

Spiropalm 6MWT

Hand-held Spirometer

“Effective, simple lung screening in any environment”



- Exercise capacity, oxygen desaturation and minute ventilation (VE) during the Six-Minute Walk Test (6MWT)
- Dynamic Hyperinflation assessment, with the measurement of Inspiratory Capacity
- Integrated SpO₂ monitor (finger probe)
- Full Spirometry testing (FVC, SVC, MVV, Pre-Post BD)
- USB connection to external printer or PC
- Provided with OMNIA software for data management, real time testing and interpretation on PC

The world's first advanced Six Minute Walk Test with integrated spirometry

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 (Nonin™ technology) to monitor SpO₂ 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.

The black and white LCD display allows real time monitoring of spirometry or 6MWT tests. The USB connection allows to print reports with PCL compatible printers directly or to download spirometry or 6MWT data directly on the powerful and user-friendly software OMNIA (included in the standard package).

Spiropalm 6MWT and OMNIA fully comply with ATS/ERS guidelines for the 6MWT (2002) and encompass 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. Main 6MWT predicted sets (Enright and Sherrill, Troosters, Gibbons, Camarri, Chetta 6MWT) are also incorporated in OMNIA suite.

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".



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Validation articles

- Crapo R. O. (LDS Hospital) 2004 "Validation of COSMED turbine vs ATS 24 standard volume-time waveforms "
- More scientific studies on www.cosmed.com/bibliography



Technical Specifications

Product	Description	REF
Spiropalm 6MWT	Handheld Spirometer and Six Minute Walk Test	C09064-03-99
Standard packaging	Main Unit, PC software (OMNIA) and user manual, flowmeter, adult paper mouthpieces (20 pcs), pediatric paper mouthpieces (5 pcs), pediatric adapter, antibacterial filters (5 pcs), nose clips (2 pcs), AC/DC adapter, USB cable, 6MWT kit (carrying case, pulse oximeter, silicon face mask, headcap, elastic belt and product holder).	
Standard Tests		
Tests	6MWT: Ventilation (VE), Respiratory Frequency (RF), Dynamic Inspiratory Capacity (IC), Dyspnea & Fatigue (Borg Scale), Breathing Reserve (BR), Oxygen Saturation (SpO ₂), Heart Rate (HR) Spirometry: Forced Vital Capacity (FVC) Pre/Post, Slow Vital Capacity (SVC) Pre/Post, Maximum Voluntary Ventilation (MVV), Bronchochallenge - Bronchial Dilator/Constrictor test	
Measured Parameters (partial listing)	6MWT: Distance (m), 6MWW (Kg*m), SpO2(%), HR (%), T88 (≤88%) (mm:ss), T (ΔSpO2 ≥ 4%) (mm:ss), VE (L/min), RF (1/min), BR (%), IC (L), SBp (mmHg), DBp (mmHg), Borg Dyspnea (x.x), Borg Fatigue (x.x). Spirometry: 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% • Lung Age • ERV • IRV • VE • Rf • ti • te • ti/t.tot • VT/ti • Best FVC • Best FEV1 • IC	
Predicted Values (partial listing)	6MWT: Enright and Sherrill, Troosters, Gibbons, Camarri, Chetta 6MWT Spirometry: 2012 Global Lung initiative (GLI), ERS 1993 (ECCS 1983), NHANES III, Knudson 83, ECCS 1971, ITS, Zapletal, LAM, Pneumobil, Gutierrez (Chile), Multicèntrico Barcelona, Thai 2000, Austria (Forche), Crapo 1981 user defined predicted calculations.	
Automatic Interpretation	ATS/ERS 2005 (Spirometry), GOLD COPD, ATS/ERS 2005 (Obstruction Reversibility based on FVC Post BD), ATS/ERS 2007 (Obstruction Reversibility based on Rocc)	
Hardware		
Dimensions & Weight	185x86x31 cm / 390 gr	
Interfaces	USB-A, USB-B (external printer)	
Display	LCD B/W 320 x 240 pixel (amber backlighted)	
Batteries	1 Rechargeable Li-ion battery (1800 mAh)	
Power supply	Input: AC 100-240V, Output: DC 12 V	
Internal memory	up to 1000 tests/patients	
Recording time (6MWT)	2-30 minutes	
Flowmeter	Turbine Ø-28mm	
Type	Bidirectional Digital Turbine	
Resolution	12 ml	
Ventilation Range	0-300 l/min	
Flow Range	0-16 l/s	
Accuracy	± 2% or 20 ml/s	
Resistance	<0.8 cmH ₂ O /l/s @ 14l/s	
Software	OMNIA	
Available languages	English, Italian, French, German, Spanish, Dutch, Russian, Chinese, Portuguese	
Required PC Configuration	1.4 GHz or faster processor speed. Compatible with Vista (32/64), Windows 7 (32/64), Windows 8 (32/64). RAM 4GB (8GB recommended). 500 MB of free disk space	
Options & Accessories	Description	REF
Calibration syringe	3L syringe for accuracy check of flow volume measurements	C00600-01-11
Consumables	Description	REF
Antibacterial filters	Single-use filters to prevent bacterial and viral cross contamination (box contains 50 pcs)	A-182-300-004
Nose clips	Clips for performing spirometry tests (5 pcs)	C00441-01-98
Paper mouthpieces	For spirometry testing (box contains 500 pcs)	C01805-01-98 (adult) C01814-01-98 (pediatric)
Safety & Quality Standards		
MDD (93/42 EEC); FDA 510(k); EN 60601-1 (safety) / EN 60601-1-2 (EMC) Complies with ATS/ERS 2005 guidelines		



To know more:



COSMED Srl

Via dei Piani di Monte Savello 37
Albano Laziale - Rome 00041, Italy

+39 (06) 931-5492 Phone
+39 (06) 931-4580 Fax

info@cosmed.com | cosmed.com