Q-NRG max
Metabolic Monitor

Technical Specifications

Product	Description	REF
Q-NRG Max	Metabolic Monitor - Wellness Version	C09093-01-99
Standard packaging	Q-NRG Max unit, cover, calibration adapters, USB cable, power cable, fuses, user manual	
Indications for use	Measurement of Resting Energy Expenditure and Aerobic Capacity of healthy subjects with limitations in accordance with labeling, within the following population: Hose mode (REE): subjects > 5 years Canopy mode (REE): subjects >15Kg (33 lb) Mask mode (CPET): subjects ventilating in the range 5-300 L/min	
Measurements		
Cardio Pulmonary Exercise Test (optional)	Pulmonary Gas Exchange (VO2, VCO2), VO2max, Sub-max VO2, Thresholds (VT1/LT1, VT2/LT2), Heart Rate	
Indirect Calorimetry in Canopy mode (optional)	Resting Energy Expenditure (REE) with canopy hood, Respiratory Quotient (RQ), Substrates Analysis (%FAT, %PRO, %CHO)	
Indirect Calorimetry in Hose mode (optional)	Resting Energy Expenditure (REE) with filter, 2-way valve and hose, Respiratory Quotient (RQ), Substrates Analysis (%FAT, %PRO, %CHO)	
Flowmeter	**Internal flowmeter (blower)**	**External flowmeter (VO2 Max)**
Type	Bidirectional digital turbine	Bidirectional digital turbine
Ventilation range	10-60 L/min	0-300 L/min
Ventilation accuracy	±2% or ±100 mL/min	±2% or ±100 mL/min
Resistance	<0.45 cmH_2O s/L @ 1 L/s	<0.6 cmH_2O s/L @ 14 L/s
Calibration	With 3L calibration syringe (annual)	Automatic via internal blower (monthly)
Gas Analyzers	**Oxygen (O_2)**	**Carbon Dioxide (CO_2)**
Sampling mode	Micro Dynamic Mixing Chamber (patented)	
Type	Galvanic Fuel Cell (GFC)	Digital NDIR
Range	0-25%	0-10%
Accuracy	±0.05% Vol. or ±0.3%	±0.05% Vol. or ±1%
Resolution	±0.01% Vol.	±0.01% Vol.
Calibration	Automatic with gas cylinder (annual)	
Report		
Export modes	USB, Bluetooth®	
Export formats	PDF, CSV, XML	
Hardware		
Dimensions & Weight	31x21x27 cm, 4.65 Kg	
Display	10.1" Transmissive TFT LCD, 1024x600, 65k colors, capacitive touch screen	
Power	Battery: Li-Ion "smart"(3 hours autonomy) Mains: 100V-240V ±10%; 50/60Hz, 100-130 VA	
Wireless Connectivity	Bluetooth 2.1 + EDR Class II (range 10 m line-of-sight), ANT+, BLE	
Wired Connectivity	1 USB-device (5 kV galvanic insulated), 2 x USB Host, RS-232 (5 kV galvanic insulated), LAN (5 kV galvanic insulated)	
Environmental ranges (operating)	Temp. +10°C to +35°C. Humidity: 5-93% (non condensing). Atmospheric pressure: 700hPa-1060hPa (up to 3011m)	
Firmware		
Languages	English, Spanish, Portuguese, Dutch, Polish, Danish, French, Italian, Japanese, German, Chinese	
PC Software (optional)	**OMNIA**	
Languages	English, Chinese (Traditional & Simplified), Czech, Danish, Dutch, French, German, Greek, Hebrew (interpretation only), Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Romanian, Russian, Spanish, Swedish, Turkish	

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PC Requirements	Windows 8.x (32 bit, 64 bit), Windows 10 (32 bit, 64bit), Windows 11 (64bit), CPU ≥ 2GHz, RAM ≥ 4GB, HD ≥ 10GB for full installation, Monitor resolution ≥ 1366x768 pixel, ≥2 USB port

Options	Description	REF
OMNIA	PC Software	C04060-0X-11
VO2 Max Add-on	Masks (S, M), Headcap (S/M), mask adapters (2 pcs.), Flowmeter, optoreader, HR monitor, sampling lines (2 pcs.)	C05390-01-11
Canopy Kit	Canopy hood (large) + Canopy hose	C03179-01-11
REE Hose Add-on	Hose + 2-way valve for Hose mode	C05391-01-98
Accessories	**Description**	**REF**
Carts	Wheeled cart w/ integrated VESA holder (X1)	A-258-900-005
Clamp/adapter	Quick adapter for X1cart	A-258-500-015
	Clamp for pole or rail	C04756-01-10
Cylinder Holder	Holder for gas cylinder for X1 cart	A-258-500-012
Canopy Hose	Reusable hose for canopy testing	C02678-01-07
2-way valve	2-way valve for Hose mode	A-850-050-003
Hose	Corrugated pipe for Hose mode	A-108-300-013
Face masks	Reusable oro-nasal mask (Petite, XS,S, M, L)	A-800-1X0-002 A-800-20X-001
Face masks w/ valves	Reusable oro-nasal mask (XS,S, M, L) with inspiratory valves	C04324-0X-10
Mask adapter	Adapter for face masks	C02466-01-20
Headcap	Reusable headcap (Petite/XS, S/M, L)	A-800-900-02X
Flowmeter	Reusable turbine T3	C05270-01-05
Optoreader	Optoelectronic reader for flowmeter	C05320-01-06
Filter adapter	For mask tests with AB/AV filters	C05085-01-20
HR monitor	Heart Rate monitor	A-661-200-094
Cal. adapter	Calibration adapter	C05346-01-20
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-870-155-001
3L syringe	Certified 3L siringe for calibration	C00600-01-11
Consumables	**Description**	**REF**
Canopy veil	Sinlge use veils (50 pcs.), large	C04690-01-10
AB/AV filters	Single use with round mouthpiece (50 pcs.)	A-182-300-004
	Single use with oval mouthpiece (50 pcs.)	A-182-300-005
Sampling line	Reusable gas sampling line	C02210-02-08
Nose clip	Single use (25 pcs.)	A-662-100-001
Security & Quality Standards		
Safety (IEC 60335-1/ANSI AAMI 60355), EMC (IEC 60601-1-2/ANSI AAMI 60601-1-2), Telemetry (ETSI EN 301 489-1, ETSI EN 301 489-17), FCC, IC		

This is a preliminary product version not yet finalized, and may therefore undergo changes or revisions prior release.

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