MetaLyzer® 3B
PORTABLE SPIROERGOMETRY SYSTEM
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.
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.
Configure your MetaLyzer® 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.

### MetaLyzer® 3B Options and Accessories

**Volume Transducer**
- CORTEX volume transducer disposable
- CORTEX volume transducer reusable
- CORTEX volume flow volume electronic

**Hardware Options**
- Battery option
- Calibration kit
- Gas on-demand valve
- Gas bottle
- Filter syringe
- Gas line
- Gas sensor
- Nose clip
- Reusable flow sensor

**Packages**
- Performance package
- CORTEX mobile-Plus dual monitor
- CORTEX mobile-Plus single monitor
- CORTEX bike M

**Trolley & PC**
- Trolley & PC

**Bilographer**
- Polar HSI
- BT smart HF sensor

**HE/ECG**
- PhysioFlow
-PhysioFlow electrodes
- PhysioFlow license

**PhysioFlow/BD/SpO2**
- Nonin wrist Ox2 3150

**Software Options**
- MSS Energy Metabolism for CPET
- MSS Performance Assessment
- MSS Pre-Operative Risk Assessment
- MSS Interpretation Assistant by Wasserman
- MSS Exercise Scheduler

**Accessories & Spare Parts**
- Face masks
- ECG electrodes blue sensor
- ECG - electrodes custo med

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**Please select software license**
- PhysioFlow license
- MSS Energy Metabolism license
- MSS Energy Metabolism for CPET license
- MSS Spirometry license
- MSS Pre-Operative Risk Assessment license
- MSS Spirometry license

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**Interface**
- TestControlCenter

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**PhysioFlow/BD/SpO2**
- PhysioFlow electrodes
- PhysioFlow license

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**Connections**
- MC3000 interface
- MC3000 interface (custo med)
- MSS Pre-Operative Risk Assessment
- MSS Performance Assessment

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**HMCT & Ergometer**
- home
- 12-lead ECG Interface
- MSS Speedometer

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**Ergometer**
- Polar HSI
- BT smart HF sensor

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**PhysioFlow/BD/SpO2**
- Nonin wrist Ox2 3150
- TANGO M2 with ECG module

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**Standards**
- Standard
- Option
- Offer on request
- Connection possible
- Accessories & spare parts

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**儿科**
- pediatric 1
- pediatric 2
- pediatric 3
- pediatric 4
- pediatric 5
- pediatric 6

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**Multifunction Clock**
- 12-lead ECG Interface
- MSS Pre-Operative Risk Assessment
- MSS Performance Assessment

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**Connecting Options**
- Connection possible
- Adapter for face mask
- Sample box
- 2 m

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**Software**
- MSS Energy Metabolism for CPET
- MSS Performance Assessment

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**Accessories**
- Accessories & disposable
- ECG electrodes
- ECG electrodes blue sensor
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, 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.

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

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.

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 spirometry systems we also offer customized solutions. Share your ideas with 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
# MetaLyzer® 3B – TECHNICAL DATA

## O2 Sensor
- **Type**: chemical fuel cell
- **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**: ≤ 0.1 kPa/l/s @ 20 l/s
- **Calibration**: 1x daily

## Volume Turbine, Disposable
- **Flow**: ≤ 14 l/s
- **Accuracy**: +/- 3 %
- **Resistance**: ≤ 0.06 kPa/l/s @ 14 l/s
- **Calibration**: not necessary

## 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
- **Atmospheres**: ≤ 25 % O2
- **Relative Humidity**: 0 to 100 % (non condensing)

## Physical Specifications
- **Dimension (LxWxH)**: 235 x 165 x 85 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 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)**

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