# MetaLyzer® 3B PORTABLE SPIROERGOMETRY SYSTEM

Product Brochure



METALYZER 3B

on / at

# FOR A MORE ACTIVE LIFE



### 02

# MetaLyzer<sup>®</sup> 3B

The METALYZER® 3B is a portable high resolution spiroergometry system with Breath-by-Breath technology. The system allows a complete medical analysis of the functionality of a person's lung, heart and metabolism at rest and under stress.

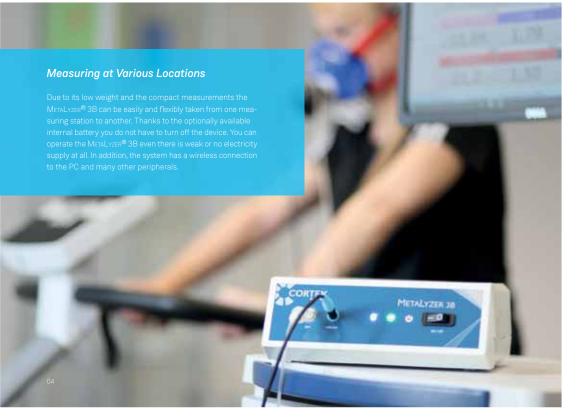
The MetaLyzer® 3B can be used in various ways thanks to its numerous hardware and software options. Its scope ranges from a spiroergometric measuring station for performance diagnostics up to a complete cardiopulmonary solution.

Either in a fitness club, at a medical practice, in a hospital o at an Olympic test center: Benefit from the MetaLyzer® 3B in combination with the efficient application software MetaSoft® Studio and exploit the full potential of spiroergometry.

# Information and Accuracy SPIROERGOMETRY LACTATE TEST PWC BORG



For more information: http://cortex-medical.c



# MetaLyzer® 3B FOR A MORE ACTIVE LIFE

### Features

- portable Breath-by-Breath system
- internal battery allowing a 12-hour running time (available as an option)
- Bluetooth<sup>®</sup> LE for connection to HF, Sp02, power meters and other measuring devices
- interfaces to numerous types of ECGs
- USB or Bluetooth<sup>®</sup> connection to a PC
- $\cdot$   $\,$  front display with LED status indicators  $\,$
- push-pull connectors protecting against reverse polarity and damages
- minimal need for maintenance
- long calibration intervals
- O2 sensor with long lifespan
- constant and dynamic flow control
- modular future-proof system set-up

## Low Maintenance

Our customers often say the METALYZER® 3B is a "work horse". It is extremely reliable and requires only minimal adjustment and maintenance. Gas calibration once a month is absolutely sufficient. Handy gas cartridges and the automatic gas-on-demand valve ensure correct dosage of quantity and pressure.

# Service-friendly

The few consumables can be easily and quickly exchanged by the user due to its clever design. The device is therefore operable at any time.

Software Options	PhysioFlow/BD/Sp02	HF/ECG	Trolley & PC	Packages	Hardware Options	Volume Transducer
<ul> <li>MSS Energy Metabolism for CPET</li> <li>MSS Performance Assessment         <ul> <li>MSS Performance Assessment</li> <li>MSS Pre-Operative Risk Assessment</li> <li>MSS Enterpretation Assistant by Wasserman</li> <li>EOV Detection</li> <li>PhysioFlow License</li> <li>MSS Spirometry                 <ul> <li>And holder</li> </ul> </li> <li>MC3000 Interface (custo med)</li> <li>12-lead ECG Interface</li> <li>MSS Basal- &amp; Resting Metabolic Rate</li> <li>MSS Network License Basic</li> <li>MSS Network License Basic</li> <li>SS Network License Extension</li> </ul> </li> </ul>	<ul> <li>PhysioFlow         <ul> <li>PhysioFlow electrodes</li> <li>PhysioFlow cable</li> <li>Deag</li> <li>Charger</li> </ul> </li> <li>PhysioFlow electrodes         <ul> <li>Charger</li> </ul> </li> <li>PhysioFlow electrodes         <ul> <li>Tongo M2 for use with custo med</li> <li>Qusto trigger cable</li> <li>Qusto trigger cable</li> <li>Tango M2 with ECG module</li> </ul> </li> <li>Tango M2 with ECG module</li> <li>Nonin wrist 0x2 3150</li> </ul>	<ul> <li>Polar H10</li> <li>BT smart HF sensor</li> <li>MSS 1-lead belt</li> <li>MSS 3-lead guard</li> <li>custo cardio 100 <ul> <li>MSS 3-lead guard</li> </ul> </li> <li>custo cardio 200 <ul> <li>MC3000 interface</li> <li>custo cardio 300</li> <li>MC3000 interface</li> </ul> </li> <li>ECG - electrodes custo med</li> <li>ECG - electrodes blue sensor</li> <li>12-lead ECG interface <ul> <li>Schiller</li> <li>GE</li> <li>Micromed</li> <li>AmedTec</li> <li>Dr. Schmitt</li> <li>Ergocid</li> <li>Spacelabs</li> <li>Norav</li> <li>Medsat</li> <li>Labtech</li> <li>Welch Allyn</li> <li></li> </ul></li></ul>	<ul> <li>CORTEX mobile Plus dual monitor         <ul> <li>○ printer shelf</li> <li>○ support arm</li> </ul> </li> <li>CORTEX mobile Plus single monitor         <ul> <li>○ printer shelf</li> <li>○ support arm</li> </ul> </li> <li>PC         <ul> <li>③ monitor</li> <li>③ laptop</li> <li>④ printer shelf</li> </ul> </li> </ul>	<ul> <li>performance package</li> <li>service package</li> <li>TestControlCenter <ul> <li>of ro 2 CPET devices</li> <li>of ro 3 CPET devices</li> </ul> </li> <li>of ro 4 CPET devices</li> <li>warranty extension</li> </ul>	Image: Second Secon	CORTEX volume     transducer disposable     disposable turbines     disposable flow electronics     CORTEX volume     transducer reusable     turbine     flow volume electronic
<ul> <li>Polar H10</li> <li>BT smart HF sensor</li> <li>MSS 1-lead belt</li> <li>PhysioFlow electrodes</li> <li>D batteries</li> <li>Custo cardio 200</li> <li>MC3000 interface</li> <li>Custo cardio 200</li> <li>MC3000 interface</li> <li>Custo cardio 200</li> <li>MC3000 interface</li> <li>ECG - electrodes bute sensor</li> <li>ECG - electrodes suts med</li> <li>MC3000 interface</li> <li>MC3000 interface</li> <li>ECG - electrodes suts med</li> <li>Custo trigger cable</li> <li>Ours Chiller</li> <li>GEE</li> <li>Micromed</li> <li>AmedTec</li> <li>Dr Schmitt</li> <li>Ergocid</li> <li>Spacelabs</li> <li>Norav</li> <li>Welch Allyn</li> <li>Medset</li> <li>Labtech</li> <li>Welch Allyn</li> <li>PhysioFlow ilectrodes</li> <li>PhysioFlow electrodes</li> <li>PhysioFlow electrodes</li> <li>PhysioFlow electrodes</li> <li>PhysioFlow electrodes</li> <li>PhysioFlow electrodes</li> <li>Tango M2 for use with outs omed</li> <li>Custo trigger cable</li> <li>Custo trigger cable</li> <li>Nonin wrist 0x2 3150</li> </ul>	<ul> <li>Polar H10</li> <li>BT smart HF sensor</li> <li>MSS 1-lead belt</li> <li>MSS 1-lead belt</li> <li>MSS 3-lead guard</li> <li>custo cardio 100 <ul> <li>MC3000 interface</li> <li>custo cardio 200</li> <li>MC3000 interface</li> </ul> </li> <li>Custo cardio 300 <ul> <li>MC3000 interface</li> </ul> </li> <li>ECG - electrodes blue sensor</li> <li>MardTec</li> <li>ECG - Ergocid</li> <li>Spacelabs</li> <li>Norav</li> <li>Medset</li> <li>Labtech</li> <li>Welch Allyn</li> </ul>			CORTEX mobile Plus dual monitor		

1 Please serece Standard Option 1 Offer on request Oconnection possible Accessories & spare parts

# **BENEFIT FROM OUR PACKAGES**

# The Service Package for Major Security of Investment

The service package includes all consumables (calibration gas, 02 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 MetaLyzer<sup>®</sup> 3B

The METALVZER® 3B performance package already comes with he most widely used hardware and software options in the area of sports and preventive medicine. In addition, the package ncludes a calibration set, a mask extension set and a larger stock 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:



# 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 to 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<sup>®</sup> 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



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# MetaLyzer® 3B – TECHNICAL DATA



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# **O2 Sensor**

- type: chemical fuel cel
- range: 0-100 %
- accuracy: < 0.1 Vol %
- T90: < 100 ms
- calibration: 1x per month

# **CO2 Sensor**

- type: NDIR
- range: 0-13 %
- accuracy: < 0.1 Vol %
- T90: < 100 ms
- calibration: 1x per month

# Pressure Sensor

range: 300-1,100 mbar

# Volume Turbine, Reusable

- flow: ≤ 20,1 l/s
- accuracy: 50 ml or +/- 2 %
- resistance:  $\leq$  0,1 kPa/I/s (@ 20 I/s
- calibration: 1x daily

# Volume Turbine, Disposable

- · flow: ≤ 14 l/s
- accuracy: +/- 3 %
- resistance:  $\leq 0.06$  kPa/I/s @ 14 I/s
- calibration: not neccessary

# Heart Rate

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

# **Operating Conditions**

- temperature: +10 ° to +35 °C
- ambient pressure: 500 to 1,050 mbar
- at atmospheres: ≤ 25 % 02
- relative humidity: 0 to 100 % (non condensing)

# **Physical Specifications**

dimension (LxWxH): 235 x 165 x 85 mm

# **Electrical Specifications**

- PC interface: USB (cable or Bluetooth<sup>®</sup>)
- power supply:
- input 100-250 VAC, 50-60 Hz, 1
- external battery: 12 h operating time

# **Quality Management**

· EN ISO 9001, EN ISO 13485

# Conformity

- guideline 93/42/EWG + 2007/47/EG
- EN ISO 60601-1; 60601-1-2;
   10993-1; 15223-1; 1041; 62304; 62366;
- 23747; 26782

# System Requirements Operating System

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

other errors excepted. Photographs and figures Biophysik GmbH 2017 X CORTE document. C and / ( , printing errors an s are used in this c *Imprint*: Modifications of the design and specifications, pare intended for illustration purposes only. Brand names Art. no.: 913-00-211. Version as of October 2017.