Enmove 1200 Portable Bedside Monitor By Mennen Medical

Maximized Monitoring Mobility

Mennen Medical's Enmove 1200 is a sophisticated, portable bedside patient monitor, providing a highly efficient solution for the varying needs of today's medical institutions. This monitor is versatile, easily adaptable to suit any medical application and patient profile and enables the remote viewing of other Enmove monitors as well as central station connectivity. This innovative device provides long term tabular and numerical trend and is available with a variety of configurations: from basic non invasive to multi-parameter monitoring, covering all medical requirements, including gas analysis.

Ease of use: Intuitive operation and functionality, with adaptable display, user-friendly interface design, large sized fonts, adjustable Vital Signs sequence and colors to fit the user's requirements and work routines.

Flexibility: Easily adaptable to a wide variety of patient environments with specified requirements. Full patient customization. Wireless connectivity to Local Area Network.

Increased Clinical Value: Maximal simultaneous parameter presentation, including 12 leads, numeric and graphic ECG display, waveforms and numerical vital signs for the whole spectrum of patient monitoring displayed on the screen, long-term follow-up of vital signs trend in both numeric and graphic format as well as medical calculations.

Cost Efficiency: Low maintenance and spare parts costs.

Clinical Features

Parameters

- 5 - 12 lead ECG
- Respiration
- NIBP
- SpO2 (Nelcor/Masimo)
- Temperature
- EtCO2 Microstream
- Mainstream Etco2
- Analog Output for ECG and IBP
- 2 BP
- Cardiac Output
- Gas Analysis (Artema)

Event Strips: Event strips of all waveforms and alarms at the time of the event.

Graphic Trend: 96 hours Trend panel presentation of graphic trends, including up to eight vital signs with up to one minute resolution.

Numerical Trend: 96 hours Numerical values of vital signs displayed in up to one minute resolution, including alarms and event marking.

Arrhythmia Analysis: Continuous ECG waveform analysis, based on QRS algorithm including 12 leads analysis.

ST Analysis: Simultaneous and continuous ST analysis of displayed ECG leads with ST alarm.

All-inclusive ECG lead display: Simultaneous display of all ECG leads.

Drug Titration and Calculation: Drug concentrate, infusion rate and injection amount calculations performed, according to defined clinical parameters.

Wireless Network: Fixed compact flash for memory card or wireless LAN card.

Dimension and Weight
- Dimension: 318mm (W) x 264mm (H) x 152mm (D)
- Weight: <7.5 kg

Operation Environment
- Power: AC100-240V (10%), 50/60 Hz (3Hz), 140VA
- Temperature: 0-400C
- Humidity: 15-95% non-condensing

Patient Range

Neonate, pediatric and adult patients

Performance Specifications
- Display: 12.1" color TFT

Rolling and refreshing waveform display
- Resolution: 800x600

Multi displays selectable, including:
  - Standard display
  - Large-font Display
  - Freeze display
  - Alarm limit display
  - Multi lead and ECG simultaneous display
  - Bed-to-bed view display
- Trace: 8 waveforms
- Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s
- Indicator: Alarm indicator
  - Power indicator
  - QRS beep and alarm sound
  - Working indicator light
  - QRS beep and alarm sound
- Interface: Parameter cable interface
  - AC Power input socket
  - Network interface
  - External, VGA interface for connection of and alternate display
- Li-ion Battery: Rechargeable
  (For 2 pieces): Maximum 6.5 hours for charging, 5 hours continuous working
- Lead Acid Battery: Rechargeable
  (For 2 pieces): Maximum 12 hours for charging, 2 hours continuous working
- Trend time: 1-96 hours
- Alarm: User adjustable High and Low limits, 3 level audible and visual alarm
- Recorder: Built-in thermal array, 2 channels
  - Record mode: manual, on alarm, time defined
  - Paper width: 50mm
  - Record speed: 25mm/s, 50mm/s

ECG

5-lead and 3-lead selectable, 12 lead (including 3/5 lead) optional
- Input:
  - 10 lead wire cable: RA; LA; RL; LL; V1-V6 or R; L; N; F; C1-C6
  - 5-lead: RA; LA; RL; LL; V or R; L; N; F; C
  - 3-lead: RA; LA; LL or R; L; F
- Lead selection:
  - 12 lead: I; II; III; avR; avL; avF; V1-V6
  - 5-lead: I; II; III; avR; avL; avF; V (n)
  - 3-lead: I; II; III
- ECG waveform: 2 channels
- Gain selection: x0.125; x0.25; x0.5; x1; x2(mm/mV); auto
- Sweep speed: 12.5mm/s, 25mm/s, 50mm/s
- Heart Rate range: Adult: 15-300bpm; Pediatric/Neonatal: 15-350bpm
- Accuracy: ±1bpm or ±1%, whichever is greater
- Resolution: 1bpm
- Filter:
  - Diagnostic mode: 0.05-100Hz or 0.05-150Hz (optional 12 lead)
  - Monitoring mode: 0.5-40Hz
  - Surgical mode:1-20Hz
- Protection: Withstand 4000VAC/50Hz voltage in isolation. Against electrosurgical interference and defibrillation
- Scaling signal: 1mv+/- 5%
- Alarm range: 15-350bpm
- S-T detection:
  - Measurement range: -2.0mV~2.0mV
  - Alarm range: -2.0mV~2.0mV
- Arrhythmia analysis: YES
- Alarm: YES, audible and visual alarm, alarm events recallable

Respiration
- Method: Thoracic impedance
- Operation modes: Auto/Manual
- Measurement range: Adult: 0-120rpm, Pediatric/Neonatal: 0-150rpm
- Apnea alarm: YES
- Alarm: YES, audible and visual alarm, alarm events recallable

NIBP
- Method: Automatic Oscillometric
- Operation modes:

Manual/Automatic/Continuous
- Auto measure time: Adjustable
- Measurement unit: mmHg/kPa selectable
- Measurement types: Systolic, Diastolic, Mean
- Measurement range:

  Range of systolic pressure:
  - Adult: 40-270mmHg
  - Pediatric: 40-200mmHg
  - Neonatal: 40-135mmHg

  Range of diastolic pressure:
  - Adult: 10-210mmHg
  - Pediatric: 10-150mmHg
  - Neonatal: 10-95mmHg

  Range of mean pressure:
  - Adult: 20-230mmHg
  - Pediatric: 20-165mmHg
  - Neonatal: 20-110mmHg
- Accuracy: The Mean error shall be less than +/-5 mmHg and standard deviation shall be less than 8 mmHg
- Over-pressure protection: double safety protection
- Alarm: Systolic, Diastolic, and Mean

Temperature

Measurement range: 0-50°C

Resolution: 0.1°C

Accuracy: ±0.1°C (not including probe)

Channel: Dual-channel

Alarm range: 0-50°C

SpO2 (Standard)
- Measurement range: 0-100%
- Resolution: 1%
- Accuracy:

+/- 2 %(70-100% Adult/Pediatric, non-motion);
+/- 3 %(70-100% neonate, non-motion);
+/- 3%(70-100% Adult/Pediatric/Neonate, motion);
0-69% unspecified
- Alarm range: 0-100%
- Pulse rate:
  - Range: 20-254bpm
  - Resolution: 1bpm
  - Accuracy: ±3bpm (non-motion), ±5bpm (motion)
- Alarm range: 20-254bpm

Masimo SpO2
- Measurement range: 1-100%
- Resolution: 1%
- Accuracy:

+/- 2 %(70-100% Adult/Pediatric, non-motion);
+/- 3 %(70-100% Neonate, non-motion);
+/- 3%(70-100% Adult/Pediatric/Neonate, motion);
0-69% unspecified
- Alarm range: 0-100%
- Pulse rate:
  - Range: 25-254bpm
  - Resolution: 1bpm
  - Accuracy: ±3bpm (non-motion), ±5bpm (motion)
- Alarm range: 25-254bpm

NELLCORE SpO2
- Measurement range: 1-100%
- Resolution: 1%
- Accuracy:

+/- 2 %(70-100%, MAX-A, MAX-AL, MAX-N, MAX-P, MAX-I AND MAX-FAST sensors);
+/- 2.5 %(70-100% OxiCliq A, OxiCliq N, OxiCliq P and OxiCliq I sensors);
+/- 3%(70-100% D-YS, DS-100A, OXI-A/N AND OXI P/I sensors);
+/- 3.5%(70-100% MAX-R, D-YSE AND D-YSPD sensors);
0-69% unspecified
- Alarm range: 0-100%
- Pulse rate:
  - Range: 20-300bpm
  - Resolution: 1bpm
  - Accuracy: ±3bpm (20-250bpm), (251-300bpm) unspecified
- Alarm range: 25-250bpm

IBP
- Measurement range: -50~300mmHg
- Channel: 2 channels
- Pressure transducer: Sensitivity: 5 mV/V/mmHg
- Impedance range: >300
- Transducer sites: ART, PA, CVP, RAP, LAP, ICP , CPP
- Resolution: 1mmHg
- Accuracy: ±1mmHg or ±2%, whichever is greater (exclusive of transducers)
- Alarm range: -50~300mmHg

Cardiac Output
- Method: Thermodilution
  Measurement range: CO: 0.1-20 lit. /min.
  TB: 23-43°C
  TI: 0-27°C
- Resolution: CO: 0.1 lit. /min.
  TB: 0.1°C
  TI: 0.1°C
- Accuracy: CO: ±5%
  TB: ± 0.1°C
  TI: ± 0.1°C
- Parameter output: Cardiac output, hemodynamics calculation

EtCO2

Microstream CO2
- CO2 Range: 0-99mmHg
- Accuracy: ±2mmHg (0-38mmHg)
  ±5% of reading (39-99mmHg), +0.08% for every 1 mmHg above 38mmHg
- Resolution: Waveform: 0.1 mmHg
  -Value: 1mmHg
- Sampling rate: 50 ml/min-7.5+15 ml/min
- Initializing time: 30 seconds (typical), reaches ±5% steady-state accuracy within 3 minutes.
- Response time: Typical value: 2.9 s, including the rising time and the delay time (adopting the FilterLine of Standard length)
- Rising time: < 190ms (rising from 10% to 90%)
- Delay time: 2.7 s (typical value)
- Respiration rate: 0-150 breath/min
- Respiration rate accuracy:
  0-70 bpm-±1 bpm
  71-120 bpm-±2 bpm
  121-150 bpm-±3 bpm
- Mode: Adult, Neonate

Sidestream CO2
- CO2 Range: 0-99mmHg
- Accuracy:
  ±2mmHg (0-40mmHg)
  ±5% of reading (41-76mmHg)
  ±10% of reading (77-99mmHg)
- Sampling rate: 100 ml/min
- Sampling rate accuracy: 15%
- Start up time :< min; once module starts up, it reaches ISO accuracy
- Mode: 10 minutes after start-up, the module reaches full accuracy mode
- Respiration rate: 0-120 breath/min
- Respiration rate accuracy:
  0-70 bpm - ±2 bpm
  >70 - ±5 bpm
- Response time: < 240 msec (10% to 90%)
- Delay time: < 2s

Mainstream CO2
- Method: Infrared Absorption
- Measurement Mode: Mainstream
- Measurement range:
  EtCO2: 0-99mmHg
  InsCO2: 0-99mmHg
  AwRR: 0-150rpm
- Resolution:
  EtCO2: 1mmHg
  InsCO2: 1mmHg
  AwRR: 1rpm
  AwRR: ±2 bpm
- Alarm range: Same as Measurement range
- Accuracy: CO2 concentration
  ±2mmHg (0-40mmHg)
  ±5% of reading (41-76mmHg)
  ±10% of reading (77-99mmHg)

Muti-Gas/O2
- Method: Infrared Absorption
- Gas sorts: CO2, N2O, Des, Iso, Enf, Sev, Hal, O2 (optional, paramagnetic sensor)
- Measurement range:
  CO2: 0~30%
  N2O: 0~105%
  O2: 0~105%
  Enf, Iso, Hal: 0~30%
  Sev: 0~30%
  Des: 0~30%
- Data output: Fi and Et Values
- Respiration rate: 2~60±1bpm, 61-100 bpm-unspecified
- Other: Up to 3 waveforms displayed
  Agent mixture detection, MAC value disp

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