microQuark

PC-based Spirometer

Turn any PC into a Spirometer by connecting to a USB port

- Full Spirometry Testing (FVC, SVC, MVV and Pre-Post Bronchial Challenge Test)
- Bronchial Challenge Test (Metacholine and Bronchial Dilator)
- Automatic diagnosis according to ERS/ATS Standards and COPD Diagnosis (GOLD)
- Advanced software, patient database, diagnosis, realtime tests, professional prints, trends
- Digital Turbine Flowmeter validated by LDS Hospital (ATS Standards)

Discount CARDIOLOGY
www.discountcardiology.com

COSMED
Pulmonary Function Equipment

The microQuark is a new PC spirometer designed by COSMED for lung function screening. It can be used with any PC, either desktop or laptop, by simply installing the application software and connecting the USB cable to the USB port of the computer.

The great competitive advantage of this product is the newly developed software that allows the user to manage reliable screening spirometry in a fast, simple, and cost-effective way. All data (FVC, SVC and MVV) is displayed in realtime, so the user can monitor tests as they are performed.

Applications

The microQuark features can be used in a variety of application fields: Small Clinic, Family Practice, General Practitioner, Occupational Health, Preventive Medicine, and Sports Medicine.

Accurate & Reliable Flow and Volume Measurements

The flowmeter ensures maximum precision throughout a wide range of flows (up to 20 l/s) and a very low flow resistance (less than 0.7 cm H_2O/l/s at 12 l/s). Calibration is completed in a second using a 3-liter calibration syringe. The microQuark also has a built-in temperature sensor for the automatic correction of results to BTPS conditions.

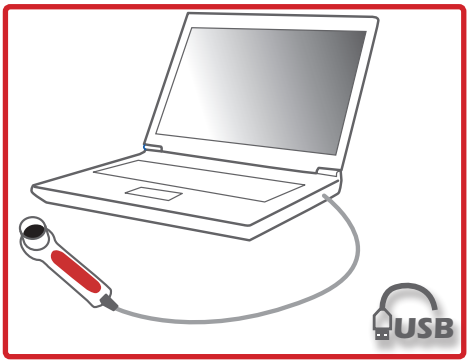
The turbine flowmeter complies with ATS and ERS recommendations. All flow and volume measurement systems are pretested by means of a pulmonary waveform generator system, according to the ATS 94 Standards (24 + 26 curves, BTPS conditions).

Technology

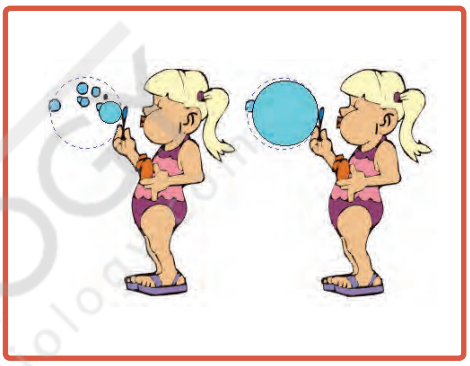
No batteries are required for the microQuark. Power is supplied by the PC through a USB connection.

PC Software

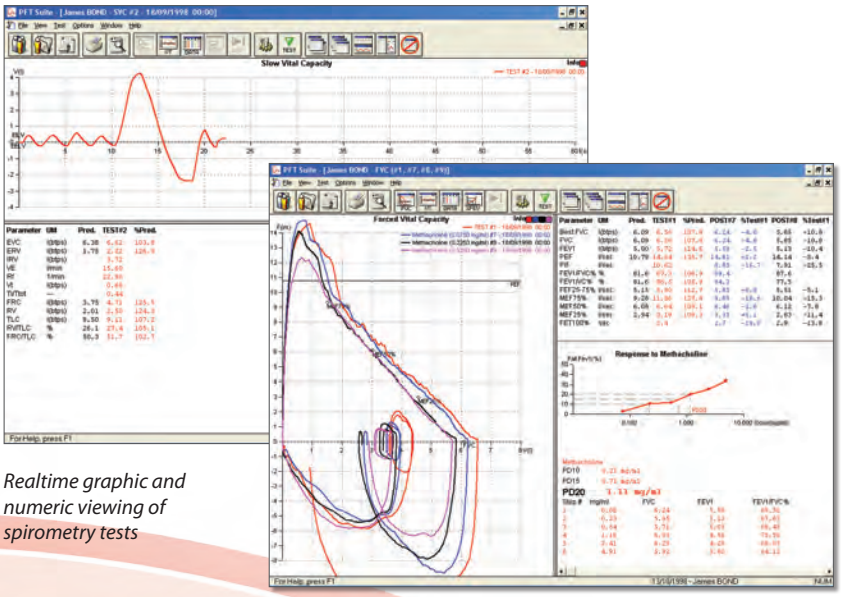
- Complete database management for patients, diagnosis, clinical reports, and bronchial challenge protocols
- User-defined protocols to easily manage bronchial challenge tests
- Detailed printing of F/V, V/t, bronchial challenge response graphics, PD 10, 15 and PD 20 calculation
- Pre/Post-test with either bronchial dilator or metacholine
- Powerful post-analysis data management with the ability to overlap tests performed in different test sessions
- Multiple parameter trend analysis
- Batch print multiple spirometry tests
- Built-in temperature sensor for automatic BTPS correction
- Software encouragement tool for pediatric and non-compliant patients
- Several selectable sets of predicted values: ERS, NHANES III, etc.
- Ability to create custom parameters and user-defined sets of predicted equations
- Measurement of FEV6 parameter and related calculations
- Printout report according to the ERS-ATS requirements
- Customizable printouts per user needs
- Best Test selection and results based on ATS 1994 standards
- Quality control messages according to ATS guidelines for spirometry tests
- Full database compatibility with Quark PFT product line



Direct connection to USB port



Software Encouragement feature



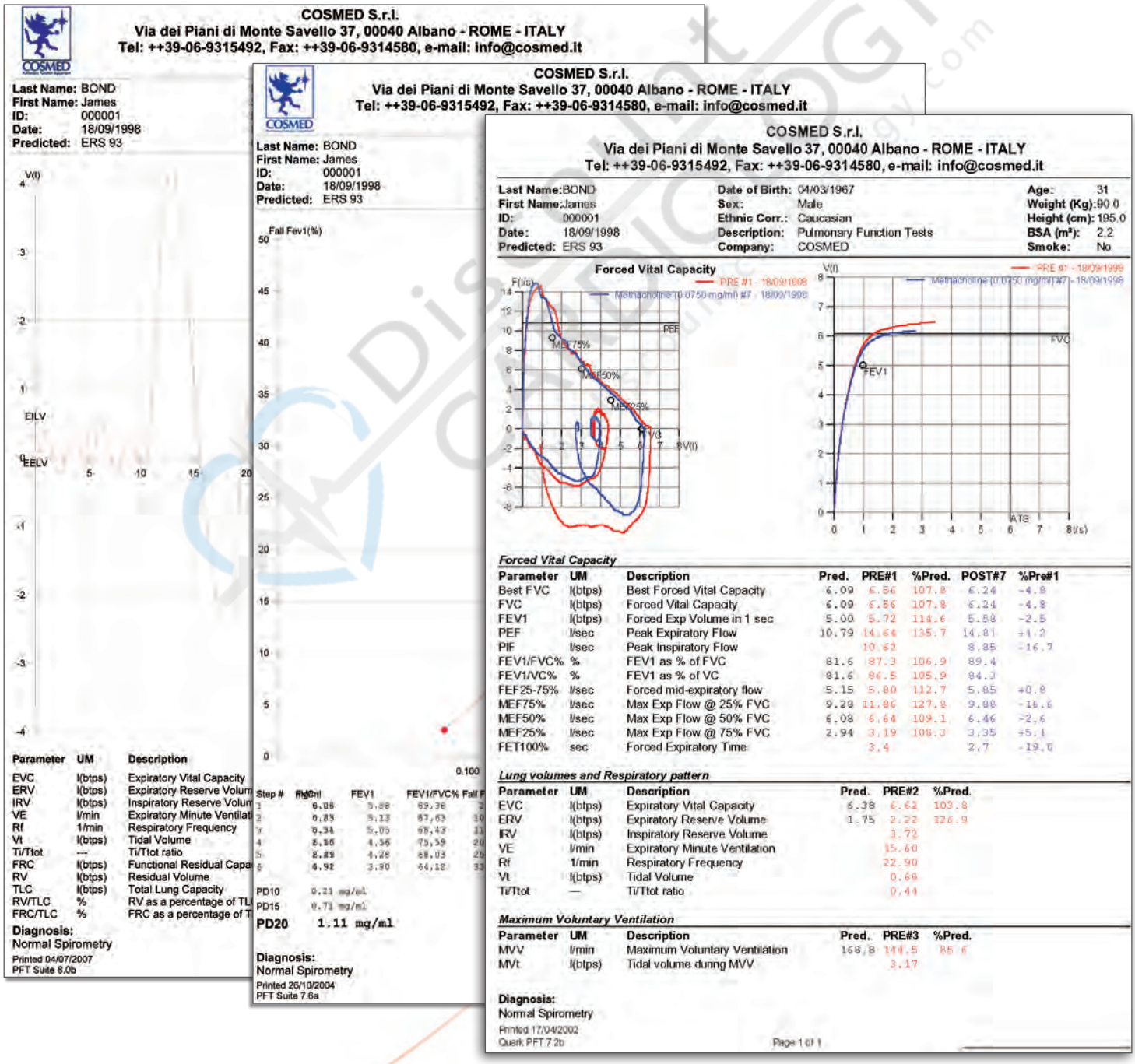
Realtime graphic and numeric viewing of spirometry tests

Discount Cardiology
www.discountcardiology.com

Accessories and Options

Digital Turbine Flowmeter	The Digital Turbine Flowmeter does not require frequent calibration, and is extremely accurate and reliable in any conditions. It can be used with antibacterial filters (recommended) or cardboard mouthpieces.
Calibration Syringe	A 3-liter certified Calibration Syringe ensures easy and fast flowmeter calibration at any time.
Antibacterial Filters	The Antibacterial Filters provide high filtration efficiency (99.9999%) to avoid cross-contamination.

Antibacterial Filter



Printout reports according to ATS/ERS Guidelines

The microQuark and related accessories are provided together in a convenience carrying case

Technical Specifications

Product Features

Flowmeter	*Digital Turbine Ø 28 mm"*
Type	*Bidirectional*
Flow Range	*0.08-20l/s*
Volume Range	*12 liters*
Accuracy of Reading	*±2%*
Resistance	*<0.6 cmH_2O/l/s @ 14 l/s*
Temperature Sensor	*0-50° C*

Measured Parameter

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, Thai 2000, user defined predicted calculations

Hardware

Interfaces	*Digital USB*
Dimensions (mm, in)	*150 x 45 x 53 / 38.1 x 11.43 x 13.4*
Weight (g/oz)	*77 / 2.7*

Standard Packaging Includes

PC software and user manual, flowmeter, nose clips (2), serial communication cable, carrying case, adapter for pediatric mouthpieces, conic mouthpiece, adult mouthpieces (20), pediatric mouthpieces (20), CD-rom

Available Languages

English, Italian, French, German, Spanish, Portuguese, Turkish, Chinese (Mandarin), Korean

PC Configuration Required

Pentium or faster. Operating system: Windows XP, 2000, 98/95, NT, Vista (32 bit), Windows 7 (32 bit). 64 Mb RAM or more, USB port available, CD reader", 20 Mb on HD space available, Monitor VGA, SVGA, XGA, any mouse and printer compatible with the MS Windows™ operative system

Electrical Requirements

Power Supply	*via USB*

Safety & Quality Standards

Equipment complies with MDD (93/42 EEC);
FDA 510(k) cleared (federal law restricts this device to sale by or on the order of a physician). EN 60601-1 (safety) / EN 60601-1-2 (EMC).
COSMED is an organization whose quality management system is certified by CERMET according to UNI EN ISO 9001:2008 and UNI EN ISO 13484:2004

CE 0476

Discount CARDIOLOGY www.discountcardiology.com

Distributed by:

COSMED
Pulmonary Function Equipment

COSMED USA Inc.
California
1850 Bates Avenue
Concord, CA 94520
Toll Free +1 800 426-3763
Phone +1 (925) 676-6002
Fax +1 (925) 676-6005

COSMED USA Inc.
Illinois
2211 North Elston Avenue #305
Chicago, IL 60614

COSMED srl
Headquarters
Via dei Piani di Monte Savello 37
Rome 00041 ITALY
Phone +39 06 931-5492
Fax +39 06 931-4580

cosmed.com

COSMED and its product names and logos are owned by COSMED and may be registered.

© 2013/01 COSMED E & OE. Subject to alterations without prior notice. P/N: C02864-02-93