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 VO₂
- Relative and absolute VCO₂
- 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:

- VO₂, VCO₂, RER vs. Time
- VCO₂ vs. VO₂
- VE vs. VO₂
- VE vs. VCO₂
- HR, VCO₂ vs. VO₂
- 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, VO₂/HR vs. Watts
- VO₂, VCO₂ vs. Watts
- VE/VO₂, VE/VCO₂ Vs. Watts
- REE

GA-200 Gas Analyzer

The GA-200 CO₂ and O₂ 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.

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.
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 VO₂, VCO₂ 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.

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>GA-200</td>
<td>Oxygen and Carbon Dioxide Gas Analyzer</td>
</tr>
<tr>
<td>IX-214</td>
<td>Data Acquisition and Analysis Module</td>
</tr>
<tr>
<td>SP-304</td>
<td>Spirometer</td>
</tr>
<tr>
<td>A-FH-300</td>
<td>300L/min Reusable Spirometer Flow Head</td>
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<tr>
<td>A-GAM-100</td>
<td>Face Mask</td>
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<tr>
<td>PHRM-100</td>
<td>Pulse Rate Heart Monitor</td>
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HEK-214 Exercise Physiology Kit includes:
- IX-214 4-Channel Computer Interface
- EM-100 Event Marker
- FT-325 Hand Dynamometer
- TM-100 Temperature Sensor
- SP-304 Spirometer
- BP-600 Blood Pressure Sensor
- GA-200 Gas Analyzer
- GAK-1000 Exercise Breath-by-Breath Gas Analyzer Accessory Kit
- PHRM-100 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 Heart Transmitter Chest Belt
- HRR-100 Heart Rate Receiver with 6 ft. Adapter Cable

LabScribe2 Software

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<th>Part Number</th>
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<tbody>
<tr>
<td>LS20-MC</td>
<td>LabScribe2 Metabolic Calculations Module</td>
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<tr>
<td>LS-20-MC-SL</td>
<td>LabScribe2 Metabolic Calculations Module Site License</td>
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