

METAMax[®] 3B

MOBILE SPIROERGOMETRY SYSTEM



Product Brochure



EXTENDING LIMITS



METAmax[®] 3B

*Whatever pushes you forward:
The METAmax[®] 3B is a spiroergometry
system for professional outdoor use
designed to meet your individual needs –
no matter how exceptional they might be.*

Thanks to sophisticated technical features and constant further development the METAmax[®] 3B can be used in all disciplines. Regardless of its location in the field, in the air, on the water or near fire, the METAmax[®] 3B offers endless options.

Because of its very low weight, the high wearing comfort and the secure data transmission it ensures the METAmax[®] 3B is the first choice for mobile high performance testing.



TELEMETRY: > 1,000 M



APPLICABLE AT EVERY HEIGHT



HUMIDITY: 0 TO 95 %



TEMPERATURE: -10 ° TO +40 °C



For more information: <http://cortex-medical.com>

Spiroergometry – On your Conditions

With a weight of less than 600 g the METAMAX® 3B is the most light mobile spiroergometric device on the market. For many disciplines this is a decisive advantage because in field tests the total weight of the test person increases only minimally and has effectively no influence on your test results. Its award-winning ergonomic design in combination with the chest and back carrying system and adjustable Velcro fasteners allows maximal mobility and impress in numerous types of sport.

The METAMAX® 3B can be operated in various ways, either with a laptop, the Smart Control or completely autonomously. Just synchronize the recorded test data with the application software METASOFT® Studio.

Benefit from the full potential of the METAMAX® 3B and add – for example – an optional stationary kit, a back carrying system or an ECG. All options and accessories are listed in the product overview on pages 6 and 7.

METAMAX® 3B – DESIGNED FOR OUTDOORS

Highlights

- **ultralight, mobile Breath-by-Breath system (580 g)**
- **telemetric range of over 1,000 m (bi-directional telemetry with Bluetooth® technology)**
- **chest and back carrying system**
- **convenient control via Smart Control, laptop or as stand-alone**
- **6-hour battery life**
- **400 hours data storage**
- **constant dynamic flow control**
- **free definable audio signals**

Using GPS

To determine the velocity and location of a test person in a field test the METAMAX® 3B uses a powerful GPS module. The module allows you to calculate velocity and altitude changes and gives an objective picture of the person's stress factors during a field test.





































































































































Secure Data Communication

The Long Range Bluetooth® module, developed and enhanced by CORTEX, has a range of over 1,000 m. Only very slight disturbances are caused by interference. In case connection is interrupted, the measured results are securely stored in the METAMAX® 3B. In addition, the system is equipped with Bluetooth® Low Energy. This standard guarantees a maximum compatibility with external sensors, for example heart frequency, SpO2 or a power meter.



The Entire Spectrum
of the
METAMAX® 3B

Configure your METAMAX® 3B according to your Individual needs. A wide range of hard-/software options and benefit packages are available. You can enhance your selected system by adding perfectly matching peripherals and accessories.

Volume Transducer	Hardware Options	Packages	Trolley & PC	Ergometer	HF/ECG	PhysioFlow/BD/SpO2	Software Options	Accessories & Spare Parts
<div><div>CORTEX volume transducer disposable<ul style="list-style-type: none">disposable turbinesdisposable flow electronics</div><div>CORTEX volume transducer reusable<ul style="list-style-type: none">turbineflow volume electronic</div></div>	<div>stationary kit<ul style="list-style-type: none"> power supply extension for volume sensor sample line 2 m</div> <div>GPS</div> <div>backpack system</div> <div>sample flow dryer</div> <div>calibration kit<ul style="list-style-type: none"> gas-on-demand valve gas bottle 3 liter syringe box</div> <div>Canopy<ul style="list-style-type: none"> Canopy blanket hose adapter</div> <div>spirometry kit<ul style="list-style-type: none"> spirometry (SW) hand holder for CORTEX reusable flow sensor 100 disposable filters & nose clips</div>	<div>performance package</div> <div>service package</div> <div>TestControlCenter<ul style="list-style-type: none"> for 2 CPET devices for 3 CPET devices for 4 CPET devices</div> <div>warranty extension</div>	<div>CORTEX mobile Plus dual monitor<ul style="list-style-type: none"> printer shelf support arm</div> <div>CORTEX mobile Plus single monitor<ul style="list-style-type: none"> printer shelf support arm</div> <div> PC</div> <div> monitor</div> <div> laptop</div> <div> printer</div>	<div>CORTEX bike M<ul style="list-style-type: none"> seat height adjustment (motor) integrated BP integrated SpO2 adjustable pedal cranks triathlon handle bar adaptation for pediatric ergometry</div> <div>CORTEX TM Sport<ul style="list-style-type: none"> fall stop handrail</div> <div>CORTEX TM High Performance<ul style="list-style-type: none"> fall stop handrail</div> <div>more<ul style="list-style-type: none"> Lode Cyclus II SRM Woodway HP Cosmos Monark Ergoline</div> <div>interfaces<ul style="list-style-type: none"> TrackMaster Micromed Marquette Quinton Motek Force TechnoGym ...</div>	<div> Polar H10</div> <div> BT smart HF sensor</div> <div>MSS 1-lead belt</div> <div>MSS 3-lead guard</div> <div>custo cardio 100<ul style="list-style-type: none"> MC3000 interface</div> <div>custo cardio 200<ul style="list-style-type: none"> MC3000 interface</div> <div>custo cardio 300<ul style="list-style-type: none"> MC3000 interface</div> <div> ECG - electrodes custo med</div> <div> ECG - electrodes blue sensor</div> <div>12-lead ECG interface<ul style="list-style-type: none"> Schiller GE Micromed AmedTec Dr. Schmitt Ergocid Spacelabs Norav Medset Labtech Welch Allyn</div>	<div>PhysioFlow<ul style="list-style-type: none"> PhysioFlow license PhysioFlow electrodes PhysioFlow cable bag batteries charger</div> <div>PhysioFlow electrodes<ul style="list-style-type: none">for 50 testsfor 200 tests</div> <div>Tango M2 for use with custo med<ul style="list-style-type: none"> custo trigger cable QRS trigger software license</div> <div>Tango M2 with ECG module</div> <div>Nonin wrist Ox2 3150</div>	<div>MSS Energy Metabolism for CPET</div> <div>MSS Performance Assessment<ul style="list-style-type: none"> MSS Exercise Scheduler</div> <div>MSS Pre-Operative Risk Assessment</div> <div>MSS Interpretation Assistant by Wasserman</div> <div>EOV Detection</div> <div>PhysioFlow License</div> <div>MSS Spirometry<ul style="list-style-type: none"> hand holder</div> <div>MC3000 Interface (custo med)</div> <div>12-lead ECG Interface</div> <div>MSS Basal- & Resting Metabolic Rate</div> <div>MSS HL7 Interface Activation License</div> <div>MSS Network License Basic<ul style="list-style-type: none"> MSS Network License Extension</div>	<div>face masks<ul style="list-style-type: none">pediatric 1pediatric 2petiteXSSML</div> <div>head cap</div> <div>adapter for face mask</div> <div>sample line<ul style="list-style-type: none">0.6 m2 m</div> <div>turbine with sieve – reusable</div> <div>turbine – disposable<ul style="list-style-type: none"> 100 pieces 500 pieces</div> <div>O2 sensor MMX3B</div> <div>bacterial filter spirometry</div> <div>PhysioFlow electrodes<ul style="list-style-type: none"> for 50 tests for 200 tests</div> <div>ECG electrodes custo med</div> <div>ECG electrodes blue sensor</div>

BENEFIT FROM OUR PACKAGES

The Service Package for Major Security of Investment

The service package includes all consumables (calibration gas, O2 sensors etc.) for the first three years. It gives you high planning reliability for your projects and test studies thanks to an extended warranty period of three years. In addition, your operating costs are much lower by purchasing the service package.

Performance Package METAMAX® 3B

The METAMAX® 3B already comes with the most widely used hardware and software options in the area of sports and preventive medicine. It also includes the CORTEX GPS module and a stationary kit for optimal use of the METAMAX® 3B in a laboratory with an external electricity supply. Furthermore, the package includes a calibration kit and a larger supply of consumables.

CORTEX Warranty Extension

The warranty extension from CORTEX allows you to extend the warranty for your spiroergometry system at any time and as often as you wish. CORTEX offers you attractive warranty packages for the systems depending on scope and duration. The warranty includes free of charge repair of the device, trouble shooting of hard- and software as well as regular software updates.

For more information on the terms of the warranty extension please go to:



For more information: <http://cortex-medical.com>

CONNECTIVITY

CORTEX treadmill TM

The CORTEX treadmill TM combines functionality and design at an outstanding price-performance ratio. Two basic versions are available: with running surfaces of 53 cm x 161 cm or 73 cm x 172 cm plus various add-ons.

CORTEX bike M

Due to its ergonomic design with an open frame, low entry and the stable aluminum platform, the CORTEX bike M is a perfect all-rounder.

Additional Ergometers and Treadmills

Connect our systems to more than 40 different ergometers and treadmills. Based on special software interfaces you can easily connect our spiroergometry solutions to a continuously increasing number of bike / arm ergometers and treadmills (such as: Ergoline, Cyclus 2, h/p/cosmos, Woodway or Lode). Upon special request we also offer connections to additional devices. Just give us a call.

Electrocardiograms (ECGs)

The perfect symbiosis between spiroergometry and ECG: benefit from the specific advantages of a bidirectional interface and combine our spiroergometry solutions with the ECGs made by custo med.

Numerous advantages such as simplified operational steps, a synchronized cursor or an easier exchange of variables enable an especially intuitive reporting, thereby enhancing your test and diagnostic options.

Besides custo med's ECGs you can select alternative ECG connections. For more information please refer to pages 6 and 7.

Wireless 3-lead ECG from custo med

The custo guard allows a user-friendly 3-lead ECG measurement when performing laboratory and field tests.

METASOFT® STUDIO

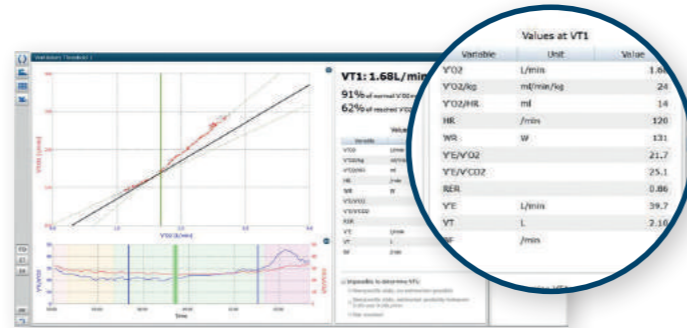
MAKES COMPLEXITY EASY

The METASOFT® Studio combines the complexity of spiroergometric examinations with the most intuitive usability in a unique way.

It is impossible to give a feeling of the easy and intuitive data collection and test evaluation METASOFT® Studio offers. To put it briefly:

You have to see and test METASOFT® Studio by yourself.

Please contact us to arrange an appointment for a product presentation to see what the software is all about. To get a first impression, watch our short video tutorial:



CORTEX Quality Guarantee

The top quality of CORTEX products and services is the key factor of our success and represents a central brand promise. Since founding our company almost 30 years ago, we stay for:

„Fast realization of innovative ideas, supported by excellent services, now and in the future“.

We and all our CORTEX partners work according to the world wide quality and security standards of medical products.

The Entire Spiroergometry Variety

Visit our website www.cortex-medical.com and get to know the wide range of products offered. Or ask for additional brochures. Besides our powerful mobile and portable spiroergometry systems we also offer customized solutions. Share your ideas and tell us what you want!

You would like to know more about CORTEX and our products?

Then contact us!

Please call: +49 341 487 49-0 or send an e-mail to: sales@cortex-medical.com



METAMax[®] 3B – TECHNICAL DATA

O2 Sensor

- type: electro-chemical fuel cell
- range: ≤ 25 Vol %
- accuracy: ± 0.1 Vol %
- calibration: every 14 days

CO2 Sensor

- type: Infrared (NDIR)
- range: ≤ 13 Vol %
- accuracy: ± 0.1 Vol %
- calibration: 1x per month

Volume Turbine, Reusable

- flow: ≤ 20 l/s
- accuracy: ± 2 %
- resistance PEF: ≤ 0.30 kPa/l/s @ 20 l/s
- calibration: 1x daily

Volume Turbine, Disposable

- flow: ≤ 14 l/s
- accuracy: ± 3 %
- resistance PEF: ≤ 0.36 kPa/l/s @ 14 l/s
- calibration: not necessary

Heart Rate

- smart BT | 3-lead ECG (optional)
12-lead ECG (optional)

Telemetry

- range: $> 1,000$ m
- PC interface: USB 2.0 with Long Range Bluetooth[®] receiver or Bluetooth[®] USB adapter

Operating Conditions

- temperature: -10° to $+40^{\circ}$ °C
- ambient pressure: 500 to 1,050 mbar
- at atmospheres: ≤ 25 % O₂
- relative humidity: ≤ 95 % (non condensing)

Physical Specifications

- dimension (LxWxH): 2x (120 x 110 x 45 mm)
- weight: 580 g (without battery)

Electrical Specifications

- PC interface: Bluetooth[®] 2.1
- power supply:
battery with 5,5 hours operating time

Quality Management

- EN ISO 13485

Conformity

- MDD 93/42/EEC
MDR (EU) 2017/745 Art. 120
- EN 60601-1; EN 60601-1-2; EN ISO 10993-1;
EN 62366; EN 62304; EN ISO 14971
EN ISO 15223-1; EN ISO 23747; EN ISO 26782

System Requirements Operating System

- Windows 7, 8, 10 (32 or 64 Bit)
Windows Server 2008, 2012 (64 Bit), 2016 (64 Bit)