

AIRCHECK

Fitness – professional tests and consultation

The fitness industry is in motion. The awareness of health and the demands of the customers are increasing. Gas exchange or V_{O2} testing is the analysis that provides significant information for the important aspects of physical performance, fat burning and resting metabolic rate. The AIRCHECK takes less than 20 minutes and immediately supplies the data for creating an efficient and individual training. The high-performance solutions from CORTEX will convince you.



SCOPE OF DELIVERY

- AIRCHECK Device
- CORTEX Disposable Flow Sensors
- Twin-Tube (for Flow Sensor)
- Gas Sample Line
- Personal-Use Mask incl. Harness
- Chest Belt for Heart Rate Measurement
- AIRCHECK Basic Software + 1 AIRCHECK-Modul
- Crossover Network Cable
- Desktop power supply incl. power cord
- Carrying Case
- Manuals on CD

ACCESSORIES & OPTIONS

- Software Options
- CORTEX System Cart Fitness
- Notebook
- Color Printer

MEASURING METHOD / SENSORS

Measuring method	Mixing Chamber		
Flow Sensor	Type	Differential Pressure	
	Range	0 - 14 L/s	
	Accuracy	± 2 %	
O ₂ Sensor	Type	Electrochemical Cell	
	Range	5 - 35 Vol. %	
	t ₉₀ Time	3.5 s	
	Accuracy	± 0.1 Vol. %	
CO ₂ Sensor	Type	Infrared	
	Range	0 - 10 Vol. %	
	t ₉₀ Time	3.5 s	
	Accuracy	± 0.1 Vol. %	
Heart Rate	Chest Belt		

PHYSICAL SPECIFICATIONS

Dimensions (LxWxH)	245 x 220 x 105 mm
Weight	1230 g

ELECTRICAL SPECIFICATIONS

PC Interface	LAN
Power Supply	110 - 240 V AC, 50-60 Hz

OPERATING CONDITIONS

Warm-Up Time	approx. 30 min
Temperature	+ 10° - max. +35° C
Ambient Pressure	550 - 1050 mbar
Relative Humidity	0 - 99 % (non-condensing)

PRODUCT SAFETY

- Directive 2006/95/EC: 12.Dec.2006
- Directive 2004/108/EC: 15.Dec.2004
- CE

QUALITY MANAGEMENT

- EN ISO 9001 / Dec.2000

CORTEX Biophysik GmbH
Nonnenstraße 39
D-04229 Leipzig
Germany

Phone: +49-341-4 87 49-0
Fax: +49-341-4 87 49-50
E-Mail: info@air-check.info
Internet: www.air-check.info



AIRCHECK Software

The key for success in exercising ...

Fitness benefits from the experience of many years in gas exchange analysis in the field of sports medicine, which CORTEX has consolidated into the AIRCHECK System. With the the high-performance AIRCHECK Software you can determine simply, quickly and precisely the individual performance of your customers and can derive science-based exercise recommendations for several goals, starting from basic exercises for maximum fat burning up to specific preparations for competitions.



SOFTWARE

AIRCHECK BASIC SOFTWARE

AIRCHECK MODULES

- Maximum Exercise Test
- Fat Burning Test
- Resting Metabolic Rate Test

AIRCHECK OPTIONS

- Exercise Scheduler
- Trend Analysis
- Data Export/Import
- System Statistics
- THEDEX-Interface

MINIMUM REQUIREMENTS FOR PC/NOTEBOOK

COMPUTER / NOTEBOOK

- Processor Pentium® IV or better
- Hard Drive > 40 GB
- RAM min. 512 MB
- Drive CD-ROM

WINDOWS® OPERATING SYSTEM

- MS-Windows® XP
- MS-Windows® Vista
- MS-Windows® 7

MONITOR

- 17" TFT
- min. Resolution 1024x768 Pixel, recommended 1280x1024 Pixel

REQUIRED INTERFACES

- 1-2x LAN for AIRCHECK and workload devices
- mind. 2x USB for Dongle and Printer

OPTIONAL

- Soundsystem

AIRCHECK PARAMETERS

Maximum Performance, Anaerobic Threshold, Heart Rate Exercise Zones, Heart Rate Zones for maximum Fat Burning, Resting Metabolic Rate (RMR)

NAMING	UNIT	AIRCHECK-MODUL
CARDIOVASCULAR		
· Heart Rate	1/min	Maximum Exercise Test, Fat Burning Test
GAS EXCHANGE		
· Oxygen Uptake	l/min	Maximum Exercise Test, RMR Test
· Oxygen Uptake per Kilogram	l/min/kg	Maximum Exercise Test
· Carbon Dioxide Output	l/min	Maximum Exercise Test, RMR Test
· Respiratory Exchange Ratio	-	Maximum Exercise Test, RMR test
VENTILATION		
· Minute Ventilation	l/min	Maximum Exercise Test
· Breathing Frequency	1/min	Maximum Exercise Test
ENERGY		
· Energy Expenditure	kcal/d, kcal/h	Fat Burning Test, RMR Test
· Fat Burning Rate	g/h	Fat Burning Test, RMR Test
· Carbohydrate Burning Rate	g/h	Fat Burning Test, RMR Test
WORKLOAD CONTROL		
· Work Rate	W	Maximum Exercise Test, Fat Burning Test
· Speed	m/s, km/h, m/h	Maximum Exercise Test, Fat Burning Test
· Incline	Degree (°), %	Maximum Exercise Test, Fat Burning Test

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