



Geratherm® wristwatch

Digital blood pressure monitor for the wrist

INSTRUCTION MANUAL

Model KP-6130

CE 0197

Designated use

This unit uses an oscillometric measurement method in order to measure systolic and diastolic blood pressure, as well as the heart rate. The measurement is conducted on the wrist. All values can be read on an LCD screen. This unit has been developed for home use and should only be used by adults over 18 years of age with a wrist diameter between 13.5 and 19.5 cm.



Precautions

- This manual and the product are not substitutes for visiting the doctor.
- Neither the information contained herein nor this product may be used to diagnose or treat health problems, or to prescribe drugs. If you have or suspect that you have a medical problem, please seek immediate advice from your doctor.
- Do not conduct any measurements if the temperature is low (below +5 °C) or high (over +40 °C), or if the relative humidity is beyond the range of 15 % to 90 %, as this can lead to inaccurate readings.
- Wait 30 to 45 minutes, before taking a measurement if you have just had a caffeinated drink or a cigarette.
- Relax for at least 5 to 10 minutes before taking a measurement.
- Please wait 3 to 5 minutes between measurements, so that your blood vessels can return to the state they were in prior to measurement. You may have to adapt the waiting time to your personal physiology.
- It is recommended that you use the same wrist for each measurement (preferably the left) and take the measurement at about the same time every day.
- Sit down comfortably with your elbows placed on the table and both feet on the ground. Please do not interlock your legs during the measurement.
- Place the product on level of the heart. Relax your hand. Your palm should be facing upwards.
- Take the measurement at room temperature in a quiet and stress-free environment.
- The unit should not be moved or shaken during the measurement. Please do not speak during the measurement.
- Please keep in mind that blood pressure naturally varies depending on the time of day and is affected by many different factors. Blood pressure is usually highest at work and reaches its lowest level during the sleep phase.
- Blood pressure measurements should be assessed by a doctor or trained healthcare professional who is familiar with your medical history. If you use the unit and regularly record the results, please keep your doctor informed with regard to the ongoing changes in your blood pressure.
- If you suffer from a cardiovascular disease (such as atherosclerosis), diabetes, a liver or kidney disease, severe hypertension or peripheral circulatory disorders, etc., please consult your doctor before using this unit.
- The blood pressure measurements conducted with this unit are equivalent to measurements obtained by a trained observer in accordance with the values achieved using the cuff/stethoscope auscultation method and are within the specified EN 1060-4 standard limits.
- If the cuff causes any discomfort during the measurement, press the "POWER" button to turn off the unit immediately.
- If the pressure is over 300 mmHg and the cuff does not deflate automatically, pull off the strap to detach the cuff.
- Do not use this appliance on infants, children or persons who cannot express their own intentions.
- Measuring too frequently may result in circulatory disorders, which can cause unpleasant sensations such as localised bleeding under the skin or temporary numbness in your arm. These symptoms do not usually last long. However, if you have not recovered after some time, please consult your doctor.
- The unit is not waterproof. Never immerse this instrument in any liquids.
- Do not use the instrument if you think it is damaged or if you notice anything unusual.

Guarantee

The warranty for this blood pressure monitor is valid for any error on the part of the manufacturer under normal use for 3 years from the date of purchase. If your unit does not function properly due to defective parts or assembly, we will repair it free of charge. With the exception of the battery and cuff, all parts of the unit are subject to this warranty. Damage caused by improper handling of your unit is not guaranteed.

We recommend that the accuracy of the unit be checked after 2 years from manufacturing date by an authorized laboratory.

This checking procedure is not a service provided under the warranty.

Information you should know before operating the device

What is blood pressure?

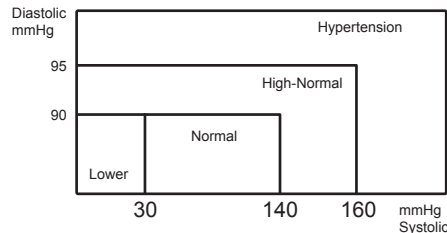
A force is created by the heart as it pushes blood into the arteries and through the blood circulation system. Another force is created by the arteries as they resist the blood flow. Blood Pressure is the result of these two forces.

What is systolic and diastolic pressure?

Systolic pressure is the highest pressure at the height of the heart's contraction. Diastolic pressure is the lowest pressure when the heart is resting.

Is my blood pressure normal?

See the following chart-WHO (World Health Organization) blood pressure classification.

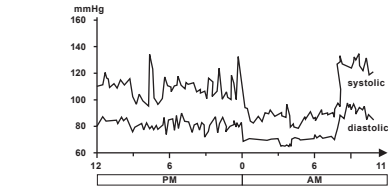


What about low blood pressure?

In general, the lower blood pressure reading is the better, unless it causes some uncomfortable symptoms such as fainting and light headedness.

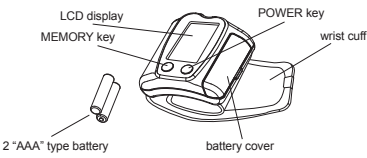
Fluctuation and variation in blood pressure

The following chart shows the blood pressure fluctuation in a day.



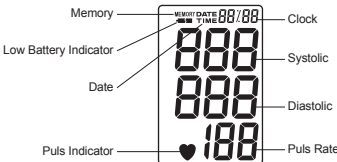
The following causes will influence the result of measuring blood pressure and cause the variations: bathing, breathing, conversation, drinking alcohol, exercise, moving, mental tension, meals, temperature change, smoking

About the device



The cuff is designed for fit wrist sizes between 13.5 and 19.5 cm (5.35 to 7.68 inch).

Explanation of Display



Preparation for use

Battery installation / replacement

- Remove the battery cover.
- Insert the batteries into the battery compartment matching correct polarities "+" and "-".



Note: Replace both batteries, if the low battery mark appears. Remove the batteries if the unit will not be used for a period of time. It is recommended that the same type of alkaline batteries be used to avoid incompatibility.



Keep batteries away from small children. Do not throw batteries into fires: they could explode.

Attaching pressure cuff

- Wrap the cuff around the left wrist. The display should be placed on the palm side of the wrist. The wrist should be bare skin.
- Fasten the cuff. Don't pull it strongly and make the cuff too tight. The cuff's edge should be approximately 1 cm (0.39 inch) from your palm line.
- Attach the cuff on the right hand as shown in the figure if it is not possible to measure the left.

Measuring posture

- Sit upright and place your forearm on the storage case, so that the unit is the same height with your heart. Relax yourself and measure in a natural posture.
- According to the fluctuation mentioned, it is very important to measure and record the blood pressure at the same time every day in order to get the tendency of your blood pressure.

How to operate the unit

1. Setting the clock

To enter the setting mode by pressing and holding the MEMORY button lasting for over 3 seconds. The display will show a blinking year firstly. Press the POWER button to adjust the year when it is blinking. Secondly, to press and release the MEMORY button, the "month" will appear and blink to be adjusted, and then "date", "hour" and "minute" will follow up as you press and release the MEMORY button again.

To adjust the clock

by pressing the memory key to adjust the values of the "month", "date", "hour" and "minute" when they are blinking.

2. Measuring blood pressure

Press and release the POWER button to start measuring automatically.

When the measurement was finished, the display will show the measured pressure and pulse value. Then, press the POWER button to turn off the unit. Otherwise the unit will turn off automatically in 150 seconds later.



3. Recall the memories

Press and release the MEMORY button to recall the last reading. The display will show the stored pressure and pulse rate.

Press the MEMORY button to go to previous stored values.



4. To delete one record

- Step 1:** Press and release MEMORY button to display stored values. Press and release MEMORY button again to choose the record that you wish to delete.
- Step 2:** Press and hold the POWER button until the display shows "dEL".
- Step 3:** Press and hold the POWER button. After three beeps are heard, the selected record is deleted.



Care and Maintenance

- Do not drop the unit.
- Do not modify or disassemble the body or the wrist cuff.
- Do not bend or twist the wrist cuff.

- Use a moistened cloth with water or neutral detergent to clean the body and then wipe it dry.
- Avoid thinner and benzene.
- Keep the unit in an suitable place avoiding high temperature, direct sunlight, high moisture, and much dust.
- Do not press the POWER button when the cuff has not been well wrapped.

DISPOSAL

Observe the applicable regulations when disposing of the device and batteries. This product must not be disposed of together with domestic waste. All users are obliged to hand in all electrical or electronic devices, regardless of whether or not they contain toxic substances, at a municipal or commercial collection point so that they can be disposed of in an environmentally acceptable manner. Please remove the batteries before disposing of the device/unit.

Do not dispose of old batteries with your household waste, but at a battery collection station at a recycling site or in a shop.



Error Message

Error Marks	Correction
LL Err	The pressure measured was lower than 20 mmHg. Please measure again.
UU Err	Excessive body movement is detected during measurement. Please measure again.
P Err	Pumping error. Please check cuff and try again.
rrErr	The pressure can not be measured due to signal noise. Please measure again.
HI	The pumping pressure is higher than 300 mmHg. Please measure again.
	Please replace the 2 batteries.
no display	Please replace the 2 batteries.

Specifications

Model no.	KP-6130
Display system	Liquid Crystal Display
Measuring method	Oscillometric, Fully fuzzy logic
Power Source	2 Alkaline "AAA" type batteries (1.5V)
Measuring range	20 to 300 mmHg (Cuff Pressure) 40 to 200 Pulse/minute (Pulse Rate)
Accuracy	±3mmHg (Cuff Pressure) ±5% of Readings (Pulse Rate)
Inflation	Automatic pump
Deflation	Automatic exhaust valve
Memory	42 memories
Display	LCD (year/date/time, pressure and pulse)
Low battery indicator	Yes
Power OFF	Automatically after 150 seconds of non use.
Battery Life	Approximately 250 measurements.
IP Classification	IP20 (protected against foreign bodies < 12.5 mm)
Cuff size	13.5 to 19.5 cm
Operating environment	+5 °C to +40 °C, rel. humidity: 15 % to 90 % RH
Storage environment	-25 °C to +55 °C, rel. humidity: 15 % to 90 % RH
Dimensions	80(W) mm X 80(D) mm X 30 mm (H)
Weight	Approx. 130g (including 2 batteries)
Electromagnetic compatibility (EMC)	The present medical product is a device with an extremely high degree of noise immunity. Therefore, the enclosure with the EMC tables was not printed out.

Specification are subject to change without notice for improvement.

Quality standard

Geratherm® is certified in accordance with Council Directive 93/42/EEC and EN ISO 13485 and is entitled to affix the CE-mark CE 0197 (Notified Body: TÜV Rheinland LGA Products GmbH).

- The blood pressure monitor conforms to
- EN 1060-1 (Non-invasive sphygmomanometers part 1: General requirements) and
 - EN 1060-3 (Non-invasive sphygmomanometers part 3: Supplementary requirements for electromechanical blood pressure measuring systems)
 - EN 1060-4 (Non-invasive sphygmomanometers, Part 4: Test procedures to determine the overall system accuracy of automated non-invasive sphygmomanometers)

Symbol Index

	Follow instructions for use		Type BF Equipment
	Keep dry		Batch code (mm/yyyy; month/year)
	Store between 15 % and 90 % R.H.		Serial number
	Store between -25 °C and +55 °C		Manufacturer
	The device must not be disposed of with household waste.		Caution! Read the instruction manual!



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