# beurer



**EN** Blood pressure monitor Instructions for use



# **ENGLISH**



# Read these instructions for use carefully and keep them for later use, be sure to make them accessible to other users and observe the information they contain.

#### Dear customer.

Thank you for choosing a product from our range. Our name stands for high-quality, thoroughly tested products for applications in the areas of heat, weight, blood pressure, body temperature, pulse, gentle therapy, massage, beauty, baby and air.

With kind regards,

Your Beurer team

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# 1. Included in delivery

Check that the exterior of the cardboard delivery packaging is intact and make sure that all contents are present. Before use, ensure that there is no visible damage to the device or accessories and that all packaging material has been removed. If you have any doubts, do not use the device and contact your retailer or the specified Customer Service address.

- 1 x blood pressure monitor
- 1 x upper arm cuff
- 4 x 1.5 V LR6 AA batteries
- 1 x storage bag
- 1 x instructions for use

# 2. Signs and symbols

The following symbols are used on the device, in these instructions for use, on the packaging and on the type plate for the device:



#### WARNING

Warning notice indicating a risk of injury or damage to health



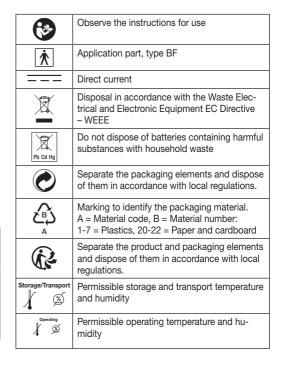
#### **IMPORTANT**

Safety note indicating possible damage to the device/accessory



#### Note

Note on important information



<del>*</del>	Protect from moisture
SN	Serial number
REF	Item number
MD	Medical device
CE	CE labelling This product satisfies the requirements of the applicable European and national directives.
UDI	Unique Device Identifier (UDI) for unique product identification

#### 3. Intended use

The BM 26 upper arm blood pressure monitor is intended for home use and serves as a non-invasive way of measuring and monitoring arterial blood pressure and pulse values in adults with an upper arm circumference of 22-35 cm. As a result, you can quickly and easily measure your blood pressure and pulse and view various average values from previous measurements. The recorded measurements are classified and evaluated graphically. A symbol in the display also warns of possible existing cardiac arrhythmia.

#### 4. Warnings and safety notes



#### Notes on use

- In order to ensure comparable values, always measure your blood pressure at the same time of day.
- Do not take a measurement within 30 minutes of eating, drinking, smoking or exercising.
- Before the initial blood pressure measurement, make sure always to rest for about 5 minutes.
- Furthermore, if you want to take several measurements in succession, make sure always to wait for at least 1 minute between the individual measurements.
- Repeat the measurement if you are unsure of the measured value.
- The measurements taken by you are for your information only – they are no substitute for a medical examination! Discuss the measured values with your doctor and never base any medical decisions on them (e.g. medicines and their dosages).
- Using the blood pressure monitor outside your home environment or whilst on the move (e.g. whilst travelling in a car, ambulance or helicopter, or whilst undertaking physical activity such as playing sport) can influence the measurement accuracy and cause incorrect measurements.
- This device is not intended for use by people (including children) with restricted physical, sensory or mental skills or a lack of experience and/or a lack of knowledge, unless they are supervised by a person who is responsible for their safety or are instructed by such a person in how to use the device. Supervise children around the device to ensure they do not play with it.

- Do not use the blood pressure monitor on newborns, pregnant women or patients with preeclampsia.
- Cardiovascular diseases may lead to incorrect measurements or have a detrimental effect on measurement accuracy. The same also applies to very low blood pressure, diabetes, circulatory disorders and arrhythmias as well as chills or shaking.
- The blood pressure monitor must not be used in connection with a high-frequency surgical unit.
- Only use the device on people that have the upper arm circumference specified for the device.
- Please note that when inflating, the functions of the limb in question may be impaired.
- During the blood pressure measurement, the blood circulation must not be stopped for an unnecessarily long time. If the device malfunctions remove the cuff from the arm.
- Avoid any mechanical restriction, compression or bending of the cuff line.
- Do not allow sustained pressure in the cuff or frequent measurements. The resulting restriction of the blood flow may cause injury.
- Make sure that the cuff is not placed on an arm in which the arteries or veins are undergoing medical treatment, e.g. intravascular access or intravascular therapy, or an arteriovenous (AV) shunt.
- Do not use the cuff on people who have undergone a mastectomy.
- Do not place the cuff over wounds as this may cause further injury.
- Place the cuff on your upper arm only. Do not place the cuff on other parts of the body.

- The blood pressure monitor can only be operated with batteries.
- To conserve the batteries, the blood pressure monitor switches off automatically if you do not press any buttons for 3 minutes.
- The device is only intended for the purpose described in these instructions for use. The manufacturer is not liable for damage resulting from improper or incorrect use.

#### / Notes on handling batteries

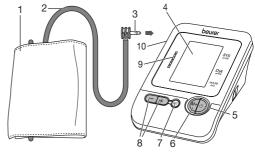
- If your skin or eves come into contact with battery fluid, rinse the affected area with water and seek medical assistance.
- / Choking hazard! Small children may swallow and choke on batteries. Therefore, store batteries out of the reach of small children.
- Observe the plus (+) and minus (-) polarity signs.
- If a battery has leaked, put on protective gloves and clean the battery compartment with a dry cloth.
- · Protect batteries from excessive heat.
- Risk of explosion! Do not throw batteries into a fire.
- Do not charge or short-circuit batteries.
- If the device is not to be used for a long period of time, remove the batteries from the battery compartment.
- Use identical or equivalent battery types only.
- · Always replace all batteries at the same time.
- · Do not use rechargeable batteries.
- Do not disassemble, open or crush the batteries.



#### Notes on electromagnetic compatibility

- The device is suitable for use in all environments listed in these instructions for use, including domestic environments.
- The use of the device may be limited in the presence of electromagnetic disturbances. This could result in issues such as error messages or the failure of the display/device.
- Avoid using this device directly next to other devices or stacked on top of other devices, as this could lead to faulty operation. If, however, it is necessary to use the device in the manner stated, this device as well as the other devices must be monitored to ensure they are working properly.
- The use of accessories other than those specified or provided by the manufacturer of this device can lead to an increase in electromagnetic emissions or a decrease in the device's electromagnetic immunity; this can result in faulty operation.
- Failure to comply with the above can impair the performance of the device.

# 5. Device description



- 1. Cuff
- 2. Cuff line
- 3. Cuff connector
- 4. Display
- 5. START/STOP button O

- 6. Memory button M+
- 7. Setting button **SET**
- 8. Function buttons -/+
- 9. Risk indicator
- Connection for cuff connector (left-hand side)

#### Information on the display:

- 1. Systolic pressure
- 2. Unit in mmHg
- 3. Diastolic pressure
- 4. Pulse symbol and calculated pulse value
- 5. Time and date
- 6. Cardiac arrhythmia symbol (
- 7. Average values of the 3 most recent measurements AVG
- 8. Inflate, release air
- 9. Risk indicator
- 10. Battery replacement symbol (
- 11. Symbol for user 2 2 2 2



#### 6. Initial use

#### Inserting the batteries

- Remove the battery compartment lid on the rear of the device.
- Insert four 1.5 V AA (alkaline type LR6) batteries. Make sure that the batteries are inserted the correct way round in accordance with the markings. Do not use rechargeable batteries.



Close the battery compartment lid again carefully.

If 4 warning tones sound and the symbol appears simultaneously on the display, it is no longer possible to perform a measurement and all batteries must be replaced. Once the batteries have been removed from the device, the time must be set again. Any saved measured values are retained.

#### Setting the date and time

It is essential that you set the date and time. Otherwise, you will not be able to save your measured values correctly with a date and time and access them again later. The time is shown in 12-hour format i.e. the time from 13:00 is displayed as 01:00 PM.

To set the date and time, proceed as follows:

- Press the setting button SET 2x.
- The month flashes in the display. Now use the function buttons -/+ to set the desired month, and confirm using the setting button SET.
- The day flashes in the display. Now use the function buttons
   -/+ as described above to first set the day and then the time,
   and confirm each with the setting button SET.

Press the button 5 to exit the settings mode.

# 7. Usage

Ensure the device is at room temperature before measuring. The measurement can be performed on the left or right arm.

#### Attaching the cuff

 Place the cuff onto the bare upper arm. The circulation of the arm must not be hindered by tight clothing or similar.



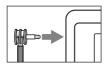
 The cuff must be placed on the upper arm so that the bottom edge is positioned 2 – 3 cm above the elbow and above the artery. The line should point to the centre of the palm.



 Now tighten the free end of the cuff, but make sure that it is not too tight around the arm and close the hook-and-loop fastener.
 The cuff should be fastened so that two fingers can still fit under the cuff.



 Now insert the cuff line into the connection for the cuff connector.



 The cuff is suitable for you if the index mark ( ) is within the OK range after fitting the cuff.



ing on the line.

Blood pressure may vary between the right and left arm, which may mean that the measured blood pressure values are different. Always perform the measurement on the same arm. If the values between the two arms are significantly different, please consult your doctor to determine which arm should be used for the measurement.

Important: The device may only be operated with the original cuff. The cuff is suitable for an arm circumference of 22 to 35 cm.

A larger cuff for upper arm circumferences of 30 to 42 cm can be obtained from specialist retailers or from the service address using order number 162.973.

#### Adopting the correct posture







- Before every measurement, relax for about 5 minutes. Otherwise deviations can occur.
- You can take the measurement while sitting or lying. Always make sure that the cuff is at heart level.

- To take your blood pressure, make sure you are sitting comfortably with your arms and back leaning on something. Do not cross your legs. Place your feet flat on the ground.
- To avoid falsifying the measurement, it is important to remain still during the measurement and not to speak.
- Wait for at least 1 minute before taking another measurement.

#### Selecting the memory

Press the **SET** button. Select the desired memory space by pressing the -/+ function buttons. You have 4 memories with 30 memory spaces each to store the measurements of 4 different people separately or to separate measurements taken in the morning and at night.

Confirm your selection by pressing the 🖒 button.

#### Performing the blood pressure measurement

- As described above, attach the cuff and adopt the posture in which you want to perform the measurement.
- Start the measurement by holding the O button. Following
  the display check, during which all numbers light up, the cuff
  inflates automatically. Whilst the cuff is inflating, the device is
  already establishing measurements for estimating the necessary inflation pressure. If this pressure is insufficient, the device automatically pumps more pressure.
- Then the pressure in the cuff is slowly released and the pulse is detected.
- When the measurement has been taken, the remaining air pressure dissipates very quickly. The pulse, the systolic and diastolic blood pressure are displayed.

- The measurement can be cancelled at any time by pressing the () button.
- If a higher inflation pressure is always required, you can bypass the additional pumping process by holding the M+ button shortly after the inflation process starts until the desired cuff pressure is reached. This should be approx. 30 mmHg above the systolic value.
- The symbol Err appears if the measurement could not be performed properly. Observe the chapter "What if there are problems?" in these instructions for use and repeat the measurement.
- The device switches off automatically after approx. 3 minutes.

Wait for at least 1 minute before taking another measurement.

#### Evaluating the results

#### Cardiac arrhythmia:

This device can identify potential disruption of the heart rhythm when measuring and, if necessary, indicates this after the measurement with the symbol ( ).

This can be an indicator for arrhythmia. Arrhythmia is an illness in which the heart rhythm is abnormal because of flaws in the bioelectrical system that regulates the heartbeat. The symptoms (skipped or premature heart beats, pulse being slow or too fast) can be caused by factors such as heart disease, age, physical make-up, excess stimulants, stress or lack of sleep. Arrhythmia can only be determined through an examination by your doctor.

If the symbol (( ) is shown on the display after the measurement has been taken, repeat the measurement. Please ensure that you rest for 5 minutes beforehand and do not speak or move during the measurement. If the symbol (( ) appears frequently, please consult your doctor. Self-diagnosis and treatment based on the measurements can be dangerous. Always follow your doctor's instructions.

#### Risk indicator:

The measurements can be classified and evaluated in accordance with the following table.

However, these standard values serve only as a general guideline, as the individual blood pressure varies in different people and different age groups etc.

It is important to consult your doctor regularly for advice. Your doctor will tell you your individual values for normal blood pressure as well as the value above which your blood pressure is classified as dangerous.

The classification on the display and the scale on the device show which category the recorded blood pressure values fall into. If the values of systole and diastole fall into two different categories (e.g. systole in the 'High normal' category and diastole in the 'Normal' category), the graphical classification on the device always shows the higher category; for the example given this would be 'High normal'.

Blood pressi		Systole (in mmHg)	Diastole (in mmHg)	Action
Level 3: severe hypertension	red	≥180	≥110	Seek medical attention
Level 2: moderate hypertension	orange	160-179	100-109	Seek medical attention
Level 1: mild hypertension	yellow	140–159	90-99	Regular monitoring by doctor
High normal	green	130–139	85-89	Regular monitoring by doctor
Normal	green	120-129	80-84	Self-monitoring
Optimal	green	<120	<80	Self-monitoring

Source: WHO, 1999 (World Health Organization)

#### Saving, accessing and deleting measured values

- The results of every successful measurement are stored together with the date and time. If there are more than 30 measurements, the oldest measurements are lost.
- Use the SET button and then the -/+ buttons to select the
  desired user memory and confirm using the (\*) button. Pressing the M+ button displays the average value AVG of the 3
  most recent measurements stored in the user memory. By
  pressing the + button, the most recent measurements are
  displayed; by pressing the button, the oldest are displayed.

- The average value AVG can only be displayed if there are 3 saved values in the respective user memory.
- To clear the memory, you must first select a user memory.
   Hold the SET button pressed for approx. 3 seconds. All the values in the current user memory are deleted after 3 brief acoustic signals are output.
- If you want to change the user memory, see the "Selecting the memory" chapter.

#### 8. Cleaning and maintenance

- Clean the device and cuff carefully using a slightly damp cloth only.
- · Do not use any cleaning agents or solvents.
- Under no circumstances hold the device and cuff under water, as this can cause liquid to enter and damage the device and cuff.
- If you store the device and cuff, do not place heavy objects on the device and cuff. Remove the batteries. The cuff line should not be bent sharply.

# 9. Accessories and replacement parts

Accessories and replacement parts are available from the corresponding service address (according to the service address list). Please state the corresponding order number.

Designation	Item number and/or order number
Standard cuff (22-35 cm)	162.972
XL cuff (30-42 cm)	162.973

#### 10. What if there are problems?

Problem	Possible cause	Solution
Err	The cuff could not be correctly inflated.	Please take another measurement to check whether the cuff can be correctly inflated.  Make sure that the cuff connector is correctly connected to the device and that the line is not bent; also make sure that neither your arm nor other heavy objects are pressing on the line.
Err	An error occurred during the measurement.	Please wait one minute and repeat the measurement. Ensure that you do not
	The inflation pressure is higher than 300 mmHg or is outside of the measurement range.	speak or move during the measurement.
	The batteries are almost empty.	Insert new batteries into the device.

### 11. Disposal

# (i) Repairing and disposing of the device

- Do not repair or adjust the device yourself. Proper operation can no longer be guaranteed in this case.
- Do not open the device. Failure to comply will invalidate the warranty.
- Repairs must only be carried out by Customer Services or authorised retailers. Before making a claim, please check the batteries first and replace them if necessary.
- For environmental reasons, do not dispose of the device in household waste at the end of its service life. Dispose of the device at a suitable local collection or recycling point in your country. Dispose of the device in accordance with EC Directive WEEE (Waste Electrical and Electronic Equipment). If you have any questions, please contact the local authorities responsible for waste disposal.

# Disposing of the batteries

- Empty, completely flat batteries must be disposed of through specially designated collection boxes, recycling points or electronics retailers. You are legally required to dispose of the batteries.
- The codes below are printed on batteries containing harmful substances:
  - Pb = Battery contains lead,
  - Cd = Battery contains cadmium,
  - Hg = Battery contains mercury.



#### 12. Technical specifications

Model no.	BM 26
Measurement method	Oscillometric, non-invasive blood pressure measurement on the upper arm
Measurement range	Cuff pressure 0–300 mmHg, systolic 60–280 mmHg, diastolic 30–200 mmHg, pulse 30–180 beats/minute
Display accuracy	Systolic ±3 mmHg, diastolic ±3 mmHg, pulse ±5% of the value shown
Measurement uncertainty	Max. permissible standard deviation according to clinical testing: systolic 8 mmHg/ diastolic 8 mmHg
Memory	4 x 30 memory spaces
Dimensions	L 161 mm x W 110 mm x H 69 mm
Weight	Approximately 395 g (without batteries, with cuff)
Cuff size	22 to 35 cm
Permissible operating conditions	+10°C to +40°C, 15-93% relative humidity (non-condensing)
Permissible storage conditions	-25°C to +70°C, ≤93% relative humidity, 700 – 1060 hPa ambient pressure
Power supply	4 x 1.5V — AA batteries (alkaline type LR6)

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Battery life	For approx. 180 measurements, depending on levels of blood pressure and inflation pressure
Classification	Internal supply, IPX0, no AP or APG, continuous operation, application part type BF

The serial number is located on the device or in the battery compartment.

Technical information is subject to change without notification to allow for updates.

- This device conforms with the European standard EN 60601-1-2 (Group 1, Class B, in accordance with CIS-PR 11, IEC 61000-3-2, IEC 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11) and is subject to particular precautions with regard to electromagnetic compatibility. Please note that portable and mobile HF communication systems may interfere with this device.
- This device complies with the EU Medical Devices Directive 93/42/EEC, the German Medical Devices Act (Medizinproduktgesetz) and the standards EN 1060-3 (Non-invasive sphygmomanometers – Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems) and IEC 80601-2-30 (Medical electrical equipment – Part 2 – 30: Particular requirements for the basic safety and essential performance of automated non-invasive sphygmomanometers).
- The accuracy of this blood pressure monitor has been carefully checked and developed with regard to a long useful life. If the device is used for commercial medical purposes, it

must be regularly tested for accuracy by appropriate means. Precise instructions for checking accuracy may be requested from the service address.

### 13. Warranty/service

Further information on the guarantee and guarantee conditions can be found in the guarantee leaflet supplied.