

iWorx Metabolic Measurement Solutions

Easy-to-Use, Portable and Affordable Solutions for Teaching and Research

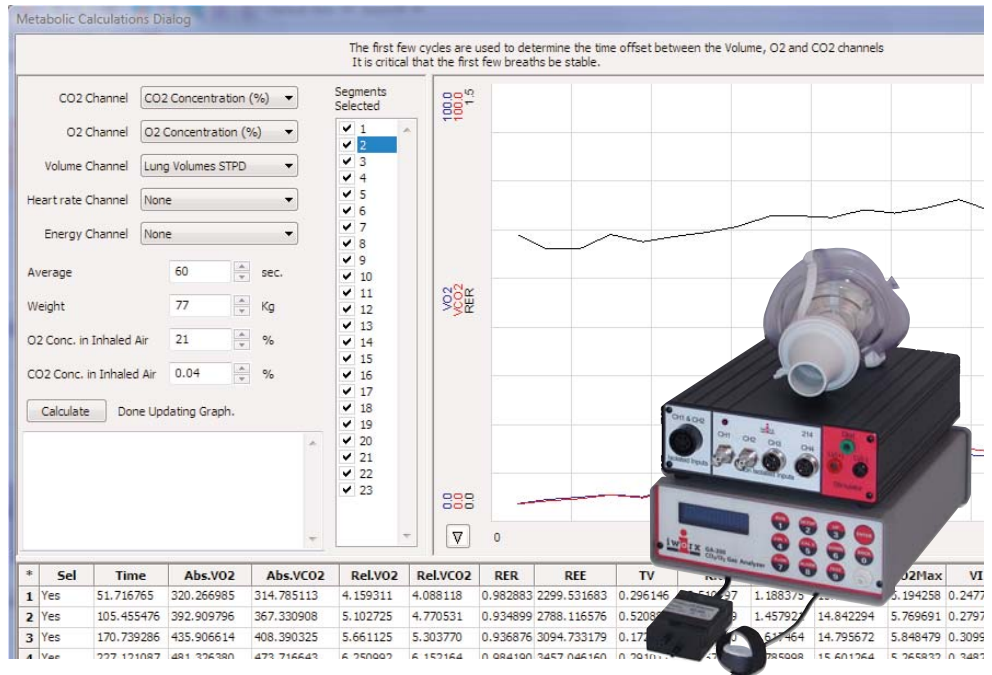
The iWorx MC-214 Metabolic Cart is a compact, economical and easy-to-use system capable of measuring and analyzing breath-by-breath oxygen consumption and carbon dioxide production in resting and exercising subjects.

- Exercise physiology teaching and research
- Metabolic research
- Fitness assessment

LabScribe2™ software with the Metabolic Calculations Module is capable of calculating many metabolic parameters directly from the oxygen and carbon dioxide concentrations, lung volumes, and heart rates recorded in the LabScribe2 Main window.

These parameters include:

- Relative and absolute VO_2
- Relative and absolute VCO_2
- RER
- TV
- VE
- METS, and more.



The Metabolic Calculations Module also allows these parameters to be plotted against time or each other to yield valuable information about the aerobic fitness of the subject. These plots include:

- VO_2 , VCO_2 , RER vs. Time
- VCO_2 vs. VO_2
- VE vs. VO_2
- VE vs. VCO_2
- HR, VCO_2 vs. VO_2
- TV vs. VE

When the workload set on the ergometer is also recorded, the Metabolic Calculations Module can plot these additional parameters:

- VE vs. Watts
- HR, VO_2 /HR vs. Watts
- VO_2 , VCO_2 vs. Watts
- VE/ VO_2 , VE/ VCO_2 Vs. Watts
- REE

IX-214 Data Acquisition Unit

The MC-214 system includes the iWorx IX-214, which is a rugged, reliable, four-channel data recorder. The IX-214 includes a dual-channel biopotential amplifier designed for use on human subjects. Two additional channels accommodate virtually any type of sensor.

GA-200 Gas Analyzer

The GA-200 CO_2 and O_2 Gas Analyzer provides a 10 millisecond response time which allows

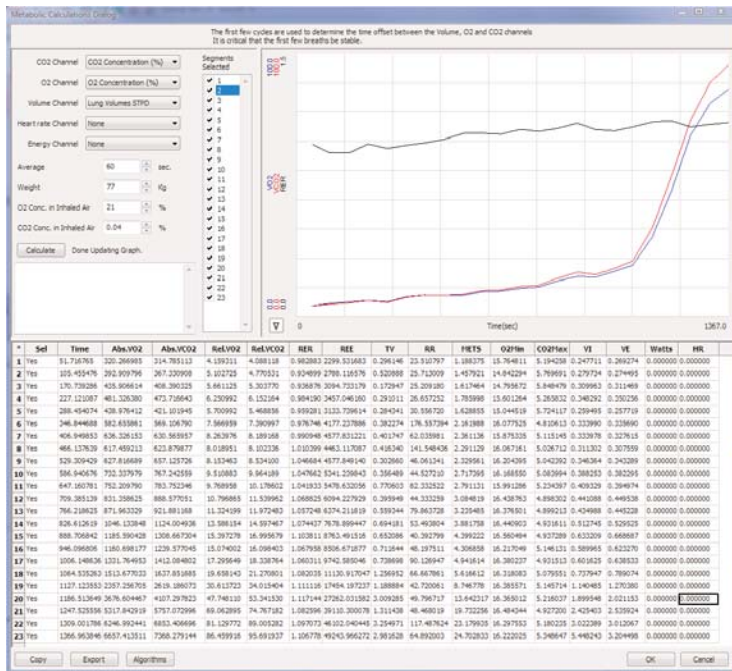
measurement of breath-by-breath changes in respiratory gas concentrations. The GA-200 uses

laser diode absorption technology to measure oxygen concentrations from 0-100%, and infrared detection to measure carbon dioxide concentrations from 0 to 13%.



The GA-200 has a fluorescent display for programming the unit and observing measurements, a keypad for programming the unit's operation and calibration, and analog outputs that allow the unit to be easily connected to the IX-214 data recording unit.

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LabScribe2 Software

LabScribe2™, the recording software used with the IX-214, is easily configured to record the outputs of the GA-200 Gas Analyzer and the SP-304 Spirometer with one click of the computer's mouse. The built-in Metabolic Calculations Module analyzes the respiratory volumes and the concentrations of oxygen and carbon dioxide to provide the VO_2 , VCO_2 and RER of the subject.

HEK-214 Exercise Physiology Kit

The iWorx HEK-214 Kit includes all of the components necessary to measure breath-by-breath oxygen consumption and carbon dioxide production in resting and exercising subjects, as well as the measurement of blood pressure, cardiograms, myograms, encephalograms, reflex responses, spirometry, and more.

The kit includes professionally developed courseware with 28 experiments and 140 exercises for teaching the concepts of exercise physiology and human physiology.

Exercise physiology experiments include:

- Breath-By-Breath Measurement of Resting Metabolic Rate (RMR)
- Breath-By-Breath Measurement of Respiratory Exchange Ratio (RER)
- Regulation of Body Temperature and the Respiratory Exchange Ratio (RER)

Want to Learn More?

Just call (800) 234-1757 or contact us by email at info@iworx.com.



Data Acquisition for
the Life Sciences

www.iworx.com

Ordering Information

MC-214

includes:

Part Number
GA-200

Description
Oxygen and Carbon
Dioxide Gas Analyzer
Data Acquisition and
Analysis Module

IX-214

SP-304

A-FH-300

A-GAM-100

PHRM-100

Spirometer
300L/min Reusable
Spirometer Flow Head
Face Mask
Pulse Rate Heart Monitor

HEK-214 Exercise Physiology Kit

includes:

IX-214

EM-100

FT-325

TM-100

SP-304

BP-600

GA-200

GAK-1000

PHRM-100

4-Channel Computer
Interface
Event Marker
Hand Dynamometer
Temperature Sensor
Spirometer
Blood Pressure Sensor
Gas Analyzer
Exercise Breath-by-
Breath Gas Analyzer
Accessories Kit
Pulse Heart Rate Monitor

plus appropriate cables, power supply, electrodes and courseware for teaching.

PHRM-100 Polar® Heart Rate Monitor Transmitter/Receiver Set

includes:

HRB-100

HRR-100

Heart Transmitter
Chest Belt
Heart Rate Receiver
with 6 ft. Adapter Cable

LabScribe2 Software

LS20- MC

LS-20-MC-SL

LabScribe2 Metabolic
Calculations Module
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Calculations Module
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