

# EMCO

## MRI Compatible Monitor

### 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

#### 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 Oximetry & Capnography



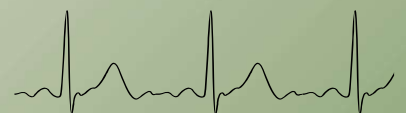
Emco Meditek has been manufacturing MRI Compatible Pulse Oximeters since 2014, with an installation base all over India. Now comes the **MRI Compatible Pulse Oximeter with Capnograph 3800**, incorporating Nonin Medical (USA) SpO<sub>2</sub> & Respirationics (USA) CO<sub>2</sub> Technology



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# EMCO MEDITEK<sup>®</sup> PVT. LTD.

An ISO9001 & ISO13485 Certified Company





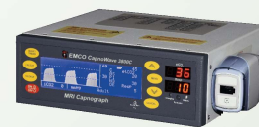
# MRI Compatible Pulse Oximeter with Capnograph

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  $\text{etCO}_2$ , Respiration,  $\text{SpO}_2$  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"	$\text{SpO}_2$ , Pulse Rate
LCD Display	240x64 pixels, STN, Transmissive, Negative, White LED Backlight, Viewing Area 132.6x39.0mm
	Display of Plethysmograph/Capnograph
	Display of Readings - $\text{etCO}_2$ , Respiration Rate, $\text{iCO}_2$
	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) $\text{CO}_2$ 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 $25^\circ\text{C}$ , full specifications within 2 minutes
Range ( $\text{etCO}_2$ )	0 to 150 mmHg (0 to 19.7 %Vol, 0 to 20 KPa)(at 760mmHg)
Accuracy ( $\text{etCO}_2$ )	$\pm 2$ mmHg 0 to 40mmHg $\pm 5\%$ of reading 41 to 70 mmHg $\pm 8\%$ of reading 71 to 100 mmHg $\pm 10\%$ of reading 101 to 150 mmHg $\pm 12\%$ of reading Above 80bpm Respiration
Resp. Rate Range	2 to 150 breaths per minute (bpm)
Resp. Rate Accuracy	$\pm 1$ breath
Resolution	1 bpm
Compensations	Host supplied - Barometric Pressure 400 mm Hg to 800 mm Hg Operator selectable - $\text{O}_2$ / $\text{N}_2\text{O}$ 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

$\text{SpO}_2$ Range	0 - 100%
Accuracy	Adult/Paediatrics Neonates
No Motion	$\pm 2$ digits $\pm 3$ digits
Motion	$\pm 3$ digits $\pm 3$ digits
Low Perfusion	$\pm 3$ digits $\pm 3$ 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	$\pm 3$ digits $\pm 3$ digits
Motion	$\pm 5$ digits $\pm 5$ digits
Low Perfusion	$\pm 3$ digits $\pm 3$ digits
Note : $\pm 1 A_{rms}$ represents approximately 68% of measurements	
Averaging	8, 16, 32 beat - automatic
Pulse Beep	
Pulse Beep	Tone changes with $\text{SpO}_2$ value
Alarm & Beep Volume	User selectable in steps of 1 to 10
$\text{SpO}_2$ 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
$\text{etCO}_2$ (mmHg)	1 to 150 0 to 149 (in 1mmHg steps)
$\text{iCO}_2$ (mmHg)	1 to 50 0 to 49, Off (in 1mmHg steps)
Respiration (bpm)	5 to 150 0 to 145 (in 5 bpm steps)
$\text{SpO}_2$	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  $\text{SpO}_2$ , Pulse Rate,  $\text{etCO}_2$ ,  $\text{iCO}_2$  & 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" (240mm)	3.35" (85mm)	8.66" (220mm)	2.9 kgs (6.4 lbs)

Specifications subject to change without prior notice.



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## EMCO MEDITEK® PVT. LTD.

### Head Office

EMCO Meditek Pvt. Ltd.,  
109, Vasan Udyog Bhavan, Off. Senapati Bapat Marg,  
Lower Parel, Mumbai - 400 013, India  
Tel : +91-22-24903653, 24923634  
Email : emeditek@emcomeditek.com  
Website : <http://www.emcomeditek.com>

### Factory

Emco Meditek Pvt. Ltd.  
Luna Road, Padra, Gujarat 391440, India  
Tel : +91-2662-223397, 223398  
Email : emcomeditek@gmail.com  
GSTIN : 24AAACE5991R1ZZ  
CIN : U32109MH1989PTC053525