

METASWIM

Unique solution of Cardiopulmonary Exercise Testing for swimmers

Even in swimming sports, gas exchange analysis is an important instrument for the further improvement of sporting achievements. By using the METASWIM you can determine physiological exercise stress data which are directly relative to real competition stress. The METASWIM is prepared for mounting in flumes and also applicable with easy modification at the pool. CORTEX-Telemetry ensures a safety application because of a wireless communication.



SCOPE OF DELIVERY

- METASWIM system unit
- Snorkel assembly (4x freestyle/breast and 1x backstroke)
- Calibration Kit for METASWIM
- Hygiene Kit for METASWIM
- METASWIM heart rate
- METASWIM retrieving unit
- METASWIM wire basket
- Tube-in-Tube gas sample line
- Saliva removal line
- Protection filter from moisture for gas sample line
- CORTEX fast charger
- Jar Drierite Drying Salt
- Funnel for Drierite Drying Salt
- PC equipment
- User manual

ACCESSORIES & OPTIONS

- Software Options
- PC / Notebook
- Color Printer

MEASURING METHOD / SENSORS

Measuring Method	Breath-by-Breath
Flow / Volume	Type Turbine digital
	Range 0.05 - 20 L/s
	Resolution 14 mL
	Accuracy $\pm 2 \%$
O ₂	Type Electro-Chemical Cell
	Range 0 - 60 Vol. %
	T ₉₀ Time <100 ms
	Accuracy ± 0.1 Vol. %
CO ₂	Type ND Infrared
	Range 0 - 13 % Vol.
	T ₉₀ Time <100 ms
	Accuracy ± 0.1 Vol. %
Heart Rate	Polar® HR Set by Hosand telemetry

TELEMETRY

Type	Bidirectional 19200 Baud
Frequency	433 - 434 MHz
Range	1000 m
Interface	RS232

PHYSICAL SPECIFICATIONS

Dimensions of system (LxWxH)	560 x 340 x 210
Weight	7,5 kg

ELECTRICAL SPECIFICATIONS

PC Interface	Serial (RS232)
Power Supply	Battery Internal 7.2 V nominal 8800 mA

OPERATING CONDITIONS

Warm-Up Time	approx. 30 min
Temperature	10° to max. +40° C
Ambient Pressure	500 - 1050 mbar
Relative Humidity	0 - 99 % (non-condensing)

PRODUCT SAFETY

- Directive 93/42/EEC
- DIN EN 14971
- DIN EN 60601-1 / 60601-1-1 / 60601-1-2 / 60601-1-4
- CE 0124

QUALITY MANAGEMENT

- Directive 93/42/EEC; Annex II; Section 3
- EN ISO 9001
- EN ISO 13485

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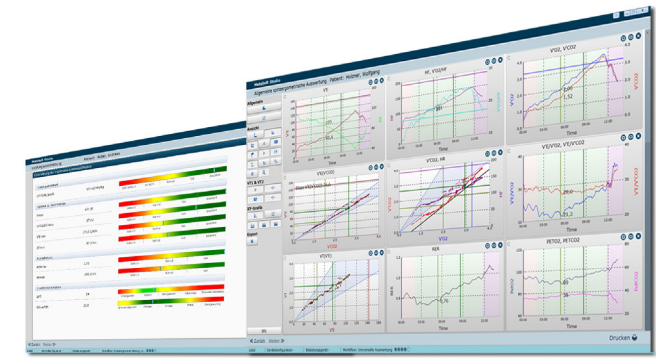


MetaSoft® Studio

the core of CORTEX Systems

All CORTEX systems are based on the application software MetaSoft® Studio. It controls and monitors all processes of Cardiopulmonary Exercise Testing and all peripheral systems, e.g. heart rate and blood pressure measuring tools and ergometers.

A clearly structured user guidance is provided based on intuitive workflows. MetaSoft® Studio can be operated via keyboard, mouse or touch screen.



SOFTWARE OPTIONS

- CORTEX MSS Training Guidance
- CORTEX MSS Exercise Scheduler
- Activation License - mc 3000 Interface
- CORTEX MSS 12-Channel ECG Interface
- CORTEX MSS Spirometry
- CORTEX MSS Metabolism for CPET
- CORTEX MSS Basal Resting Metabolic Rate
- CORTEX MSS Interpretation Assistant by Wassermann
- CORTEX MSS Pre-operative Risk Assessment
- CORTEX MSS Risk Assessment for heart failure patients
- CORTEX MSS HL7 Interface
- CORTEX MSS Import Function AIRCHECK

SYSTEM REQUIREMENTS

COMPUTER / NOTEBOOK

- Processor Intel Core 2 Duo / 2 GHz, AMD Athlon 64 X2 / 2 GHz or higher
- Graphics DX9 compatible, with 128 MB RAM or higher
- Screen 1280*1024 (4:3), 1280*800 (16:9)
- Hard disk ≥ 20 GB
- RAM ≥ 2 GB
- Drive DVD-ROM

WINDOWS OPERATING SYSTEMS

- MS Windows® 7 (32, 64 Bit)
- MS Windows® 8 (32, 64 Bit)
- MS Windows® Server 2003 (32, 64 Bit)
- MS Windows® Server 2008 (32, 64 Bit)
- MS Windows® Server 2012 (32, 64 Bit)

INTERFACES

- LAN
- min. 2x USB
- seriell 2x COM

OPTIONAL

- Sound Card
- CD / DVD Writer

SUPPORTED DEVICES

BICYCLES ERGOMETERS

- custo med ec3000, ec500
- Daum ergo-bike Cardiopro, Medical, Premium
- Elmed EGT
- ERGO-FIT CYCLE, EF
- Ergoline Ergometrics / ErgoSelect
- ERM-100
- Fukuda BE-350, -360
- GE eBike
- h/p/cosmos compatibele
- Kettler CX1
- Lode Corival / Examiner / Excalibur/ Rehcor
- MIHA ProCycle
- Monark 829, 839
- Proxomed Kardiobike
- RBM Cyclus
- Seca CT 100
- Technogym BikeMed, KRace
- Other Devices

ARM ERGOMETERS

- Lode Anglo

TREADMILLS

- Cardioline CardioTread
- Daum ergo_run
- Ergo-fit Cadio Trac
- Fukuda MAT
- Gait Trainer 2
- h/p/cosmos Compatible, Mercury, Pulsar, Quasar Saturn, Stellar, Stratos, Venus
- Jaeger CosCom
- JNB JT4000M
- Lode Valiant
- Marquette T2000
- Micromed Centurion
- Quinton ST
- TaeHa TH
- Technogym Excite Run, RunRace
- Trackmaster TM, 425, TMX
- VR3000
- Woodway PPS 55 Med, USA, XELG
- Other Devices

ECG SYSTEMS

- AmedTec ECG Pro
- custo med custo diagnostics, custo card / meta control 3000
- Fukuda stress
- GE CardioSoft, CASE
- Micromed Elite
- Mortara/Xscribe M12A-USB
- Spacelabs CardioNavigator, Sentinel

BLOOD MEASURING SYSTEMS

- SunTechTango, Tango+

OXYGEN SATIETY MEASURING SYSTEMS

- Nonin 4100 Bluetooth Oxymeter, Xpod/Ipod

