**Key Features**

- **Forced Vital Capacity - FVC**
- **PRE-POST bronco-challenge test**
- **Slow Vital Capacity - SVC**
- **Maximum Voluntary Ventilation - MVV**
- **Pediatric Encouragement Software**
- **Automatic BTPS Correction**
- **Windows™ PC Software**
- **Three Year Warranty**

**Overview**

*microQuark* is the new spirometer designed by COSMED for lung function screening. By simply installing the application software and connecting the cable to the serial port, microQuark can be used with any PC, either desktop or laptop. The great advantage of this product is the new software developed to allow any user to manage reliable screening spirometry in a simple and quick way.

**Accuracy**
The turbine flowmeter ensures maximum precision throughout a wide range of flows (up to 20 l/s) with a very low flow resistance (less than 0.7 cmH2O/l/s at 12 l/s). Calibration is carried out in seconds using a calibration syringe (1 or 3 liters). microQuark has a built-in temperature sensor for correcting the results automatically to BTPS.

**Ultimate Software**
microQuark is provided with the well proven COSMED software family for spirometry management. User-friendly interfaces, intuitive commands and icons make microQuark the perfect tool for fast and reliable data collection in any department or doctor office. The 12 month warranty on software includes free upgrades to new releases.

**ATS/ERS Compliance**
COSMED’s turbine flowmeter complies with ATS and ERS recommendations. All flow and volume measurement systems are pre-tested in our lab by means of a pulmonary waveform generator system according to ATS 94 standard (24+26 curves, BTPS conditions). microQuark meets ERS’93 recommendations for spirometry.

**Simple and Troublefree Technology**
No batteries are required in the new microQuark. Power supply is directly provided by the PC through the keyboard/mouse PS2 plug. A small adapter is provided in case the system is used with desktop PCs.

**Three Year Warranty**
The system is provided with a three year warranty on the main unit (flowmeter and cables not included).
Software Features

- “User friendly” interface developed according to the MS Windows guidelines.
- Easy management of broncho-challenge test by means of user-defined protocols.
- Pre-Post test with either broncho-dilator or metacholine.
- Powerful post analysis on data with possibility to overlap tests performed in different test sessions.

Hardware Features

PC Configuration Required

- Pentium or faster
- Windows XP, 2000, 98/95 or NT
- 16 Mb RAM or more
- Serial port RS 232 available
- Floppy disk 3.5"
- 20 Mb on HD space available
- Monitor VGA, SVGA, XGA
- Any mouse and printer compatible with the MS Windows™ operative system

Options

- Calibration syringe 3 liters
- Antibacterial filters
- USB - RS232 adapter (for Windows 2000 only)

Standard Equipment

- PC software and user manual
- Turbine flowmeter
- 2 Nose clips
- Serial communication cable
- Carrying case
- Adapter for pediatric mouthpieces
- PS2 Keyboard/Mouse adapter
- 20 Adult mouthpieces
- 20 Pediatric mouthpieces

Technical Specifications

Flowmeter
Bidirectional digital turbine Ø 28mm
Flow range: 0.03-20 l/s
Volume Range: 12 liters
Flow resistance: <0.70 cm H2O/l/s @ 12 l/s
Accuracy F/V: ±2%
Temperature sensor: 0-50° C

Tests
Forced Vital Capacity, Slow Vital Capacity (Inspiratory & Expiratory), Maximum Voluntary Ventilation, Respiratory pattern, Broncho-challenge tests.

Measured parameters
FVC • IVC • VC • MVV • VT • FEV1 • FEV6 • FEV1/FEV6 • FEV6/FVC • PEF • PIF • FEV1/FVC • FEF 25-75 • FEV1/VC% • %FEV1 • MEF25%•MEF50% • MEF75% • FET 100% • ERV • IRV • VE • Rf • ti • te • ti/t.tot • VT/ti • Best FVC • Best FEV1 • IC

Predicted values
ERS 1993 (ECCS 1983), NHANES III, Knudson 83, ECCS 1971, ITS, Zapletal, LAM, Pneumobil, Gutierrez (Chile), Multicèntrico Barcelona, User defined predicted calculations.

Technical sheet
Transmission: Serial port, RS 232
Dimensions: 150 x 45 x 53 mm
Weight: 77 g

CE
microQuark meets the European Directive 93/42 on Medical Device.

Safety Standards
EN 60601-1 (safety)/EN 60601-1-2 (EMC)

Options

- Calibration syringe 3 liters
- Antibacterial filters
- USB - RS232 adapter (for Windows 2000 only)
- PS2 Keyboard/Mouse adapter
- 20 Adult mouthpieces
- 20 Pediatric mouthpieces

New Features

- New NHANES III predicted equations included.
- FEV6 parameter and related calculations now measured.
- Printout report according to the ERS-ATS requirements.
- Create custom printouts according to user settings.
- Automatic interpretation according to latest ATS recommendations.

Powerful reporting allows user to print-out either ATS or user defined reports.

- Best Test selection and results reproducibility according to ATS 1994 standards.
- Quality control messages according to the ATS guidelines for spirometry tests.
- Automatic BTPS correction by means of the built-in temperature sensor.
- Full compatibility of the database with Quark PFT product line.

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