



RICap Rapid Intervention Capnograph



ZUG[®]
MEDICAL SYSTEMS



OVERVIEW

RICap CO2 Monitor is intended to provide continuous monitoring of end tidal CO2 concentration (EtCO2), Capnogram, Respiration Rate (RR) of adult, paediatric and infant patients.

As a life saving device during Rapid Intervention, RICap finds its place in emergency departments just as much as in perioperative departments, spot check for both intubated and non-intubated patients, and during transport not only in ambulances but even within the hospital. Splashproof, lightweight and fitting in the palm of a hand, starting up within seconds, it is an excellent device that can be used directly by both ALS and BLS providers.

RICap waveform allows a quick evaluation of the patient respiratory distress help healthcare personnel for a rapide intervention.



INTERFACES

- 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 3.5 hours continuous use
- Adult and neonatal 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



TECHNICAL CHARACTERISTICS

Mechanical and Environment

Dimensions	60 x 47 x 43 mm (2.36 x 1.85 x 1.69 inches)
Weight	~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 (adult/Pediatric), < 1 cc dead space(infant)

Human Machine 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

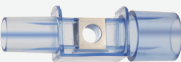
Power Specifications

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	MDD 93/42/EEC EN 60601:1990, Amendment 1 (1991), Amendment 2 (1995) EN 60601-1-2:2001 EN 60601-1-8:2004 EN ISO 21647:2004 EN ISO 5356-1:2004 EN 1789:2007
Box content	RICap capnograph, adult and neonate airway adapters, lanyard and pouch

INTERFACES

Part Number	Designation		Included with device
RICap®	RICap® module	1	
M401B-A	Disposable Adult airway adapter	1	
M401B-N	Neonate airway adapter	1	
RIC-P	Pouch	1	
RIC-L	Lanyard	1	
RIC-B	AAA battery	1	(not provided)