

# SphygmoCor Mx

## Beat-to-Beat Aortic Blood Pressure Monitoring

The SphygmoCor Mx Aortic BP Monitoring System provides in real-time a derived continuous calibrated blood pressure waveform at the ascending aorta, using a recording of the radial artery blood pressure waveform.

The SphygmoCor Mx system then performs trend analysis to provide quantitative aortic cardiovascular data such as systolic pressure, diastolic pressure, pulse pressure, augmentation pressure, ejection duration, and subendocardial viability index.

The SphygmoCor Mx system can be used

- In conjunction with a radial artery BP monitor, with its in-dwelling radial artery pressure transducer, to provide a less invasive alternative to the aortic pressure catheter for real-time monitoring of ascending aortic blood pressure.
- In conjunction with new non-invasive radial artery pressure waveform monitors (calibrated or non-calibrated) to monitor changes in the aortic pressure waveform.



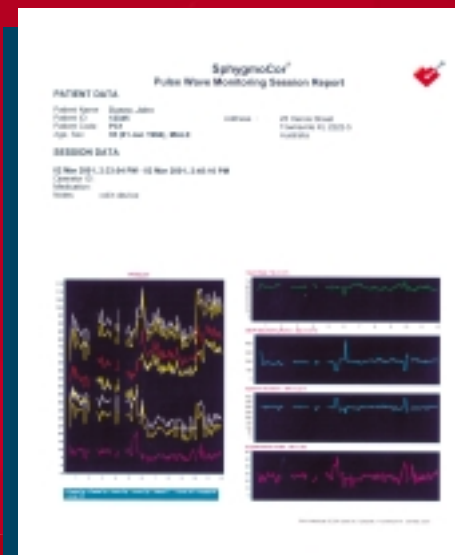
### Features

- Monitor the complete aortic blood pressure profile that is seen by the left ventricle, the coronary arteries and the baro-receptors - not just the max/min pressure values seen in the radial artery.
- Monitor the blood pressure that drives the cerebral blood flow.
- Track dynamic changes in LV load and subendocardial viability
- Monitor subtle pressure waveform changes, not just max/min values of blood pressure.

The new SphygmoCor Mx Aortic BP Monitoring System now makes it easier for you to monitor the "definitive" blood pressure – the pressure at the heart.

### Applications

- Intensive Care (ICU)
- Anesthesiology (OR)
- Emergency Care
- Research



# System Specification

## SphygmoCor Pulse Wave Monitoring System: Model SCOR-Mx



### STANDARD SYSTEM CONFIGURATION

- SphygmoCor signal processing electronics module
- SphygmoCor 2000 Software System V6.
- System documentation.
- Footswitch (for hands-free operation)

### PERFORMANCE AND OPERATING SPECIFICATION

- Monitoring Screen Format
- Parallel calibrated display of the recorded peripheral pressure waveform and simultaneously estimated ascending aortic pressure waveform
- Parallel numeric display of aortic and radial values of:
  - Systolic pressure (Sp)
  - Diastolic pressure (Dp)
  - Mean pressure (Mp)
  - Pulse pressure (Pp)
- Update of numeric pressure values at user-defined repetition intervals (5 sec minimum)
- Trending Plots, updated at chosen repetition interval, of:
  - Blood Pressures (Sp, Dp, Mp, Pp)
  - Augmentation Index
  - Ejection Duration (as % of Cardiac Cycle)
  - SEVR (Buckberg Ratio)

#### Printed report formats

(a) Standard Patient Status Report (captured at any time, or at programmed intervals) includes:

- Parallel display of the captured peripheral pulse waveform and simultaneously estimated ascending aortic pulse waveform.
- Side-by-side display of the averaged recorded peripheral pulse waveform and the averaged derived aortic pulse waveform.
- Systole and diastole timing.
- Derived central indices for the dynamics of ventricular-vascular interaction.
- Quality Control Parameters.

(b) Session Report includes:

- Print out of summary Monitoring Screen
- Listing of Patient Status Report captured during monitoring period

#### Input data

- The SphygmoCor System can derive ascending aorta blood pressure waveforms from peripheral waveforms recorded at the radial artery
- Patient Status Reports (for both the peripheral artery and aortic waveforms) provide:
  - Heart rate
  - Ejection duration
  - True mean pressure
  - Time to the peaks of the primary ejection pulse and the reflected pulse
  - dP/dT max for the recorded peripheral wave

#### Calibration

- The recorded radial pressure wave form is calibrated output from a radial artery Blood Pressure Monitor.

Further analysis provides at the ascending aorta:

- Systolic and diastolic pressure
- Pulse pressure height
- Augmented pressure and augmentation index (due to wave reflection)
- End systolic pressure
- True mean pressure
  - in systole
  - in diastole
- Pressure-time index
  - in systole
  - in diastole
- Buckberg subendocardial viability ratio

#### Software features

- Real-time display of derived aortic pressure waveform.
- Real-time display and update of parameter trends.
- Patient Reports database in Microsoft®-Access format.
- Improved waveform feature extraction.
- Export Function allows Patient data to be readily analysed with Excel, SPSS.
- Up to twenty databases can be set up for different studies.
- Patient analysis & parameter trends by viewing selected averaged waveforms in a chronological sequence.
- Batch printing of selected reports.
- Auto-scaling of peripheral signal & display of the last 5 sec of data during signal capture.

#### Minimum computer requirements

- IBM compatible PC: Pentium III or Celeron 600 Processor; 128 MB RAM; 800x600 256 colour SVGA Display; 100 MB initial free hard disk space (more for data storage), CD-ROM drive.
- Equipment interface: RS-232 serial communications port.
- Operating system: Windows 95 / 98 / 00® Windows NT® 4
- Printing: Windows Printing System

#### Physical description (electronics module)

Case: Polystyrene Plastic  
Weight: 2.5 kg  
Size: 30.5 (l) x 26.1 (w) x 13.5 (h) cm  
[12" (l) x 10.3" (w) x 5.3" (h)]

#### Operating conditions:

Ambient temperature: 15-30°C  
Relative humidity: 20-80%

#### Power supply (mains power):

100-250 VAC, 50/60 Hz

#### REGULATORY APPROVALS

- CE Mark (MDD, ANNEX II)
- MHW, Japan
- TGA, Australia
- IEC 601-1 (amendments 1 and 2) Electro-Medical Equipment Safety standard.
- IEC 601-1-2 Electro-Medical Equipment, Electro Magnetic Compliance (EMC) Standard
- ISO9001/ISO13485/EN46001: Manufactured under a quality system certified as complying with ISO9001/ISO13485/EN46001 by an accredited certification body.



AtCor Medical (formerly PWV Medical) ABN 11 062 279 985.

Head Office: West Ryde Corporate Centre, 11/1059-1063 Victoria Road, West Ryde, NSW 2114, Australia

Tel: + 61 2 9874 8761 Fax: + 61 2 9874 9022 Email: inquiry@pwvmedical.com

Webpage: [www.pwvmedical.com](http://www.pwvmedical.com)