

## Pulse Oximeter with Capnograph Model 3800



### Pulse Oximeter Features

- 20 feet Fiber Optic Sensor (non-magnetic) avoids potentially hazardous heating or image artefacts during MR Scans
- Suitable for use in 0.5 to 3 Tesla MRI environment
- Built-In Rechargeable Battery back-up of 8 hours (Pulse Oximeter) & 4 hours (with Capnograph)
- Alarms (Audio & Visual) for alarm limit violations

### etCO<sub>2</sub> (Capnography) Features

- Sidestream Sensor (LoFlo)
- 50ml Sampling rate CO<sub>2</sub> sensor that provides consistent and reliable CO<sub>2</sub> monitoring of adult, paediatric and neonatal patients
- Useful in monitoring the effects of pain-controlled analgesia, monitoring respiratory efforts during procedural sedation
- Supplied with 12 ft Sampling Lines



### Pulse Oximeter with etCO<sub>2</sub> (Capnography)



Emco Meditek has been manufacturing MRI Compatible Pulse Oximeters since 2014, with an installation base all over India. Now comes the **MRI Compatible Pulse Oximeter with Capnograph 3800**, incorporating Nonin Medical (USA) SpO<sub>2</sub> & Respirationics (USA) CO<sub>2</sub> Technology



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# EMCO MEDITEK<sup>®</sup> PVT. LTD.

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# MRI Compatible Pulse Oximetry with etCO<sub>2</sub> (Capnography)

The EMCO 3800 is a table top monitor - MRI Compatible - to measure Pulse Oximetry & Capnography. The monitor is indigenously designed and manufactured with technology from world leaders in Capnography technology, **Respironics Inc., USA** & the **PureSAT** Signal Processing Oximetry Technology from **Nonin Medical Inc, USA**.

## Other Features

- Provides fast reliable etCO<sub>2</sub>, Respiration, SpO<sub>2</sub> and Pulse rate measurements on any patient, from **neonates to adults**
- User Selectable High & Low Alarm limits for all parameters
- User Selectable Alarm & Pulse Beep Volume
- Sealed Acid Rechargeable Battery with built-in charger. Charging Time is 8 hours.
- Battery back-up of a fully charged battery is 8 hours (Pulse Oximeter) & 4 hours (with Capnograph)
- Audible & Visual Low battery indication when 15 minutes remaining

### Model 3800C (Only Capno)



Also Available

## Technical Specifications

### Displays, Indicators & Keys

LED Display 0.4"	SpO <sub>2</sub> , Pulse Rate
LCD Display	240x64 pixels, STN, Transmissive, Negative, White LED Backlight, Viewing Area 132.6x39.0mm
	Display of Plethysmograph/Capnograph
	Display of Readings - etCO <sub>2</sub> , Respiration Rate, iCO <sub>2</sub>
	Display of Graphical Trends
LED	Battery, Charging
Keys	On/Off, Menu, Up, Down, Cancel, Waveform/Trend, Freeze, Silence

### Capnogram & Plethysmograph

Wave Speed	3.12, 6.25, 12.5, 25 mm/sec
Display type	Line or Fill
Wave Freeze	Scrolling available for previous 5 Screens
Averaging	Breath-to-Breath, 4 Breaths, 8 Breaths
Apnea	Delay of 10, 20 & 30 sec.

### CAPNOGRAPH SPECIFICATIONS

Sensor/Method	Sidestream (LoFlo) CO <sub>2</sub> Sensor
Principle of Operation	Non-dispersive Infrared (NDIR), Single Beam, Dual wavelength, no moving parts
Initialisation Time	Capnogram displayed in less than 20 seconds, at an ambient temperature of 25°C, full specifications within 2 minutes
Range (etCO <sub>2</sub> )	0 to 150 mmHg (0 to 19.7 %Vol, 0 to 20 KPa)(at 760mmHg)
Accuracy (etCO <sub>2</sub> )	±2 mmHg 0 to 40mmHg
	±5% of reading 41 to 70 mmHg
	±8% of reading 71 to 100 mmHg
	±10% of reading 101 to 150 mmHg
	±12% of reading Above 80bpm Respiration
Resp. Rate Range	2 to 150 breaths per minute (bpm)
Resp. Rate Accuracy	±1 breath
Resolution	1 bpm
Compensations	Host supplied - Barometric Pressure 400 mm Hg to 800 mm Hg Operator selectable - O <sub>2</sub> / N <sub>2</sub> O compensation
Calibration	No routine user calibration required

### Environmental Specifications

Temperature	0 to 45 deg. C (Operating), -40 to 70 deg.C (Storage)
Relative Humidity	10 to 90% (Operating), <90 % (Storage) Non-condensing
Barometric Pressure	400-800 mmHg (Operating), 375-795 mmHg (Storage)

Classification (IEC60601-1)	Type of Protection : Class I
	Degree of Protection : Type BF - Applied Part
	Mode of Operation : Continuous
	Degree of Ingress Protection : IPX1 (drip proof)

EMC & Safety Compliance IEC 60601-1; 60601-1-2; 60601-1-8, 80601-2-61

### OXIMETER SPECIFICATIONS

SpO <sub>2</sub> Range	0 - 100%	
Accuracy	Adult/Paediatrics	Neonates
	No Motion	±2 digits ±3 digits
	Motion	±3 digits ±3 digits
Low Perfusion	±3 digits ±3 digits	
	Averaging	4, 8, 16 beat - automatic
Pulse Rate Range	18 to 300 bpm (No motion)	
	40 to 240 bpm (Motion/Low Perfusion)	
Accuracy	Adult/Paediatrics	Neonates
	No Motion	±3 digits ±3 digits
	Motion	±5 digits ±5 digits
Low Perfusion	±3 digits ±3 digits	
Note : ±1 A <sub>rms</sub> represents approximately 68% of measurements		
Averaging	8, 16, 32 beat - automatic	
Pulse Beep	Tone changes with SpO <sub>2</sub> value	
Alarm & Beep Volume	User selectable in steps of 1 to 10	
SpO <sub>2</sub> Sensor	Fiber Optic Sensor - 20 feet (Adult/Paediatric/Neonate)	

### Common Parameters

Alarms	Sensor Disconnect, Limit Violation, Low Battery		
Alarm Silence	2 minutes & Permanent silence		
Alarm Ranges	High	Low	
	etCO <sub>2</sub> (mmHg)	1 to 150	0 to 149 (in 1mmHg steps)
iCO <sub>2</sub> (mmHg)	1 to 50	0 to 49, Off	(in 1mmHg steps)
Respiration (bpm)	5 to 150	0 to 145	(in 5 bpm steps)
SpO <sub>2</sub>	1 to 100% & OFF	0 to 100%	(in 1% steps)
Pulse	5 to 300 bpm	0 to 295 bpm	(in 5 bpm steps)

### Memory Trends (available on Display)

Past Trends of SpO<sub>2</sub>, Pulse Rate, etCO<sub>2</sub>, iCO<sub>2</sub> & Respiration Rate for 72 hours (3 days)  
Trends available on Display - 15min, 1hr, 2hrs, 4hrs & 8hrs  
Past Trends of 1000 Alarm Violations

### Power Requirements

Battery	Rechargeable Sealed Lead Acid Battery - 6V, 2.8Ah
Charging Time	8 hours
Battery Backup	8 hours (Oximeter), 4 hours (with Capnograph)
AC Mains	100~240 Vac, 50 Hz, 10VA Max.

### Dimensions

Width	Height	Depth	Weight
9.45"	3.35"	8.66"	2.9 kgs
(240mm)	(85mm)	(220mm)	(6.4 lbs)

Specifications subject to change without prior notice.



## EMCO MEDITEK® PVT. LTD.

**Factory :**  
Luna Road, Post Dabhasa,  
Taluka Padra, District Baroda - 391440, India  
Phone : +91-2662-223397, 9316614911  
E-mail : emcomeditek@gmail.com

**Head Office :**  
Unit No. 109, Vasan Udyog Bhavan,  
Off. Senapati Bapat Road, Lower Parel, Mumbai 400013  
Phone : +91-22-31823174, 9819901861  
E-mail : emeditek@emcomeditek.com  
Website : <https://www.emcomeditek.com>  
CIN : U32109MH1989PTC053525

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