

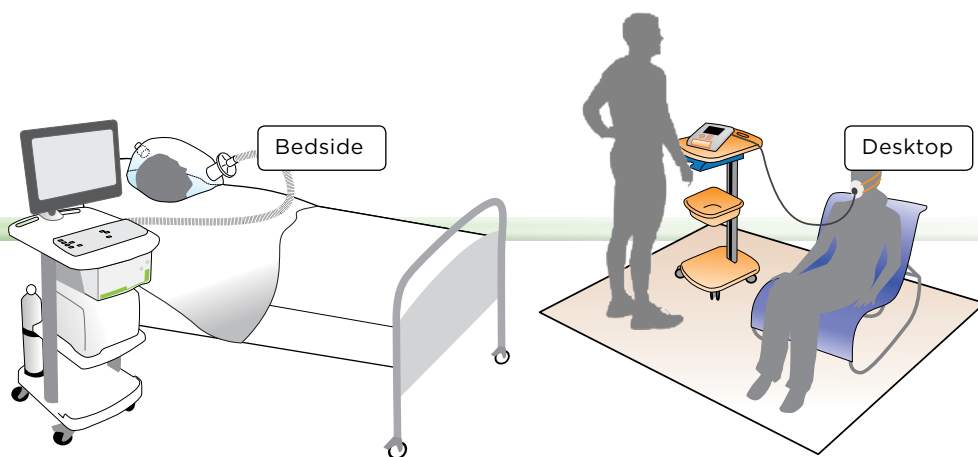
Gold Standard Solutions for Indirect Calorimetry and Body Composition in research and clinical applications

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

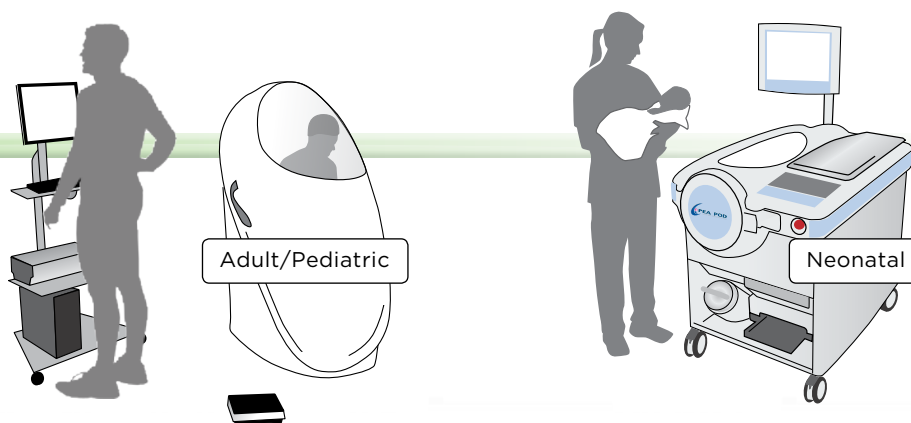
COSMED provides a complete range of solutions and diagnostic equipment for measuring metabolism and energy requirements of either spontaneously breathing or mechanically-assisted patients. With the recent acquisition of Life Measurements, Inc. (LMI), COSMED is now

also leader in body composition diagnostic equipment based on Gold Standard Air Displacement Plethysmography for accurate measurements of adults, children and infants.

Indirect Calorimetry

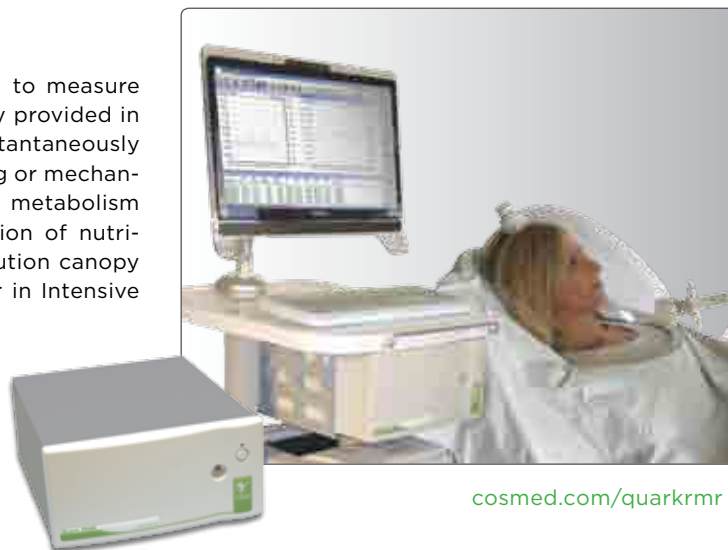
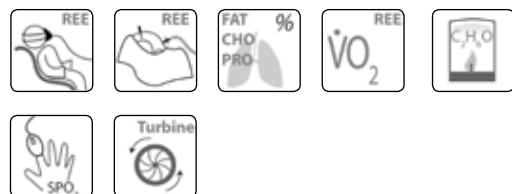


Body Composition



Quark RMR

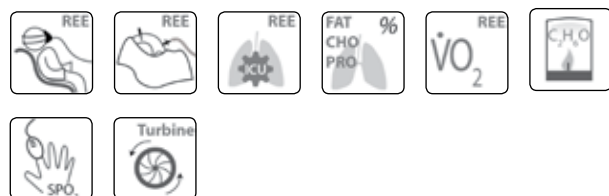
The Quark RMR is a new generation metabolimeter designed to measure Resting Energy Expenditure (REE) through indirect calorimetry provided in a compact bedside solution. It is designed to accurately and instantaneously measure energy requirements of either spontaneously breathing or mechanically-assisted patients. Additionally, the Quark RMR identifies metabolism substrate utilization, allowing improved nutrition and evaluation of nutritional therapies. Tests can be performed with either a flow-dilution canopy hood, a face mask, or (optionally) connected with a ventilator in Intensive Care Unit (ICU) applications.



cosmed.com/quarkrmr

Quark RMR ICU Option

The Quark RMR ICU Option allows the measurement of energy requirements in mechanically-assisted patients. This solution is compatible with many ventilators in the market (connection through the exhalation port), and allows accurate measurement of energy requirements of patients in Intensive Care Units. The automatic bias flow detection allows a constant calibration of analyzers and flowmeter. Medical graded cart and medical PC/screen/keyboard allow comfortable and safe measurements in ICU rooms. Sterilization requirements are reduced to a minimum thanks to the use of disposable filters.



cosmed.com/quarkrmricu

Fitmate

The Fitmate is a scientifically validated desktop indirect calorimeter for the measurement of Resting Metabolic Rate (REE, RMR). It includes a large LCD screen and a built-in printer that allow the user to perform tests without the use of a computer. Tests can be taken with disposable or multi-use face masks. 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). Possibility to manage also other measurements (body composition, anthropometrics, etc.) and to prepare personalized diet plans.



cosmed.com/fitmate

Body Composition

BOD POD Gold Standard

The BOD POD Gold Standard Body Composition Tracking System is an air displacement plethysmograph, which uses whole-body densitometry to determine body composition (fat and fat-free mass) in adults and children, and can accommodate a wide range of populations. A full test requires only about 5 minutes, and provides highly accurate, safe, comfortable, and fast test results. Each BOD POD Gold Standard is a complete turnkey system with a dedicated computer system, the ability to measure Thoracic Gas Volume (TGV), and data management capabilities.



cosmed.com/bodpods

Pediatric Option™ Accessory

The BOD POD Gold Standard with the Pediatric Option accessory accurately assesses the body composition of children as small as 12 kg and between 2 and 6 years of age. The Pediatric Option is comprised of an ergonomic seat base, easily secured to the BOD POD, an adjustable seat tray which allows safe and comfortable testing for young children, and a custom-developed software program for testing young children.



cosmed.com/bodpods

PEA POD

The PEA POD is an Air Displacement Plethysmography system using whole body densitometry to determine body composition (fat and fat-free mass) in infants weighing between 1 and 8 kg. The PEA POD is extremely simple to operate, with software prompts guiding the operator through each step of the process. From start to finish, a PEA POD test takes about 7 minutes. The accuracy of the PEA POD has been shown to be very high against reference techniques in a number of research publications.



cosmed.com/peapod

Ethanol Burning Kit

The accuracy of the Quark RMR can be verified any time with the optional Ethanol burning kit, which allows a very accurate quality control test for routine calibration. By burning a known quantity of ethanol, if the measurement is accurate, the RQ measured by the Quark RMR should range from 0.64 to 0.69.



Canopy Kit for Fitmate

Fitmate can also be equipped with an optional flow-dilution-based hood for spontaneously breathing patients. The canopy improves patient comfort and can be used for confined-to-bed patients. The ventilatory rate can be directly regulated by the system.



Face Masks

A complete choice of face masks is available to meet different requirements. From the comfortable ergonomic and reusable silicone masks (5 size available: 3 adult and 2 paediatric) to the universal-size single-patient masks that eliminate time and costs of sterilization.



Carts

COSMED also offers a range of solid and compact carts, which allow easy transport and comfortable testing with Fitmate and Quark RMR. The Quark RMR medical graded cart with built-in isolation transformer has been designed to hold the whole equipment (unit, PC, monitor, printer, cylinder plus other accessories).





Indirect Calorimetry
w/ Mask



Indirect Calorimetry
w/ Canopy Hood



Metabolism Substrate (%FAT, %PRO,
%CHO)



Indirect Calorimetry
w/ Ventilator (ICU)



Oxygen Consumption
(resting)



Quality Control
(Ethanol Burning Kit)



Pulse Oximeter (SpO₂)



Physical Activity Monitoring



Turbine Flowmeter



Built-in Thermal Printer



Rechargeable Batteries



Body Composition



Body Composition w/ Infants



Body Density



Weight



Body Plethysmography TGV, RAW, GAW



Step Count



Activity Minutes



Distance



METs



Target Setup



Calories Burned



Data Management



Set Up



Memory

| Product Features | Quark RMR | Fitmate | BOD POD | PEA POD | IOI 353 | Lifecorder |
|--|--------------|-----------------|------------|------------|--------------|-------------|
| Indirect Calorimetry/Metabolism | | | | | | |
| Resting Energy Expenditure (REE, RMR) | • | • | estimate | estimate | estimate | |
| Indirect Calorimetry (VO ₂ , VCO ₂ , RQ) | • | VO ₂ | | | | |
| REE w/ Canopy Hood | • | ◦ | | | | |
| REE w/ Ventilator (ICU) | ◦ | | | | | |
| Weight Management Program (Energy Balance) | | • | | | | |
| Diet Planner | | • | | | | |
| Body Measurements | | | | | | |
| Weight | | | • | • | • | |
| Fat Mass & Fat Free Mass | | | • | • | • | |
| Body Density | | | • | • | | |
| Height | | | | | | ◦ |
| Body Composition with Skinfold Caliper | | • | | | | |
| Multi-Frequency Bioimpedance | | | | | 5-50-250 | |
| Segmental Analysis (arms, legs, trunk) | | | | | • | |
| Total Body Water (TBW), proteins, minerals | | | | | • | |
| Visceral Analysis | | | | | | |
| Waist to Hip Ratio | | • | | | | |
| Heart Rate at Rest | ◦ | ◦ | | | | |
| Blood Pressure | ◦ | ◦ | | | ◦ | |
| Lifestyle Monitoring | | | | | | |
| Step Count | | ◦ | | | | • |
| Speed | | ◦ | | | | • |
| Distance | | ◦ | | | | • |
| Activity Levels | | ◦ | | | | • |
| Hardware | | | | | | |
| Integrated LCD | PC screen | • | PC screen | • | • | • |
| Integrated Printer | | • | | • | ◦ | |
| Battery | | • | | | | • |
| Electrical requirements | • | • | • | • | • | |
| Software | • | • | • | • | • | • |
| Dimensions (cm) | 17 x 30 x 45 | 8 x 24 x 20 | 132x84x165 | 80x122x156 | 89 x 40 x 73 | 7 x 4 x 1.8 |
| Weight | 8 kg | 1,5 kg | 250 kg | 335 kg | 10 kg | 43 gr |
| Safety & Quality Standards | | | | | | |

COSMED is an organization whose quality management system is certified by CERMET according to UNI EN ISO 9001:2008 and UNI EN ISO 13485:2004.

- standard, ◦ option



**COSMED srl
Headquarters**
Via dei Piani di Monte Savello 37
Pavona di Albano - Rome
00041 ITALY
Phone +39 06 931-5492
Fax +39 06 931-4580
info@cosmed.com

**USA
Concord, CA**
Phone +1 (925) 676-6002
Fax +1 (925) 676-6005
Chicago, IL
Phone +1 (773) 645-8113
Fax +1 (773) 645-8116
info@cosmedusa.com

**GERMANY
Sundern**
Phone +49 (2933) 786-4387
Fax +49 (2933) 786-4388
deutschland@cosmed.com

**CHINA
Guangzhou**
Phone +86 (20) 8332-4521
Fax +86 (20) 8332-0683
china@cosmed.com

cosmed.com