



Automatic Blood Pressure Monitor - BP03
with Measure While Inflation (MWI) Technology

Automatic digital blood pressure is a portable monitoring device for accurate measurements of human blood pressure. This latest state of the art device uses the oscillometric method of blood pressure measurement. This means the monitor detects your blood's movement through your brachial artery and converts the movements into a digital reading. An oscillometric monitor does not need a stethoscope so the monitor is simple to use.

Working Principle:

Oscillometric method uses a sphygmomanometer cuff with an electronic pressure sensor (transducer) to observe cuff pressure oscillations, electronics to automatically interpret them, and automatic inflation and deflation of the cuff. The pressure sensor is accurately calibrated to measure exact pressure readings. Oscillometric measurement requires less skill than the auscultatory technique and may be suitable for use by untrained staff and for automated patient home monitoring.

The Measure While Inflation technology enables the cuff to be inflated to a pressure initially in excess of the systolic arterial pressure and in the process calculates both Systolic and Diastolic pressure over a period of about 30-45 seconds. When blood flow is nil (cuff pressure exceeding systolic pressure) or unimpeded (cuff pressure below diastolic pressure), cuff pressure will be essentially constant. When blood flow is present, but restricted, the cuff pressure, which is monitored by the pressure sensor, will vary periodically in synchrony with the cyclic expansion and contraction of the brachial artery, i.e. it will oscillate. Over the inflation period, the recorded pressure waveform forms a signal known as the cuff inflation curve using PWM controlled inflation technology.

Special adaptive filters extract the oscillometric pulses from the cuff inflation curve. Over the inflation period, the extracted oscillometric pulses form a signal known as the oscillometric waveform (OMW). Analysis algorithms are employed to estimate the systolic, diastolic arterial pressure and pulse rate.



Technical Specifications:

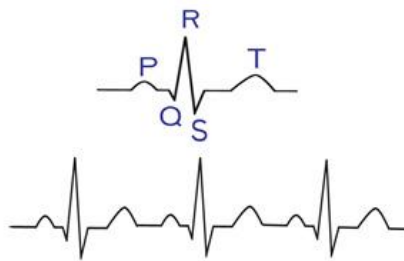
Product Name	Digital Automatic Blood Pressure Monitor
Model	BP03
Measurement Method	Oscillometric Measurement & Measure While Inflation (MWI)
Measure While Inflation (MWI)	Fast Result
Measurement Range Pressure	20-300 mmHg
Pulse	40-180 beats/minute
Accuracy Pressure	+/- 3 mmHg
Pulse	+/- 5%
Power Supply	AA (4 nos)/ AC adaptor
Number of measurements with AA batteries	450 minimum
EMC compliance	IEC60601-1-2:2007
Electrical compliance	IEC60601-1
Memory	10
Dimensions:	156*150*130mm
Weight	250 grams
Special Features	<ul style="list-style-type: none"> - Arrhythmia Detection - Comfort Inflation Technology - Big wide angle viewing screen - Movement Artifact Rejection - Inbuilt Power Port - With AA batteries - Most Accurate Measurements - With power port - Stores memory readings - Low Power Consumption



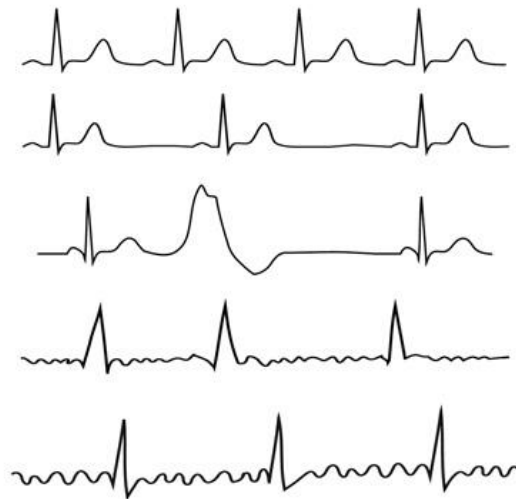
What is Arrhythmia?

A heart arrhythmia is an irregular heartbeat. Heart rhythm problems (heart arrhythmias) occur when the electrical signals that coordinate the heart's beats don't work properly. The faulty signaling causes the heart to beat too fast (tachycardia), too slow (bradycardia) or irregularly. Heart arrhythmias may feel like a fluttering or racing heart and may be harmless. However, some heart arrhythmias may cause bothersome — sometimes even life-threatening — signs and symptoms. However, sometimes it's normal for a person to have a fast or slow heart rate. For example, the heart rate may increase with exercise or slow down during sleep. Heart arrhythmia treatment may include medications, catheter procedures, implanted devices or surgery to control or eliminate fast, slow or irregular heartbeats. A heart-healthy lifestyle can help prevent heart damage that can trigger certain heart arrhythmias.

Normal heart rhythm



Irregular heart rhythm



What is Movement Artifact Rejection?

Movement Artifact Rejection is a technique by which unwanted signals introduced in the blood pressure signal are removed by artificial intelligence. Noise signals are mostly caused due to unwanted movement caused by the patient like a sneeze or sudden arm movement or heavy breathing. Walnut Medical Blood Pressure Monitor rejects the noise introduced in the blood pressure signal by intelligent signal processing algorithms designed specially to give the most accurate measurements. These features make the Walnut Medical Blood Pressure Monitors the most advanced and affordable blood pressure monitor. In most of the cases unwanted movement, sneezes, jerks were rejected in calculation of Blood Pressure of the patient; However, it is recommended not to move the arm or body while taking measurements.

Walnut Medical is proud to manufacture the most advanced Blood Pressure Monitors in the world