⁽⁴⁾ Bluetooth and Wifi • ⁽⁵⁾ Pluscel battery (Lithium)

Designed in compliance with the new standard ISO 80601-2-84:2018 for emergency and transport ventilators.