

Modern ergometer with multifunctional applications







### **Highlights**

#### Easy to operate

For Lode products this means:

- easy to connect
- easy to move around
- easy user interface

#### Reliable and reproducible stress tests

The experience of professionals who calibrate many ergometers shows 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.

#### Additional features with PCU

Besides the possibility to program 24 protocols easily, this control unit offers the following features:

- better monitoring because of the additional and larger display
- a perfect combination with BPM
- possibility to measure SpO2

#### Multifunctional

The ergometer can be used for both arm and leg ergometry.







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With the stand for the Angio, the ergometer can move up and down over a range of 140 cm. With the stand it is easier to move your arm ergometry setting to another room, because it stands free. Handgrips are standard included. The Angio is an ergometer unit that can be used for both arm and supine ergometry. Its compact design makes it universally applicable for ergometric studies in those sectors in which standard ergometry cannot be used. The Angio operates independent of pedaling speed in the range of 7 - 1000 watt.

The Angio rehab is standard supplied with a 7" control unit with touch screen. Thanks to the built-in network module, the ergometer can be connected to the Lode Cardiac Rehab Manager Software, Lode Rehab Manager or the Lode Ergometry Manager.

A USB A-B cable for service purposes only will be standard delivered with the product. To connect LEM or LCRM you need a special interface cable that can be ordered under part number 930930.

#### **Features**



#### Small adjustment steps

The workload of the Lode ergometers is adjustable in steps of only 1 watt. Depending **Matt** 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.



#### 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.



#### 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



#### LCRM compatible

This product can be used with Lode Cardiac Rehabilitation Manager software (LCRM)



#### Customer specific display setting

Display settings are adjustable according to your specific requirements: each individual has its specific wishes about the parameters to be displayed. This can easily be adjusted with the Lode ergometers.



#### Versatile Interfacing

Various interface protocols guarantee perfect communication with all commonly known stress ECG and spirometry equipment





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### Interconnectivity between Lode products

Connecting Lode products has never been easier! Lode rehab and sports products have a standard Network card:

- To be able to connect the first product to the PC with L(C)RM a Lode proprietary network to PC cable is needed (#930930). This cable is standard included with Lode Rehab Software.
- From the second product onward products can be connected to the previous one, creating a bus network configuration;
- The last product always needs a termination plug to avoid interference and loss of data. Therefore all products with such a network card come with a termination plug.

#### Benefits

- Lossless data connection
- High bandwidth
- No interference of COM ports
- Daisy chain connection
- Full access of all data in the product to LCRM





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Angio rehab - with automatic stand can a.o be extended with the following options:

Pedal shoes (pair)

Extra stability during cycling



Partnumber: 917803

Pedal shoes pediatric (pair)

Pedal shoes for childen



Partnumber: 917833

Pedal shoes extra large (pair)

For large feet sizes



Partnumber: 917834

Adjustable cranks

Optimal force application



Partnumber: 928804

Handgrips (pair)

Versatile ergometry



Partnumber: 917812

Electric adjustable chair for arm ergometer

Comfortable seating position in front of the



Partnumber: 917813

Communication Module

Connect to ECG and spirometers



Partnumber: 945850

0-Watt start-up system

Lowest possible startup power



Partnumber: 960805

Colour Display 3.5" -

Multifunctionality



Partnumber: 945819

Network module connection cable

Easy connection



Partnumber: 930930

SpO2 for control unit with touch panel (bicycle)

Saturation and heart rate



Partnumber: 945823

Add program function to 7" touch screen for ergometer

Easily programmable



Partnumber: U945835

Extra wide access for wheelchairs

Easy access



Partnumber: 967805

Stabilisation leg for Angio with Automatic

Optimal safety and stability



Partnumber: 967815

Bluetooth Smart heart rate

Available in Q2 2019



Partnumber: 945833





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### **Specifications**

Workload	
Workload range fixed torque	0,1 - 70 Nm
Minimum load	7 W
Maximum peak load	1000 W
Minimum load increments	1 W
Maximum continuous load	750 W
Hyperbolic workload control	~
Maximum rpm independent constant load	150 rpm
Minimum rpm independent constant load	30 rpm
Electromagnetic "eddy current" braking system	<b>~</b>
Dynamic calibration	~
Accuracy	
Workload accuracy from 7 to 100 W	3 W
Workload accuracy from 100 to 500 W	3 %
Workload accuracy from 500 to 1000 W	5 %
Comfort	
Adjustability range height	1400 mm
User Interface	
Readout Distance	<b>~</b>
Readout RPM	<b>~</b>
Readout Heartrate	<b>~</b>
Readout target HR	<b>~</b>
Readout Energy	<b>~</b>
Readout Torque	<b>~</b>
Readout Time	<b>~</b>
Readout Power	<b>~</b>
Set Display	~
Set Resistance	~
Set P-Slope	~
Set Mode	~
Manual operation mode	<b>~</b>
Preset protocol operation mode	~
Analog operation mode	~
Terminal operation mode	~
External control unit	~
Colfdesigned protectal energtion made	

#### Dimensions

Product length (cm)	84 cm	33.1 inch
Product width (cm)	82 cm	32.3 inch
Product height	223 cm	87.8 inch
Product weight	95 kg	209.4 lbs
Width between stand	67 cm	
Power requirements		
V AC	100 - 240 V	
Phases	1	
Frequency	50/60 Hz	
Power consumption	250 W	
Power cord IEC 60320 C13 with CEE 7/7 plug	~	
Power cord NEMA	×	
Standards & Safety		
IEC 60601-1:2012	~	
ISO 13485:2016 compliant	~	
ISO 9001:2015 compliant	~	
Certification		

CE class Im according to MDD93/42/EEC CE class of product with optional SpO2

CE class of product with optional BPM

CB according to IECEE CB

#### Order info

Partnumber: 967924

Selfdesigned protocol operation mode



<sup>\*</sup>Specifications are subject to change without notice.