

# SpiroCard Specifications

**Weight:** Less than 2 ounces (57 grams)

**Height:** (W) 53 mm x (D) 140 mm x (H) 16 mm, extended housing.

**Housing:** PCMCIA Type II PC Card with extended housing.

**Program:** Reporting software is stored on the computer.

## **Environmental Conditions:**

Storage Conditions: Ambient Temperature: -15 to 50° C (5 to 122° F) Relative Humidity: 10 to 90% (non-condensing).

**Power Supply:** Internal: 5Vdc, 84mA max. Supplied by the PCMCIA slot.

**Operating Conditions:** Ambient Temperature: 15 to 40° C (59 to 104° F), Relative Humidity: 10 to 90% (non-condensing). Atmospheric pressure: 700 to 1060 hPa. Measurement Method: FLOW: Mouthpiece (US Patent #4,905,709) VOLUME: flow integration

**Range:** FLOW: +/-14 liters/second VOLUME: 0-8 liters BTSP

**Accuracy:** Complies with the American Thoracic Society (ATS) Standards for Spirometry, 1994 Update. FLOW: +/-5% of indication or 0.200 L/sec, whichever is greater for FEF 25-75. +/-10% of indication or +/- 0.400 L/s whichever is greater for PEF. +/-3% of indication or +/- 0.050 L, whichever is greater for FVC and FEV1. +/- 10% of indication or +/-15 L/min, whichever is greater for MVV.

**Precision:** FLOW: +/-3% of indication or +/- 0.050 L, whichever is greater for FVC & FEV1. Less than 5% of indication or less than 10 L/min, whichever is greater for PEF. Volume: +/- 3% of indication or +/-0.050 L, whichever is greater for FVC and FEV1.

**BTSP Conditions:** VOLUME: +/- 4.5% of indication or +/- 200 ml, whichever is greater for FVC and FEV1

**Calibration:** ATS 3-speed or standard calibration check.

Predicted Normals: Crapo, Cherniack, Morris, Knudson 1983, Polgar, Hsu, Roberts, Warwick, ECCS.

**Tests Performed:** FVC, Pre/Post Testing, Flow Volume Loop, MVV, SVC

**Measuring Time:** SVC up to 30 seconds.

**Printed Scale:** Flow Volume: (vertical) .5cm/1L/S, (horizontal) 1cm/1L Volume Time: (vertical) 1cm/1L, (horizontal) 1cm/second

**Sample Rate:** 100 samples/sec.

**Resolution:** Flow Rate: 2ml/sec., Volume: 1ml

**Limits of Detection:** Flow Rate: 2ml/sec., Volume: 1ml

**Parameters measured:** FVC, FEV0.5, FEV1, FEV3, FEV1/FVC, FEV3/FVC, PEF, FEF25%, FEF50%, FEF75%, FEF25-75%, FIVC, FIV0.5, FIV1, FIV3, FIV1/FIVC, FIV3/FIVC, PIFR, FIF50%, FIF 25-75%, FIF.2-1.2, FVC/FIVC, Extrapolated Volume (Ext. Vol.) MVV, RR, MTV, SVC