

Capnography: Mainstream Sensor

Plug and Play Capnography

This mainstream sensor provides a cost-effective field upgradeable "plug-and-play" option to measure real-time CO₂ gas concentration (mmHg), End-tidal CO₂ (EtCO₂) volume and Respiratory Rate (RR) in intubated patients.

With a sampling rate of 100ml/min, this sensor provides rapid and accurate response time; allowing continuous and quantitative monitoring of pulmonary functioning, respiratory status and ventilation control.

Technical Specifications

Mode of Sampling

Mainstream Sensor

Principle of Operation

Absorption of infrared radiation by gas via noninvasive infrared optics (main absorption wavelength of CO₂ is 4260nm)

Sampling Rate

100 ml/min.

CO₂ Measurement Range

GAS volume percentage, 0 to 20%

CO₂ Resolution

0.1mmHg

CO₂ Measurement Accuracy

± (Volume Fraction of 0.43% + 8% of GAS Level)

Response Time

≤ 3 seconds (total system)

Rise Time

≤ 500 milliseconds

Respiratory Resolution

1 breath per minute (BPM)

Respiration Rate (RR) Range

0 to 150 breaths per minute (BPM)

Respiration Rate (RR) Accuracy

±1 breath per minute (BPM)

Calibration

No user calibration required

Airway Adapters (Reusable or Disposable)

Dead space is < 5cc (adult/pediatric), < 1cc (neonatal)

Interconnection

Standard LEMO 8-pin, plastic connector

Interference (gas and vapor effects)

Xenon (GAS Level 80) CO₂ value at 38mmHg (max. positive bias 5mmHg); Desflurane (GAS Level 15) CO₂ value at 38mmHg (max. positive bias 3mmHg); Unspecified Metered dose inhaler propellants (GAS Level and quantitative effects not specified); No additional effect Nitrous oxide (GAS Level 60); Halothane (GAS Level 4); Enflurane (GAS Level 5); Isoflurane (GAS Level 5); Sevoflurane (GAS Level 5); Helium (GAS Level 50); Ethanol (GAS Level 0.1%); Isopropanol (GAS Level 0.1%); Acetone (GAS Level 0.1%); Methane (GAS Level 1%)

Operating Conditions

0 to 40°C (ambient temperature); 15% to 85% (relative humidity); 86kpa to 106kpa (atmospheric pressure)

Storage Conditions

-10 to 40°C (ambient temperature); 15% to 85% (relative humidity); 86kpa to 106kpa (atmospheric pressure)

Water Resistance

IPX2

