



Gebrauchsanweisung

Aneroid

**Blutdruckmessgerät
und Manschette**

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Aneroid

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Information on the various models of Riester aneroid sphygmomanometers

You have just purchased a high-quality Riester precision aneroid sphygmomanometer manufactured in compliance with European standard EN 1060, Part 1: "Non-invasive sphygmomanometers - General Requirements" and Part 2: "Supplementary requirements for mechanical sphygmomanometers" and subjected to constant stringent quality control. The outstanding quality of this instrument will guarantee you years of reliable blood pressure measurement.

1. exacta® and sphygmotensiophone

These come with 2-tube cuffs, since the manometer is not connected directly to the bulb.

2. R1 shock-proof, minimus® II, precisa® N 1-Tube, babyphon® and ri-san®

These come with 1-tube cuffs. In these palm-style models, the bulb is connected directly to the manometer.

3. minimus® III and precisa® N double-tube

These come with double-tube cuffs. In these palm-style models, the bulb is connected directly to the manometer.

4. sanaphon® and ri-san®

These are instruments for measuring blood pressure at home.

In these models the manometer and bulb constitute one unit. A stethoscope chestpiece has been integrated into the 1-tube cuff. This chestpiece picks up the sounds of Korotkoff and conveys them to the ear via the enclosed stethoscope which has to be screwed into the threaded receptacle on the outside of the cuff.

5. big ben® Round / Square, wall, stand and anaesthetic model

These aneroid sphygmomanometers, which are characterized by outstanding readability, include a 2-tube cuff. One tube is connected to the bulb with the air release valve; the other tube is connected, via connecting piece, to a coiled tube that can be extended to a length of 3 m.

Installation instructions for the different models (with the exception of the desk model):

5.1. Wall model

Remove the wing nut underneath the cuff basket and

take off the wall bracket. Hold the bracket against the wall at the desired location and mark the positions of the mounting holes for drilling. Drill the holes and insert screw anchors in them. Now you can fasten down the wall bracket with screws (see Fig. 1). Place the unit on the wall bracket so that the top part of the wall bracket engages the edge of the cuff basket and the bottom part fits over the screw that protrudes from the underside of the cuff basket. Now replace and tighten the wing nut on the protruding screw.

5.2. Stand model

Mounting on stand:

Insert the column into opening provided in the base with five casters. Fasten the column by tightening the hexagon socket screw on the bottom part of the base using the hex wrench included.

Using bolts to mount the unit:

The package in which the unit came includes a threaded guide pin. Apply some adhesive to the threads. Insert the pin into the opening provided for it on the underside of the unit and tighten (see Fig. 2). Place the unit with the pin onto the column of the stand and fasten it at the desired height using the locking screw.

5.3 Anaesthetic model

Remove the wing nut underneath the cuff basket and take off the wall bracket. Affix the wall bracket to the back of universal clamp No. 10384 using the screws included (see Fig. 3). Place the unit on the wall bracket so that the top part of the wall bracket engages the edge of the cuff basket and the bottom part fits over the screw that protrudes from the underside of the cuff basket. Now replace and tighten the wing nut on the protruding screw.

Selection of suitable cuff sizes

A. Nylon-velcro cuffs

Our nylon-velcro cuffs have a tufted strip on one side and hooks on the other. This ensures that the cuffs can be easily opened and closed quickly and repeatedly.

On all the models (with the exception of sanophon®), the cuffs are calibrated, i.e. provided with measurement lines.

To make sure that you have chosen the right cuff size, check to see whether the white index line is in the range between the arrows after the cuff has been put on. If the index line fails to reach this range, the cuff is too small. If it is beyond the range, the cuff is too large. Precise blood pressure readings can be obtained only if the correct cuff size is used.

The following cuff sizes are available for all models (with the exception of the sphygmotensiophone, sanaphon® and ri-san® models):

Neonatal	arm circumference:	5.0 - 7.5 cm
Infant	arm circumference:	7.5 - 13 cm
Child	arm circumference:	13 - 20 cm
Small adult (thin arms)	arm circumference:	17 - 26 cm
Adult	arm circumference:	24 - 32 cm
Large adult (heavy arms)	arm circumference:	32 - 48 cm
Thigh	leg circumference:	42 - 50 cm
Thigh (heavy thighs)	leg circumference:	50 - 70 cm

sanaphon® and ri-san®:

Measure your arm circumference to make sure that it lies within the range indicated on the cuff.

The following sizes are available: child, adult, large adult and thigh. These sizes correspond to the circumferences given in the above table.

B. Cotton-velcro cuffs

Our cotton-velcro cuffs have a tufted strip on one side and hooks on the other. This ensures that the cuff can be easily opened and closed quickly and repeatedly. Measure your arm circumference to make sure that it lies within the range indicated on the cuff.

The following cuff sizes are available for the models listed below:

sphygmotensiophone:

Infant	arm circumference:	7.5 - 13 cm
Child	arm circumference:	13 - 20 cm
Adult	arm circumference:	24 - 32 cm

C. Cotton hook cuffs

On one side of these cuffs, metal bars have been worked into the fabric covering; metal hooks have been riveted to the fabric on the other side.

The metal hooks are inserted into the metal bars in the cuff fabric. Measure the circumference of your arm to make sure that it lies within the range indicated on the cuff.

The following cuff sizes are available for the models listed below:

R1 shock-proof, minimus® II, minimus® III, big-ben® Round / Square (all versions) and ri-san®

Adult	arm circumference:	24 - 32 cm
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D. Cotton bandage cuffs

There is a bandage strip and a hook on one side of the bandage cuff. To attach the cuff, simply insert the hook into the bandage strip. Measure the circumference of your arm to make sure that it lies within the range indicated on the cuff.

The following cuff sizes are available for the models listed below:

R1 shock-proof, minimus® II, minimus® III, big-ben® Round / Square (all versions) and ri-san®
Adult arm circumference: 24 - 32 cm

How to put on the cuffs

A. Nylon-velcro cuffs

A.1. Place the cuff 2-3 cm above the bend of the elbow on the naked left upper arm; make sure that the symbol "ø" is above the artery. Close the cuff by means of the velcro closure.

A.2. In units intended for home use, the diaphragm of the chestpiece integrated into the cuff must be placed above the artery.

To put on the cuff, pull the free end of the cuff through the metal D-ring and close the cuff by means of the velcro closure.

B. Cotton-velcro cuffs

C. Cotton bandage cuffs

D. Cotton hook cuffs

Place the cuff 2-3 cm above the bend of the elbow on the naked left upper arm; make sure that the symbol "ø" is above the artery.

B.1. Close the cuff by means of the velcro closure.

C.1. Fasten bandage cuff by inserting the hook in the bandage strip.

D.1. In the cuffs with hook closures, insert the metal hooks in the metal bars worked into the cuff fabric.

How to measure blood pressure

- After you have put on the cuff, pump it up by pressing the bulb until the pressure in the cuff is about 20 mm Hg above the expected systolic blood pressure (upper value).
- It is very important that the person whose blood pressure is being taken is relaxed and sitting comfortably. Furthermore,

the lower arm should be placed at the level of the heart with the inside of the arm facing upwards.

- Place the chestpiece of the stethoscope - preferably our anastophon® model (Cat. No. 4177-01 - 4177-05) - on the artery under the cuff.
- No separate stethoscope is required for the models **intended for home use**, since the chestpiece has been integrated into the cuff in these models.
- To be able to measure blood pressure, open the air-release screw on the bulb by turning it counter-clockwise. Ideally, the rate of air release should be 2 - 3 mm Hg/s. This rate can be adjusted by turning the screw very carefully. Perform a visual check of the air-release rate by looking at the scale: the pointer must move 1-1.5 graduations on the scale per second.
- **ri-san**® model feature a pushbutton valve. Actuate this valve to obtain an ideal air discharge speed of between 2 and 3 mmHg/s. When pressed up to the stop, the cuff will be completely evacuated.
- Once the upper blood pressure value (i.e. systolic pressure) has been reached, a rhythmic thumping sound is heard. The **systolic pressure**, or upper blood pressure value, is the pressure measured when the heart contracts, forcing blood into the blood vessels.
- When the lower blood pressure value (diastolic pressure) is reached, the thumping sound stops. The **diastolic pressure**, or lower blood pressure value, is the pressure measured when the cardiac muscle is expanded and fills up with blood again.
- The blood pressure measurement procedure has now been completed.
- We expressly call your attention to the fact that measuring your blood pressure at home is not a substitute for consulting a physician regularly; only a physician is capable of precisely analyzing the blood pressure readings you have taken.

How to care for the aneroid sphygmomanometer

1. Manometer and bulb

Cleaning

Wipe off the manometer and bulb with a damp cloth.

Sterilization is not necessary, since the parts do not come into direct contact with the patient's body.

2. Cuffs

Cleaning:

After removing the bladder, wipe the nylon-velcro covers with a damp cloth. Alternatively, these can be washed with soap and cold water like all the other cuffs. If you decide on the latter course, rinse the cuffs with clear water afterwards and let them air dry. Wipe the bladder and tubes with a damp cloth.

Disinfection:

After removing the bladder, wash the cuff covers in cold water to which disinfectant has been added. Afterwards, let them air dry.

The bladder and tubes can be wiped with a cotton cloth moistened with ethanol.

IMPORTANT!

Do not iron nylon-velcro cuffs!

Never expose the cuffs to intensive solar radiation! Never touch the cuff covers or bladders with a sharp instrument, since this could cause damage!

Test of precision

Remove the tube from the manometer and hold the manometer in a vertical position. When the pointer stands still at 0 on the scale, the instrument has been adjusted properly. If the pointer is below or above 0, the instrument must be recalibrated. Either take it to an authorised RIESTER dealer or send it to us.

Monitoring of instruments

EU countries except Germany:

Legal regulations for monitoring instruments apply to all EU countries except Germany.

Countries outside the EU:

For any countries where no legal regulations exist for monitoring instruments, it is recommended to examine the accuracy of measuring instruments in 2-year intervals.

Technical Data

Minimal environmental conditions under which the error tolerance of +/- 3 mm Hg must be satisfied in accordance with the EN-1060-2 standard:

Measurement conditions:	10°C to 40°C at a relative air humidity of 85 % (non-condensing)
Storage conditions:	-20°C to 70°C at a relative air humidity of 85 % (non-condensing)
Versions:	Aneroid, desk, wall, stand and anaesthetic model
Type of indication:	Round scale
Scale graduation:	Increments of 2 mm Hg
Range shown on scale:	0 to 300 mm Hg
Measurement range:	0 to 300 mm Hg
Pointer movement:	No stop pin
Tube adapter:	"1 or 2" or "1 and 2", depending on the particular model
Pressure generation:	Bulb
Pressure reduction:	Air-release valve that can be regulated.



Key to symbol on the unit:
Important: Please observe the accompanying documentation!



Meaning of the symbol on the packaging:
Cuffs contains natural rubber latex

Riester

The familiar way



Riester bietet eine große Produktauswahl in den Bereichen

Blutdruckmessgeräte | Instrumente für H.N.O.,
Ophthalmologische Instrumente | Dermatologische
Instrumente | Thermometer | Stethoskope | Stirnspiegel,
Stimnlampen, Untersuchungslampen | Laryngoskope |
Gynäkologische Instrumente | Perkussionshämmer |
Stimmgabeln | Produkte zur Blutstauung |
Lungendruckmessgeräte | Dynamometer
| Druckinfusionsgeräte | Veterinärmedizinische Instrumente
| Arztkoffer/ -taschen

**Die detaillierten Beschreibungen der Produkte
finden Sie unter der jeweiligen Rubrik im
Gesamtkatalog (Best. Nr. 51231-50). Oder gehen
Sie online unter www.riester.de.**



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found in the respective sections of the omnibus
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