QRS Disposable Mouthpiece Calibration Information

All QRS spirometers use pre-calibrated, disposable mouthpieces. These mouthpieces are individually calibrated during production using the same equipment LDS Hospital uses to validate spirometers against the American Thoracic Society's Recommendations for the Standardization of Spirometry.

The ATS recommends calibrating your spirometers daily and again every time you move your equipment. This doesn't apply to spirometers that utilize pre-calibrated mouthpieces. The ATS/ERS 2005 Standardisation of Spirometry document recommends a calibration plan for disposable mouthpieces. This replaces the old recommendations which only addressed the older style spirometry pneumotachs that would require calibrating spirometers every day and again any time the device is moved. With the advent of disposable, pre-calibrated mouthpieces this is no longer necessary. However, as the ATS recommends, a quality assurance program should be implemented to periodically select and test calibration on a sample of disposable mouthpiece pneumotachs.

QRS does not routinely sell 3-liter calibration syringes with our spirometers. The calibration test on our spirometers is only a calibration check. There is no way to field calibrate QRS spirometers. QRS has thousands of spirometers in use around the world and has found the devices will not require recalibration unless they sustain physical damage or are dropped (as stated in our user's manual). In these situations, you should perform a calibration check. If that calibration check fails, contact QRS and make arrangements for us to recalibrate at the factory.

Some customers may prefer to do periodic calibration checks on our spirometers and mouthpieces to make sure they are within the acceptable range. We encourage this and have built-in standard and ATS 3-speed calibration checks into our spirometry software.

Customers who purchase a calibration syringe can check calibration on every mouthpiece before it is used. We believe this is overkill and essentially repeats what we have performed during production. Another method that is used by some of our customers is to randomly select a mouthpiece for a calibration check every time a new bag of mouthpieces is opened. Many customers of ours report that after doing this for a period of time they eventually stopped because they found the mouthpieces to never be out of calibration. However, this method would provide a quality control system that should ensure any organization of the quality of the results they receive from QRS spirometers.