

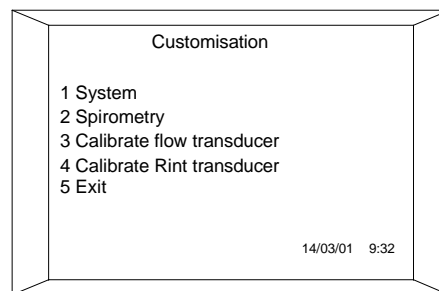
Clinical Trials Calibration Check for MicroLab Spirometers (Mark6 software v1.22 Onwards)

All Micro Medical Spirometers are flow-type spirometers and are calibrated to read in litres, at body temperature, barometric pressure saturated with water vapour (BTPS) for FEV₁ and FVC. The calibration should remain stable indefinitely and the unit should not require re-calibration, unless the transducer is physically damaged.

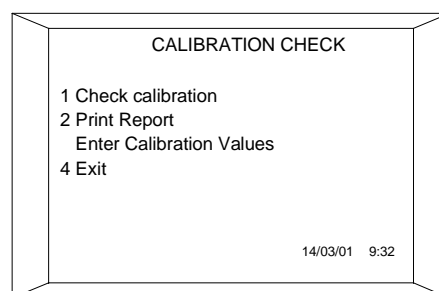
As a check on the correct functioning of the unit the ATS recommends volume calibration checks daily using a 3-litre syringe (available from Micro Medical as Cat No. SM2125). Ideally the syringe should be kept in close proximity to the spirometer to maintain the exact temperature and humidity of the testing site and the same operator should perform the procedure, as variation in technique will affect calibration results¹.

Performing a calibration check.

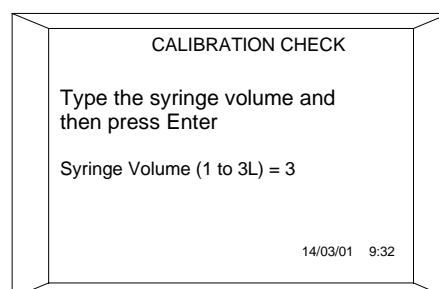
- Place the spirometer and syringe on a flat surface
- Select the Customisation Screen by holding down Enter and On keys.



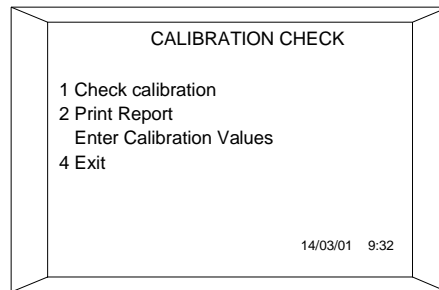
- Select Option 3: Calibrate flow transducer. The following screen will appear:



- Select Option 1: Check calibration. The following screen will appear:



- Press enter key to move to FVC screen
- Fill the calibration syringe with 3 litres of air and attach directly to the spirometer transducer.
- Empty the syringe volume into the transducer evenly, without pausing, and avoid banging the syringe against the end stop. (i.e. an uninterrupted blow lasting between 1 and 6 seconds). Once emptied, immediately reverse the procedure and fill the syringe to obtain both expiratory and inspiratory calibrations.
- The syringe calibration values are displayed on screen and must lie in the range of 2.91L to 3.09L. Press 'Done' and the following screen will appear:



- Press 2 to Print Report. For quality control, all printed records of daily calibration check results should be kept and stored out of direct sunlight and in a non-plastic folder.

If, after checking, the spirometer appears to require re-calibration, then please refer to your monitor.

References

1. American Thoracic Society.1994 Update. Standardization of spirometry. *Am J Respir Crit Care Med* Vol 152. p 1118

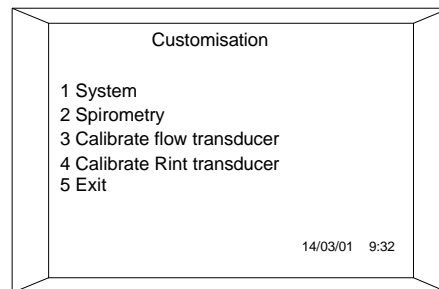
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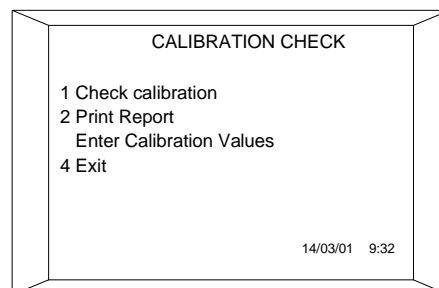
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Performing a calibration check.

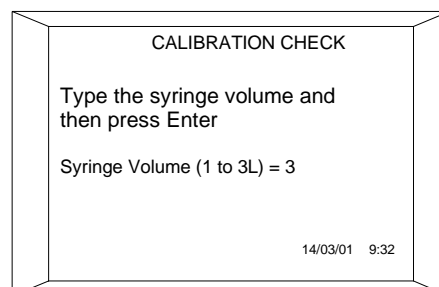
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- Select the Customisation Screen by holding down Enter and On keys.



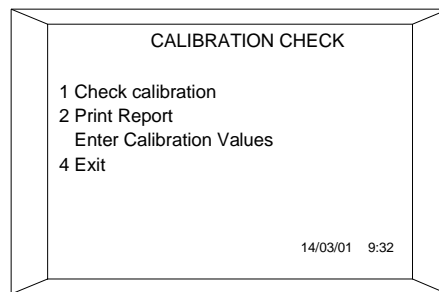
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- Empty the syringe volume into the transducer evenly, without pausing, and avoid banging the syringe against the end stop. (i.e. an uninterrupted blow lasting between 1 and 6 seconds). Once emptied, immediately reverse the procedure and fill the syringe to obtain both expiratory and inspiratory calibrations.
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