

Effective capnography monitor

With Respironics CO₂ and SpO₂ (standard or optional Nellcor), the Echo CO₂ provides effective continuous, long-term capnography monitoring. It is tailored for mechanically ventilated and non-intubated patients.

- » 5.7" high resolution display for easy reading
- » Lightweight, portable design and user-friendly interface for easy operation
- » Flexible configurations to meet many clinical needs
- » Respironics Loflo sidestream or CAPNOSTAT 5 EtCO₂ mainstream measurement
- » SpO₂ (standard or optional Nellcor Oximax)
- » Real-time parameters measurement display with trend table for easy reviewing
- » Built-in rechargeable Lithium-ion battery for 10 hours of continuous use
- » Bi-directional communications with central station via wired or wireless network
- » Suitable for adult, pediatric and neonatal patients
- » Also includes: Powerful storage capacity, nurse call, and PR measurement



Echo CO₂ with Sidestream CO₂

- » Compact design
- » Unique bracket for CO₂ module
- » No need for water trap
- » Low sample velocity of flow, suitable for neonatal patients (50mL/min)
- » No need to calibrate at a regular basis
- » Filter tip to obstruct the water vapor from contamination
- » Suitable for adult, pediatric and neonatal patients

Echo CO₂ with Mainstream CO₂

- » No need to calibrate on a regular basis
- » Suitable for traditional breathing machine
- » Short warm-up time

One-Button-Switch

Fast and easy access via a single push-button that turns on and off CO₂ measurement. This gives the doctor more time with patients and reduces time spent operating the monitor.

Available with specially designed sensors that can support Immersion Disinfection/ Lens Hood, featuring Nellcor Oximax as an option. Suitable for most clinical tests covering adult, pediatric and neonatal patients.



Technical Specifications

Classification

- » Anti-electroshock type Class I equipment and internal powered equipment
- » EMC type Class A
- » Anti-electroshock degree
- » SpO₂; BF Defibrillation type; TEMP; CF type.
- » Ingress Protection: IPX1 (W/O Temp module) IPX0 (with Temp module)

Specifications

Size and Weight

- » Size: 200.8 mm (L) 41 mm (H) 89 mm (D)
- » Weight: 3 kg

Display

- » 5.7" color TFT resolution (640 x 480)

Power Supply

- » 100 - 240 VAC, 50/60Hz
- » Pmax=70VA FUSE T 1.6AL

Battery

- » Type: Lithium-ion
- » Voltage: 14.8 V DC
- » Capacitance: 4,400 mAh
- » Working period, Color TFT: 480 mm
- » Rechargeable period < 360min

Recorder (Optional)

- » Built-in thermal array: 3 channels
- » Paper Width: 48 mm
- » Paper Speed: 25mm/s

SpO₂ (Standard)

- » Measuring Range: 0 ~ 100 %
- » Alarm Range: 0 ~ 100 %
- » Resolution: 1 %

Accuracy

Adult (including Pediatric):

- » ±2% (70%~100% SpO₂)
- » Undefined (0~70% SpO₂)

Neonate

- » ±3% (70%~100% SpO₂)
- » Undefined (0~70% SpO₂)

Pulse Rate

- » Measuring and Alarm Range: 30 ~ 300 bpm
- » Resolution: 1 bpm
- » Accuracy: ±3 bpm
- » Data update period: 2s
- » ISO 9919

SpO₂ (Option, by Nellcor OxiMax)

- » Measuring Range: 1 ~ 100 %
- » Alarm Range: 1 ~ 100 %
- » Resolution: 1 %

Accuracy

Adult (including pediatric)

- » ±2% (70%~100% SpO₂)
- » Undefined: (0~70% SpO₂)

SpO₂ (Option, by Nellcor OxiMax) continued

Neonate:

- » ±3% (70%~100% SpO₂)
- » Undefined: (0~70% SpO₂)

Pulse Rate

- » Measuring and Alarm Range: 20~300 bpm
- » Resolution: 1 bpm
- » Accuracy: 3 bpm

Respirics CO₂

Mainstream option

CO₂ Measurement Range

- » 0 to 150 mm Hg,
- » 0 to 19.7%, 0 to 20 kPa (at 760 mm Hg)

Rise Time

- » Less than 60 ms - Adult / infant
- » Reusable or Single Patient Use
- » Airway Adapter

CO₂ Resolution

- » 0.1 mm Hg 0 to 69 mm Hg
- » 0.25 mm Hg 70 to 150 mm Hg

CO₂ Accuracy

- » 0 - 40 mm Hg ±2 mm Hg
- » 41 - 70 mm Hg ±5% of reading
- » 71 - 100 mm Hg ±8% of reading
- » 101 - 150 mm Hg ±10% of reading
- » Above 80 bpm ±12% of reading

CO₂ Stability

- » Short Term Drift: Drift over four hours shall not exceed 0.8 mm Hg max.
- » Long Term Drift: Accuracy specification will be maintained over a 120-hour period.

Respiration Rate Accuracy: ±1 breath

Calibration

- » No routine user calibration required.
- » An airway adapter zero is required when changing to a different style of airway adapter.

Water Resistance

- » IPX4-Splash-proof (sensor head only)

Shock Impact

- » EN60068-2-6 Sinusoidal Vibration
- » EN60068-2-27 Shock
- » EN60068-2-64 Random Vibration
- » Able to withstand repeated 6-foot drops onto tiled floor while operating

Sidestream option

Sample Rate: 50 mL/min

CO₂ Measurement Range

- » 0 to 150 mm Hg, 0 to 19.7%, 0 to 20 kPa (at 760 mm Hg).
- » Barometric Pressure supplied by Host

Respirics CO₂

Sidestream continued

CO₂ Resolution

- » 0.1 mm Hg 0 to 69 mm Hg
- » 0.25 mm Hg 70 to 150 mm Hg

CO₂ Accuracy

- » 0 - 40 mm Hg ±2 mm Hg
- » 41 - 70 mm Hg ±5% of reading
- » 71 - 100 mm Hg ±8% of reading
- » 101 - 150 mm Hg ±10% of reading
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CO₂ Stability

- » Short Term Drift: Drift over four hours shall not exceed 0.8 mm Hg max.
- » Long Term Drift: Accuracy specification will be maintained over a 120-hour period

Respiratory Rate Range: 2 to 150 bpm

Respiratory Rate Accuracy: ±1 breath

Sample Cell/Filter

- » Proprietary single patient use sample cell and inline filter are integrated with the sample line which eliminates contamination of the internal system

Nasal Sampling Kits for Non-intubated Patients

- » Adult, pediatric and infant nasal CO₂ sampling, nasal CO₂ sampling and O₂ delivery
- » Adult and pediatric nasal/oral CO₂ sampling, nasal/oral CO₂ sampling and O₂ delivery

On-Airway Adapter KITS for Intubated Patients

- » Adult/Pediatric with and without dehumidification tubing Pediatric/Infant, low dead space, with and without dehumidification tubing
- » Taper meets ISO 5356-1

Sample Kit Hours of Use

- » Nasal Cannula (all styles) — up to 12 hours
- » On-Airway Adapter Kits without dehumidification tubing — up to 12 hours

Sample Cell Detection

- » Insertion automatically turns sampling pump on. Removal automatically turns sampling pump off.

Water Resistance IPX4 -Splash-proof

(when sample cell is inserted in sample cell receptacle)

Shock Impact

- » IEC TR 60721-4-7 Class 7M3 (designed to withstand environments subject to significant vibrations or high shock levels)
 - » EN60068-2-27 Shock
 - » EN60068-2-64 Random vibration
- Specifications subject to change without notice.