

VITAE<sup>®</sup> 40

TRANSPORT AND EMERGENCY VENTILATOR

# Advanced ventilation in the palm of your hand





VITAE® 40

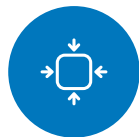
# Polyvalence that saves lives

From CPR on the field  
to the most complex transport



ERGONOMIC

All the control in the  
palm of your hand



COMPACT

227 x 125 x 65 mm



LIGHT

1.4 kg  
(with batteries)

VITAE® 40

# Ventilation and monitoring at ICU level

## Ventilation

VOLUME CONTROLLED	PRESSURE CONTROLLED
Controlled ventilation (VCV)	Controlled ventilation (PCV)
Assisted/Controlled (VC-A/C)	Assisted/Controlled (PC-A/C)
Synchronized Intermittent (VC-SIMV)	Synchronized Intermittent (PC-SIMV)
Synchronized Intermittent + Pressure Support (VC-SIMV-PS)	Synchronized Intermittent + Pressure Support (BIPAP)
Adaptive Pressure with Volume Guaranteed Ventilation (APVG) APVG + A/C APVG + SIMV APVG + SIMV + PS	Pressure Support Ventilation (PSV)
	Continuous Positive Airway Pressure (CPAP)
	Compensation for leakage Non-Invasive Ventilation (NIV)

## Monitoring

Estimated FiO <sub>2</sub>
Volumetric capnography (main stream, Masimo™)
Real-time ventilation curves
Loops and trends



### Assistants during CPR

Pressure-controlled ventilation with pre-configured settings and restrictions (CPR-PCV) during continuous cardiac massage

#### Assistants during CPR 30/2 or 15/2

##### CPR Semi-Auto:

Manual trigger of 2 breaths at the end of each massage cycle. Audible and visible metronome.

##### CPR Auto:

Automatic trigger of 2 breaths at the end of each massage cycle. Audible and visible metronome.

##### CPR Auto-Compressor:

Automatic trigger 1 of breath at the end of each massage cycle in a thoracic compressor

According to regulations:



Conventional and high flow oxygen therapy (up to 80 L/min)



Connectivity (Bluetooth)



RTCA / EUROCAE ED-14G

# VITAE® 40

## TECHNICAL DATASHEET



Designed according to the new ISO standard 80 601-2-84:2018 for emergency and transport ventilator.

### OPTIONS

- (1) Capnography (Masimo™ main stream)
- (2) Volumetric capnography
- (3) Pluscel battery (Lithium)
- (4) Bluetooth

### MONITORIZATION:

#### Ventilation curves:

Real time: Pressure/time, Flow/time, CO<sub>2</sub>/time<sup>(1)</sup>

Loops: Volume-Flow, Pressure-Volume, Flow-Pressure, VCO<sub>2</sub> (SBCO<sub>2</sub>)<sup>(2)</sup>

#### Ventilation trends:

Pip, VMe, Cdyn, EtCO<sub>2</sub><sup>(1)</sup>, V'CO<sub>2</sub><sup>(2)</sup>, V'alv<sup>(2)</sup>

#### Ventilation parameters:

Pip, VTe, F, Fspont, VMe, VTi, InCO<sub>2</sub>, EtCO<sub>2</sub>, Pplat, Pavg, Cdyn, O<sub>2</sub> Consumption, Leakage Index (VTi vs VTe), Timer

#### Volumetric capnography parameters<sup>(2)</sup>:

ViCO<sub>2</sub>, VeCO<sub>2</sub>, VCO<sub>2</sub>, V'CO<sub>2</sub>, VDaw, VDalv, VDphys, VD/VT, PACO<sub>2</sub>, FECO<sub>2</sub>, PECO<sub>2</sub>, VD/VT (Bohr), Valv, V'alv

#### FiO<sub>2</sub> (estimated)

**Alarms: Specific interface with dedicated buttons on the touchpad**

**Battery level**

### VENTILATION ADJUSTMENTS:

- Tidal volume: 5 to 3000 mL (50 to 1500 mL in VCV modes)
- Ventilation frequency: 3 to 80/min
- I:E relation: 5:1 to 1:8
- PEEP: 0 to 30 mbar
- Inspiratory pressure: 5 to 60 mbar
- Maximum pressure: 5 to 60 mbar
- Pressure support: 5 to 60 mbar
- FiO<sub>2</sub>: 40 to 100% O<sub>2</sub> (in 10% increments)
- Trigger: 1 to 15 L/min
- Inspiratory time: 0.1 to 16 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 circuit options:	Reusable, Disposable, Adult and Paediatric
Power supply:	12 V <sub>DC</sub> Optional: AC/DC (100 - 240 V / 50 - 60 Hz)
Consumption:	max. (battery charge)= 2.5 A (typical= 1 A (@ 12 V <sub>DC</sub> ))
Gas supply:	O <sub>2</sub> : 2.7 - 6 bar (internal gas consumption < 0.1 L/min)
Battery autonomy:	Up to 12 hours (5 h internal bat. <sup>(4)</sup> ) + 7 h Pluscel bat. <sup>(3)</sup> )
Display:	TFT colour 4,3" (95 x 54 mm), with night vision options
Communications <sup>(4)</sup> :	Bluetooth
Enclosure protection:	IP44
Dimensions and Weight:	227 x 125 x 65 mm; 1.4 Kg (including battery)
Fresh air inlet filter:	0.65 µm (> 98% at 95 L/min)
Overpressure limiting device:	105 hPa (105 cmH <sub>2</sub> O)
Operating conditions:	-20 to +50 °C, 0 - 95% humidity, up to 4600 m altitude (built-in thermometer and altimeter for corrections)
Mechanical strength:	30g (normative vibrations and impact for helicopters, airplanes and ambulances)
EMC protection:	Radiated and conducted tests of helicopters, airplanes and ambulances
Airworthiness:	In accordance with IEC, ISO, EN and RTCA standards
Lithium-free battery <sup>(4)</sup> :	Internal NiMH battery, without reactive compounds, compliance with new air transport regulations

# VITAE® 40 ACCESSORIES/ CONSUMABLES/ SPARES

## 01\_ BASIC CONFIGURATION

**VITAE®40** \_\_\_\_\_ **5200800**

Standard ventilation modes: VCV, VCV-ACV, VC-SIMV, PCV, PCV-ACV, PC-SIMV, CPAP, Manual. CPR modes (CPR assistants and CPV ventilation), Oxygen therapy (high flow), Patient circuit VITAE®40 – disposable adult, Ambulance supply cable, Batteries pack 6 x NiMH rechargeable, Oxygen therapy adapter (ref. 0220011)

Power hose O<sub>2</sub> (2m O<sub>2</sub> DISS) (\*) \_\_\_\_\_ 410005X

## 02\_ OPTIONS

Advanced ventilation modes (PSV + APVG) \_\_\_\_\_ 4200803

Advanced volumetric capnography \_\_\_\_\_ 4200804

Bluetooth \_\_\_\_\_ 4200962

AC-DC charger (\*) \_\_\_\_\_ 3200884

## 03\_ ACCESSORIES

External battery (Li-ion) \_\_\_\_\_ 4200981

Test Lung (1L) \_\_\_\_\_ 0142020

Oxygen regulator with 1m hose (P-300 P40 – 1m – DISS) (\*) \_\_\_\_\_ 55014XX

	 <p>Transport case VITAE®40 Ref.: 3200990</p>	 <p>Transport bag for cylinder 2/3 L (PAX) Ref.: 4200996</p>	 <p>Backpack transport Oxy Compact for VITAE®40 Ref.: 4200990</p>	
	 <p>Capnography (CO<sub>2</sub> analyser main-stream): IRMA CO<sub>2</sub>, airway adapter for IRMA and CO<sub>2</sub> monitoring Ref.: 4200802</p>	 <p>Wall support XG (30g) Ref.: 4320301</p>	 <p>Steerable XG clamp (0°-45°-90°) VITAE®40 Ref.: 4200972</p>	
	 <p>Double distributor DISS valve Ref.: 4200980</p>	 <p>MR850 Humidifier/ heater + temperature sensor + heating cable + adapter to bar Ref.: 0500540</p>	 <p>Oxygen regulator (P-300 P40 – With quick-release connection) (*) Ref.: 5501XXX</p>	
<p>Cart for VITAE®40 Accessories (not included): AC/DC, Cylinder up to 7L. Ref.: 4200860</p>				

(\*) Consult with us all available options.

Manual and interface available in English, French and Spanish (other languages please check availability).

# VITAE® 40 ACCESSORIES/ CONSUMABLES/ SPARES

## 04\_CONSUMABLES

Pack 10 Bacterial-viral filters (HMEF) – single use – paediatric \_\_\_\_\_ 4100501  
 Pack 10 Airway adapters for IRMA CO<sub>2</sub> - infant \_\_\_\_\_ 4100503



Patient circuit  
 VITAE®40 Reusable  
 adult  
 Ref.: 4200897



Patient circuit  
 VITAE®40 Reusable  
 paediatric  
 Ref.: 4200898



Patient circuit  
 VITAE®40 single use  
 adult  
 Ref.: 4200892



Patient circuit  
 VITAE®40 single use  
 paediatric  
 Ref.: 4200893



Pack 10 Bacterial-viral  
 filters (HMEF)  
 Disposable adult  
 Ref.: 4100500



Pack 10 Airway adapter  
 for IRMA CO<sub>2</sub>  
 Adult/paediatric  
 Ref.: 4100502



Oxygen therapy  
 and capnography kit  
 Ref.: 4200811



Pack 10 Optiflow circuit  
 kit for MR850  
 with humidification chamber  
 Ref.: 0500544



Pack 10 NIV face mask  
 Size S  
 Ref.: 4200041



Pack 10 NIV face mask  
 Size M  
 Ref.: 4200043



Pack 10 NIV face mask  
 Size L  
 Ref.: 4200045



Pack 10 high flow  
 nasal cannula Size S  
 Ref.: 4200040



Pack 10 high flow  
 nasal cannula Size M  
 Ref.: 4200042



Pack 10 high flow  
 nasal cannula Size L  
 Ref.: 4200044

## 05\_SPARES

Rechargeable NiMH battery \_\_\_\_\_ 3200851  
 Pack of 10 VITAE®40 air filters \_\_\_\_\_ 4200817  
 Ambulance supply cable \_\_\_\_\_ 3200885



**AS EASY TO USE  
AS BREATHING**



## MANUFACTURERS SINCE 1973

Puerto de Navacerrada, 3  
28935 Mostoles,  
Madrid, SPAIN

T: +34 91 616 6000  
info@hersill.com  
www.hersill.com

