

EMMA™ Emergency Capnometer



World's smallest CO₂ monitor for any clinical situation

PHASEIN's in-house tradition and expertise in gas analysis systems has led to development of the world's first self-contained, real time respiratory gas analyzer for CO₂ monitoring in emergency transport, emergency care, intensive care and other clinical settings.

A self-contained Capnometer

EMMA Emergency Capnometer is designed using the latest advances in component and microprocessor technology to provide a self-contained, fully quantitative capnometer with unique versatility and design. EMMA Emergency Capnometer uses the IRMA mainstream technology in order to precisely determine end-tidal CO₂ concentrations and respiratory rate.

Battery operated

EMMA Emergency Capnometer is battery operated and offers twelve hours of normal use with two standard AAA lithium batteries for unparalleled mobility and convenience.

Increased patient safety

EMMA Emergency Capnometer is a fully quantitative capnometer. The accuracy of all measurement values is according to the requirements of the ISO 21647 standard for respiratory gas monitors. EMMA Emergency Capnometer is designed to make CO₂ and RR monitoring possible in all ventilatory and CPR events.

Alarms

The EMMA Monitor model is available with both audible and visual alarm system for No Breath Detected, No Adapter, Check Adapter, and adjustable high and low end-tidal CO₂ alarm. A highly visible bar graph provides feedback on CO₂ concentration, breathing activity or alarm situations.

Economy

EMMA Emergency Capnometer is built with IRMA mainstream technology inside and does not require any routine calibration thus reducing operating expenses.

Rugged design

EMMA Emergency Capnometer has a rugged, shock resistant and water resistant design to provide the user with a reliable monitor for emergency situations. EMMA Emergency Capnometer is designed in accordance with the requirements of the EN 1789:2007 standard for Road Ambulances.

Easy to use

Simply turn on the power, connect to an ET-tube, respiratory bag or breathing circuit and start measuring.

We call it PLUG-IN and MEASURE...™

Technical Specifications



General

Description: Compact, battery powered, fully quantitative capnometer for mainstream CO₂ and RR monitoring in emergency transport, emergency care, intensive care and other clinical settings.

Measurements: Non-dispersive IR absorption.

Models: EMMA Analyzer (non-alarm).

EMMA Monitor (full-alarm).

Versions: CO₂ displayed in kPa or mmHg.

Warm up: In operation and full accuracy within 5 sec.

Calibration: No routine calibration required.

Certifications: CE marked according to the 93/42/EEC MDD, FDA 510(k) and UL/CSA 60601-1.

Dimensions: 52 x 39 x 39 mm (2.1 x 1.5 x 1.5 inches).

Weight: 53 g (1.9 oz) with lithium batteries, 60 g (2.1 oz) with alkaline batteries.

Shock resistant design: Withstands repeated 1 m drops.

Environment

Operating: -5 to 50 °C (23 to 122 °F).

Storage: -30 to 70 °C (-22 to 158 °F).

Humidity: 10 - 95 %, non-condensing.

Atm.pressure: 70 -120 kPa.

Displays

ETCO₂: LED Numeric Display.

Respiratory Rate: LED Numeric Display.

Momentary CO₂: 14 segment LED bar graph.

Battery status: LED indicator.

Alarm status: LED indicator.

Controls

Power: ON key.

Alarm silence: 2 min. alarm silence key (EMMA Monitor).

ETCO₂: Up/Down key for setting alarm limits (EMMA Monitor).

Self test: Automatic initial check at power on.

CO₂

Range: 0 - 9.9 kPa / 0 - 99 mmHg.

Accuracy: ±0.3 kPa / ± 2 mmHg or ±6 %_{REL} during standard conditions.

Rise time: ≤ 60 ms.

Respiratory rate (RR)

Range: 3 - 150 breaths/min.

Accuracy: ±1 bpm.

Breath detect: Adaptive threshold, minimum 1 kPa CO₂ change.

EMMA Airway Adapters

Adult/Pediatric: 6 ml dead space.

Infant: 1 ml dead space.

Indicators and Alarms

EMMA Analyzer: Indicators for: No Adapter, Check Adapter, No Breath Detected, Low Battery.

EMMA Monitor: Alarms for: No Adapter, Check Adapter, No Breath Detected, Low Battery, Low ETCO₂, High ETCO₂.

Power requirements

Batteries: Two (2) AAA Cell Alkaline or Lithium batteries (2x1.5VDC) (IEC Type LR03).

Battery life time: Alkaline: 8 hours of normal use. Lithium (non-rechargeable): 12 hours of normal use.

Standards

General: EN 60601-1:1990, type BF

Respiratory Gas: EN ISO 21647:2004

Moisture protection: IEC 60529:1989 class IP 33

Transport: EN1789:2007

Data subject to change without notice



EMMA Analyzer
(non-alarm)
CAT.NO. 601100 (kPa)
CAT.NO. 601102 (mmHg)



EMMA Monitor
(full-alarm)
CAT.NO. 605100 (kPa)
CAT.NO. 605102 (mmHg)



EMMA Airway Adapter
Adult/Pediatric
Box of 25
CAT.NO. 100620



EMMA Airway Adapter
Infant
Box of 10
CAT.NO. 100660



EMMA Pouch
Box of 10
CAT.NO. 100680



EMMA Lanyard
Bag of 10
CAT.NO. 100684