

# Spiropalm 6MWT

Hand-held Spirometer



“Effective, simple lung screening in any environment.”

Bed-side spirometer with advanced  
Six Minute Walk Test



**COSMED**

The Metabolic Company

“Oxygen desaturation and minute ventilation assessment during the Six Minute Walk Test (6MWT) may improve functional status evaluation<sup>(1)</sup>”

- I Exercise capacity, oxygen saturation and minute ventilation (VE) during the 6MWT
- I Inspiratory capacity measurement for dynamic hyperinflation assessment
- I Integrated Nonin<sup>®</sup> SpO<sub>2</sub> monitor
- I Full spirometry testing (FVC, SVC, MVV, Pre-Post BD)
- I Provided with OMNIA software for data management, real time testing and interpretation on PC



Spiropalm 6MWT is an innovative medical device incorporating the latest design for portable spirometry and a unique tool for the standardized Six-Minute Walk Test (6MWT).

Spiropalm 6MWT provides the customer with a complete testing package with the ability to measure minute ventilation and breathing pattern during walking together with a fully integrated pulse oximeter to monitor SpO<sub>2</sub> and HR during the test. Spiropalm 6MWT allows thus a full assessment of ventilation limitation due to dynamic hyperinflation and air trapping in patients with pulmonary disease.

Spiropalm 6MWT was awarded with the 2013 ERS “Product of Outstanding Interest” (POINT) Award. Its versatility was recognised as “a new way of measuring and reporting results for the Six Minute Walk Test (6MWT) by evaluating exercise capacity with integrated pulse oximeter and ventilation measurement”.

## Design

- **Enhanced 6MWT** Turbine flowmeter, connected to a silicone face mask with head cap for measurement of ventilatory parameters. Oxygen saturation monitored by an integrated pulse oximeter (Nonin<sup>®</sup>).

- **Truly hand-held device:** compact size and light weight (only 390 gr). Internal memory that can store up to 600 tests/patients. Li-Ion battery with autonomy of up to 6 hours (charging time 2h10).
- **High accuracy:** Meets ATS/ERS standards for spirometry (2005) and 6MWT (2002) testing. Independent validation of the turbine flowmeter by LDS Hospital using the ATS 24 standard volume-time waveforms.
- **USB port** for download data in OMNIA and for real-time spirometry testing.

## Six Minute Walk Test (6MWT)

- Measurement of minute ventilation (VE) and breathing pattern (Rf) during walking.
- Integrated oxygen saturation and HR monitoring during walking.
- Real time visualization of main 6MWT parameters on the Spiropalm LCD.
- At end of test, manually enter Six Minute Walk Distance (6MWD) and Borg dyspnea and fatigue levels.
- Breathing Reserve (BR) with ventilation limitation statement.

- Dynamic Hyperinflation evaluation through Inspiratory Capacity (IC) changes from baseline.
- Printout fully compliant with ATS/ERS guidelines for 6MWT (2002).

## Spirometry

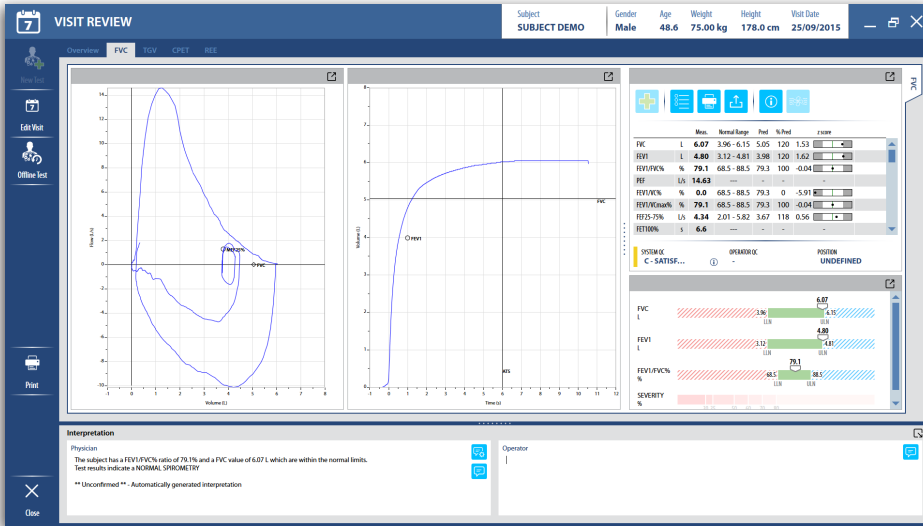
- Full spirometry testing (FVC, SVC, MVV, Pre/post BD).
- Available two test modes: either stand-alone with the Spiropalm unit and then download on PC or performed test in real time using directly the software interface.

## Data Management & Software

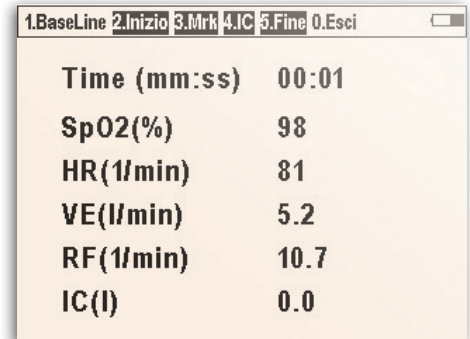
- Innovative user interface, touch screen, easy and self-explanatory
- Compatible with Windows 10
- Graphical data presentation both at screen and on printouts with gauges (pictograms)
- Powerful algorithm automatically elaborating results and providing comprehensive interpretation text strings including numerical results
- Full customizable time-based trends of main measured parameters

(1) Bystrov V. et al 2013 “The six-minute walking test accompanied by pulse oximetry and ventilation assessment in patients with pulmonary arterial hypertension”

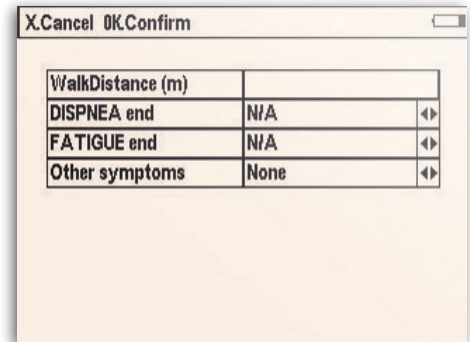
- New trial selection and quality control functions (in compliance with ATS/ERS guidelines).
- Innovative pediatric incentivation software with user-defined effort grade on both PEF and FVC predicted.
- ATS, Metacholine-dose, Mannitol and user defined Broncho-Provocation protocols.
- Includes new standards and predicted according to latest guidelines for spirometry (2005 ATS/ERS Consensus, GLI, GOLD COPD Interpretation).
- New calibration procedures (calibration and linearity check) according to latest Occupational Health standards.
- Intuitive 6MWD gauge featuring measured vs predicted distance.
- Edit function allows to eventually delete single steps ("invalid breath") in the 6MWT.



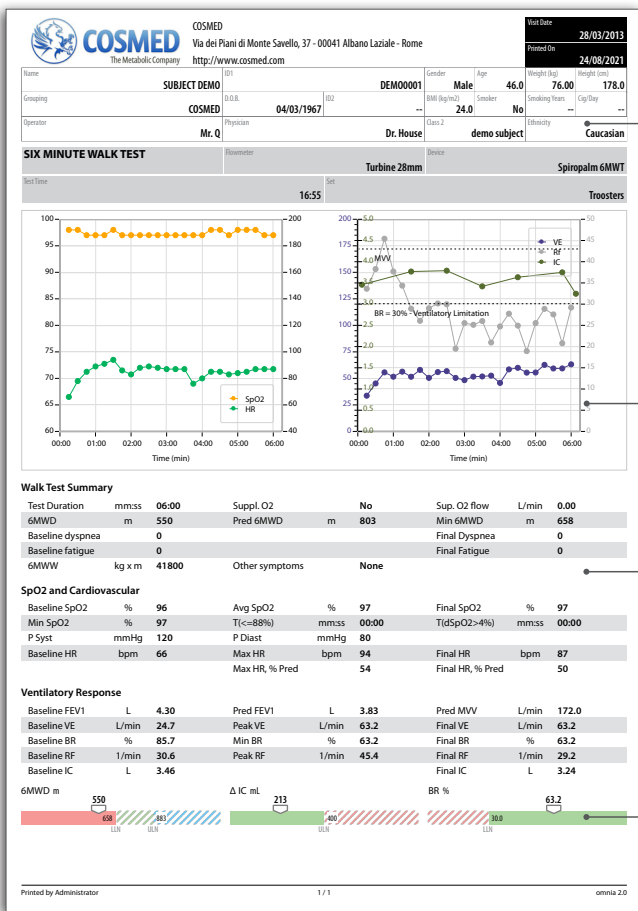
Spirometry tests can be performed directly on a PC with OMNIA, the new software generation from COSMED



Spiroalm screenshot: during the 6MWT



Screen on display: entry of distance traveled and fatigue levels after the test

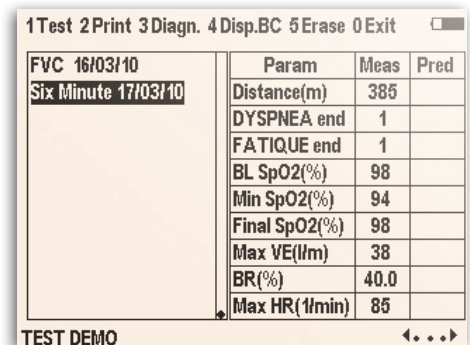


Customisable header and patient info

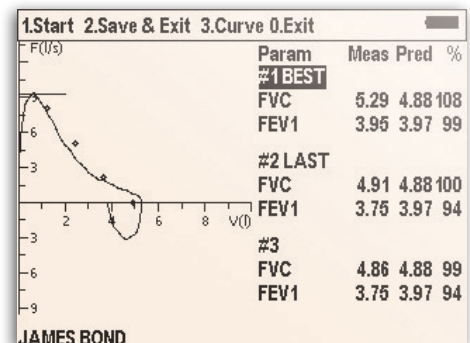
Graphical representation of SpO<sub>2</sub>/HR and VE/RF curves during the test

Measured parameters

Pictograms: measured vs predicted values



Spiroalm screenshot: end of 6MWT



Spiroalm Screenshot: spirometry results

6MWT tests can be downloaded via USB on OMNIA software for advanced management, analysis and printing of results. Alternatively tests can also be printed directly with compatible printers connected via USB port



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