

# CO<sub>2</sub>SMO®

## Capnograph/Pulse Oximeter



CO<sub>2</sub>SMO® is a lightweight, portable monitor which verifies critical ventilation and oxygenation information in virtually any clinical setting: from EMS, ED, and transport to continuous monitoring in the OR, ICU, or procedural sedation.

### Capnograph

- Utilizes the CAPNOSTAT® mainstream CO<sub>2</sub> sensor with patented solid state design and standard two year warranty.
- Designed for hassle-free performance in both prolonged and spot check monitoring situations, even under the most adverse airway conditions.
- Monitors both intubated and non-intubated patients.
- Convenient "On-Cable" accuracy verification eliminates the need for bulky calibration gas cylinders.

### Pulse Oximeter

- Advanced digital technology provides superior performance in conditions of low perfusion or motion artifact.
- Innovative, reusable Y-Sensor™ can be sterilized and used with all patient populations.
- Unique sensor management plan guarantees fixed operating costs and practically eliminates the burden of tracking and handling sensors.
- On-screen plethysmogram and Signal Strength Bar aid in determining optimum sensor placement.

# CO<sub>2</sub>SMO<sup>®</sup> Technical Specifications

## Capnograph

<b>Principle of Operation</b>	Solid state mainstream sensor. Single beam, non-dispersive infrared (NDIR) absorption, ratiometric measurement
<b>Initialization Time</b>	Capnogram within 15 seconds, full specifications within 60 seconds
<b>Calibration</b>	Routine calibration is not required. 15 second adapter zero performed when changing to different style of adapter.
<b>Accuracy Verification</b>	Accuracy verifier provided on sensor cable
<b>Capnostat<sup>®</sup> Mainstream CO<sub>2</sub> Sensor</b>	
Size:	1.30" H x 1.67" W x .85" D (3.30 x 4.24 x 2.16 cm)
Weight:	.64 oz (18 gm) – cable excluded
Shock Resistance:	Withstands repeated 6 ft drops
<b>Airway Adapters</b>	Adult/pediatric reusable or single patient use (added dead space <5.0 cc), neonatal reusable (added dead space <0.5 cc) and sampling adapter for non-intubated patients
<b>Sampling Flow Rate</b>	180 ml/min (for non-intubated patients)
<b>CO<sub>2</sub> (Carbon Dioxide)</b>	
Compensations:	N <sub>2</sub> O & O <sub>2</sub> (selectable), BP (automatic)
Capnogram:	Selectable sweep speed (12.5 or 25 mm/sec)
Range:	0 – 100 mm Hg
Accuracy:	±2 mm Hg (for 0 – 40 mm Hg) ±5% of reading (for 41 – 70 mm Hg) ±8% of reading (for 71 – 100 mm Hg)
Resolution:	1 mm Hg
Response Time:	60 ms
<b>Respiratory Rate</b>	
Accuracy:	±1 bpm
Range:	0 – 150 bpm
Resolution:	1 bpm

## Pulse Oximeter

<b>Principle of Operation</b>	Red/Infrared absorption
<b>SpO<sub>2</sub> (Oxygen Saturation)</b>	
Range:	0 – 100%
Accuracy:	±2% SpO <sub>2</sub> (for 80 – 100% SpO <sub>2</sub> ) (1 SD, or 68% of readings within claim) Unspecified for 0-79% SpO <sub>2</sub>
Resolution:	1%
Averaging:	Menu selectable, 2 or 8 seconds
Audio:	Pitch of pulse tone varies with SpO <sub>2</sub> value
<b>Pulse Rate</b>	
Range:	30 – 250 bpm
Accuracy:	±1% of full scale
Resolution:	1 bpm
Averaging:	8 seconds
<b>Sensors</b>	Reusable Y-Sensor™ (can be sterilized and used with all patient populations); reusable adult finger sensor
<b>Plethysmogram</b>	Pulsatile waveform with autogain on/off selection

## General

<b>Alerts</b>	
Limits:	Adjustable limits for ETCO <sub>2</sub> , SpO <sub>2</sub> , Respiratory and Pulse Rates
Audio:	Adjustable volume, 2 min. silence or OFF (LED indicators)
Visual:	On-screen & red "Alert Bar"
<b>Display</b>	
Type:	Dot matrix, Cold Cathode Display (CCD)
Size:	5" W x 1.5" H (12.7 x 3.08 cm)
<b>Graphic Trend/Histogram</b>	
Memory:	24-hr battery backed
Format:	On-screen or printed, in 30 min., 2, 8, or 12-hr segments
<b>Communication Output</b>	
Digital:	RS232 (printer, NovaCARD™, computer interface)
Analog:	Optional module, 0-1VDC (numerics & waveforms)
<b>Physical</b>	
Size:	3.3" H x 9.0" W x 8.0" D (8.38 x 22.86 x 20.32 cm)
Weight:	8 lb (3.63 kg)
<b>Electrical</b>	
Power Requirements:	100 – 120/200 – 240 VAC, 50-60 Hz, 30 VA
Battery:	Sealed lead acid gel cell, 2-hr life, 12-hr recharge
<b>Environmental</b>	
Operating Temperature:	50 – 104° F (10 – 40° C)
Operating Humidity:	0 – 90% relative (non-condensing)

### Stand-alone Capnograph Configuration

The CAPNOGARD™ capnograph has the same technical specifications as the CO<sub>2</sub>SMO, excluding the pulse oximeter.



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CAUTION: U.S. federal law restricts this device to sale by or on the order of a physician.

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