



**SPHIGMOMANOMETRO ANEROIDE A-100 E A-50**  
**ANEROID SPHYGMOMANOMETER A-100 AND A-50**  
**TENSIOMÈTRE ANÉROÏDE A-100 ET A-50**  
**ANEROID-BLUTDRUCKMESSGERÄT A-100 UND A-50**



**MANUALE D'ISTRUZIONE**  
**INSTRUCTION MANUAL**  
**MANUEL D'INSTRUCTION**  
**BENUTZERHANDBUCH**

## 1. INTRODUCTION

This instruction manual is intended to assist the user for safe and efficient operation of the aneroid sphygmomanometers A-100 (with single head stethoscope included) and A-50 (stethoscope not included) (hereinafter: device).

The device must be used in accordance with the procedures described in this manual. It is important to read and understand the entire manual, especially the section “Information about blood pressure measurement”.

These devices are intended for the non-invasive measurement of systolic and diastolic arterial blood pressure. Always contact the physician if measurement is taken on children or persons with arrhythmia, as errors may occur.



**READ INSTRUCTION MANUAL CAREFULLY BEFORE USE  
THE DEVICE MUST NOT BE DISASSEMBLED  
FOR ANY PROBLEM PLEASE CONTACT THE TECHNICAL SERVICE OF DISTRIBUTOR  
FOR SPECIFIC INFORMATION ON YOUR OWN BLOOD PRESSURE PLEASE CONTACT YOUR PHYSICIAN.**

### **SAFETY RULES**

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1. Before first use, open the packaging, check all components are enclosed and good working.
2. The medical device must be set-up and used according to information supplied with the present manual;
3. Respect the safety rules and particularly:
  - Children and/or disable persons may only use the device under the supervision of an adult in possession of his/her full faculties.
  - If the device is stored at temperature out by indicated environment temperature limits, do not use it immediately. Leave the device at room temperature for at least one hour.

- Avoid extreme environmental conditions and the exposure to direct sunlight.
  - **NEVER DIP ANY PART OF THE DEVICE AND ACCESSORIES IN WATER, IT ISN'T WATER PROOF.**
  - The device must be used only by adult people.
  - Cleaning the device with soft and dry cloth. Do not use petrol, thinners or similar solvents. Spot on the cuff can be removed carefully with a damp cloth. Do not wash any part of the device.
  - Do not wash or iron the cuff
  - Do not squeeze the air hoses nor the cuff
  - Keep the cuff away from cutting edges and do not twist it
  - Avoid to drop the device or threat it roughly in any way.
4. The device must not be disassembled. For any problem please contact the Technical Service of the Manufacturer. Failure to comply with the above invalidates the safety of the device and the guarantee claims.
  5. This medical device must be used exclusively for the use for which it has been designed and as described in this manual. Any different use must be considered incorrect and therefore dangerous; the manufacturer and the distributor cannot be considered liable for damage caused to people, things or animals by improper, incorrect and/or unreasonable use.
  6. Measurement on people with serious peripheral circulation or renal problems, people who have had an ictus or if they are unconscious and the case of serious arrhythmia may be difficult and bring extra error; it is recommended to consult the physician.
  7. In case of malfunctions contact the technical service of the Manufacturer. If by technical check the device will result opened by user, the guarantee of Manufacturer and Distributor will be expired.

## **A-100 AND A-50 CHARACTERISTICS**

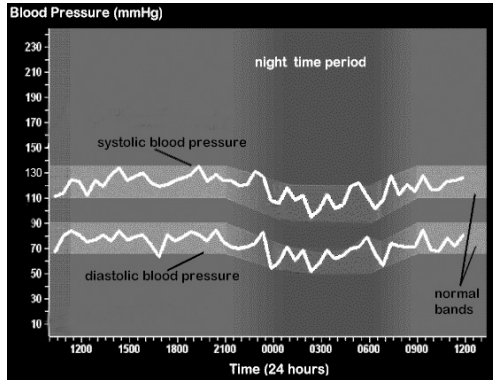
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A-100 and A-50 devices are aneroid sphygmomanometers (only A-100 with stethoscope included), that with manual procedure using Riva Rocci/Korotkoff measuring method, can be used to measure with great reliability the systolic and diastolic pressures. These devices have high accuracy and are designed to be very easy to use. Thanks to manometer's dimension and readability, is easy to ready clearly the cuff pressure all measuring time.

**WARNING: These devices can not provide reasonable accuracy if used or stored in the temperature or humidity beyond the range stated in the section "Technical Specification" of this manual.**

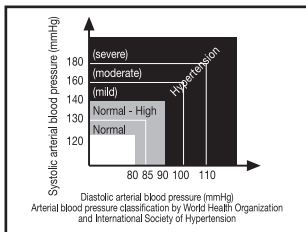
## 2. INFORMATION ABOUT BLOOD PRESSURE MEASUREMENT

1. It is necessary to know that arterial blood pressure is subjected to sharp fluctuations. The level of the arterial blood pressure depends on many factors. Generally arterial blood pressure is lower in summer and higher in winter. Arterial blood pressure changes with atmosphere pressure and it is affected considerably by many factors, e.g. physical loads, emotional excitability, stress, diet, etc. **Medicines, alcohol, smoking, affect greatly the level of blood pressure.** When blood pressure is measured at the hospital, the value is always higher than that at home. The reason is the stress caused by the ambient, which is known as “White coat effect”. Blood pressure will raise in low temperature, so it is recommended to take the blood pressure at room temperature. If the device was stored at temperatures out of range recommended, it is necessary to leave it at room temperature for at least 1 hour, otherwise malfunction may occur. Blood pressure varies with age and individually, and it is recommended to write down daily the measures, to evaluate with physician the one’s “normal blood pressure”.



*The illustration is from British Hypertension Society*

2. In case of patients with cardio-vascular diseases, the measurement should be taken under physician’s instruction. Not in any case it is allowed to change the dosage of the medications suggested by the physician without his consultation.
3. An accurate measurement of blood pressure may be difficult in serious arteriosclerosis, weak pulses, or in patients with manifest fluctuation of heart contraction rhythm. It is recommended to consult a physician for a correct reading of the blood pressure measurements.
4. It is necessary to keep quiet during measurement to get accurate readings. Measurement should be conducted in quiet environment at room temperature. Don’t eat or smoke before a measurement. A-100 and A-50 supplied with the

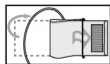


standard cuff which is fit for the arm size 22-32 cm. Care should be taken to ensure that the cuff size is appropriate for the person whose blood pressure is being taken. Children and adults with cuff size fall outside the range 22-32 cm should select special size cuffs. Please contact the dealer to get these special size cuffs.  
**ATTENTION: Use only original cuff!**

### 3. INSTRUCTIONS

**Sit down comfortably and place the device on a table with everything ready for measurement. Make sure you have a stethoscope which is not included in models A-50.**

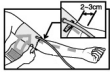
#### 3.1 FITTING THE CUFF



1. Insert the edge of the cuff approximately 5 centimeters into the D-ring as shown. Connect to one air tubes of cuff the aneroid manometer and to other one tube the inflation bulbe with valve.



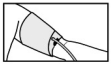
2. Put the cuff on the left upper arm with the tubes toward the direction of the palm. If measurement on your left arm is difficult, you can use right arm. In this case, it is better to know that the readings may differ from the left one so is important to remember to measure always the pressure at same arm, so the reading can be compared and well evaluated.



3. Wrap cuff around your upper arm with the lower edge of the cuff approximately 2-3 centimeters above the elbow. The mark ARTERY must be over the artery of the arm so that the good arrow printed on cuff for each arm is exactly over the artery during measurement (Right Arm arrow for right arm and Left Arm arrow for left arm).



4. Press the cuff to make sure that it is safety closed. The cuff should not be too tight or too loose. One finger should be easily put in between cuff and upper arm.



5. Sometimes it is difficult to make a regular fit due to the shape of the user's upper arm, the cone-shape assembly of cuff is also acceptable.



6. If the clothes fits closely to the upper arm, or the sleeve has been rolled up take them off to get accurate measurement.



7. When cuff is wrapped around your arm, place under the cuff the head of stethoscope, **in contact with skin**. The head of stethoscope will must be under the cuff and in line with space into the zone between the two "ARTERIAL" arrows printed on the cuff.



Once the cuff is wrapped, make sure that its position is approx at the same level of the heart, and that the forearm is extended naturally on the table.

### 3.2 CARRY OUT A MEASUREMENT

It is necessary to keep quiet during measurement to get accurate readings. Measurement should be conducted in quiet environment at room temperature. **Do not eat, smoke or exercise before measurement. Measurements are advisable before meals or at least two hours after. In case measurements has to be repeated, at least 10-15 minutes should be waited.**

**ATTENTION: Do not use cuffs other than the original cuff contained in this kit. DON'T INFLATE THE CUFF MORE THAN 300mmHg. The measuring time usually shall not exceed 2 minutes.**

Before the measurement, take 3~5 minutes of deep breathing and relax. Don't talk or move the arm.

1. Hold the measuring aneroid manometer unit with the hand with cuff or use the hook in the back to attach it at the buttonhole needle on the cuff. The inflation bulb with the hand without cuff. Check that manometer air valve is fully closed (take it between thumb and forefinger and turn on it clockwise).
2. Pump the inflation bulb to increase pressure in the arm cuff. The manometer will show the pressure value within the cuff. Continue to pump until the pressure reaches approx 30~40 mmHg above the regular systolic pressure. If the regular systolic pressure is unknown, pump until 180 mmHg or more until when heartbeat is heard.
3. Stop inflation and wait 3-4 seconds (or 3-4 heartbeats) before you open slowly the air valve such to let the indicator go down by 2-3 mmHg/sec.
4. During pressure decrease, look continuously the manometer and read the values indicated at first heartbeat heard into the stethoscope. This is the Systolic Pressure value (Max pressure). Lower and lower heartbeats will be then heard in the stethoscope. The pressure indicated on the manometer in the moment of last heartbeat is the value of Diastolic Pressure (Min Pressure).
5. The measuring is finished and you can open the air valve of manometer to deflate fully the cuff.

### 3.3 FAST INTERRUPTION DURING MEASUREMENT

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If you do not feel well during measurement or want to stop the measurement for any reason, open the air valve (turn on the valve anticlockwise) to deflate the cuff.

## 4. MAINTENANCE AND REPAIR

1. It's necessary to protect these devices and their accessories against high moisture and heat, direct sunlight, shock, solvents, alcohol.
2. This device don't needs ordinary maintenance, if necessary contact the technical service of distributor.
3. Keep the cuff and inflation bulb away from sharp subjects and don't extend or twist the cuff.
4. Use only soft and dry cloth to clean the device.
5. The cuffs are delicate and must be handled with care. You can clean the cuff cover with damp cloth.

**WARNING: Under no circumstances any part of device and its accessories can be washed. Keep the device and all of its accessories out of the reach of children.**

## 5. THOUBLESHOOTING





SYMPTOM	CHECK POINT	REMEDY
Manometer does not show any pressure during the cuff inflate.	<p>The manometer air valve is not fully closed The air tube is folded, bad connected or damaged. The cuff is damaged and leaks air.</p> <p>The manometer is damaged.</p>	<p>Close fully the air valve on the manometer. Connect correctly the air tube. Change the cuff.</p> <p>Call the technical service of distributor.</p>
The reading is extremely low or high	<p>Is the cuff at the same level as the heart? Is the cuff wrapped right? Did you move your arm during measurement? Did you talk or move your arm (or hand) during measurement?</p>	<p>Make sure that your posture is right Wrap the cuff correctly Relax during measurement Keep quiet and silent during the measurement</p>
Pulse rate is too low or too high	<p>Did you talk or move your arm (or hand) during measurement?</p> <p>Did you make measurement right after exercise?</p>	<p>Keep quiet and silent during the measurement</p> <p>Take measurement again after resting for almost 15 minutes</p>

## 6. TECHNICAL CHARACTERISTICS

Model	A-100 (REF PR 315100)
Size	Ø 50(D) x 90(H) mm
Weight	Approximately 110 g
Measuring method	Riva Rocci/Korotkoff
Measuring range	40 to 260 mmHg (pressure)
Pressure Range	0 to 300 mmHg
Measuring accuracy	± 3 mmHg for systolic and diastolic pressure
Inflation	Manual
Rapid deflation	Manual Valve / Fast deflation button
Operation temperature and humidity	+10° C to + 40° C , 20 to 85% RH
Storage temperature and humidity	-20° C to + 50° C, 20 to 85% RH
Cuff size	Applicable for arm size 22-32 cm
STETHOSCOPE ENCLOSED IN TO THE PACK	

Model	A-50 (REF PR 315050)
Size	Ø 50(D) x 90(H) mm
Weight	Approximately 110 g
Measuring method	Riva Rocci/Korotkoff
Measuring range	40 to 260 mmHg (pressure)
Pressure Range	0 to 300 mmHg
Measuring accuracy	± 3 mmHg for systolic and diastolic pressure
Inflation	Manual
Rapid deflation	Manual Valve
Operation temperature and humidity	+10° C to + 40° C , 20 to 85% RH
Storage temperature and humidity	-20° C to + 50° C, 20 to 85% RH
Cuff size	Applicable for arm size 22-32 cm
STETHOSCOPE NOT ENCLOSED	

## 7. SYMBOLS

<b>CE 0123</b>	CE Marking in conformity with EC directive 93/42/EEC and subsequent changes
	Warning!
	Consult the instruction manual
	To keep in cool and dry place
	Storage temperature
<b>LOT</b>	LOT number
<b>REF</b>	REF number

## 8. WARRANTY

**CA-MI** warrants its products for **24 months** after purchasing date. In front of this warranty, **CA-MI** will be obliged only to repair or substitute free of charge the products or parts of them that, after verification effected on our factory, or our authorized Service Center, by the Technical Service, results defective. **CA-MI** will substitute the device, only if a **SALE RECEIPT**. We also request to specify the kind of fault, in order to speed up repairing procedures. The product must be accompanied by a description of the defect. The warranty, with exclusion of responsibility for direct and indirect damages, it is thought limited to the solos defects of material or workmanship and it stops having effect when the device results however gotten off, tampered or sheltered out of the Factory or from the Authorized Service center. The commodity always travels to risk and danger of the buyer, without any responsibility of **CA-MI** for damages caused by the transport or dismay from the vector.

# CE 0123

Dispositivo medico di Classe Im (DIR 93/42/EEC e s.m.i.)  
Medical Device Classe Im (MDD 93/42/EEC and subsequent changes)  
Dispositif médical Class Im (Directive 93/42/EEC et modifications ultérieures)  
Geräteklasse Im (93/42/EWG und nachfolgende Änderungen)



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