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## Important Notes

This Blood Pressure Kit, which uses an aneroid gauge that is most popular among doctors and nurses due to its reliability and durability, is great for your personal use.

With its great accuracy, long lasting and easy of use, this product will help you monitor your blood pressure wherever you are.

Only a physician is qualified to interpret changes in your blood pressure. This device is not intended to replace regular medical examinations. It is recommended that your physician review your procedure for using this monitor. Never make adjustments to your medication unless it is the advise of a physician.

Please read this manual carefully before using this device. This Blood Pressure Kit is intended for use by adults only. Use a child size cuff when measuring a child's blood pressure.

## Measurement Accuracy

The blood pressure measuring device bears the CE (conformity) label "CE 0120". The quality of the device has been verified and conforms to the provisions of the EC council directive 93/42/EEC of 14 June 1993 on medical devices, as well as the EMC directive 89/336/EEC:

- EN 1060-1  
Non-invasive blood pressure measuring equipment.  
General requirements
- EN 1060-2  
Non-invasive sphygmomanometers.  
Supplementary requirements for mechanical sphygmomanometers.
- EN 1441  
Risk analysis for medical devices.



**Kessler**<sup>®</sup>  
MEDIZINTECHNIK

pressure logic  
adjustable KS 106  
Instruction Manual

CE<sub>0120</sub>

## Helpful Information

### What is blood pressure

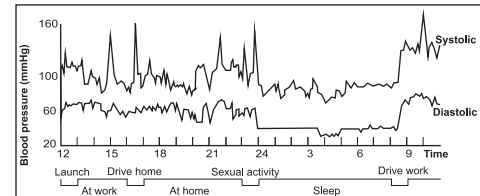
Blood pressure is the force that blood exerts on the arteries. This force is constantly changing as the heart beats. When the heart contracts, blood pressure reaches its highest value. This is called systolic blood pressure. When the heart relaxes between beats, the value of blood pressure is lower. This is called diastolic blood pressure. The unit of measure for blood pressure is the millimeter of mercury, abbreviated mmHg.

For example, an individual's blood pressure may be measures as 120mmHg (systolic) and 80mmHg (diastolic). This would be spoken as "120 over 80" and written as "120/80".

Remember that blood pressure varies throughout the day. Food intakes, smoking, time of day, stress, level of exercise and many other factors can affect it.

### Typical daily blood pressure fluctuations.

(Example: 35-year-old man)

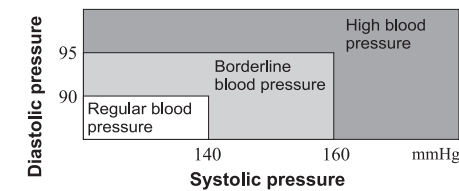


### What is High Blood Pressure?

Hypertension is a condition where an individual's blood pressure remains high over a long period of time. Untreated, hypertension can cause many serious medical problems including strokes and heart attacks. To control hypertension, the American Heart Association recommends that you no smoke, reduce fat and salt intake, maintain proper weight, exercise and get regular physical check-ups.

### Blood Pressure Classifications

Standards for assessment of high blood pressure, without regard to age, have been established by the World Health Organization (WHO), as shown in this chart.



### Why It is Important to Measure Your Blood Pressure at Home?

Having your blood pressure taken at the doctor's office may cause you to become nervous, thus artificially raising your reading. Having the ability to take your blood pressure at home makes it easy to record a log of your daily readings. This will help you gain a greater understanding of your blood pressure reading and the factors that affect it. Be sure that you share your information with your doctor.

### Hints for Accurate Measurement

1. Relax and try to remain still for 5 to 10 minutes before measurement.
2. Remove any clothing on the upper arm so that cuff can be placed directly on the skin. **Constriction of the upper arm caused by rolling up a shirt sleeve may cause and inaccurate reading.** Avoid this condition by completely removing the garment causing the constriction.
3. Refrain from eating, smoking and drinking (especially alcoholic beverages) before a measurement since these activities can affect your blood pressure.
4. Remember that blood pressure varies continuously throughout the day. Try to take your blood pressure at the same time each day.
5. Do not be concerned with the results of one measurement. Many measurements, recorded over a long period of time, will provide a better indication of your blood pressure.
6. Please relax for 5 to 10 minutes before taking another measurement.

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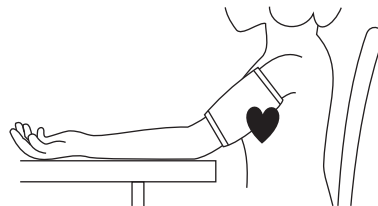
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## Correct Method of Measurement

7. Many factors can affect your blood pressure such as exercising, eating, talking, moving, nervousness, environment and temperature changes. Emotional stress can cause an increase in blood pressure. Daily fluctuations of 25 to 50 mmHg are common.

To obtain the most accurate blood pressure measurement, please follow these important directions.

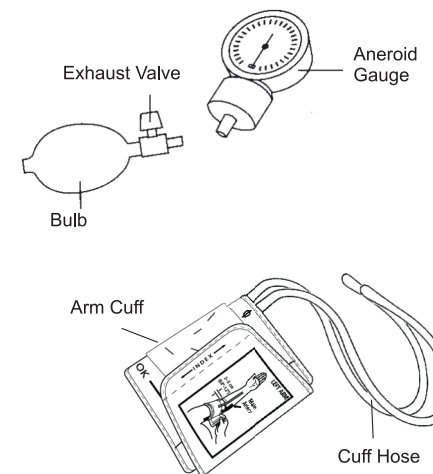
- Be seated in a chair with back support.
- Rest your arm on a table so the cuff is at the same level as your heart.
- Place both feet on the ground.
- Do not talk, laugh, cough, or move your arm during the measurement.



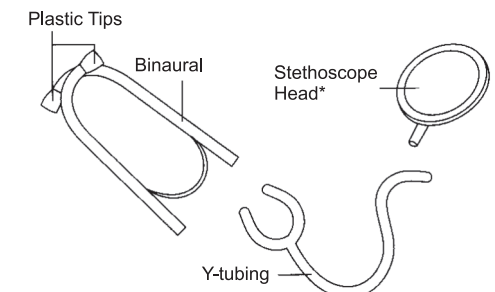
**IMPORTANT:**  
The arm cuff must be at the same level as your heart, or accurate measurements will not be possible.

## Parts Identification

### Gauge and Inflation System



### Stethoscope



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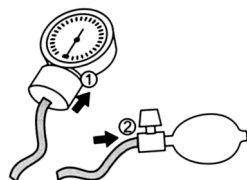
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## Preparation before Taking a Measurement

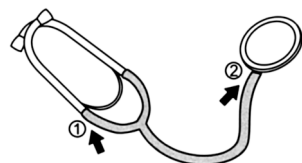
### How to Apply the Arm Cuff

(Preferably the left arm.)

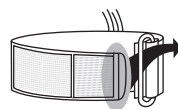
1. Connect the two tubes on the cuff to the gauge and the bulb.



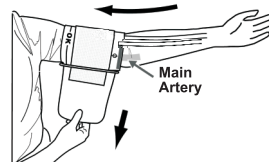
2. Connect the Y-tubing to binaural and the stethoscope head (fixed on the cuff).



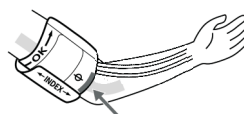
3. Insert the end of the cuff through the D-Ring to make a loop. (Make sure that the Velcro stays outside when it is done.



4. Wear the arm cuff with the hose downward. Pull the end of the cuff and secure it snugly with the Velcro. The tubes must be pointing your palm, and the artery mark "Φ" must be over your main artery.



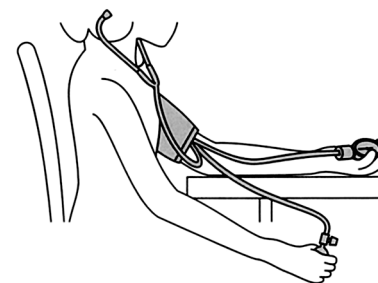
5. The edge the cuff should be at approximately 3 to 4 cm above the inner side of the elbow joint. If the index line falls within the OK range, the cuff circumference is suitable, otherwise you may need cuff with other circumferences.



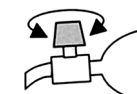
## Taking a Measurement

Please make sure that you have followed the procedures concerning the use of cuff and stethoscope on the previous section.

1. Hold the gauge with your left hand and hold the bulb with your right hand.



2. Turn the valve clockwise to close. Squeeze the bulb until the gauge indicator is pointing towards 180-200 mmHg.



3. Turn slowly the valve to open in order to deflate the cuff.

4. Watch the gauge indicator and control the deflation rate to be between 2-3 mmHg / second.

### Systolic Pressure

During deflation, while watching the gauge indicator falling listen carefully for the first sound will come as a soft hit. When this will happen the indication of the gauge indicator will be your systolic pressure.

### Diastolic Pressure

As the pressure decreases further, the soft hit you hear is getting weaker. At the point where you will hear the last soft hit will be your diastolic pressure.

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## Troubleshooting

Problem	Recommended Action
The pressure decrease too quick, hard to listen to the heart beat.	<ul style="list-style-type: none"> <li>• Check that all connection are well connected and without leakage.</li> <li>• Make sure the valve is turned tightly clockwise, and only turn it loose when you are ready to read the pressure.</li> </ul>
The deflation rate is ok, but I can not hear the heart beat.	<ul style="list-style-type: none"> <li>• Check if the ear pieces are properly insert into the ears.</li> <li>• Check if all stethoscope tubes are connected well.</li> <li>• Check if the cuff is applied correct.</li> </ul>
The gauge indicator is not moving.	<ul style="list-style-type: none"> <li>• Check if the tubes of the cuff are well connected to the gauge and the bulb.</li> <li>• Check if the bladder inside the cuff is leaking pressure by blowing into the two tubes. Replace the cuff if it is leaking.</li> <li>• Check if the gauge indicator can move freely by blowing into it. Have the gauge serviced if the gauge indicator will not move or will not zero itself.</li> </ul>

Problem	Recommended Action
Blood pressure readings are too high or low.	<ul style="list-style-type: none"> <li>• Check if the wrist is positioned properly.</li> <li>• Rest your arm on a table so that the cuff is in the same level with your heart during measurement</li> <li>• Remain seated during the entire measurement period..</li> <li>• Refrain from hand and body movements during measurement.</li> </ul>
Blood pressure readings are variable.	<ul style="list-style-type: none"> <li>• Your blood pressure can fluctuate considerably through out the day. All of the following factors can influence your blood pressure: <ul style="list-style-type: none"> <li>• Emotional state.</li> <li>• Daily activities or exercise.</li> <li>• Smoking.</li> <li>• Drinking alcoholic beverages.</li> <li>• Eating.</li> <li>• Taking certain medications.</li> </ul> </li> </ul>

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## Care and Maintenance

- Keep the unit out of locations with high temperatures or high humidity, and keep it out of direct sunlight.
- Keep sharp objects away from the cuff.
- Do not subject the unit to strong impacts or drop it on the floor.
- Use only a soft dry cloth to clean the unit. Do not use solvents or other petroleum based cleaners.

## Specifications

Model:	KS 106
Measuring method:	Aneroid / Auscultatory
Measuring range:	Pressure: 0 - 300 mmHg
Accuracy:	Pressure $\pm$ 3mmHg
Inflation system:	Manual inflation with air pump bulb
Deflation system:	Manual deflation
Arm size ranges:	22 - 35 cm (9 - 13 inches)
Weight:	Approx. 330g
Storage condition:	-10 °C ~ +60 °C, 10% ~ 95% RH
Operating condition:	+10 °C ~ +40 °C, 10% ~ 85% RH
Standard cited:	EN 1060-1 EN 1060-2 EN 1441

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## Blood Pressure Log

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