Sphygmomanometer

✨ Description

A **Sphygmomanometer** is a medical device used to measure arterial blood pressure accurately. It typically consists of an inflatable cuff, a measuring unit (mercury, aneroid dial, or digital display), and a pressure-release valve. This essential diagnostic tool is widely used in hospitals, clinics, ambulances, and home-care environments to detect hypertension, hypotension, and other cardiovascular conditions. Modern models provide precise, quick, and non-invasive readings suitable for both human and veterinary applications.

📌 Specifications

- Cuff with Velcro fastening or hook system
- Inflation bulb with air-release valve (for manual type)
- Aneroid gauge or digital LCD display
- Calibration accuracy: ±3 mmHg (standard)
- Durable bladder and bulb material
- Latex or latex-free variants
- Adjustable cuff size options
- Battery-operated for digital type
- Non-invasive blood pressure measurement

📏 Sizes

(According to cuff circumference)

- Paediatric: 12–19 cm
- Adult small: 20–26 cm
- Adult medium: 27–34 cm
- Adult large: 35–44 cm
- Thigh/extra-large: 45–52 cm

Veterinary cuff sizes vary depending on species and limb size.

🔶 Shapes

- Cylindrical rubber bulb
- Flat inflatable cuff
- Circular aneroid dial or rectangular digital module
- Compact, portable design

🧩 Types

- Manual Mercury Sphygmomanometer
- Manual Aneroid Sphygmomanometer
- Digital/Automatic Sphygmomanometer
- Wrist-type digital BP monitor
- Paediatric, adult, and veterinary cuff variants

🟫 Material

- Cuff: Nylon or polyester
- Bladder & bulb: Latex or PVC
- Gauge: Stainless steel + glass dial
- Digital type: High-impact ABS housing
- Velcro fastening strap

🗂️ Category

- Diagnostic Instruments
- Cardiovascular Monitoring Devices

🧪 Product Form

- Complete BP measuring unit with cuff
- Manual or digital operating mechanism

Usage

- Measuring systolic and diastolic blood pressure
- Cardiovascular screening
- Monitoring hypertensive patients
- Diagnostic evaluation in clinics, hospitals, and home-care settings

Advantages

- Non-invasive and easy to use
- Highly accurate readings
- Available in multiple types to suit all environments
- Durable construction for long-term use
- Portable and lightweight
- Digital types offer one-touch operation

Disadvantages

- Manual types require training
- Mercury units are heavy and require careful handling
- Digital readings may slightly vary with movement
- Calibration required for accuracy

Precautions

- Ensure correct cuff size for accurate results
- Position arm at heart level during measurement
- Avoid measuring over clothing
- Do not kink or fold the cuff bladder
- Calibrate regularly (especially aneroid type)

HS & HSN Code

- **HS Code:** 9018
- **HSN Code:** 90181990 (Other electro-diagnostic apparatus including sphygmomanometers)

Handling

- Wrap cuff snugly around the upper arm
- Inflate gradually (manual type)
- Ensure user remains still during reading
- Store in a dust-free, dry environment
- Avoid shock or drops to protect the gauge

Sterilisation Details

- The device itself is **non-sterilisable**
- Cuff can be cleaned with disinfectant wipes
- Regular hygiene maintenance recommended
- Do not immerse digital or mechanical units in liquids

Human Applications

- Routine blood pressure monitoring
- Hypertension management
- Pre- and post-operative vital screenings
- Emergency medical evaluation
- Home-care BP tracking for cardiac patients

Veterinary Applications

- Monitoring BP in dogs, cats, horses, and other animals
- Anaesthesia monitoring during veterinary surgery
- Diagnostic assessment for kidney, cardiac, and shock conditions
- Recording vital signs in critical-care animals

❓ FAQs (Frequently Asked Questions)

Q1. What is a Sphygmomanometer?
A **Sphygmomanometer** is a device that measures blood pressure using a cuff and pressure gauge.

Q2. Which types are most accurate?
Mercury Sphygmomanometers (MSM) are the gold standard, but **Aneroid (AM)** and **Digital Blood Pressure Monitors (DBPM)** also provide reliable results.

Q3. Can it be used at home?
Yes — digital models are ideal for **home BP monitoring**.

Q4. Do sphygmomanometers require calibration?
Yes, especially **Aneroid Models (AM)**, which need periodic calibration.

Q5. Is it suitable for animals?
Yes — with the correct cuff size, it is used widely in **veterinary practice**.