

Welch Allyn, Inc.
95 Old Shoals Road
Arden, NC 28704
Telephone: 828-684-4895, Fax: 828-687-1002
www.welchallyn.com

WelchAllyn

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Welch Allyn sphygmomanometers are manufactured to high standards for quality and accuracy. The instruments are manufactured using calibrated pressure standards traceable to the National Institute of Standards and Technology.

During normal operation, the location of the pointer within the oval indicates that the instrument is most likely in calibration. Should the pointer rest outside the oval with zero pressure applied, the instrument should be recalibrated.

Welch Allyn recommends that the calibration of mechanical sphygmomanometers be checked using the following procedures on an annual basis even if the pointer rests inside the oval.

1. Connect the instrument under test to a high-quality, known pressure standard and a 150 to 500 cc test volume.
2. Pressurize the gauge to slightly above 300 mm Hg and bleed down the pressure no faster than 10 mm Hg per second, stopping to check the pressure at 300, 250, 200, 150, 100, 60, and 0 mm Hg.
3. Record the readings of the instrument under test and the applied pressure. The difference is the error of the instrument. The error of the reference pressure should be added to the specified accuracy of the instrument under test (+/-3 mm Hg) to determine the working accuracy of your calibration set-up.

NOTE: Your ability to measure the accuracy of a sphygmomanometer 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 only ± 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.

Welch Allyn recommends using a pressure standard that is as sensitive as possible when performing calibration checks. A **Setra Pressure Meter** (part no. 2270-01, \$1,756.85), which is calibrated for ± 0.1 mm Hg, or **Netech Pressure Meter** (part no. 200-2000IN, \$306.00), which is calibrated for ± 1.0 mm Hg, work well for this application.

Welch Allyn's Sphygmomanometer Service Manual (part no. 95P504) contains details about testing, repair, and calibration of aneroid sphygmomanometers.

As an alternative, you may send sphygmomanometers to Welch Allyn for calibration. For a fee, you can receive for your files a calibration certificate that documents readings of the instruments received during calibration.

For more information, to purchase meters or manuals, or to send sphygmomanometers to Welch Allyn for calibration, call 800-535-6663.

Sincerely,



Chuck Setzer
Quality Manager



Set Up for Checking Calibration of Aneroid

