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MASTERMED
A1/A1+, A2/A2+, A3

CE
1304

MEDIZINTECHNIK
seit 1890
KaWe



User's Manual Aneroid blood pressure measuring device (for doctors)

Dear Customer, thank you for choosing our innovative aneroid blood pressure monitor. Our products are known for their high quality and longevity. This KaWe product meets the requirements of EC directive 93/42/EEC (standards for medical products) and DIN EN ISO 81060-1:2012 standard "Non-invasive sphygmomanometers - Part 1: Requirements and test methods for non-automated measurement type".



Please read these instructions thoroughly and completely before use and follow the given care instructions.

Use:

This device and its accessories are only to be used by physicians and trained professionals for monitoring blood pressure.

Purpose:

This device is intended for the non-invasive measurement of systolic and diastolic blood pressure.

Unsuited use/contraindication of the device:

Any use other than that described here shall be deemed improper. The manufacturer shall not be liable for any resulting damages. The user alone shall bear all risks.

Features/preparation:

This blood pressure measuring device is an aneroid measuring device. During measurement, there is a build-up of pressure that constricts an artery in the upper arm. As the pressure is released, the upper blood pressure reading (systolic blood pressure) is calculated and after a complete blood flow through the artery, further pressure is released and thereby the lower blood pressure reading (diastolic blood pressure)

is calculated.

1. Familiarize yourself fully with this product before using it.
2. Do not take your blood pressure directly after bodily exertion or in a state of excitement.
3. Relax for approx. 15 min in order to avoid measurement inaccuracies.
4. The measuring time shall not exceed two minutes. Between two successive measurements, a break must be taken for a minimum of two minutes.
5. In order to ensure correct measuring results, make sure that the proper cuff size is used. Different cuff sizes are available for different applications. Please consult an authorized dealer. The single-tube cuff only fits MASTERMED A1 and A1+. The dual-tube cuff is used with MASTERMED A2, A2+ and A3.

Basic rules for patients when measuring blood pressure:

- sit comfortably
- do not cross your legs
- lean back or find other support for your back and arms
- the middle of the cuff should be on the upper arm at the heart level
- during blood pressure measurement, relax and do not talk if possible
- rest for 5 minutes before the first use

Recommended for auscultation method:

- in adults, phase V (K5)
- in children aged 3 to 12 years, phase IV (K4)
- in pregnant women, phase V (K5), unless noises are heard in the cuff when pressure reduces, in such case phase IV (K4) of Korotkoff sounds is used.

K5 is the point at which the sounds heard with a stethoscope are no longer audible.

K4 is the point at which the sounds heard with a stethoscope vary from clear tapping to muffled.

Measuring blood pressure:

Attaching the arm cuff (instructions given for right-handed users):

1. After pushing back the shirt sleeve or otherwise freeing the upper arm of clothing, open the cuff's Velcro strap and pull the cuff up over the upper left arm. The tube should be positioned so that it points downward. The lower edge of the cuff should stay approx. 2–3 cm above the elbow.
2. The artery pointer on the cuff (KaWe logo must be visible on the outside) must be placed on the inside of the upper arm near the palpating artery. If this artery cannot be seen, it can be found by feeling the pulse with the fingertips.
3. For the doctor's blood pressure measuring device, a stethoscope is required in addition. The stethoscope chest piece (membrane side) must be inserted under the cuff and positioned over the artery.
4. Make sure that the cuff is always at the heart level.
5. Using the Velcro closure, fasten the cuff firmly but not tightly (leaving about 1–2 cm of space).
6. Prepare the stethoscope for use (insert the ear pieces into your ears).

Creating pressure:

1. Close the air-release valve on the hand pump by turning the screw to the right. Do not over-tighten the screw.
2. Inflate the cuff quickly and rhythmically with the hand pump and use the diaphragm on the stethoscope to listen to the pulse.
3. During this process, watch the device gauge and hold the left arm absolutely still.
4. If a pulse can no longer be heard with the stethoscope, raise the pressure in the cuff once again with the hand pump by 30 mmHg.

Releasing pressure:

1. Open the air release valve slowly, so that the drop in pressure on the gauge is approx. 2–3 mmHg/s.

Note: The speed of the pressure release affects the exactness of measurement results. The pressure must not be released too quickly or the point at which the pulse restarts will be missed. If the pressure is released too slowly, the arm will be left too long without the supply of blood because the pressure cuts off the blood flow.

Determining the systolic pressure:

1. While releasing the pressure, listen continuously for the sound of the pulse in the artery with the stethoscope. When the first pulse is heard, read the upper blood pressure value (systolic pressure) and remember this value.
2. As the pressure is released even further, the pulses will become quieter until they disappear completely. Remember the last pressure value by which a pulse was heard. This is the lower blood pressure value (diastolic pressure).

Completing the measurement procedure:

1. Open the air release valve completely to let the air escape completely from the cuff.
2. Remove the cuff from the arm and store the entire instrument in its storage case.

Cleaning:

Gauge: To clean the device, use only a soft, dry cloth.

Reusable cuff: If necessary, wipe the cuff with a damp cloth.

Disinfection:

Gauge: For disinfection of the device by wiping (minimum exposure time of at least 5 minutes) it is recommended to use the disinfectant MikroZid sensitive liquid (manufactured by Schülke & Mayr).

Reusable cuff: Wipe the cuff with a damp cloth and clean with soap or disinfectant. The cuffs have been tested to withstand the following recommended disinfectants: Buraton liquid, Cidex®, Ethanol 70%, Isopropyl-alcohol 70%, Mikrozid® and Sporidicin®. After disinfection, the cuff cover should be rinsed with water and left to air dry.

Single patient cuffs: The single patient cuff is to be used on one and the same patient for the duration of their treatment. The cuffs can be personalized. Do not clean or disinfect the single patient cuffs! Dispose of the cuff properly after use!

Warnings:

1. When the cuff is not connected to the gauge, always use a tube stopper to prevent accidental penetration of liquid. The penetration of liquid into the tube may cause damage to the gauge.
2. Periodically inspect and replace damaged or deteriorated cuffs.
3. Use only the appropriate size cuffs. The arterial pointer must be in the marked area, otherwise the measurement readings may be incorrect.
4. Single-patient cuffs are not intended for use on more than one patient.
5. Do not immerse the device in liquid to clean it.
6. Do not sterilize the device!
7. The blood pressure measuring device must be handled carefully and must not be exposed to pressure, sharp objects or any other mechanical stress.
8. The pointer on the gauge must point within the tolerance range of the zero position when there is no pressure in the cuff.
9. Always let all of the pressure out of the cuff before storing the instrument.
10. Protect the surface of the stethoscope diaphragm from damage.
11. Never inflate to more than 300 mmHg.
12. When replacing or repairing parts, please ensure that only original KaWe replacement parts are used.

13. Make sure that the tube system is airtight.
14. It is recommended that the device be handed over to the manufacturer or an authorized service center at least every 2 years for proper metrological control according to the Medical Devices Operator Ordinance.



No changes to the device are allowed!

Technical specifications:

Measurement range: 0-300 mmHg

Measurement accuracy: ± 3 mmHg

Storage/operating conditions:

Gauge:

Storage conditions: -30°C to $+70^{\circ}\text{C}$

Operating conditions: $+10^{\circ}\text{C}$ to $+40^{\circ}\text{C}$

Relative humidity: 15% – 85%

Cuff:

Storage conditions: -20°C to $+55^{\circ}\text{C}$

Relative humidity: 15% – 90%

Operating conditions: $+10^{\circ}\text{C}$ to $+40^{\circ}\text{C}$

Sea level: from -70 m to $+1700$ m

Warranty:

If used properly and in accordance with the instructions for use, the warranty period is two years from the date of purchase. If used properly and in accordance with the instructions for use, the product life is at least 10 years. If you have any questions or need repairs, please contact your dealer.

Accessories:

Accessories A1 / A1+:

Reusable single-tube cuff

04.85104.211 - infant
04.85104.221 - children
04.85104.231 - adult
04.85104.241 - large adult

Single patient single-tube cuff

04.85140.221 - children
04.85140.231 - adult
04.85140.241 - large adult

Accessories A2 / A2+:

Reusable dual-tube cuff

04.85204.211 - infant
04.85204.221 - children
04.85204.231 - adult
04.85204.241 - large adult

Accessories A3:

Reusable dual-tube cuff

04.86600.221 - children
04.86600.231 - adult
04.86600.241 - large adult

Arm circumference:

Infant: 13.8 - 21.5 cm
Children: 20.5 - 28.5 cm
Adult: 27.5 - 36.5 cm
Large adult: 36 - 46 cm

Contact:

Address or telephone number of your dealer.
Further information: www.kawemed.com

Disposal:

The product is to be disposed of in accordance with the local requirements.

Symbol key:

	Product reference number
	Lot code
	Batch No
	Date of manufacture
	Please follow the instructions for use
	Manufacturer
	Compliance with relevant guidelines
	Caution!
	Latex free
	Relative humidity
	Temperature range limits