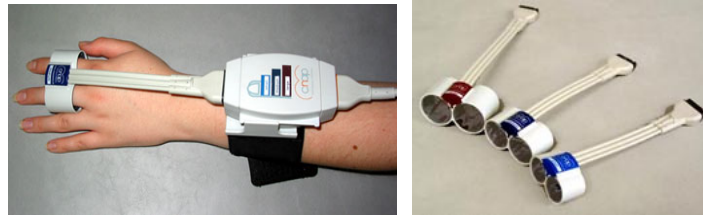


NIBP100D



The NIBP100D Noninvasive Blood Pressure Monitoring System is suitable for small children (~4-5 years) to large adults

- **Accurate noninvasive blood pressure values**
- **Comfortable for subjects to wear**
- **Real-time, continuous, noninvasive blood pressure**
- **Easy to use**

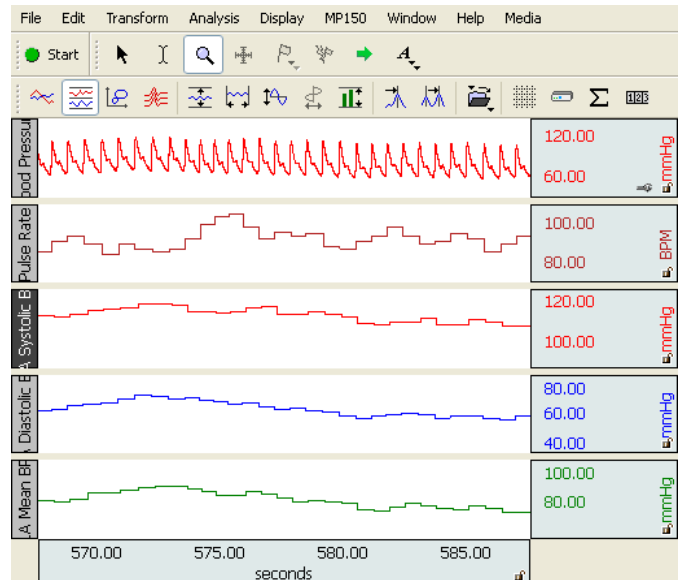
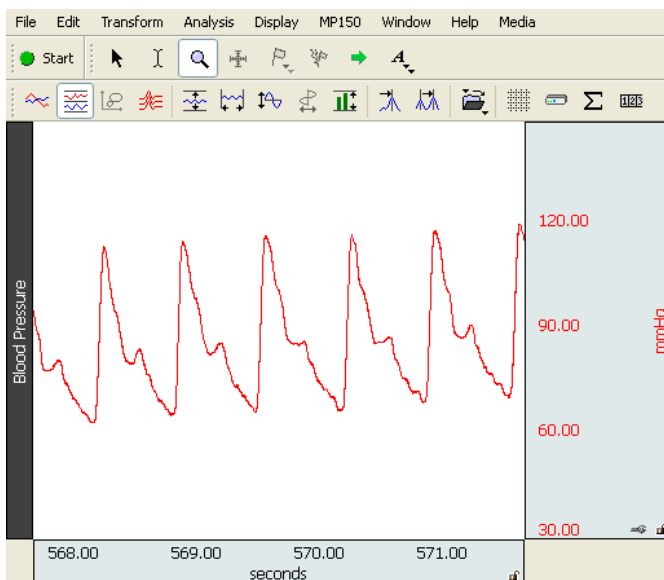
The NIBP100D noninvasive blood pressure system provides a continuous, beat-to-beat, blood pressure signal recorded from the fingers of a subject. The noninvasive blood pressure (NIBP) monitoring system uses a double finger cuff that is comfortable for the subject to wear and easy to place on the hand. The cuffs (included with system) come in three sizes to accommodate children through large adults. The system outputs a continuous blood pressure waveform that is similar to a direct arterial pressure waveform. The monitor displays values for systolic, diastolic, mean blood pressure, and heart rate.

The NIBP100D interfaces with an MP150 data acquisition system (or third-party data acquisition system), via a DA100C and TC1105 Interface Connector. The *AcqKnowledge* software displays the blood pressure signal, plus systolic, diastolic, mean blood pressure and heart rate. It will also provide a detailed beat-to-beat analysis of the blood pressure signal.

The NIBP100D is calibrated using a standard blood pressure cuff that is placed around the subject's upper arm. The unit automatically takes a blood pressure measurement from the subject and uses the value for calibration purposes. During the calibration process the system locates the pulse at the finger and performs a partial occlusion. It will switch from one finger to the next during the course of the recording to relieve the pressure from the occluded finger. The interval between finger rotations is user-selectable and can be as long as 60 minutes. During the rotation, the system takes another calibration reading to ensure that values are accurate.

The system is very user friendly and the initial setup and calibration period takes less than three minutes—that time includes placing the cuff around the upper arm and the sensor on the fingers. Placing the finger sensor is as simple as sliding the subject's fingers through the two cuffs.

The system employs a vascular unloading technique to measure blood pressure at the fingers. A refined version of the Penáz' principle is used to deliver a continuous noninvasive blood pressure signal. The method is based on concentrically interlocking control loops for accurate long-term readings of finger blood pressure.



For complete specifications, see the **NIBP100D User Manual** online under the product page "Resource" tab.

Components

- **Double-Cuff Finger Sensors** – one each size
 - **L** 24 - 28 mm dark red, **M** 18 - 24 mm Dark blue, **S** 10 - 18 mm Light blue
- **Blood Pressure Cuffs** — one each size
 - **Child** (12 – 19 cm), **Small Adult** (17 – 25 cm), **Adult** (23 – 33 cm), **Large Adult** (31 – 40 cm)
- **NIBP100D Monitor**
 - Dimensions 280 x 270 x 250 mm (11 x 10.6 x 9.8 in.)
 - Weight 7.5 Kg (16.6 lbs) including components and accessories necessary for operability of device
 - Battery Sealed lead gel, operating time = 2h (fully charged battery, normal conditions)



Electrical properties

- Nominal voltage: 18 VDC ±10%
- Nominal current: 3A

- Operability: No time-limit if powered by external mains adapter, at least 2h if on battery-operation (fully charged battery)

NIBP100D continuous noninvasive arterial pressure

- Parameter classification
 - Sys, Dia, Mean [mmHg]
 - Pulse [bpm]
- Measuring range
 - Sys: 40 - 250 mmHg (5.3 – 33.3 kPa)
 - Dia: 30 - 210 mmHg (4 - 28 kPa)
 - Mean: 35 - 230 mmHg (4 – 30.6 kPa)
 - Heart rate indication range 20-200 bpm
 - Accuracy ±5 mmHg (0,6 kPa)
- Display resolution 1 mmHg (0.1 kPa)

- Inflation pressure
 - Typ.: 120 mmHg (16 kPa)
 - Min.: 30 mmHg (4 kPa)
 - Max.: 300 ±10 mmHg (41.3 kPa ±1.3 kPa)
- Excess pressure limit
 - 300 ±10 mmHg (40 kPa ±1.3 kPa)
 - Response time: < 3 sec.
 - Deflation time: < 15 sec
 - Protection against electric shock: Type BF

External mains adapter

- Nominal voltage: 100 – 240 VAC
- Power frequency: ~50/60 Hz
- Power output: 18 V, 3.3 A

- Safety class: Class II with functional earth
- Earth leakage current: < 500 µA

Interface

- To DA100C via TCI105 (sold separately)

Output

- Sensor bridge voltage: 2 – 10 V (external monitor)
- Sensitivity: 5 µV/V/mmHg

- BP Wave Out: CNAP™ transducer cable 0.3 m; connector RJ11 6P4C (e.g. Abbott IBP catheter)

Standards

- EN 60601-1+A1+A2+A12+A13: 1996
- EN 60601-1-2: 2003
- EN 60601-1-4:1996 +A1: 1999
- EN 60601-1-6: 2004
- EN 60601-1-8:2004+A1: 2006

- EN 60601-2-30: 2000
- EN 1060-1: 1995
- EN 1060-3:1997+A1: 2005
- ANSI/AAMI SP10: 2002



Note Electric and magnetic fields may interfere with the functional reliability of the device, so avoid using the NIBP100D CNAP™ Monitor 500 close to devices emitting powerful electromagnetic fields, e.g. x-ray equipment, diathermy applications or magnetic resonance tomographs.