

CLEO

VERSATILITY IN VITAL SIGNS



CLEO

PORTABLE

weighs less than 6lbs

TOUCHSCREEN

easy and intuitive to use

MOBILE

backup battery powered



The **Cleo** is a new and intuitive approach to patient vital signs measurement. The **Cleo** can be configured to measure any combination of: non-invasive blood pressure, SpO₂, rapid temperature, and capnography (EtCO₂).

Weighing in at less than 3 LBS the portable **Cleo** is well suited for any patient care area by offering a multitude of vital sign combinations. The **Cleo** can be used as a basic pulse oximeter or configured to a NIBP/SpO₂/Temp spot check monitor. **Cleo** can also be configured to be a stand-alone capnograph or combination capnograph/SpO₂/NIBP monitor. The **Cleo** is well suited for both bed side and mobile spot check use.

The **Cleo** simplifies clinician use by incorporating a touch screen with a simple user interface making the **Cleo** intuitive for any user. A long life lithium Ion battery is standard and many mobile mounting solutions are available for the **Cleo**.

Field Upgradeable THERMOMETER



Covidien Filac 2000™

Accurate within $\pm 0.3^{\circ}\text{C}$
Temperature Reading within 4 seconds

The **Covidien Filac 2000™** plug-in thermometer module can be installed into the Cleo anywhere and anytime. This simple plug-in module adds the option of a 4 second oral temperature reading brightly displayed on-screen. The **Filac 2000™** supports infection control by utilizing single use probe covers and a probe isolation chamber when not in use.

Cost Effective Capnography

CAPNOTRACK®



Infinium Capnotrack®

The **Infinium Capnotrack®** capnography system is a cutting edge low flow End-tidal CO₂ measuring system. The **Capnotrack®** uses a 50/ml per minute sidestream method to

deliver the most accurate EtCO₂ readings. Non-proprietary sample lines allows the **Cleo** to be the industry's lowest cost per patient End-Tidal CO₂ monitors. The **Capnotrack®** can be used on both intubated and non-intubated patients. The **Capnotrack®** sample line connection system uses filter cells to eliminate the potential of cross contamination.

Mounting Solutions

A RELIABLE CONNECTION



ROLLING STAND

Height and tilt adjustable with a large wheel base allows for smooth and stable mobility.

- Quick release slide mount
- Accessory basket
- Medical grade steel construction
- Lockable wheels



WALL MOUNTS

Height and tilt adjustable wall mounts offer.

- Quick release of monitor
- Medical grade construction
- Adaptable to anesthesia machines
- Adaptable to most wall rail systems

SAFETY

Meet the requirement of EN60601 series, CE marking according to MDD93/42/EEC

| | |
|--|---|
| Type of Protection: | Class I (on AC power) , internally powered equipment (on battery power):Per I.E.C. 60601-1, clause 2.2.4 |
| Degree of Protection: | Type BF, defibrillation-proof CF - Applied part |
| Sterilization or Disinfection methods: | 70% isopropyl alcohol solution or a nonstaining disinfectant. Equipment not suitable for use in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide |
| Operation Mode: | Continuous |
| Protection Against Ingress of Liquids: | IPX0 |

APPLICATION

Neonatal, pediatric and adult patients

PHYSICAL DIMENSIONS & WEIGHT

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|------------|----------------------------|
| Base Unit: | 8 x 4.5 x 4 (HxWxD inches) |
| Weight: | 2.5 LBS |

PERFORMANCE SPECIFICATIONS

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|-------------|--|
| Display: | 5.0 inch (Diagonal) color TFT |
| Resolution: | 800 x 3(RGB) x 480 |
| Trace: | 2 waveforms |
| Waveforms: | PLETH, ETCO2 |
| Indicator: | Alarm Indicator Power indicator Pulse beep and alarm sound |
| Trend time: | From 1 to 72 hours |

NIBP

| | |
|----------------------------------|---|
| Measuring Technology: | Automatic oscillating measurement |
| Cuff Inflating: | <30s (0 ~ 300 mmHg, standard adult cuff) |
| Measuring Period: | AVE<40s |
| Mode: | Manual, Auto, STAT |
| Measuring Interval in AUTO Mode: | 2 min ~ 4 hrs |
| Pulse Rate Range: | 30 bpm ~ 250 bpm |
| Measuring Range: | Adult/Pediatric Mode SYS: 40 ~ 250 (mmHg) DIA: 15 ~ 200 (mmHg) Neonatal Mode SYS: 40 ~ 135 (mmHg) DIA: 15 ~ 100 (mmHg) |
| Resolution: | 1mmHg |
| Pressure Accuracy: | Maximum Mean error: ±5mmHg |
| Maximum Standard deviation: | 8mmHg |
| Overpressure Protection: | Adult Mode: 280(mmHg) Neonatal Mode: 150 (mmHg) |
| Alarm Limit: | SYS: 50 ~ 240 mmHg DIA: 15 ~ 180 mmHg |
| Standards: | Meets performance standards of ANSI/AAMI SP10:2002 |

SpO2

| | |
|--------------------------|--|
| ASpO2: | Anti-motion SpO2 |
| SpO2% Range: | 0 ~ 100% |
| SpO2 Accuracy: | ±2% (70 ~ 100%, non-motion) ±3% (70 ~ 100%, motion) |
| Pulse Rate Range: | 30-250 bpm |
| Pulse Rate Accuracy: | ±2 bpm (non-motion), ±3 bpm (motion) |
| Alarm Upper-lower Limit: | Upper limit 70 ~ 100%, Lower limit 70 ~ 100% |
| SpO2 Probe: | Red light LED wavelength: 660nm±5nm Infrared light LED wavelength: 940nm±10nm |
| Standards: | Meets performance standards of EN ISO 9919:2005 |

RAPID TEMPERATURE (OPTION)

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|--------------------------------|---|
| Temperature Measurement Range: | 30°C to 43°C (86°F to 109°F) |
| Typical Measurement Times: | Oral (Quick Mode): 3-5 seconds (non-fever temps), 8-10 seconds (fever temps) <i>(after insertion into measurement site):</i> Oral (Standard Mode): 6-10 seconds Axillary Mode: 8-12 seconds Rectal Mode: 10-14 seconds Direct Mode (All Sites): 60-120 seconds |
| Pulse Timer: | 60 Second count with a "beep" at 15 seconds, 2 "beeps" at 30 seconds, 1 "beep" at 45 seconds, and 2 "beeps" at 60 seconds |
| Patient Accuracy: | A Standard Prediction Mode reading and a Direct Mode reading will differ by less than ±0.2°C (±0.4°F) on 98% of tested patients |
| Batteries: | Four "AA" Required. Standard IEC package size. Alkaline --1.5 Volt Approx. 6000 temperature readings |
| Standards: | Meets performance standards of EN 12470-3:2000, ASTM E1112:2006 |

ETCO2 (OPTION)

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|---------------------------------|---|
| Mode of Sampling: | Sidestream or Mainstream |
| Principle of Operation: | Non-dispersive infrared (NDIR) single beam optics, dual wavelength, no moving parts. |
| CO2 measurement Range: | 0 to 150 mmHg (0 to 19.7%, 0 to 20 kPa) |
| CO2 Calculation Method: | BTPS (Body Temperature Pressure Saturated) |
| CO2 Resolution: | 0.1mmHg (0-69mmHg), 0.25mmHg (70-150mmHg) |
| CO2 Accuracy: | 0 ~ 40 mmHg ± 2 mmHg 41 ~ 70 mmHg ± 5% of reading 71 ~ 100 mmHg ± 8% of reading 101 ~ 150 mmHg ± 10% of reading Above 80 breath per minute ± 12% of reading |
| Sampling rate: | 100Hz |
| Respiration Rate: | 2 ~ 150 bpm |
| Respiration Rate accuracy: | ±1 breath |
| Response Time: | <3 seconds - includes transport time and rise time |
| Inspired CO2 measurement Range: | 3 ~ 50 mmHg |
| Standards: | Meets performance standards of ISO/FDIS 21647:2004 (E), ASTM F1456-01, IEC/CDV 60601-2-55 |

NETWORKING

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|----------------------|--|
| Wired Networking: | Industry standard: 802.11b/g wired network Frequency Range: 2.412 ~ 2.484 GHz Connected bedside number: Up to 16 bedside monitors |
| Wireless Networking: | Up to 100m indoors Industry standard 802.11b/g wireless Supports TCP/IP and UDP/IP Protocols |

POWER

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|-----------------|---|
| Source: | External AC power or internal battery |
| AC Power: | 100 ~ 240VAC, 50/60Hz, 150VA |
| Battery: | Built-in and lithium ion rechargeable, 12.6V/5Ah |
| Charge Time: | 8 hours |
| Operating Time: | 3 hours |

ENVIRONMENTAL SPECIFICATIONS

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|-----------------|--|
| Temperature: | Operating: 5 ~ 40 °C Storage: -10 ~ 45 °C |
| Humidity Range: | Operating: ≤80 % Storage: ≤80 % |

FUSE

3.15A/250V

LCD SPECIFICATIONS

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|--------------------|------------------------------|
| Display Type: | TFT color LCD |
| Size (diagonal): | 5.0 inch |
| Active Area: | 152.4 (W) x 91.44 (H) mm |
| Color arrangement: | RGB-stripe |
| Dot pitch: | 0.0635(W) x 0.1905(H) mm |
| Display Mode: | Normally white, Transmissive |
| Interface: | Digital (TTL) |
| Surface Treatment: | Anti-Glare |

TOUCHSCREEN SPECIFICATIONS

| | |
|--------------------------------|--|
| Type: | Four-Wire Analog Resistive Touch Panel |
| Input Mode: | Stylus Pen or Finger |
| Connector: | FPC |
| Insulation resistance: | 25MΩ |
| Voltage: | 7VDC |
| Chattering: | 10ms |
| Transparency: | 80% |
| Surface hardness: | 3H |
| Durability-surface scratching: | Write 100,000 |
| Active force: | 80gf |
| Knock Test: | 1,000,000 times |