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 silicon 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 (VO$_2$) and Resting Energy Expenditure (REE, RMR), Fitmate measures 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 ±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.
Technical Specifications

Product | Description | REF
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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 | 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 cmH₂O l/s @ 3l/s
Ventilation range | 0-50 l/min

Gas Analyzers
O₂ | GFC
Range | 0-25%
Accuracy | ±2% (REE) ±0.02% (O₂)
Warm-up time | 10 seconds

Hardware
Dimensions & Weight | 24 x 20 x 8 cm / 1.5kg
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
Fitmate Suite
Available languages | Italian, English, Spanish, French, German, Portuguese, Greek, Dutch, Chinese, Finnish, Russian, Slovenian

PC Configuration
Pentium or faster, Windows XP VISTA, 7, 8 (32/64 bit), 128 Mb RAM or more, USB, CD-Rom reader, 80 Mb on HD space available.

Accessories & Options
Description | REF
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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
O₂ 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. Records up to 60 days of data, steps, distance, energy expenditure, and classify 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:
www.cosmed.com/bibliography