



## PULMONARY FUNCTION TESTS

SpiroStar USB  
PC Based Spirometer  
Small. Smart. Safe

A spirometer is a device which measures the amount of air that you can blow out and is indispensable in conducting Spirometry or Pulmonary Function Tests that can help diagnose various lung conditions. Lung damage is usually irreparable, therefore, early detection is essential to prevent further damage.

Spirometry is usually a part of routine health checkup, specially for smokers and people having exposure to pollution or hazardous environment, that can help diagnose various lung conditions, most commonly COPD (Chronic Obstructive Pulmonary Disease). Spirometry is also used to monitor the severity of certain lung conditions, and their response to treatment.

Medikro SpiroStar spirometry systems provides a whole range of options that offer customized solutions to your needs. The Spiro 2000 software can be used from basic lung function tests to advanced bronchial provocation challenge tests.

With Medikro spirometry systems, explore a whole new world of dynamic spirometry.



SpiroStar USB SMART

## Key Features

The smart software fulfill basic requirement of dynamic lung function test with accuracy and quality in line with all SpiroStar family product.

Measurement	VC, FVC
Parameters	FEV1, FVC, FEV1/FVC%, FEV6, FEV25%/50%, FEV 25-75%, PEF, METT, AEFV, FET, VEXT FIV1, FIVC, FIV1/FIVC%, FIV6, FIV25%/50% FIV 25-75%, PIF, MITT, AIFV, FIT, VIEXT, LAGE, Reproducibility INDEX.
Bronchodilator test	Pre-Post test comparison with automatic interpretation
Report	Single page report comprising of Flow-Vol envelop curve and VT6 Curve.

SpiroStar USB PRO

Comprehensive PRO software allows you to do full phased dynamic lung function test. With MVV test and trends.

Measurements	TV,VC,FIVC,FEVC,FVC and MWV.
Parameter	Standard parameter as in the SMART Version along with MVV specific Parameters like MVV, MVVFR, and MWVT.
Children Incentive	3D animated incentive to encourage children undergoing PFT.
Connectivity	Can be incorporated in HIS (Hospital Information System) and LAN Set up.
Trend function	This option provides both graphical and tabular trend for all 54 parameters.
Report	One page standard report with option to show graphical trend or VT6 Curve, additional pages can be added for detail report.

SpiroStar USB SENSE

Complete spirometry with detail bronchial provocation challenge test. Comprises of all common challenge test protocols. The sense software having all features of PRO version with Bronchial Provocation Challenge test.

Challenge protocol	Methacholine, Cold Air, Dry Air, Exercise, Adeenosine Histamine.
REPORT	Bronchial challenge test details with dose response curves report format for standard spirometry remain same as PRO Version.

Spiro Star PC Base System





## Technical specifications

### SpiroStar USB spirometer unit

- Physical dimensions: 84 mm x 36 mm x 17 mm
- Weight: 20 g
- Frequency response: 0...250 Hz (-3 dB)
- Supply voltage: via USB port
- Temperature correction: software-based
- Temperature range (operating): +10...+40°C
- Temperature range (storage): -10...+50°C
- Relative humidity range: 5...85%
- Pressure range: 600...1060 hPa
- Safety standards: EN60601-1, EN60601-1-2
- Class IIa medical device (MDD, 93/42/EEC), CE 0537

### SpiroSafe flow transducer - the best solution to patient safety

- Screen-type interchangeable disposable pneumotach
- Material polyethylene, can be disposed with incineration without toxic emissions
- Flow range: -14...+14 l/s
- Back pressure: less than 0.06 kPa/(l/s), meets ATS, ACCP & ECCS standards
- Accuracy: 3% without calibration, 2% with volume calibration
- Sterilisation not required, the entire SpiroSafe flow transducer is disposable

### Medikro® Spirometry Software

#### Remote use

- Database access via local area network (LAN)
- Final report and signal data transfer via e-mail

#### Calibration

- Calibration with standard 3000 ml pulmonary calibration syringe, user defined volumes allowed
- Calibration results are recorded and stored in the calibration log file

### Results and Databases

- Criteria of best results: according to ATS and ERS 2005 guideline.
- Automatic classification of bronchodilatation test.
- Several interactive graphs and tables. Detailed viewing by zoom, signal change by check boxes, trending.
- Reference values: several predefined national sets. Reference values also in a histogram form.
- Final report: page size A4/Letter, HTML based, user-defined, several predefined formats available.
- Database: MS Access or any other ODBC and SQL capable database
- XML based import and export functions
- Complies with latest ATS-ERS (2005) Recommendations



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