MetaLyzer® 3B
PORTABLE SPIROERGOMETRY SYSTEM

Product Brochure
MetaLyzer® 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 or 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.
Measuring at Various Locations

Due to its low weight and the compact measurements the MetaLyzer® 3B can be easily and flexibly taken from one measuring station to another. Thanks to the optionally available internal battery you do not have to turn off the device. You can operate the MetaLyzer® 3B even there is weak or no electricity supply at all. In addition, the system has a wireless connection to the PC and many other peripherals.

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® LE for connection to HF, SpO2, power meters and other measuring devices
• interfaces to numerous types of ECGs
• USB or Bluetooth® connection to a PC
• 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.
### MetaLyzer
Configure your MetaLyzer of the Entire Spectrum and accessories. Perfectly matching peripherals your selected system by adding options and benefit packages to your individual needs.

#### Hardware Options
- **Battery option**
- **Calibration kit**
- **Gas on-demand valve**
- **Gas bottle**
- **Gas-on-demand valve**

#### Accessories
- **Cables**
- **Tea cup**
- **Triathlon handle bar**
- **Adjustable pedal cranks**

#### Software Options
- **PhysioFlow license**
- **Software license**
- **OES trigger**

#### Accessories & Spare Parts
- **Face masks**
- **Face shields**
- **Bacterial filter spirometry**

#### Interfaces
- **PhysioFlow electrodes**
- **2 m**
- **bacterial filter spirometry**

#### Performance Package
- **Heart rate**
- **Artificial lung**
- **Artificial heart**

#### Volume Transducer
- **Flow volume electronic transducer reusable**
- **Flow volume reusable**
- **Disposable flow electronics**

#### Package
- **CORTEX volume single monitor**
- **Support arm**
- **CORTEX® 3B Mobile**

#### Menu Bar
- **Software package**
- **Service package**
- **Performance package**

#### Volume Transducer
- **CORTEX-CORTEX® mobile Plus dual monitor**
- **Support arm**

#### HP/EKG
- **Polar HSI**
- **BT smart HF sensor**
- **MSS 1-lead left**
- **MSS 3-lead left guard**

#### PhysioFlow/BID/SpiO2
- **PhysioFlow - electrodes blue sensor**
- **PhysioFlow - electrodes custo med**
- **MSS Spirometry**

#### End User
- **SIP2 for use with custo med**
- **EVOV Detection**
- **MSS Spirometry**

#### Interfaces
- **PhysioFlow/BID/SpiO2**
- **MSS Spirometry**
- **MSS Basal- & Resting Energy Metabolism**

#### CORTEX® 3B according
- **Volume Transducer**
- **Hardware Options**
- **Packages**
- **Tray & PC**
- **Ergometer**
- **HP/EKG**
- **PhysioFlow/BID/SpiO2**
- **Software Options**
- **Accessories & Spare Parts**

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**The Entire Spectrum of the Metalver® 3B**

Configure your Metalver® 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.
CONNECTIVITY

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 MetaLyzer® 3B

The MetaLyzer® 3B performance package already comes with the most widely used hardware and software options in the area of sports and preventive medicine. In addition, the package includes 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:

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, hy/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.
The MetaSoft® Studio combines the complexity of spirometric 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.

**MetaSoft® STUDIO MAKES COMPLEXITY EASY**

**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 worldwide quality and security standards of medical products.

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
### O2 Sensor
- **Type:** chemical fuel cell
- **Range:** $0-100\%$
- **Accuracy:** $< 0.1 \text{ Vol}\%$
- **T90:** $< 100 \text{ ms}$
- **Calibration:** 1x per month

### CO2 Sensor
- **Type:** NDIR
- **Range:** $0-13\%$
- **Accuracy:** $< 0.1 \text{ Vol}\%$
- **T90:** $< 100 \text{ ms}$
- **Calibration:** 1x per month

### Pressure Sensor
- **Range:** 300-1,100 mbar

### Volume Turbine, Disposible
- **Flow:** $\leq 14 \text{ l/s}$
- **Accuracy:** $+/- 3\%$
- **Resistance:** $\leq 0.06 \text{ kPa/l/s} @ 14 \text{ l/s}$
- **Calibration:** not necessary

### Volume Turbine, Reusable
- **Flow:** $\leq 20.1 \text{ l/s}$
- **Accuracy:** $50 \text{ ml} or +/- 2\%$
- **Resistance:** $\leq 0.1 \text{ kPa/l/s} @ 20 \text{ l/s}$
- **Calibration:** 1x daily

### 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
- **Relative Humidity:** 0 to 100 % (non condensing)

### Physical Specifications
- **Dimension (LxWxH):** $235 \times 165 \times 85 \text{ mm}$
- **Weight:** 940 g

### Electrical Specifications
- **PC Interface:** USB (cable or Bluetooth®)
- **Power Supply:**
  - Input: 100-250 VAC, 50-60 Hz, 12 W
  - External Battery: 12 h operating time

### Quality Management
- **EN ISO 13485**

### System Requirements Operating System
- **Windows 7, 8, 10 (32 or 64 Bit)**
- **Windows Server 2008, 2012 (64 Bit)**
- **2016 (64 Bit)**