Quark SPIRO

Spirometry Lab

"Effective, simple lung screening in any environment"



Modular Spirometry Laboratory
with additional bronchial challenge,
airways resistance and forced oscillations tests

COSMED
The Metabolic Company

“The perfect tool for accurate, frequent and reliable Spirometry tests in any hospital department or physician’s office”

- **Full Spirometry testing (FVC, SVC, MVV, Pre/Post BD)**
- **Choice of different flowmeter configurations (PNT or turbine)**
- **Forced Oscillations Technique (FOT) (optional module)**
- **Integrated dosimeter for accurate and easy bronchial challenge tests (optional module)**
- **Airway resistance by Interrupter Technique (optional module)**
- **User friendly interface and advanced features with OMNIA Software**
- **Meet latest ATS/ERS standards**



Quark SPIRO is a modern modular laboratory for complete spirometry testing, with easy-to-add advanced test features like forced oscillation technique, integrated dosimeter and airway resistance.

Modularity allows to configure Quark SPIRO according to any kind of requirement.

This cost-effective solution gives the opportunity to scale at any time to a more complex configuration.

Low maintenance costs, no need for technical expertise and user-friendly software, make Quark SPIRO the perfect tool for accurate, frequent and reliable spirometry tests in any hospital department or physician’s office.

Quark SPIRO includes both standard calibration procedures and advanced calibration procedures to verify accuracy, including pneumotach linearization and verification of all flowmeters (turbine, PNT).

Latest technology in flowmeters (available choice between turbine or pneumotach) and other hardware components guarantee accurate measurements and fast test procedures.

Forced Oscillations Technique (FOT)

The Forced Oscillation Technique module is a system for the measurement of the mechanical properties of the respiratory system under tidal breathing conditions.

- Total Respiratory Impedance measurement by Pseudo Random Noise Signal
- Quick and easy assessment during normal brathing
- Ideal for uncooperative patients such as children or elderly people.
- Recognized reference method for pre-school children assessment

The optional Q-i2m module for Quark SPIRO allows the operator to manage, with one single PC program, tests of respiratory mechanics, diffusing lung capacity, static and dynamic lung volumes.

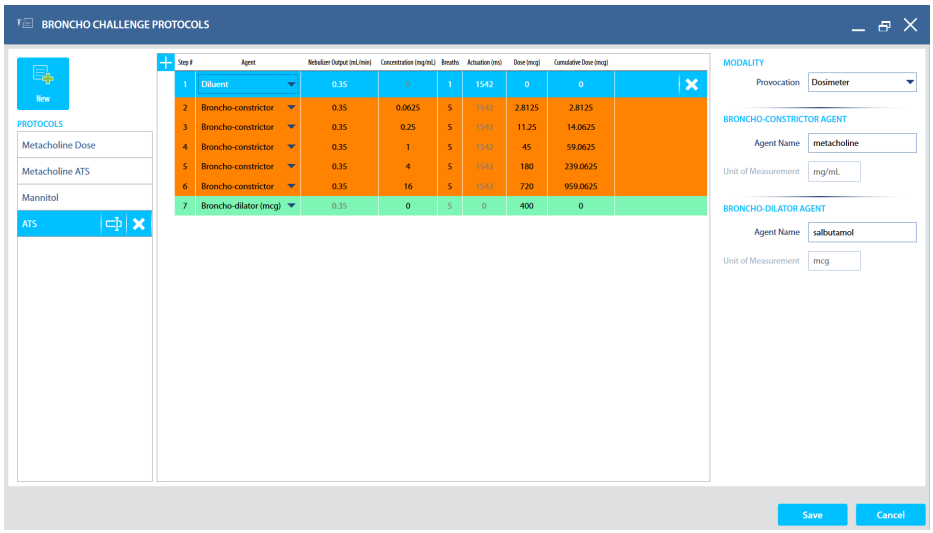


Dosimeter Module

Bronchial challenges can be used to confirm or rule out a diagnosis of hyperreactive airways.

A dosimeter is particularly useful as it allows to perform and control automatically the different steps of the bronchial challenge

- Controlled and more accurate management of bronchial challenge
- High quality Philips Respironics Nebulizer
- Easy to clean and disinfect
- Multi-step protocol with a single drug concentration
- Choice between standard (ATS and Lofarma) or custom protocols
- Full compliance with ATS/ERS GuidelinesDosimeter Module

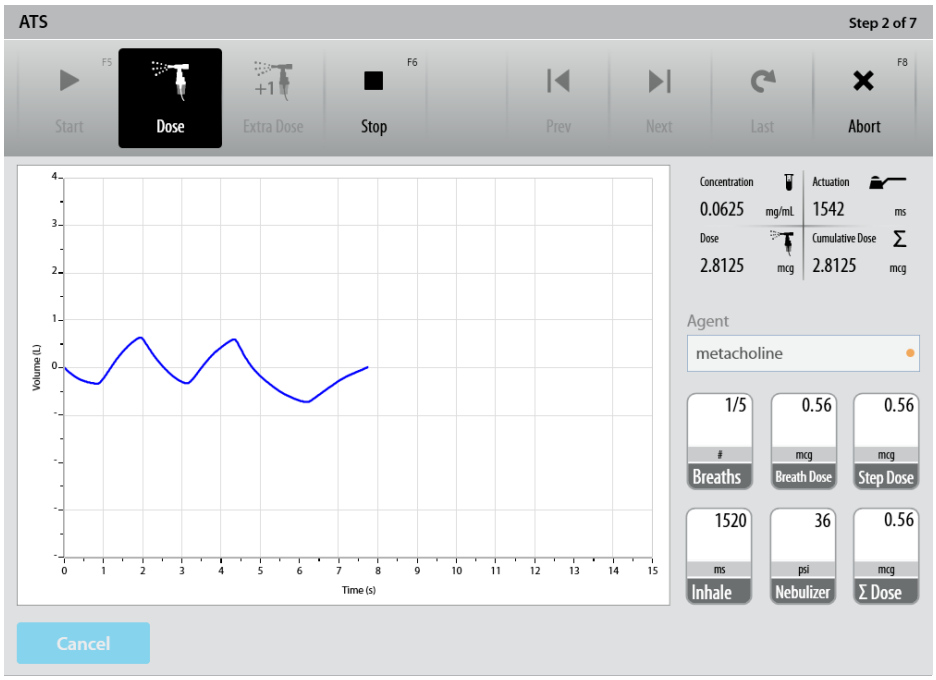


Broncho-challenge protocol editor.

Rocc Module

The Rocc module can be used for measurement of airway resistance in children and uncooperative patients.

- Interrupter technique (Rrs, int)
- High reproducibility and correlation with body plethysmography tests
- Ideal for testing non collaborative, critically ill patients and children
- Simplified test manoeuvre
- Easy to disinfect
- Scientifically validated



Dosimeter dialog box in real time.

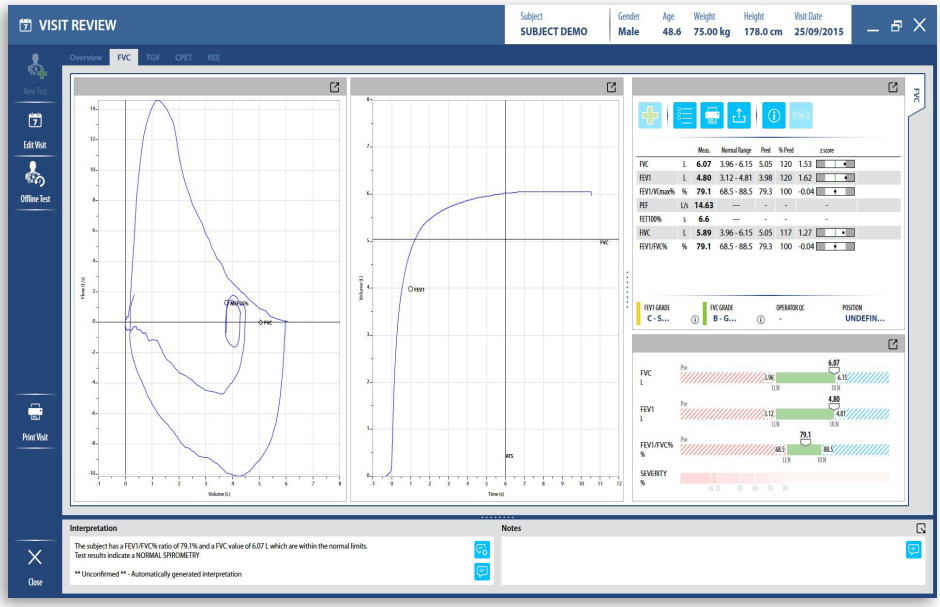
Powered by OMNIA

OMNIA is a powerful software, easy and intuitive thanks to its innovative user interface which has a native touch-screen design.

OMNIA features enhance networking capabilities as well as full integration with any additional COSMED products.

OMNIA is supported by a powerful algorithm that automatically process results and provides interpretation text strings, including numerical results and graphical data presentation (pictograms).

OMNIA encompasses all the latest industry standards for spirometry tests, including the 2005 ATS/ERS Consensus Statement on the "Standardization of the measurement of spirometry" and the 2012 Global Lung Initiative (GLI) predicted sets.



User-friendly and straightforward software interface providing quick access to features and commands

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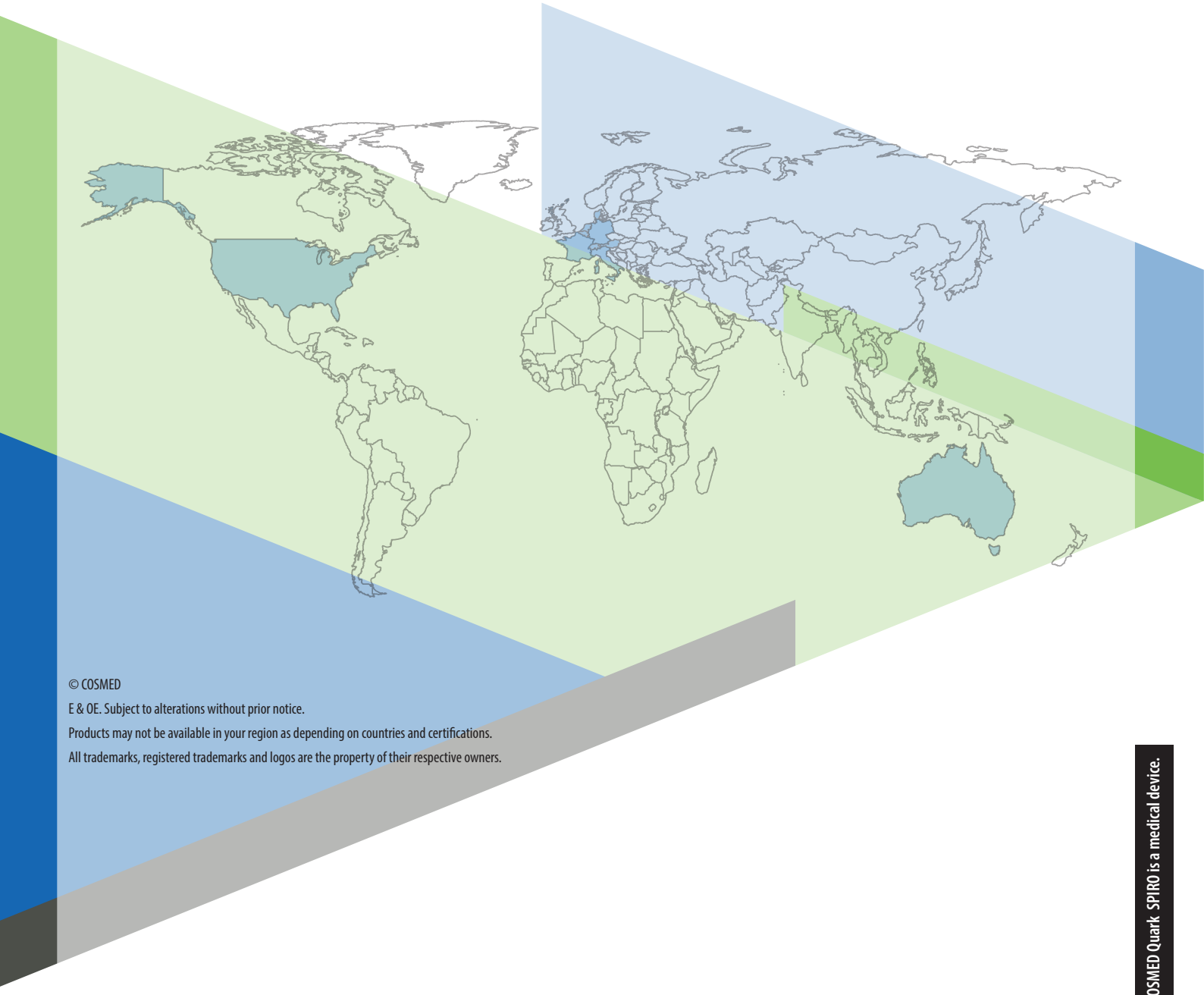
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COSMED Quark SPIRO is a medical device.

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