Tycos Hand Aneroid
Sphygmomanometer
Instructions
TR-1 Hand Aneroid
Operating Instructions

1. Seat the patient and make him/her as relaxed and comfortable as possible with the arm free of clothing. Rest arm on a steady, smooth surface at heart level and slightly flex the elbow.

2. Check to see that the pointer rests within the zero (oval) indicator on the dial face. If not, return the unit to Tycos for recalibration.

3. Select the appropriate cuff size for patient's arm. **NOTE:** Index line on cuff should fall within the double arrow range. If index line falls short of range, use a larger cuff to insure accurate results. If the index line is past the range, use a smaller cuff to insure accurate results.

4. Wrap cuff around arm with "artery" symbol located over the brachial artery, and with lower border about 2.5 cm above antecubital crease.

5. With trigger in "out" or "pump" position (see Diagram A), rapidly pump bulb to inflate cuff. Inflate to about 30 mmHg above the estimated (or palpatory) systolic pressure. **NOTE:** Verify the trigger is in "out" position or cuff will not inflate.

6. With the bell of a stethoscope (not included with this sphygmomanometer) lightly applied over the brachial artery, watch manometer, and deflate cuff by pressing lightly on trigger until tension is felt. Bleed rate increases dramatically as trigger is depressed beyond "tension point". During the measurement phase, attempt to keep the deflation rate at 2 to 3 mmHg per second. **NOTE:** Inflate the cuff rapidly then quickly begin pressure deflation rate point. During the measurement phase, attempt to keep the deflation rate at 2 to 3 mmHg per second. **NOTE:** To avoid hazards that may occur due to prolonged overinflation of the cuff, inflate the cuff rapidly and quickly begin pressure deflation.

7. As the pressure falls, note systolic pressure at the first appearance of repetitive sounds (Phase 1).

8. Note diastolic pressure at the point when Korotkoff sounds disappear (Phase V).

9. Pull trigger in fully to lock it in maximum bleed or "dump" position (see Diagram A). This allows for complete deflation of cuff.

10. Push index finger upward to return trigger to "out" or "pump" position.

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Interchanging Inflation Systems

1. The TR-1 Hand Aneroid features a conventional luer lock connection.
2. To remove the attached inflation system, simply hold the cuff tubing near the connector, and twist counterclockwise. The tubing will release easily.
3. To attach a new or different size inflation system, simply twist clockwise and tighten.

Bulb Replacement
1. To remove the old bulb assembly, turn it counterclockwise.
2. If there is damage to the gasket, remove sealing gasket from threaded part of manometer. Replace old sealing gasket with new gasket.
3. Place new bulb assembly onto the sphygmomanometer. Screw it up tightly against the sealing gasket. If bulb assembly will not seal tightly against the sealing gasket, screw the trim ring more tightly against the bulb. This will allow the bulb fitting to reach the sealing gasket.
4. When bulb is assembled to the sphygmomanometer so that it does not leak at the sealing gasket, screw the trim ring toward the sphygmomanometer (away from the bulb) until it comes up snug against the sphygmomanometer. This will lock the bulb assembly in position and prevent it from loosening with use.
Cleaning and Sterilization

**Gauge:** Wipe the sphygmomanometer clean with a slightly dampened cloth or alcohol wipe.

**Cuff:** Safely clean cuffs with a damp cloth or washed in water with soap or detergent. Before washing the cuff, remove the inflation bulb and tube fitting(s), close off tube(s) with plug*, and place the hook & loop fasteners in the closed position. After washing, allow the cuff to air dry. Re-assemble the tube fitting(s).*Plug available as accessory #5082-163.

**DO NOT PRESS WITH HOT IRON.**
The nylon hooks and loops are destroyed at temperatures above 250°F the nylon. Iron only on the reverse side with medium heat.

**Sterilization:** Do not use steam or heat to sterilize the cuff, bulb, or tubing. Use gas sterilization, if necessary. Use glutaraldehyde type liquid disinfectants on durable cuffs. Prolonged use of these disinfectants at full strength may cause discoloration of the white cuff markings.

Warranty

**Sphygmomanometer**
Your Tycos sphygmomanometer is covered by a 10 year warranty against original defects in material or workmanship. If the sphygmomanometer is found to be defective or at variance from the manufacturer’s specifications, Tycos will repair or replace the instrument or component(s) at no cost to the purchaser.

**Calibration**
Should the sphygmomanometer deviate from the ± 3 mmHg accuracy specification, Welch Allyn will recalibrate the sphygmomanometer at no charge for a period of 10 years from the date of purchase.

**Accessories**
The Welch Allyn One-Piece Blood Pressure Cuff is covered by a three year warranty against original defects in material, or workmanship. This warranty does not cover breakage or failure due to tampering, misuse, neglect, accidents, modification or shipping, and is void if the blood pressure cuff is not used in accordance with manufacturer’s recommendations or if repaired or serviced by other than Welch Allyn or a Welch Allyn authorized representative.

All repairs should be sent prepaid to:

**Welch Allyn, Inc. Repair Dept.**
4341 State Street Road
Skaneateles Falls, NY 13153
Phone: 315-685-4560
800-535-6663

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**Warning to users** - If luer lock connectors are used in the construction of tubing, there is a possibility that they might be inadvertently connected to intravascular fluid systems, allowing air to be pumped into a blood vessel.

The CE mark on this product indicates that it is in conformity with the provisions of Council Directive 93/42/EEC.

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European Regulatory Manager
Medical Division, Welch Allyn, Ltd.
Navan, CO. Meath, Republic of Ireland.

This product conforms to applicable sections of European Standard’s EN 1060-1, Non-invasive Sphygmomanometers, Part 1: General Requirements and EN 1060-2, Part 2: Supplementary requirements for mechanical sphygmomanometers.