

Quark CPET

Cardio Pulmonary Exercise Testing



Technical Specifications

Product	Description	REF
Quark CPET	Metabolic cart	C09073-02-99
Standard packaging	Quark CPET unit, flowmeter, sampling line, masks (XS, S, M), headcaps (Petite/XS, S/M), ANT® HR module, calibration syringe, adapters, pipes, cables, OMNIA® Software, user manual	
Standard Measurements		
Cardio Pulmonary Exercise Test (CPET)	Pulmonary Gas Exchange ($\dot{V}O_2$, $\dot{V}CO_2$), $\dot{V}O_{2max}$, Sub-max $\dot{V}O_2$, Thresholds (AT, RCP), EFVL, Heart Rate	
Indirect Calorimetry	Resting Energy Expenditure (REE, RMR) with mouthpiece or face mask, Respiratory Quotient (RQ), Substrates Analysis (%FAT, %PRO, %CHO)	
Optional Measurements		
Spirometry	Forced Vital Capacity (FVC) Pre/Post/Challenge, Slow Vital Capacity (SVC) Pre/Post, Maximum Voluntary Ventilation (MVV)	
Gas Analyzers		
	Oxygen (O_2)	Carbon Dioxide (CO_2)
Type	Paramagnetic	NDIR
Range	0-100%	0-10%
Response time t90	120 ms	100 ms
Accuracy	±0.1%	±0.02% Vol.
Flowmeter		
	Turbine 2000 (standard)	ID 18 (REE/RMR)
Type	Bidirectional digital turbine	Bidirectional digital turbine
Flow range	0.08-20 L/s	0.02-6 L/s
Flow accuracy	±2% or 20 mL/s	±2% or 20 mL/s
Ventilation range	0-300 L/min	0.04-50 L/min
Ventilation accuracy	±2% or 100 mL/min	±2% or 100 mL/min
Resistance	<0.6 cmH ₂ O/L/s @14L/s	<0.27 cmH ₂ O/L/s @1L/s
Hardware		
Dimensions & Weight	16x33x41 cm / 11 Kg (depending on configuration)	
Ports	USB A-B, RS-232, HR-TTL, SpO ₂	
Electrical requirements	100-240V, 50/60 Hz	
Environmental sensors	Temperature 0-50 °C; Barometric pressure 400-800 mmHg; Humidity 0-100%	
Software		
Available languages	English, Chinese (Traditional & Simplified), Czech, Dutch, French, German, Greek, Hebrew (interpretation only), Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Turkish.	
PC Requirements	Windows 7 SP1 (32/64 bit) or Windows 8.x (32/64 bit) or Windows 10 (32/64bit), CPU ≥ 2Ghz, RAM ≥ 4GB, HD ≥ 10GB for full installation, Monitor resolution ≥ 1366x768 pixel, ≥2 USB port	
Options		
	Description	REF
Mixing Chamber	Physical Mixing Chamber	C03261-02-11
Pulse Oximetry	Oximeter (several probes available)	C02600-01-05
Quark C12x	12 lead stress test ECG with USB interface	C09080-01-99
Quark T12x	12 lead stress test ECG with wireless interface	C09081-01-99
Tango	Automated non-invasive blood pressure monitor	A-661-200-035
High/Low FiO ₂ Kit	Kit for CPET test with enriched gas mixture	C03471-01-11
Physioflow Q-Link	Non-invasive cardiac output monitor with USB interface	A-661-200-069
Physioflow Enduro	Non-invasive cardiac output monitor with wireless interface	A-661-200-067
Acquatrainner	Snorkel to test swimmers	C04470-01-11 (unit) C04480-03-11 (CPET kit)

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Accessories	Description	REF
Medical Grade Cart	1 cylinder holder (120V or 240V)	C03550-0X-04
	3 cylinder holder with drawer (120V or 240V)	C02900-0X-04
Face Masks	Reusable oro-nasal mask (Petite, XS,S, M, L)	C0370X-01-10
Headcap	Reusable headcap (Petite/XS, S/M, L)	A-800-900-02X
Filter adapter	Reusable for tests with antibacterial/antiviral filters	C05085-01-20
Calibration Gas	Gas cylinder 16% O ₂ , 5% CO ₂ , N ₂ bal	A-860-000-004
Pressure regulator	Pressure regulator for calibration gas cylinder	A-870-150-005
Consumables	Description	REF
Sampling Line	Reusable gas sampling line	C02210-02-08
Antibacterial/Antiviral filters	Single use with round mouthpiece (50 pcs.)	A-182-300-004
Rubber mouthpiece	Single use (200 pcs.)	C00568-01-98
Mouthpiece w/saliva trap	Reusable	A-800-500-001
Nose clip	Single use (25 pcs.)	A-662-100-001
Safety & Quality Standards		
MDD (93/42 EEC); FDA 510(k); EN 60601-1 (safety) / EN 60601-1-2 (EMC)		



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