

This is a simple test that you can use to check the FinePointe Calibrator for accuracy. Injecting a known volume of air is a common standard for calibrating volume and flow measurements in respiratory chambers. The FinePointe hardware uses a unique Calibrator that uses water displacement as a means of injecting a known and consistent volume into the respiratory chambers every time.

**NOTE: If your calibrator has a serial number on the bottom of it, you do not need to perform this test.**

The FinePointe Calibrator is an acrylic cylinder filled with water to a certain line that should guarantee a consistent 7.4 +/- 0.2 milliliter air injection every time. This injection is part of the automated calibration function that is an integral part of all FinePointe style respiratory hardware systems (WBP, NAM, RC, and Inhalation Tower). Small inaccuracies were possible with the acrylic inner-cylinder calibrator where the volume was higher than specification, and this test will pinpoint these quickly and easily.

### Test Procedure:

1. Pull back on a 10cc syringe until the base of the plunger is at the **7.6 mL** mark (image 1)
  - a. Use a new syringe with a verified volume to ensure that the injection is accurate.
2. Connect the syringe set to **7.6ml** to the calibrator via the connected tube (image 2)
  - a. **Do not** pull back on the syringe while it is connected to the Calibrator.

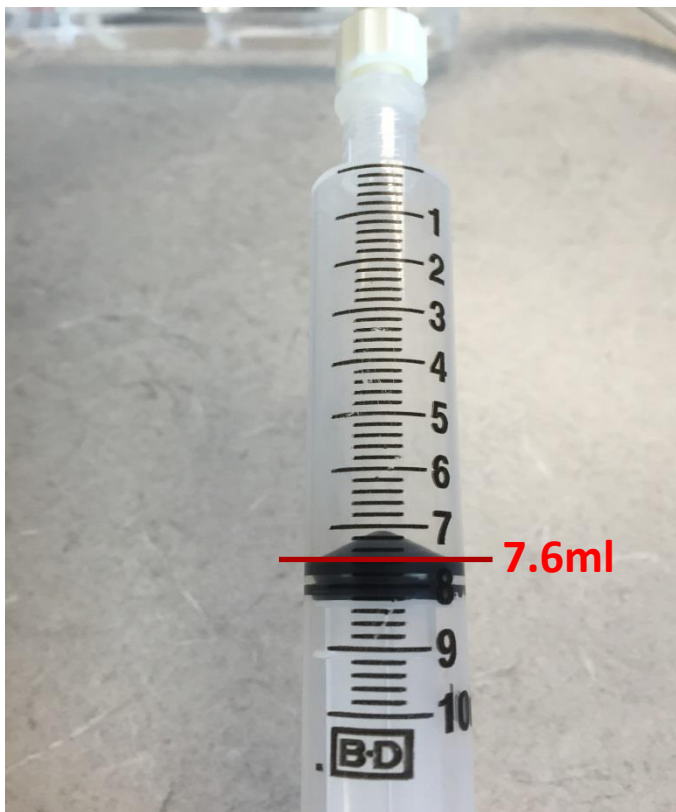


Image 1

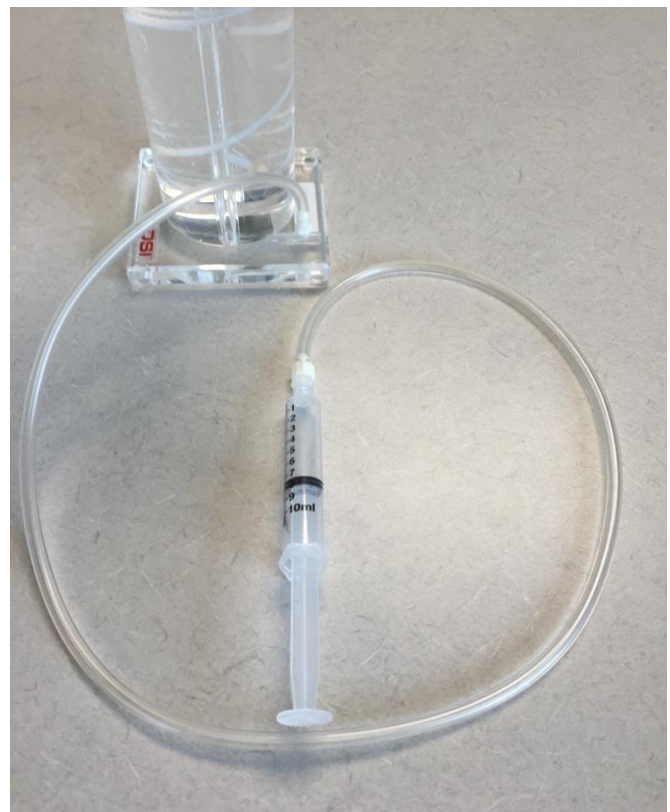
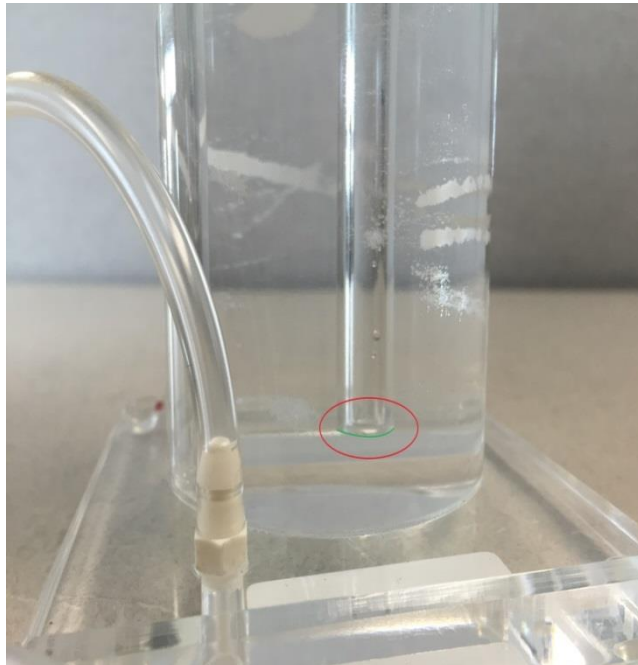


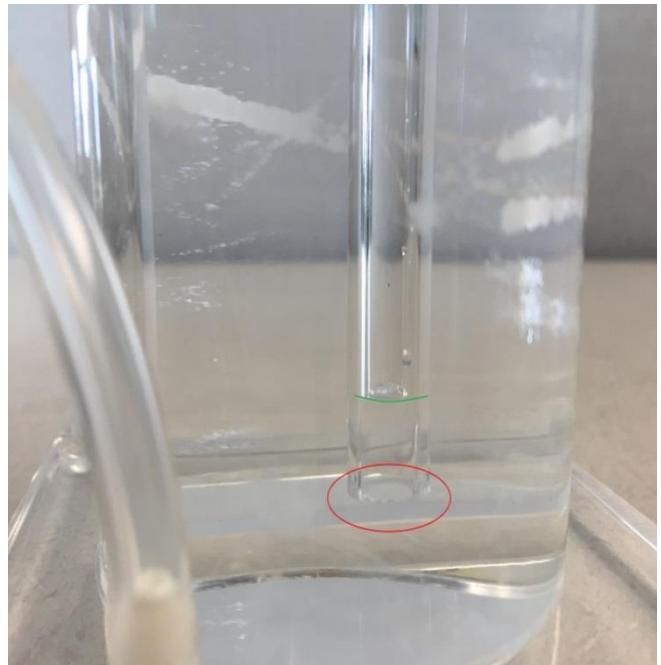
Image 2

3. Inject the 7.6 mL of air into the calibrator by pushing the plunger all the way down.
4. Watch the air being injected through the inner cylinder of the calibrator, displacing the water within.
5. Look at the **bottom** of the **inner cylinder** to see the water level.
  - a. If the water level is at the very bottom of the inner cylinder, or if there is a small bubble protruding from the bottom of the cylinder, the calibrator is still within specification (image 3).
  - b. If the water level is *above* the bottom of the inner cylinder, the displacement volume is more than 7.6mL of air and is **out of specification** (image 4).

*(See below: the level of the water in the inner column—the green line—should be at the very bottom of the inner cylinder of the calibrator—the red circle)*



**Image 3 – Accurate calibrator**



**Image 4 – Inaccurate calibrator**

If your calibrator meets the criteria outlined above we recommend indicating it by marking on the calibrator **“7.6 PASS”** with an indelible marker.

If you find that your calibrator does not meet the criteria outlined above, contact Client Service for a replacement at no charge.

**North America Client Service:** [CSservice@datasci.com](mailto:CSservice@datasci.com) 1-800-262-9687

**European Client Service:** [Europe-CSservice@datasci.com](mailto:Europe-CSservice@datasci.com) +31-13-5479356

**Asia-Pacific Client Services:** [apacsales@datasci.com](mailto:apacsales@datasci.com) +86-21-50793177