The Fitmate GS is the first portable desktop indirect calorimeter in the market using the dilution technique for accurate and frequent measurements of Resting Metabolic Rate (RMR), making it the ideal solution in a clinical setting.

Fitmate GS comes with a large and comfortable transparent hood connected to a blower that guarantees air flow inside the hood. The blower pumps-in air at a defined flow, chosen among five different flow rates dependent on subject weight.

The patient lies in bed and comfortably breathes inside the hood, where the expired gas dilutes with room air. A sample of this mixture is then conveyed to the turbine and sampling line in order to get ventilation parameters and oxygen concentration.

The Fitmate GS screen prompts messages and security alerts when ventilation is not detected or when oxygen concentration is too low or too high, in this case the flow rate can be regulated by the blower in order to keep a steady concentration of $O_2$ inside the hood.

The ventilated hood can also be used for longer periods of time with minimal discomfort and no air leaks from the system.

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

- More scientific studies on www.cosmed.com/bibliography

Technical Specifications

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>REF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fitmate GS</td>
<td>Desktop indirect calorimetry with canopy hood</td>
<td>C09666-04-99</td>
</tr>
<tr>
<td>Standard packaging</td>
<td>Fitmate GS unit, AC/DC Adapter, USB cable, Fitmate PC Software (CD-Rom), Body meter, Oxygen sensor, Canopy hood, Canopy blower, control board, Fitmate case, Thermal paper</td>
<td></td>
</tr>
</tbody>
</table>

Standard Tests

Nutritional Assessment

- Resting Energy Expenditure (REE, RMR), Indirect Calorimetry with Canopy Hood, Weight Management Program (Energy Balance), Diet Planner, Standardized Measurements (WHR, BP, RHR, etc), Body composition by Skinfold

Flowmeter

- Turbine Ø-28mm
- Type: Bidirectional Digital Turbine
- Flow Range: 0-16 l/s
- Accuracy: ± 2% or 20 ml/s (flow) ± 2% or 200 ml/min (ventil.)
- Resistance: <0.6 cmH2O /l/s @ 14/l/s
- Ventilation range: 0-300 l/min

Gas Analyzers

- O2
  - Type: GFC
  - Range: 0-25%
  - Accuracy: ±2% (REE) ±0.02% (O2)
  - Warm-up time: 10 seconds

Canopy Hood

- Dimensions & Volume: 46.8x32x22 cm / 18.7 l
- Flow rate range: 12-44.4 l/min
- Blower internal battery: 4 AA

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: 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, Dutch, Chinese, Finnish, Russian, Slovenian
- PC Configuration: Pentium or faster, Windows XP, VISTA, 7, 8, 10 (32/64 bit), 128 Mb RAM or more, USB, CD-Rom reader, 80 Mb on HD space available.

Accessories & Options

<table>
<thead>
<tr>
<th>Description</th>
<th>REF</th>
</tr>
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<tbody>
<tr>
<td>Fitmate cart</td>
<td>C02950-01-11</td>
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<tr>
<td>Calibration syringe</td>
<td>C00600-01-11</td>
</tr>
<tr>
<td>O2 sensor replacement kit</td>
<td>C02744-01-11</td>
</tr>
</tbody>
</table>

Safety & Quality Standards

- MDD (93/42 EEC); FDA 510(k); EN 60601-1 (safety) / EN 60601-1-2 (EMC)