

WelchAllyn

**Welch Allyn® DuraShock™
Integrated Aneroid
Sphygmomanometer**

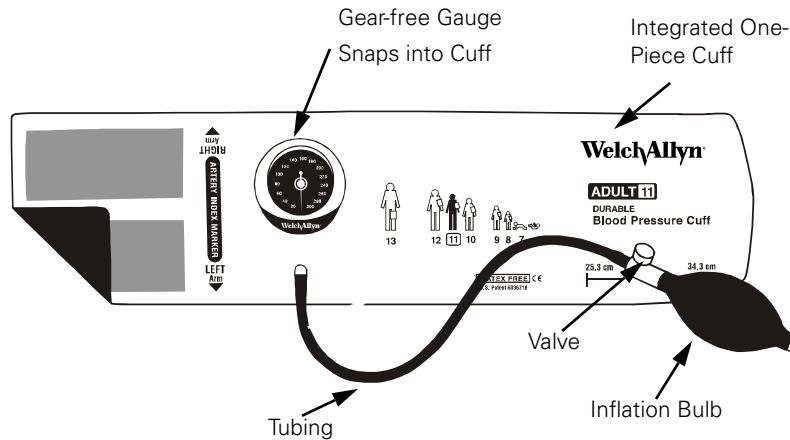


**Operating
Instruction
Manual**

Part No. 95P482 Rev. D

DuraShock is the **first and only** gear-free, shock-resistant aneroid sphygmomanometer technology. We expect you will receive years of trouble free operation from this product.

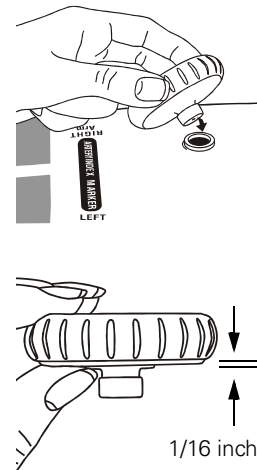
Components of the Welch Allyn DuraShock Integrated Aneroid Sphygmomanometer



Assembly Instructions

1. Attach the gauge to the cuff by pressing the gauge stem into the cuff port until you feel it engage. The gauge can be rotated 360° in the cuff port to improve your view of the dial face during readings.
2. Push the remaining smaller-diameter barb of the valve onto the tube.

NOTE: To assemble the bumper to a Welch Allyn DuraShock integrated gauge (model DS44 only), gently slide bumper over the gauge until the bumper just contacts the crystal around the entire circumference. Do not force to the point where the bumper shape is deformed, as this will reduce the shock-resistant properties of the bumper. Properly assembled, about 1/16-inch (2 mm) of the gauge will be visible below the bumper when viewed from the side (see illustration).



Operating Instructions

Auscultatory Method

1. Select cuff size appropriate for the patient's arm circumference. The applicable range, in centimeters, is printed on each cuff.

Note: The "Artery Index Marker" on the cuff should fall within the "Range" indicated on the cuff. If the index marker falls short of range, a larger cuff should be used to ensure accurate results. If the index marker is past the range, a smaller cuff should be used to ensure accurate results.

2. Wrap the cuff around the arm with the artery index marker located over the brachial artery and with the lower edge of the cuff 1-inch (2.5 cm) above the bend in the elbow.
3. Inflate cuff rapidly to a level 30 mm Hg above estimated (or palpatory) systolic pressure.
4. Partially open the valve to allow deflation at a rate of 2 to 3 mm Hg per second.
5. As the pressure falls, note systolic pressure and diastolic pressure with your stethoscope.
6. Rapidly release the remaining pressure and record measurements immediately. After a minimum of 30 seconds, repeat the above steps for a second reading.

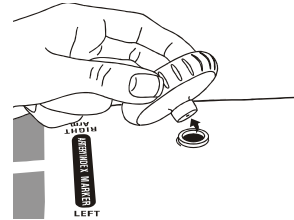
CAUTION: Do not allow a blood pressure cuff to remain on patient for more than 10 minutes when inflated above 10 mm Hg. This may cause patient distress, disturb blood circulation, and contribute to the injury of peripheral nerves.

WARNING: 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.

Inflation System Change and Replacement

The Welch Allyn DuraShock integrated blood pressure gauge connects effortlessly to the inflation system via a unique port connection. Therefore, only Welch Allyn integrated blood pressure cuffs can be used with the Welch Allyn DuraShock integrated blood pressure gauge.

1. To remove the inflation system, simply grasp the gauge and pull away from the cuff. Rotating the gauge as it is being pulled away from the cuff will make removal easier.
2. To attach a new or different size blood pressure cuff, simply press the gauge stem into the cuff port until you feel it engage. Rotating the gauge as it is being pressed into the cuff will make insertion easier.



Specifications and Standards

The Welch Allyn DuraShock integrated aneroid sphygmomanometer is accurate to ± 3 mm Hg and conforms to applicable sections of the following standards for aneroid sphygmomanometers:

- American National Standard ANSI/AAMI SP9-1994, Non-automated sphygmomanometers.
- European Standard EN 1060-1: 1996, Non-invasive sphygmomanometers, Part 1: General Requirements
- European Standard EN 1060-2: 1996, Part 2: Supplementary requirements for mechanical sphygmomanometers (excluding Section 7.4.3 for pointer thickness).
- INMETRO Technical Metrological Regulation Number 24 of February 26, 1996 (excluding Section 5.4 for pointer thickness).

This product will maintain the safety and performance characteristics specified at temperatures ranging from 0°C (32°F) to 46°C (115°F) at a relative humidity level not to exceed 85%.

Calibration Check of Aneroid Sphygmomanometer

Welch Allyn recommends that the calibration of aneroid sphygmomanometers be checked using the following procedure on an annual basis.

1. Connect gauge to a high-quality, known pressure standard¹ using a Y-connector and the DuraShock Calibration Connector accessor (part no. 5082-255).
2. Pressurize gauge to slightly above 300 mm Hg.
3. Bleed pressure down no faster than 10 mm Hg per second, stopping to check the pressure at 300, 250, 200, 150, 60 and 0 mm Hg.

NOTE: Your ability to measure the accuracy of a gauge depends upon the sensitivity of the pressure standard you use for the calibration procedure.

- If using a manometer (mercury column or aneroid gauge) rated at ± 3.0 mm Hg, you will be able to determine the accuracy of the gauge being tested to within ± 6.0 mm Hg.
- If using a device (e.g., digital pressure standard) rated at ± 0.1 mm Hg, you will be able to determine the accuracy of the gauge being tested to within ± 3.1 mm Hg.

1 Welch Allyn recommends using as sensitive as possible a pressure standard when performing calibration checks. A Setra Pressure Meter (part no. 2270-01), which is calibrated for ± 0.1 mm Hg, or Netech (part no. 200-2000IN), which is calibrated for ± 1.0 mm Hg, work well for this application. Both meters can be purchased from Welch Allyn by calling 315-685-4560.

How to Clean, Disinfect, and Sterilize the Welch Allyn DuraShock Sphygmomanometer

Cleaning

Aneroid Gauge, Inflation Bulb, and Valve: Clean the aneroid gauge, inflation bulb, and valve by wiping with slightly dampened cloth of alcohol pad.

Integrated One-Piece Cuff: Cuffs may be safely cleaned with a damp cloth (70% alcohol or 0.5% bleach solution may be used) or wash in warm water (140° F, 60° C maximum) with mild detergent. Before laundering the cuff:

1. Remove the inflation bulb and valve.
2. Close off the end of the tubing with Tube Plug Accessory (part no. 5082-163).
3. Close off the cuff port with Cuff Port Laundering Plug (part no. 5082-250).
4. Place the hook and loop fasteners in the closed position.
5. Machine launder using gentle cycle, warm water, and mild detergent.
6. Air dry completely and reassemble components.

DO NOT PRESS WITH HOT IRON.

Disinfecting

Glutaraldehyde-type liquid disinfectants may be used on the durable one-piece cuff. Follow instructions for use provided with the Glutaraldehyde product. Prolonged use of these disinfectants may cause discoloration. Do not use glutaraldehyde-type liquid disinfectants on the aneroid gauge, bulb, valve, or bladder.

Sterilizing

The durable integrated blood pressure cuff may be gas sterilized. Do not use steam or heat to sterilize the cuff, bulb, valve, or bladder. Do not attempt to sterilize the aneroid gauge.

Warranty

Your Welch Allyn DuraShock Integrated Aneroid Sphygmomanometer, when new, is warranted to be free from original defects in material and workmanship and to perform in accordance with manufacturer's specifications under normal use and service. The warranty period* begins from the date of purchase from Welch Allyn, Inc. or its authorized distributors. Welch Allyn's obligation is limited to the repair or replacement of components determined by Welch Allyn to be defective within the warranty period. These warranties extend to the original purchaser and cannot be assigned or transferred to any third party. This warranty shall not apply to any damage or product failure determined by Welch Allyn to have been caused by misuse, accident (including shipping damage), neglect, improper maintenance, modification, or repair by someone other than Welch Allyn or one of its authorized service representatives.

***Gauge Warranty**

Should the Welch Allyn DuraShock Integrated Aneroid Sphygmomanometer deviate from the ± 3 mm Hg accuracy specification during the warranty period, Welch Allyn will recalibrate the sphygmomanometer at no charge. Return the defective component only to Welch Allyn Technical Service or your local Welch Allyn authorized representative.

Welch Allyn DuraShock Model DS45: Ten-year warranty
Welch Allyn DuraShock Model DS44: Five-year warranty

***Cuff Warranty**

Welch Allyn Integrated Durable One-Piece Cuff: Three-year warranty

***Accessory Warranty**

Welch Allyn Inflation Bulb and Valve for Model DS45: Two years
Welch Allyn Inflation Bulb and Valve for Model DS44: One year

These express warranties are in lieu of any and all other warranties, express or implied, including the warranties of merchantability and fitness for a particular purpose, and no other person has been authorized to assume for Welch Allyn any other liability in connection with the sale of the Welch Allyn DuraShock Aneroid Sphygmomanometer with Integrated Gauge Adapter. Welch Allyn shall not be liable for any loss or damages, whether direct, incidental, or consequential, resulting from the breach of any express warranty, except as set forth herein.

Patents: 5,966,829; 6,036,718; 6,082,170; 6,120,458; 6,168,566; 6,234,972. Additional patents pending.

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Optional Accessories and Replacement Parts

Description	Part Number	
	Model DS45	Model DS44
DuraShock Gauge Only	DS45	DS44
Color Variety Pack, Four Bumpers	N.A.	DS44-V
Inflation Bulb, Medium	5086-01 (black)	5086-08 (gray)
Inflation Bulb, Large	5086-03 (black)	N.A.
Valve	5087-01	5087-16
Storage Case	5085-07	5085-09
DuraShock Cuff Laundering Plug	5082-250	5082-250
Durashock Calibration Check Connector	5082-255	5082-255
Universal Tube Plug Accessory	5082-163	5082-163

Durable Integrated Blood Pressure Cuff Accessories

Cuff Size	Child (9)	Child Print (9)	Small Adult (10)	Adult (11)	Large Adult (12)
Cuff Range (cm)	15.8-21.3	15.8-21.3	20.0-27.0	25.3-34.3	32.1-43.4
Durable Integrated Cuff (black tube for Model DS45)	DS45-DUR09	DS45-DUR09F	DS45-DUR10	DS45-DUR101	DS45-DUR12
Durable Integrated Cuff (gray tube for Model DS44)	DS44-DUR09	DS44-DUR09P	DS44-DUR10	DS44-DUR11	DS44-DUR12
Durable Integrated Inflation System (cuff, black tube, valve & black bulb) Model DS45)	DS45-DUR09F	DS45-DUR09F	DS45-DUR10F	DS45-DUR11F	DS45-DUR12F
Durable Integrated Inflation System (cuff, gray tube, valve & gray bulb) Model DS44)	DS44-DUR09F	DS44-DUR09F	DS44-DUR10F	DS44-DUR11F	DS44-DUR12F

Technical Service Phone Numbers

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Welch Allyn U.K. Ltd.

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Welch Allyn Ireland Ltd.

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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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