COSMED Metabolic Products

COSMED provides a comprehensive range of metabolic devices.
This document aims to provide a quick overview of the main differences among them.

Product Comparison Matrix

PRODUCT	K5	QUARK CPET	QUARK RMR	Q-NRG MAX
Device type	Wearable	Cart	Cart	Portable
Device classification	Medical, Wellness	Medical	Medical	Wellness
TESTS				
Cardio Pulmonary Exercise Testing				
VO_2max, Sub-max VO_2	●	●	○	○
Thresholds	2	2	2	2
User defined protocols	Unlimited	Unlimited	Unlimited	Unlimited
Training Zones	Software	Software	Software	Software, device
FatMax	Software	Software	Software	Software, device
Resting Energy Expenditure				
Resting Energy Expenditure (modes)	Mask	Mask	Canopy, Mask, Ventilator	Canopy, Hose
Substrates Analysis (RQ, %FAT, %PRO, %CHO)	●	●	●	○
Energy Balance	Software	Software	Software	Software, device
Other				
Spirometry (SVC, FVC, MVV, Challenge)		○	○	
Anthropometrics (Skinfold, WHR, BMI...)				●
TECHNICAL SPECIFICATIONS				
OMNIA software	●	●	●	○
Sensors				
Gas sensors	O2, CO2	O2, CO2	O2, CO2	O2, CO2
O2 sensor type	GFC	GFC, Paramagnetic	Paramagnetic	GFC
Gas Sampling				
Breath by breath (BxB)	●	●	●	
Mixing Chamber	○	○	○	●
Mixing chamber type	DMC	Physical, Adaptive	Physical, Adaptive	DMC
Data interval (mixing chamber)	10"	10"	10"	30"
Calibrations				
Flowmeter	Manual (3L syringe)	Manual (3L syringe)	Manual (3L syringe)	Automatic (Blower)
Gas Sensors	Certified Gas Mixture	Certified Gas Mixture	Certified Gas Mixture	Certified Gas Mixture
Hardware				
Power supply	Battery, Mains	Mains	Mains	Battery, Mains
User interface	3.5" TFT Touchscreen	PC monitor	PC monitor	10" LCD Touchscreen
Connectivity				
Ergometers Control	●	●	○	○
ANT+ Profiles	HR, PWR, CAD, SPD, MO2	HR	HR	HR, FE-C, PWR, CAD, SPD, MO2
Embedded sensors	GPS, accelerometer			
12-lead stress test ECG	○	○	○	○*
Pulse Oximeters (SpO_2)	Nonin 3150 BLE	Nonin 3150 BLE Nonin XPod	Nonin 3150 BLE Nonin XPod	Nonin 3150 BLE*

● Standard   ○ Optional   * Not for diagnostic purposes