



OPERATING INSTRUCTIONS

Type B Concrete Air Meter Model CA-0500

The following instructions are intended only as a guide for general operating of the meter. For complete and detailed test operating instructions, please refer to ASTM C-231 or AASHTO T152 specifications.

1. Dampen the interior of the meters bowl and place it on a flat, level, and firm surface. Fill bowl with concrete sample according to ASTM C-231 Specifications, part 8. Now, strike off the top surface of the bowl until it is just level full. Clean bowl rim and cover to assure a pressure tight fit and clamp together.
2. Open both petcocks. Use syringe to inject water through on petcock until water is expelled from opposite petcock. Jar meter gently while continuing to inject water until all air bubbles are expelled from the same petcock.
3. Close air bleeder valve on top of air chamber. Pump air into meter until gauge hand is on the initial pressure line. Wait a few seconds and tap gauge lightly. Stabilize gauge hand on initial pressure line by pumping or bleeding of air as necessary, tapping the gauge lightly.
4. Close both petcocks. Press down on the air needle valve lever for a few seconds to release air into bowl. Tap sides of bowl smartly with mallet to relieve local restraints. Then tap gauge lightly by hand to stabilize the gauge hand reading. Now read the percentage of air in sample on meters gauge hand.

Note: Release needle valve lever before releasing the pressure from either the bowl or air chamber. Failure to do so may cause water to be drawn into the air chamber thus introducing error into subsequent tests.

5. Release pressure and unclamp cover from bowl. Clean bowl cover and petcock opening with running water. Continue with next test or dry meter and accessories and store in carrying case.



CALIBRATION INSTRUCTIONS

The following instructions are intended as a general guide to supplement the specific calibration procedures detailed in ASTM C-231 or AASHTO T152 specifications.

1. Fill meters bowl completely with room temperature water. Screw the straight calibration tube into the threaded petcock hole on the underside of the cover (note which petcock hole is used). Clamp cover to bowl.
2. Open both petcocks. Use syringe to inject water into petcock with short tube installed until water and all air bubbles are expelled through opposite petcock. Rocking the meter gently during this procedure helps to remove air.
3. Pump air into meter until gauge hand is just beyond the indicated initial pressure line (I/P is generally 3%). Wait a few seconds for the compressed air to cool and tap gauge lightly. Stabilize the gauge hand at the initial pressure line by bleeding of air with valve cap (5) or pumping air in as necessary, tapping the gauge lightly.
4. Close both petcocks. Press down on needle valve lever (14) to release air into bowl. Tap the gauge lightly with your finger while holding down the lever. Wait a few seconds for gauge hand to stabilize and release lever. Gauge hand should read 0% if all air was eliminated from bowl and initial pressure line setting was correct.

If two or more attempts have a consistent variation in gauge hand reading at above or below initial pressure line, make following adjustment to meter. Release two of the covers clamps and adjust their clamp tabs by holding the clamps stud with standard pliers and turn tab one turn to make following adjustment to gauge I/P reading. If gauge hand reads above I/P line, tighten both tabs clockwise one turn, if hand reads below I/P line turn both tabs counterclockwise one turn. Now, relock both clamps to bowl and repeat steps 2 through 4.

5. Screw curved calibration tube into petcock with short tube installed, open petcock and position calibration vessel under curved tube. Press needle valve lever down and carefully fill vessel exactly full of water, using needle valve and petcock to control the flow of water into vessel. Do not overfill vessel.
6. Open opposite petcock, open petcock with curved tube allowing water in the tube to run back into bowl. The bowl now contains 5% air.
7. With both petcocks open, follow the procedure in step 3 to pressurize the meters gauge hand to initial pressure line I/P 3%. Close both petcocks and press needle valve lever down. Wait a few seconds for air to warm and gauge hand to stabilize. Press valve lever again to release any remaining air. The gauge should read 5%.
8. If two or more tests indicate a variation of more than $\pm 0.1\%$ reset the gauge hand. Remove the gauge glass and turn the calibration screw on the gauge hand to reset hand to 5%. Retest to insure settings are correct.
9. When gauge hand reads correctly at 5%, additional tests may be run in increments of 5% each by withdrawing additional water with the calibration vessel.

