Excalibur sport
The standard in Sports Medical diagnostic and performance testing.

Highlights

**Extreme workload range of 8 - 2500 watt**
The extraordinary workload range of 8-2500 watt is unique in the world! It makes this ergometer extremely suitable for sports medicine and testing the strongest athletes in the world on their anaerobic power or isokinetic capacity.

**Read out of seating position**
The Excalibur Sport has a unique read-out of the seating position on the display of the Control Unit. The display shows saddle height & angle, handlebar position vertical & height.

**Heavy Duty Design**
The Excalibur Sport is designed for heavy duty sports medicine ergometry, without doing any concession on the esthetic, modern and robust design. In other words: Excalibur Sport: the gold standard in Ergometry!

**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.

**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.
The Gold Standard in Ergometry: with proven accuracy and reliability, the Excalibur sport is renowned worldwide as “the gold standard in ergometry”. The newly designed and improved Excalibur sport ergometer meets the latest requirements of modern sports medicine and research. Since athletes are becoming more and more powerful and testing more advanced than ever, this ergometer has been developed for extreme workloads up to 2500 watt! The new design ensures maximum stability at these high workloads. Thanks to the increased adjustability, versatile positioning of the test subject has never been better! The function of this product can be enhanced by using it in combination with our Lode Ergometry Manager software.

**Features**

**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.

**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.

**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.

**Compatible with click pedals**
The bicycle ergometer is compatible with most available clickpedals to allow for maximum user flexibility.

**Adjustable handlebar Excalibur Sport**
The position of the handlebar of Excalibur Sport is completely adjustable in height and length.

**Adjustable saddle Excalibur Sport**
The position of the saddle of the Excalibur sport can be adjusted in height, length and angle to suit all users.

**Instant maximum load**
By selecting P-slope max the ergometer immediately reaches maximum power.

**LEM compatible**
This product can be used with Lode Ergometry Manager (LEM) software to manage data and to apply specific protocols when a Communication card or Network card is present.

**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.

**Designed to be sweat-proof**
The housing of the ergometer is designed in such way that sweat does not have the chance to drip into the mechanical parts. This ensures a long lifetime and makes the ergometer insensitive for malfunction.
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Changing pedals on a regular base
The standard crank is not intended for regular pedal exchange. If you intend to change pedals regularly, we advise to order the adjustable sports cranks with hardened steel pedal mounting block (part number 925808).
Excalibur sport can a.o be extended with the following options:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Partnumber</th>
</tr>
</thead>
<tbody>
<tr>
<td>USB to Serial converter</td>
<td>Easy connection</td>
<td>226012</td>
</tr>
<tr>
<td>Programmable Control Unit with SpO2 &amp; Heart rate</td>
<td>Measurement of oxygen saturation</td>
<td>928841</td>
</tr>
<tr>
<td>Blood Pressure Module</td>
<td>Accurate measurement without trigger</td>
<td>928818 -</td>
</tr>
<tr>
<td>Heart rate</td>
<td>Heart rate controlled cycling</td>
<td>928826</td>
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<tr>
<td>0-Watt start-up system</td>
<td>Lowest possible startup power</td>
<td>925805</td>
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<tr>
<td>Adjustable sports cranks incl. pediatric range</td>
<td>Optimal force application</td>
<td>925808</td>
</tr>
<tr>
<td>Easy saddle exchange option</td>
<td>Fast change of saddle to suit all users</td>
<td>925807</td>
</tr>
<tr>
<td>Mounting Bracket Control Unit &amp; RPM meter</td>
<td>All controls at hand</td>
<td>928848</td>
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<tr>
<td>Heart rate</td>
<td>Excalibur sport rebuilt to Excalibur Sport PFM</td>
<td>925880</td>
</tr>
<tr>
<td>0-Watt start-up system</td>
<td>Mounting Bracket Control Unit</td>
<td>928849</td>
</tr>
<tr>
<td>Programmable Control Unit</td>
<td>Programming protocols in advance</td>
<td>928811</td>
</tr>
<tr>
<td>RS232 cable</td>
<td>Easy connection</td>
<td>930911</td>
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<tr>
<td>Saddle for children</td>
<td>Versatile ergometry</td>
<td>401066</td>
</tr>
<tr>
<td>Saddle for children - ordered additionally</td>
<td>Versatile ergometry</td>
<td>P401066</td>
</tr>
</tbody>
</table>
Specifications

Workload

- Minimum load: 8 W
- Maximum peak load: 2500 W
- Isokinetic workload control: ✔
- Minimum load increments: 1 W
- Maximum continuous load: 1500 W
- Hyperbolic workload control: ✔
- Linear workload control: ✔
- Fixed torque workload control: ✔
- Maximum rpm independent constant load: 180 rpm
- Minimum rpm independent constant load: 25 rpm
- Optional heart rate controlled workload: ✔
- Electromagnetic “eddy current” braking system: ✔
- Dynamic calibration: ✔

Accuracy

- Workload accuracy below 100 W: 2 W
- Workload accuracy from 100 to 1500 W: 2 %
- Workload accuracy over 1500 W: 5 %

Comfort

- Toeclips on pedals: ✔
- Q-factor: 147 mm
- Minimum leg length user: 725 mm (28.5 inch)
- Minimum leg length user (incl. adjustable pedals): 650 mm (25.6 inch)
- Vertical seat adjustment maximum: 938 mm (36.9 inch)
- Vertical seat adjustment minimum: 550 mm (21.7 inch)
- Horizontal seat adjustment minimum: 72 mm (2.8 inch)
- Horizontal seat adjustment maximum: 324 mm (12.8 inch)
- Seat angle adjustment maximum: 10 °
- Allowed user weight: 180 kg (396.8 lbs)
- Horizontal handlebar adjustment minimum: 229 mm (9 inch)
- Horizontal handlebar adjustment maximum: 600 mm (23.6 inch)
- Vertical handlebar adjustment minimum: 465 mm (18.3 inch)
- Vertical handlebar adjustment maximum: 855 mm (33.7 inch)
- Handlebar adjustment angle: 360 °

User Interface

- Readout Distance
- Readout RPM
- Readout Heartrate
- Readout target HR
- Readout Energy
- Readout Torque
- Readout Time
- Readout Power
- Set Display
- Set Resistance
- Set P-Slope
- Set Mode
- Manual operation mode
- Preset protocol operation mode
- Analog operation mode
- Terminal operation mode
- External control unit
- Selfdesigned protocol operation mode

Connectivity

- Analog connector
- RS232 in connector
- RS232 out connector

Dimensions

- Product length (cm): 130 cm (51.2 inch)
- Product width (cm): 70 cm (27.6 inch)
- Product height: 89 cm (35 inch)
- Product weight: 100 kg (220.5 lbs)

Power requirements

- Power cord length: 250 cm (98.4 inch)
- Power cord IEC 60320 C13 with CEE 7/7 plug
- Power cord NEMA

Standards & Safety

- IEC 60601-1:2005
- ISO 13485:2003 compliant
- ISO 9001:2008 compliant

Certification

- CE class Im according to MDD93/42/EEC
- CE class of product with optional SpO2 IIa
- CE class of product with optional BPM IIa
- CB according to IECEE CB

Order info

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Partnumber: 925900

*Specifications are subject to change without notice.*