VM-10 Rapid Intervention Capnograph







High degree of protection



Sound and light double alarm



Overview

The VM-10 veterinary end-respiratory capnograph is designed to provide continuous monitoring of the end-tidal CO2 concentration (EtCO2), capnography, and respiration rate (RR) of animals.









Features

Power supply: 2XAAA battery/lithium battery; Small but not simple, plug and play; Intelligent data transfer.



- High standard Accuracy CO2 measurement by dual wave length
- Splash proof and rugged design for use in harsh conditions
- 4 buttons for convenient settings adjustments, alarm pause and power on/off
- · Adjustable Sweep speed
- Selectable units mmHg, kPa, %
- · Apnea detection and adjustable
- Configurable alarms for Respiration rate alarm, EtCO2 high and low, clogged or missing adapter
- · Low battery indicator

- · Visual and audible (buzzer) alarm
- Real-time Capnogram display
- Up to 4 hours continuous use
- Large animals and small animals airway adapters
- · Ultra lightweight
- · No annual routine calibration required
- Support english, italian, french, hungarian, polish (other language upon request)
- Bluetooth connectivity to export real time data











Specifications -

Mechanical and Environment

Dimensions	60 x 47 x 43 mm (2.36 x 1.85 x 1.69 inches)
Weight	\sim 80 g (complete device with batteries), < 350grs with transport pouch.
Mechanical robustness	Meets the shock and vibration requirements for transport of SS-EN ISO 21647:2004 clause 21.102
Temperature and Humidity	Operating: -5 to 50°C, 10 to 90% RH, non-condensing Storage: -30 to 70°C, <90% RH, non-condensing
Atmospheric pressure	70 - 120 kPa

EtCO2 Measurement

Transducer Type	Mainstream CO2 Monitor		
Measuring method	Dual-wavelength, non-dispersive infrared spectroscopy		
Initialization Time	Capnogram, displayed within few seconds at an ambient temperature of 25°C, and full specifications within 1-2 minutes especially if temperature below 15°C		
CO2 Measurement Range	0 to 99 mmHg, 0 to 9.9%, 0 to 9.9 kPa		
CO2 Accuracy	±(0.2% + 2% of reading)		
Total system response time	< 1s		
Calibration	No routine user calibration required. An airway adapter zero is required when changing to a new airway adapter		
Recovery time after defibrillator test	Unaffected		

Respiration Rate Measurement

Respiratory rate Range	0~150 Breaths Per Minute (BPM)
Respiration Rate Accuracy	±1BPM
Breath detect	Adaptive threshold, minimum 1 % CO2 change
Airway Adapters	< 5 cc dead space (large animals), < 1 cc dead space(small animals)

Animals Machin Interface

Display	Active OLED color graphic display, 65 000 colors, 128 x 128 pixels Multi-languages(English, French, Italian, Hungarian, polish and more to be supported)
Front Panel Buttons	4 buttons: power on/off, alarm pause, up/down selection
Alarms	No Adapter, Clogged Adapter, No Breath Detected, High AwRR, Low ETCO2, High ETCO2, Temperature out of range, Atmospheric pressure is over operating range, Low Battery

Power Specifications

External Supply	None
Power Consumption	TBD
Batteries	Two AAA Cell batteries (2x1.5VDC): Alkaline IEC:LR03 or Energizer Ultimate Lithium L92 batteries. Use of other Lithium batteries may present a risk of fire or explosion
Battery life time	Duracell Plus Alkaline: ~4 hours Energizer Ultimate Lithium L92: ~7 hours

Regulatory Compliance

Certificate	CE
Standards compliance	IEC 60601-1:2012 IEC 60601-1-8:2012 IEC 60601-1-12:2014 ISO 80601-2-55:2018

Interfaaces

Part Number	Designation		Included with device
CapnoCOP	CapnoCOP module	1	
M401D-AL	Disposable Large animal airway adapter	1	
M401D-N	Small animal airway adapter	1	
RIC-P	Pouch	1	+
RIC-L	Lanyard	1	
RIC-LI	Lithium battery	1	(contain)

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^{*} The data is subject to change without notice. Please refer to the manual for the contraindications and precautions