fitmate PRO

Desktop Cardio Pulmonary Exercise Test



- VO_2max, sub-max VO_2 and Anaerobic Threshold (AT)
- Nutritional assessment (REE, RMR)
- Fitness assessment and risk analysis
- Body composition & comprehensive weight management
- Colour LCD display and embedded high speed thermal printer
- Software for data management, exercise prescription and HR-VO_2 training zones
- Accurate, affordable and easy-to-use

A new approach to simplified metabolic assessment during exercise and at rest

The Fitmate PRO is a desktop metabolic monitor designed to break the mould of traditional Cardio Pulmonary Exercise Testing and proposes a new approach for the measurement of oxygen consumption during exercise testing or at rest. Fitmate PRO measures VO_2max, either directly or through a sub-maximal protocol, and provides additional features like the calculation of the Anaerobic Threshold (AT) and the definition of heart rate training zones.

Fitmate PRO is a compact desktop device with internal rechargeable battery, a large LCD screen and inbuilt printer that allow testing without a computer or mains power lead. Fitmate PRO processes test results and stores all information inside its internal memory, ready for upload to PC software (included).

The Fitmate technology allows to execute the VO2max and sub max test with most of cyclergometers and treadmills available in the market (h/p/cosmos, Ergoline, Trackmaster, Technogym, Monark etc.). Warnings and quality control messages (mask leaks, breathing pattern etc.) are displayed during test.

Fitmate PRO has been validated for measuring VO2max and for predicting maximal oxygen consumption with a sub-maximal protocol.

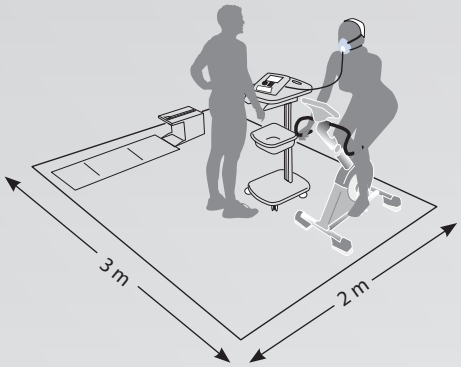
Fitmate measures accurate oxygen consumption at rest (REE, RMR), comparable with conventional metabolic carts. Tests can be executed either with face masks (multi-use), with mouthpiece and antibacterial filter or, optionally, with an integrated canopy hood.

COSMED

The Metabolic Company

Validation articles

- *Vandarakis D, et al. A comparison of COSMED metabolic systems for the determination of RMR. Res Sports Med 2013;21(2):187*
- *Lee J et al. Validation Of The Cosmed Fitmate For Predicting Maximal Oxygen Consumption Medicine & Science in Sports & Exercise: May 2009 - Volume 41 - Issue 5 - p 260*
- *Nieman DC, et al. Validation of Cosmed's FitMate in measuring exercise metabolism. Appalachian State University, Boone, North Carolina, USA. Res Sports Med. 2007 Jan-Mar;15(1):67-75*
- *Nieman DC, et al. Validation of Cosmed's FitMate in measuring oxygen consumption and estimating resting metabolic rate. Appalachian State University, Boone, North Carolina, USA. Res Sports Med. 2006 Apr-Jun;14(2):89-96*
- *More scientific studies on* www.cosmed.com/bibliography



Technical Specifications

Product	Description	REF
Fitmate PRO	Desktop metabolic monitor	C09066-02-99
Standard packaging	Unit, Carrying Case, PC Software with free upgrades, Battery Charger, USB Cable, Oxygen Sensor (12-18 months duration), Roll of thermal paper, Measuring Tape, RMR Flowmeter ID18, VO2 Flowmeter ID28, Reusable V2 mask (Medium size), HR probe and belt, Head cap for V2 mask, Antibacterial filters (15 pcs).	
Standard Tests		
Cardio Pulmonary Exercise Test (CPET)	Pulmonary Gas Exchange (VO2, VCO2), VO2max, Sub-max VO2, Thresholds (AT, RCP), Heart Rate with HR belt	
Nutritional Assessment	Resting Energy Expenditure (REE, RMR). Indirect Calorimetry (w/ Face Mask or w/ mouthpieces-antibacterial filter), Weight Management Program (Energy Balance), Diet Planner, Standardized Measurements (WHR, BP, RHR, etc), Body composition by Skinfold	
Fitness Assessment	Muscular Endurance/Strength/Flexibility, Standardized Measurements (WHR, BP, RHR, etc), Body composition by Skinfold	
Exercise Prescription	ACSM Exercise Prescription, VO2/HR Training Zones (based on AT)	
Flowmeter	**V02max (Turbine Ø-28mm)**	**RMR/REE (Turbine Ø-18mm)**
Type	Bidirectional Digital Turbine	Bidirectional Digital Turbine
Flow Range	0-16 l/s	0-8 l/s
Accuracy	± 2% or 20 ml/s (flow) ± 2% or 200 ml/min (ventil.)	± 2% or 20 ml/s (flow) ± 2% or 100 ml/min (ventil.)
Resistance	<0.6 cmH_2O /l/s @ 14l/s	<0.7 cmH_2Ol/s @ 3l/s
Ventilation range	0-300 l/min	0-50 l/min
Gas Analyzers	**O2**	
Type	GFC	
Range	0-25%	
Accuracy	±2% (REE) ±0.02% (O_2)	
Warm-up time	10 seconds	
Hardware		
Dimensions & Weight	24 x 20 x 8 cm / 1.5kg	
Interface ports	USB A-B, RS-232, HR-TTL, Flowmeter	
Display	Colour LCD 320 x 240 pixel	
Printer	High speed thermal printer 12 cm	
Battery	Rechargeable Li-ion batteries (autonomy 6h; charging time 2h10)	
Electrical Requirements	220V ± 10 %;50/60Hz 110V ± 10%; 50/60Hz	
Firmware		
Available languages	Italian, English, Spanish, French, German, Portuguese, Greek, Dutch, Turkish, Chinese, Korean, Japanese, Finnish, Polish, Russian, Slovenian	
Software	**Fitmate Suite**	
Available languages	Italian, English, Spanish, French, German, Portuguese, Greek, Dutch, Chinese, Finnish, Russian, Slovenian	
PC Configuration	Pentium or faster, Windows XP, VISTA (32/64 bit), Windows 7 (32/64 bit) 128 Mb RAM or more, USB, CD-Rom reader, 80 Mb on HD space available.	
Accessories & Options	**Description**	**REF**
REE with Canopy Hood	Kit including transparent canopy hood and blower for "gold standard" indirect calorimetry measurements at rest	C03950-01-11
Fitmate cart	Fits Fitmate unit, printer, masks, printouts, carrying case	C02950-01-11
Calibration syringe	3L syringe for accuracy check of flow volume measurements	C00600-01-11
O_2 sensor replacement kit	Includes GFC sensor, sampling line and mounting key	C02748-01-11
Activity Monitor Fitmate Lifecorder PLUS	Integrated one-axial, solid state accelerometer.	C03580-01-04
Flexibility tester Sit & Reach box	Box for the indirect measurement of lower back and hamstring flexibility	A-662-160-001
Safety & Quality Standards		
MDD (93/42 EEC); FDA 510(k); EN 60601-1 (safety) / EN 60601-1-2 (EMC)		

COSMED
The Metabolic Company

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

To know more:

© 2014/09 COSMED E & OE. Subject to alterations without prior notice. REF C03225-02-93