

# LODE ERGOMETRY MANAGER

110

Software for all Lode Ergometers

User friendly

Modular structure

Windows-based



**Lode**  
the standard in Ergometry

# LODE ERGOMETRY MANAGER

Rehabilitation

Sports Medicine

Physiotherapy

Research

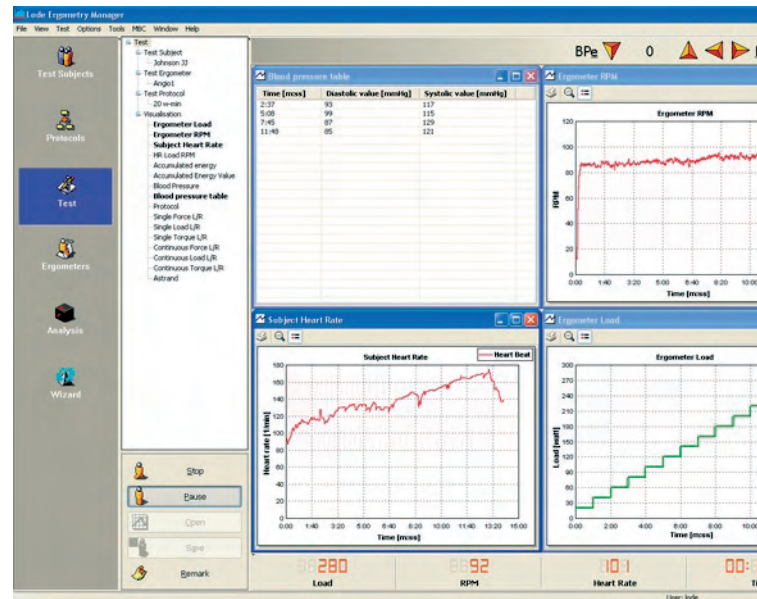
The Lode Ergometry Manager is a Windows-based software package used for controlling Lode ergometers and monitoring test subject ergometric parameters. The software enables the operator to program protocols, control ergometers, visualize, print, save and analyze ergometry data. The program also provides a patient database. The software has been developed and tested according to the Lode principles of accuracy, durability and reliability. The Lode Ergometry Manager can be extended with various modules, each with its specific functions and visualizations. The Lode Ergometry Manager is the ideal supplement to a modern ergometry setting.

## • Lode *the* standard in Ergometry

Ever since Mr. Fré Lode manufactured the first electro-magnetic cycle ergometer in 1952, accuracy, reliability and durability have been fundamental to further developments. Having started years ago in the small market of cardiology and pulmonary function, Lode BV has become a specialist in the complete spectrum of medical and research ergometry. Lode is world renowned as a manufacturer of high quality ergometers and the Lode brand stands for accuracy, durability and ergonomic design. The Lode product range varies from bicycle ergometers and treadmills to arm, recumbent and supine ergometers as well as ergometry software.

Long-term experience in manufacturing medical equipment and continuous development to meet the changing requirements of the market, make Lode a flexible and reliable partner. Together we can transform your specific ideas and wishes into custom-made products.

All Lode products are produced under the strictest quality control conditions. Lode is ISO 9001:2000, ISO 13485:2003 and FDA certified and fulfils the EU medical device directive MDD 93/42/EEC. Over years of use, service costs are almost negligible. In other words: Lode, *the* standard in Ergometry.



The Lode Ergometry Manager can be used for testing and training in several rehabilitation settings, sports medicine, physiotherapy and research environments.

## Features and Benefits

The modular structure of the Lode Ergometry Manager software in combination with the accurate and reliable Lode ergometer offers a complete and modern ergometry setting. The operator will be satisfied with the ease of executing the test. With the software, various ergometry data is made visible, enabling the operator to simultaneously visualize ergometric parameters during the test and to control or quickly intervene when necessary.

The software has a built-in security system: only authorized users can edit protocols and control all important Lode Ergometry Manager settings. Of course, every user can edit the test subject database and execute ergometry tests.

## Preparing the ergometry test

In order to quickly and efficiently execute an ergometry test, tests can be prepared in advance. The software provides the following possibilities:

### Test subjects database

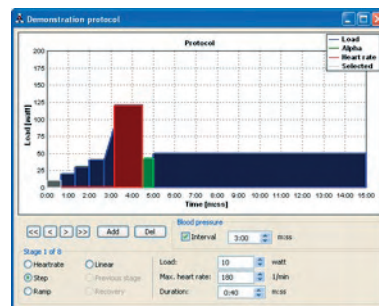
Test subject data is stored in the database. Each test subject has a unique ID code and important data like name, height and weight of the test subject. Other fields for additional information are available.

### Test protocols

Within the Lode Ergometry Manager software, it is possible to create exercise protocols. Programmable stages are:

- Heart rate controlled
- Step
- Ramp
- Linear
- Recovery

In order to make the configuring of protocols as easy as possible, it is possible to copy a previous step easily. Within a protocol, the interval time for blood pressure measurement and a heart rate limit can be preset.

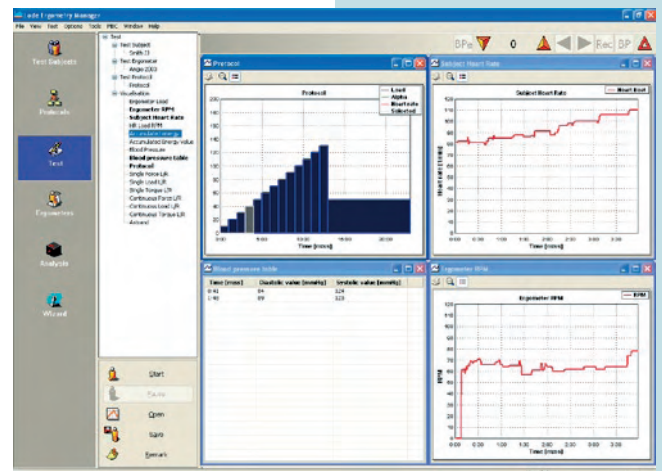


### Pre-programmed ergometry test protocols

The Lode Ergometry Manager can be extended with expansion modules. An expansion module can have a standard pre-programmed ergometry test protocol, like Wingate or Åstrand. It can also have a specific function, e.g. Pedal Force Measurement that visualizes forced exerted on the cranks. Each expansion module has specific visualizations, analysis and reports.

## During the ergometry test

During the test, various ergometry data can be visualized graphically and/or numerically. The Lode Ergometry Manager offers various standard visualizations: workload, rpm, accumulated energy, heart rate, blood pressure and time. In combination with some expansion modules, even forces exerted on the cranks, or an estimation of the maximum oxygen uptake can be visualized. With the click of a button the workload can be adjusted and the blood pressure measurement can be started.



### Remarks

Remarks can be added and modified before, after and during the test and analysis. The time is automatically printed with the remark.

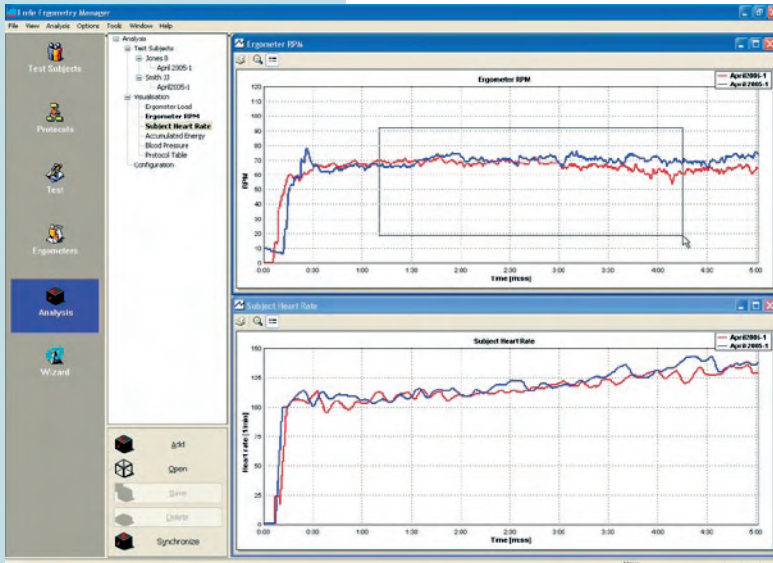
### Monitoring the test

The operator can specify which parameters should be shown during the test. The data is stored within the Lode Ergometry Manager database. Data not visualized during the test is recorded and can be analyzed at any time.

## After the test

Even after an ergometry test has been completed, the Lode Ergometry Manager will help the operator to efficiently finalize the work. Test data can be seen at any time after the test. The Lode Ergometry Manager will help analysing the results and print reports. In a clear overview you will find all tests that have been executed by a test subject.

It is possible to take a closer look at a test afterwards, by zooming into a specific part of the test's graphic.



## Analysing the test

When analysing the results, different tests from a single test subject can be compared with each other and the operator can define which ergometry data they would like to evaluate. It is also possible to compare just a part of the test. This helps to monitor the progress of the subject.

Different test subjects can be compared against each other in a graph. The results of a group can be analysed with this feature.

## Printing

It is possible to print out all possible visualizations and reports after the test. The report lists the name of the test subject, the test protocol, date and time.

## Exporting the data

With the LEM expansion module Export, all data from the test and the test subject of the Lode Ergometry Manager can be exported to Excel or ASCII-format.

## Minimal System Requirements

- Pentium III 800 MHz
- Color monitor, resolution 1024x786 pixels; 17" or larger recommended
- 128 Mb internal RAM
- 20 Gb hard disc
- CD ROM drive
- Operating system: Microsoft Windows 98SE / NT4+SP6 / 2000 / XP
- 1 free RS 232 or USB
- Keyboard
- Mouse

Note: data like heart rate, blood pressure, SpO<sub>2</sub> and pedal force will only be visualized when these options are available on the ergometer.

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