

SNOW BOARD SAMPLING EQUIPMENT

Directions for Use

1. Check calibration of empty tube.
2. Hold tube vertically above snow surface over snow board or storm board.
3. Insert tube to snow board surface with even vertical motion.
4. Record snow depth to nearest 1/10th inch or 2 mm.
5. Scoop snow away from one side of tube with spackling knife or equivalent, taking care not to damage ruler label on tube.
6. Slide spackling knife under tube and lift off board.
7. Hold finger over hole in top rubber cap to keep snow from falling out and turn tube over. This hole allows air to escape while the tube is inserted into the snow. Once tube is turned over and snow has settled to tube bottom, little or no snow will fall from hole.
8. Hang tube from scale hook by hole (in tube) and weigh on scale; record water equivalence to nearest 1/20th inch or 1mm.
9. Dump tube. Tap lightly if necessary but be careful because cold tubes will shatter.

If tube is stored in a heated building, cool tube to air temperature before using. This will help when the sample is removed by reducing melting and sticking. Best results are found when you take several measurements and take the average for your result.

Be sure that the scale is hanging freely and that there is nothing (like ice) keeping the spring in the scale from moving freely. If the scale is hanging at an angle the result will not be accurate. If you sample a board in the same place repeatedly through the season it may be worth leaving a loop of chord from a branch or something sticking horizontally from a fixed object. Ski pole straps work well too, if the pole is held at an angle, or off the ground. Do NOT hold the scale in your hand when taking a measurement. The most accurate measurements results from a free-hanging scale that is tapped a few times with your finger after the tube is hanging from the scale. Tapping allows the scale to find its true weighing location without friction from the scale itself.

Make a strong attempt to keep snow and water out of the scale itself. This will prevent friction or possible freezing between the inner and outer tubes of the scale, which will cause errors in your measurement. It will also keep moisture out of the inner spring mechanism and extend the life of your scale.

If conditions are windy and a sheltered location cannot be used for sampling, take an average of the values you see on the scale to get the best result. The scale is capable of measuring differences of only a few 1/100 of an inch of water, but with all errors possible in measurement it is recommended that resolution be limited to the nearest 1/20 of an inch or 1 mm. Sample 3 to 5 locations over the snow board, particularly if the depth on the board varies. Attempt to get a representation of high, low or medium depths.

Protection will extend the life of the label; it will scratch and can be removed or scraped. If you can't read it, you can't measure it. Be careful of the sharpened (beveled) edge of the tube. It will chip if contact with the board surface or ice lenses is too hard. Corrosion will be minimized and life of scale maximized if stored in a dry place.

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Scale Calibration

To calibrate the scale to the tube:

1. Hang the empty tube with one rubber cap on the scale as you would when taking a measurement.
2. Adjust the red measuring line in the scale to zero by rotating or spinning the plastic nob at the top of the scale with your fingers.
3. When you think the line is at zero value, let the scale hang freely from a loop or chord and tap the scale tube with your fingers. Alternatively, give it a slight bounce up and down to see that it returns to the correct calibration point. If it needs further adjustment, repeat step 2.
4. Calibration should be checked before each use.

If you have any questions, suggestions, or problems concerning sampling snow in general or this sampler in particular, please feel free to call, write or e-mail us.