The SphygmoCor® CPV System

The gold standard in noninvasive central blood pressure and pulse wave velocity assessment

SphygmoCor technology is the gold standard for noninvasive measurement of central blood pressure and pulse wave velocity. Featured in hundreds of published studies, it is used in leading medical centers and in pharmaceutical clinical trials worldwide.

SphygmoCor systems record the patient’s radial pulse waveform through a measurement taken at the wrist, derive the blood pressure waveform at the ascending aorta and report vital central blood pressure data.

The SphygmoCor CPV system also measures pulse wave velocity between two arterial locations.

Offering

- Ascending Aortic Blood Pressure
- Aortic Pulse Presssure
- Ejection Index
- Pulse Wave Velocity, any two accessible arterial sites
- Aortic Augmentation Index
- Heart Rate Variability Option

CPV system offers noninvasive assessment of central blood pressure and pulse wave velocity with a single operator, allowing integrated analysis of aortic and arterial tree stiffness. Central blood pressure has been proven to be a superior, independent predictor of future cardiovascular events, and allows assessment of vital drug effects that cannot be detected with brachial pressure measurements.
**System Specifications**

**SphygmoCor® CPV System**

### Product Configuration

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### Physical and Environmental Specifications

- **Operating Ambient temperature:** +15°C to 30°C (59°F to 86°F)
- **Operating Relative humidity:** 20% to 80%
- **Power supply (USB powered):**
  - **Supply Voltage:** +5VDC
  - **Power Consumption:** 500 mA Max
  - **Protective Class:** IEC Class I, II or Internally powered
- **Applied Parts:**
  - Type CF (ECG)
  - Type BF (Tonometer)
- **Power Connector:** Via USB Type A Connector

### Physical Specifications

- **Enclosure Material:** PC-ABS
- **Weight (Module & Tonometer):** 0.8 kg (1.8 lbs)
- **Dimensions:** 16.0 (l) x 26.4 (w) x 5.8 (h) cm (6.2" (l) x 10.4" (w) x 2.3" (h))

### Input Signal Specifications

- **Tonometer**
  - **Type:** Diffused semiconductor wheatstone bridge sensor
  - **Sensitivity:** 5 µV/V/mmHg
  - **Contact Pressure Range:** 0 – 300 mmHg
  - **Calibration:** Calibrate with sphygmomanometer
  - **Reference Pressure:** Atmosphere
  - **Bandwidth:** DC – 40 Hz
  - **Sampling Rate:** 128 Hz
  - **Gain & Offset Adjust:** Auto
  - **Signal Range, Accuracy:** ±5mV, ±20%

- **ECG**
  - **Type:** 3-Lead (Lead II)
  - **Bandwidth:** 0.67 – 40 Hz (Device does not support extended low frequency response)
  - **Sampling Rate:** PWV: 128 Hz, HRV: 1024 Hz
  - **Gain & Offset Adjust:** Auto
  - **Signal Range, Accuracy:** ±5mV, ±20%
  - **Heart Rate Range:** 30 BPM to 200 BPM
  - **Heart Rate Accuracy:** ±10%

- **Footswitch**
  - **Type:** Micro-switch
  - **IP Rating:** IPX8-1.0m

### PC Interface Specifications

- **Minimum Computer Requirements:**
  - IBM compatible PC or notebook computer with:
    - Pentium Processor P4 or greater
    - 1 GB RAM
    - 1024 x 768 256-colour XGA display
    - 60GB initial free hard disc space
    - CD-ROM drive
    - Windows standard printer drivers
    - Dedicated USB port
    - Windows XP Pro or Business Pro only
    - Vista Business or Vista Ultimate only
    - The SphygmoCor® EM3 is not supported on Windows NT/95/98/ME.
- **Interface:** USB 1.1 serial interface, USB Type B Female connector

### Regulatory

- FDA clearance
- EU CE Mark (MDD, ANNEX II, Class IIa)
- MHLV, Japan
- TGA, Australia
- IEC 60601-1/ AS/NZS 3200.1 (amendments 1 and 2) Electromedical Equipment Safety standard
- IEC 60601-1-2 Electro-Medical Equipment, Electro-Magnetic Compliance (EMC) Standard

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**AtCor Medical**
Noninvasive central blood pressure assessment

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