

Product /Comparison Matrix



Features	Fitmate PRO	Fitmate MED	Quark CPET	K4 b2
Type of product	Desktop	Desktop	Stationary	Mobile
Type of Gas Exchange Analysis	Dynamic Mixing Chamber	Dynamic Mixing Chamber	Breath by Breath	Breath by Breath
Oxygen (O ₂) Gas Sensor	Galvanic Fuel Cell (GFC)	Galvanic Fuel Cell (GFC)	Paramagnetic	Galvanic Fuel Cell (GFC)
Carbon Dioxide (CO ₂) Gas Sensor			Infrared (NDIR)	Infrared (NDIR)
Flowmeter (Exercise)	Turbine ID28 mm	Turbine ID28 mm	Turbine ID28 mm	Turbine ID28 mm
Flowmeter (Rest)	Turbine ID18 mm	Turbine ID18 mm	Turbine ID18 mm (option)	Turbine ID18 mm (option)
Face Mask	Re-usable Silicon Mask (5 sizes: 3 adult, 2 paediatric) or Disposable Mask (RMR only)	Re-usable Silicon Mask (5 sizes: 3 adult, 2 paediatric) or Disposable Mask (RMR only)	Re-usable Silicon Mask (5 sizes: 3 adult, 2 paediatric)	Re-usable Silicon Mask (5 sizes: 3 adult, 2 paediatric)
Printer	Embedded thermal, PC	Embedded thermal, PC	PC	PC
Display	Color LCD 320x240 pixel	Color LCD 320x240 pixel	PC monitor	B&W LCD 2 lines x 16 characters
PC Interface	USB, RS-232	USB, RS-232	USB, RS-232	USB, RS-232
PC Software	●	●	●	●
Integrated Global Positioning System (GPS)				●
Swimming snorkel (Aquatrainer)			○ (flume only)	○
HR belt	●	●	●	●
12-lead Stress Test ECG	○	○	○	○
Physical Mixing Chamber			○	
Automatic Control of Ergometers (bike, treadmills)	Direct	Direct	by PC	by PC
Weight	1.5 kg	1.5 kg	8 kg	475 gr
Dimensions	24x20x8 cm	24x20x8 cm	17x30x45 cm	17x5.5x10 cm
Electrical requirements	110-240V ± 10%; 50/60 Hz	110-240V ± 10%; 50/60 Hz	110-240V ± 10%; 50/60 Hz	100/240V, 50-60 Hz
Battery	Li-ion	Li-ion		Ni-MH

Tests	Fitmate PRO	Fitmate MED	Quark CPET	K4 b2
Pulmonary Gas Exchange	VO ₂	VO ₂	VO ₂ + VCO ₂	VO ₂ + VCO ₂
Anaerobic Threshold (AT)	●	●	●	●
Indirect cardiac Output (Wasserman)		●	●	●
Integrated Pulse Oximeter (SpO ₂)		○	○	○
HR Interface w/ external ECG (TTL)	○	○	●	
VO ₂ /HR Training Zones (based on AT)	●	●	○	○
Exercise Intensity for Cardiac Rehabilitation		●	○	○
ACSM Exercise Prescription	●		○	○
Cardiovascular Risk Analysis		●	○	○
Full Spirometry testing		●	○	○
Resting Energy Expenditure (REE, RMR) with face mask	●	●	●	●
Resting Energy Expenditure (REE, RMR) with canopy hood	○	○	○	○
RQ, NPRQ, %CHO, %FAT, %PRO			○	○

Application Fields	Fitmate PRO	Fitmate MED	Quark CPET	K4 b2
Respiratory Care		★		★
Cardiology		★	★	★
Cardiac Rehabilitation		★	★	★
Kinesiology, Orthopedics, GAIT Lab	★	★	★	★
Academics & Research in Exercise Physiology	★	★	★	★
Public Safety	★		★	★
Elite Athletics Performance Testing	★		★	★
Pro Teams	★		★	★
Health/Fitness Clubs/Personal Trainers	★			

★ Recommended purpose of use ● Standard ○ Option