

Cardiology

Pulmonary function

Occupational health

Rehabilitation

Physiotherapy

The Corival is one of the most popular ergometers worldwide. The Corival product line ranges from the basic Corival to the Corival Recumbent for obese and elderly test subjects and the Corival Pediatric for young children. Of course, all Corival ergometers meet the latest requirements and are developed in accordance with our three fundamental principles: accuracy, durability and reliability.

#### Lode the standard in Ergometry

Since Mr. Freerk Lode produced the first electro-magnetically braked bicycle ergometer in 1952, accuracy, reliability and durability have formed the basis for all further developments. Whereas Lode BV initially only specialised in the field of cardiology and pulmonary function, it has since grown to become a multifunctional specialist in the complete spectrum of medical ergometry. Lode is world renowned as a manufacturer of high quality ergometers and the Lode brand stands for accuracy, durability and ergonomic design. The range of Lode products varies from bicycle and treadmill ergometers to arm ergometers, recumbent ergometers, supine ergometers and ergometry software.

Thanks to Lode's many years of experience in production of medical ergometers and the continuous development to meet changing market demands, Lode is a flexible and reliable partner. In consultation with clients, specific ideas and requirements can be translated into a custom-made product. This has resulted in Lode also becoming a much requested supplier for various specialised ergometry projects. Before leaving the factory all Lode ergometers are dynamically calibrated and, of course, all units 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 Corival product line: Corival, Corival Recumbent and Corival Pediatric.

#### Special Features and Benefits

The Corival is a modern ergometer with an ergonomic, stable design and is suitable for all body postures. The comfortable step-through feature enables easy positioning of all test subjects on the ergometer. With the unique one-touch stepless saddle and handlebar adjustment, test subjects can be positioned quickly. The Corival can be controlled easily by all known stress ECG and pulmonary devices in the world.

The extreme low start-up load of 7 watts and the adjustability in small steps of 1 watt make this ergometer perfectly suitable for many different applications. The standard control unit shows multiple ergometry parameters and you can determine your specific default setting and start-up menu.

Due to a simplified keyboard you can access the full menu function with only 3 buttons. In order to respond to individual requirements, it is possible to freely adjust the different parameters shown in the display and select one of the pre-programmed languages.

The Corival has an eddy current electro-magnetic braking mechanism. The biggest advantage of this system is the accuracy which is one of the most important Lode principles. With this ergometer, the stress tests performed are reliable and reproducible. The workload is adjustable in a range of 7 to 1000 watt. Moreover, the noise level is reduced to a minimum. Easy transportation of the device is possible by a simple retractable wheel.

#### Options

The basic model of the Corival ergometer can be extended with the following options:

- Programmable control unit**  
 Besides the features of the standard display unit, this control unit has an additional display facing the operator. It is possible to programme up to 24 user-defined protocols. Possible programming stages are: step, ramp, linear, heart rate, torque, repeat and all combinations of these parameters. Furthermore, the Åstrand protocol is standard preprogrammed. This option is also available with infrared SpO<sub>2</sub> measurement which displays the oxygen saturation and heart rate, measured by a finger clip.
- Blood pressure module**  
 Using this option you can extend your standard Corival with an auscultatory blood pressure module with DKA (3-Dimensional K-sound Analysis) for use during ergometry stress testing. The module can be used with and without an ECG trigger. The robust microphone has a double-sided pickup element for increased sensitivity and noise reduction. This option can be extended with a BPM headphone set, enabling the test operator to listen to the Korotkoff sounds.
- Heart rate option**  
 The heart rate option consists of a belt and receiver and offers the possibility to programme heart rate controlled protocols. The heart rate is displayed on the control unit.
- 0-watt start up system**  
 This option offers the opportunity to drive the ergometer without load (0 watt) at a preset pedal speed. You can choose any pedal speed between 30 and 80 rpm. The number of revolutions is increased to the required rpm by means of a motor drive. There is no energy-loss due to the start-up phase.
- Adjustable cranks**  
 These cranks are adjustable within a range of 80 to 170 mm, with increments of 5 mm steps. The minimum leg length is 560 mm.
- Pediatric option**  
 This option provides a small children's seat and adjustable cranks. It makes the basic Corival suitable for children (minimum leg length: 560 mm). This option can be combined with the shortened saddle shaft.
- Shortened saddle shaft**  
 This saddle shaft is adjustable within a range of 438 to 738 mm. The minimum leg length is 484 mm. With this option the Corival is even more suitable for young or small children.
- Lode Ergometry Manager**  
 This is the generic term for various software modules that enable e.g. read-out, printing, monitoring, saving and analysing the measured data of the ergometer. Within the Lode Ergometry Manager it is e.g. also possible to programme protocols, control the ergometer and use special pre-programmed tests. LEM is the perfect supplement to a modern ergometry setting.
- Other available options**  
 Horizontal saddle adjustment, extra large saddle, saddle with backsupport, arm support, writing tray, pedal shoes and pedal strap extension.



Accurate stress testing blood pressure module.



Programmable control unit with SpO<sub>2</sub> measurement.



Comfortable gel seat with unique one-touch stepless adjustment.



One-touch handlebar adjustment.



