

“Calories, you can't  
manage what you  
don't measure.”



- Accurate Measurement of Resting Energy Expenditure
- Tests performed either with reusable face mask or with mouthpiece and AB filters
- Affordable, Portable, Compact, Easy to Use with Built-in Printer
- Energy Balance based Weight Management Plans
- Includes Software for Data Management, Lifestyle Analysis & Full Diet Plans
- Integration with Activity Monitor (optional)
- Validated vs. Gold Standard Technique

## Complete Desktop Solution for Accurate, Quick & Simple Indirect Calorimetry

Fitmate is a desktop indirect calorimeter, ideal choice for commercial weight management purposes with its large LCD screen and built-in printer that allow the user to perform tests without the use of a computer.

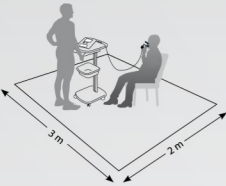
Fitmate allows affordable, simple and quick measurement of metabolism, a fundamental component of any individual weight management program. Tests can be taken with silicone multi-use face masks or with the "mouthpiece & Antibacterial Filter" technique. Only a few minutes are needed to measure energy requirements at rest (Kcal/day) and to define nutrition plans based on energy balance (calories in – calories out). Fitmate gives also the possibility to manage other measurements (body composition, anthropometrics, etc.).

Scientifically validated for the measurement of oxygen consumption ( $\text{VO}_2$ ) and Resting Energy Expenditure (REE, RMR), Fitmate measures  $\text{VO}_2$ , and assumes a constant Respiratory Quotient (RQ), which is set by default at 0.85 or can be user defined. Strong scientific evidence demonstrates that, in a steady state, the RQ is always in the range of  $0.84 \pm 0.04$ . This allows Fitmate to be used either in research or clinically on malnourished and obese patients.

Once assessment is completed, data can be either printed through the thermal printer or downloaded on the PC. The Fitmate software interface allows to manage data and review measurements i.e. selecting custom REE interval for better steady state detection. The Fitmate suite software allows users to save all data, make trends and includes additional features like energy balance, diet plan, physical activity monitor, etc.

Validation articles

- Vandanais D, et al. A comparison of COSMED metabolic systems for the determination of RMR. *Res Sports Med* 2013;27(2):187
- 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](http://www.cosmed.com/bibliography)



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Technical Specifications

Product	Description	REF
Fitmate	Desktop indirect calorimetry	C09066-01-99
Standard packaging	Fitmate unit, RMR Flowmeter ID18, AC/DC Adapter, USB cable, Body meter, Oxygen Sensor, Thermal paper, Antibacterial filters (10 pcs), Nose clips (2 pcs), Rubber mouthpieces (5 pcs), Fitmate PC Software (CD-Rom), Fitmate case	
Standard Tests		
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	
Flowmeter		
Type	Turbine Ø-18mm	
Type	Bidirectional Digital Turbine	
Flow Range	0-8 l/s	
Accuracy	± 2% or 20 ml/s (flow) ± 2% or 100 ml/min (ventil.)	
Resistance	<0.7 cmH <sub>2</sub> O/l/s @ 3l/s	
Ventilation range	0-50 l/min	
Gas Analyzers		
Type	O <sub>2</sub>	
Type	GFC	
Range	0-25%	
Accuracy	±2% (REE) ±0.02% (O <sub>2</sub> )	
Warm-up time	10 seconds	
Hardware		
Dimensions & Weight	24 x 20 x 8 cm / 1.5kg	
Interface ports	USB A-B, Flowmeter, RS-232	
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	100-240V ± 10% 50/60 Hz	
Firmware		
Available languages	Italian, English, Spanish, French, German, Portuguese, Greek, Dutch, Turkish, Chinese, Korean, Japanese, Finnish, Polish, Russian, Slovenian	
Software		
Available languages	Italian, English, Spanish, French, German, Portuguese, Greek, 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		
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 <sub>2</sub> sensor replacement kit	Includes GFC sensor, sampling line and mounting key	C02748-01-11
Activity Monitor Fitmate Lifecorder PLUS	Integrated one-axis, solid state accelerometer. Records up to 60 days of data, steps, distance, energy expenditure, and classifies Physical Activity Levels according to METs	C03580-01-04
Safety & Quality Standards		
MDD (93/42 EEC); FDA 510(k); EN 60601-1 (safety) / EN 60601-1-2 (EMC)		



To know more:



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