Corival Eccentric
Possibility to train severe cardiac and pulmonary patients with eccentric exercise

Highlights

Reliable and reproducible stress tests
The experience of professionals who calibrate many ergometers showed that the Lode ergometers are the most reliable across the complete workload and rpm range and still within specifications even after many years of intensive use.

High standards
Lode is a socially and environmentally responsible company. All Lode products are RoHS/WEE compliant and Lode is ISO 9001:2015, and ISO 13485:2016 certified. All medical products comply to MDD 93/42/EEC, incl. IEC 60601-1.

Various test modes
Besides the hyperbolic (rpm-independent) mode that is used most of the time, the standard control unit offers several other test modes, like the fixed torque mode and the linear mode. These modes can be used in both manual and terminal mode.

Q-factor equal to road-bike
The Q-factor of the ergometer is equal to the Q-factor of road bikes, creating perfect training circumstances.

Training severe cardiac and pulmonary patients
Possibility to train severe cardiac and pulmonary patients with eccentric exercise
Eccentric ergometry or "negative ergometry" is used to train severe pulmonary and cardiac patients. The motor is pushing the crank axle of the ergometer in the opposite direction. The test subject has to resist this workload and keep the pedal frequency at a selected number to get the desired training effect.

The Eccentric Corival is an ergometer with a design like the Corival with a motor next to the usual electromagnetical braking principle. The maximal eccentric workload is 250 watt. The range of target rpm (30-100 rpm) can be customized and adjusted during the training. The eccentric ergometer has safety protections but may not be used without supervision. Besides this eccentric ergometry, this ergometer can be used for normal ergometry as well.

The ergometer is standard equipped with both a 7" programmable control unit and a 3.5" display.

**Features**

**Compatible with ECG and pulmonary devices**
The Lode ergometers have digital interfaces and can be controlled easily by all known stress ECG and pulmonary devices available in the world. This is one of the reasons why the Lode ergometers are very popular worldwide.

**Extreme low start up load**
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.

**Low noise**
Due to accurate manufacturing and the careful choice of materials the product has an extremely low noise level.

**Accurate over a long period of time**
The Lode ergometers are supplied with an electro-magnetic braking mechanism of Lanooy (eddy current). The biggest advantage of this braking system compared to a friction braking system is the absolute accuracy and the accuracy over time. Moreover, friction braking systems have more wearing parts.

**RS232 connectivity**
RS232 ports enable connectivity to most ECG and ergospirometry devices as well as PC's.

**Readout of saddle height**
The height of the saddle is stepless adjustable and can be read-out on the saddle shaft.

**Perfect ergonomic position**
Improved ergonomic position according to the latest requirements.

**Ultra-low step-through**
The lowest possible step-through guarantees easy access to the ergometer for all test subjects: a must for people who are not so mobile!

**USB connectivity**
USB to connect to PC or ECG or ergospirometry products facilitates easy connectivity.

**Small adjustment steps**
The workload of the Lode ergometers is adjustable in steps of only 1 watt. Depending on your wishes, the test operator or the test subject can adjust the workload. The steps of 1 watt are possible in the manual mode as well as within protocols.
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Corival Eccentric can a.o be extended with the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Partnumber</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB to Serial converter</td>
<td>226012</td>
</tr>
<tr>
<td>Easy connection</td>
<td></td>
</tr>
<tr>
<td>Arm support</td>
<td>906814</td>
</tr>
<tr>
<td>Arterial line possible</td>
<td></td>
</tr>
<tr>
<td>Transportwheel for Corival</td>
<td>960801</td>
</tr>
<tr>
<td>Easy transportation indoors</td>
<td></td>
</tr>
<tr>
<td>RS232 cable</td>
<td>930911</td>
</tr>
<tr>
<td>Easy connection</td>
<td></td>
</tr>
<tr>
<td>SpO2 for control unit with touch panel ordered afterwards</td>
<td>945823</td>
</tr>
<tr>
<td>Saturation and heart rate</td>
<td></td>
</tr>
<tr>
<td>SpO2 for control unit with touch panel - ordered afterwards Ordered</td>
<td>P945823</td>
</tr>
<tr>
<td>afterwards</td>
<td></td>
</tr>
<tr>
<td>Shortened saddle shaft</td>
<td>960806</td>
</tr>
<tr>
<td>Increase flexibility for smaller people</td>
<td></td>
</tr>
<tr>
<td>Ambient sensor pack</td>
<td>945827</td>
</tr>
<tr>
<td>Check environmental conditions during test</td>
<td></td>
</tr>
<tr>
<td>Blood Pressure with ECG trigger for bicycle ergometer with ECG trigger</td>
<td>945828</td>
</tr>
<tr>
<td>Saddle extra large</td>
<td>401084</td>
</tr>
<tr>
<td>Versatile ergometry</td>
<td></td>
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<tr>
<td>Saddle for children</td>
<td>401066</td>
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<tr>
<td>Versatile ergometry</td>
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<tr>
<td>Saddle for children - ordered additionally</td>
<td>P401066</td>
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<td>Versatile ergometry</td>
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<tr>
<td>Bluetooth Smart heart rate</td>
<td>945833</td>
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<tr>
<td>Heart rate available within an extreme wide</td>
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</tr>
<tr>
<td>Packaging upgrade to wooden box</td>
<td>U501032W</td>
</tr>
<tr>
<td>Ultra heavy duty packaging</td>
<td></td>
</tr>
</tbody>
</table>

**Veda FOR LIFE**

UNDERSTANDING MOVEMENT & PERFORMANCE
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Specifications

**Workload**
- Minimum load: 10 W
- Maximum peak load: 1000 W
- Minimum load increments: 1 W
- Maximum continuous load: 750 W
- Hyperbolic workload control
- Linear workload control
- Fixed torque workload control
- Maximum rpm independent constant load: 150 rpm
- Minimum rpm independent constant load: 30 rpm
- Optional heart rate controlled workload
- Electromagnetic "eddy current" braking system
- Dynamic calibration
- Power range at maximum rpm (maximum): 1000 W

**Eccentric Ergometry**
- Minimum Eccentric Load: 0 W
- Maximum Eccentric Load: 250 W
- Minimum RPM Eccentric Mode: 30 rpm
- Maximum RPM Eccentric Mode: 100 rpm

**Safety Protection**
- Readout RPM
- Readout Time
- Readout Power
- Terminal operation mode
- Touchscreen

**Accuracy**
- Workload accuracy below 100 W: 3 W
- Workload accuracy from 100 to 500 W: 3 %
- Workload accuracy from 500 to 1000 W: 5 %

**Comfort**
- Q-factor: 180 mm
- Minimum leg length user: 645 mm (25.4 inch)
- Allowed user weight: 180 kg (396.8 lbs)
- Handlebar adjustment angle: 360 °
- Adjustability range seat: 300 mm (11.8 inch)

**User Interface**
- English user interface
- Norwegian user interface
- Czech user interface
- Danish user interface
- Dutch user interface
- Finnish user interface
- French user interface
- German user interface
- Italian user interface
- Japanese user interface
- Korean user interface
- Polish user interface
- Portuguese user interface
- Russian user interface
- Spanish user interface
- Turkish user interface
- Ukrainian user interface
- Readout RPM
- Readout Time
- Readout Power
- Terminal operation mode
- Touchscreen

**Connectivity**
- Lode 38K4 interface protocol
- Lode interface protocol
- Lode WLP interface protocol
- Ergoline P10 interface protocol
- Ergoline P4 interface protocol
- Schiller interface protocol
- Bosch EKG 506 DS interface protocol
- USB connector
- RS232 in connector

**Dimensions**
- Product length (cm): 105 cm (41.3 inch)
- Product width (cm): 46 cm (18.1 inch)
- Product height: 114 cm (44.9 inch)
- Product weight: 78 kg (172 lbs)

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**Power requirements**

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Length</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power cord length</td>
<td>250 cm</td>
<td>98.4 inch</td>
</tr>
<tr>
<td>Power cord IEC 60320 C19 with CEE 7/7 plug</td>
<td></td>
<td>✔</td>
</tr>
<tr>
<td>Power cord NEMA</td>
<td></td>
<td>✗</td>
</tr>
<tr>
<td>Max. power consumption eccentric mode</td>
<td>600 W</td>
<td></td>
</tr>
</tbody>
</table>

**Standards & Safety**

- ISO 13485:2016 compliant ✔
- ISO 9001:2015 compliant ✔

**Order info**

<table>
<thead>
<tr>
<th>Partnumber:</th>
</tr>
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<tbody>
<tr>
<td>960905</td>
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* Specifications are subject to change without notice.