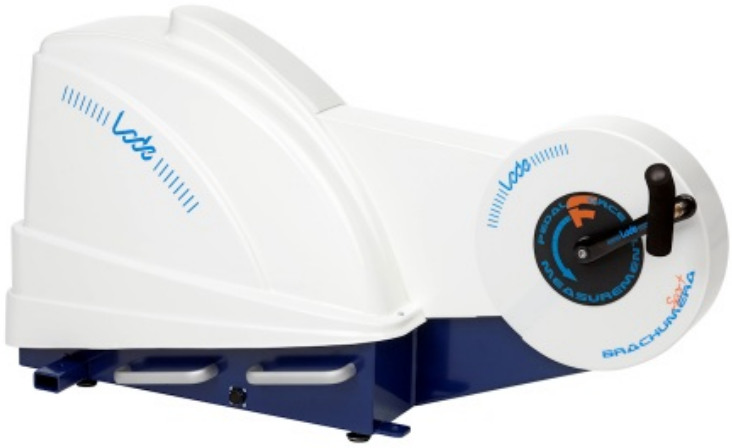
Brachumera Sport with Pedal Force Measurement

The worlds highest load accurate arm ergometer



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.

Heavy Duty Design Arm Ergometer

The Brachumera Sport is designed for heavy duty sports medicine ergometry, without doing any concession on the esthetic, modern and robust design.

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 9001:2003, ISO 13485:2008 and FDA 510K certified. All medical products comply to MDD 93/42/EEC, incl. IEC 60601-1.

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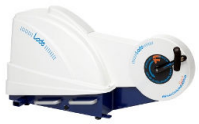

The worlds highest load accurate arm ergometer

The Brachumera Sport is a modern and reliable arm ergometer that can be controlled both manually and by external equipment. Brachumera Sport is currently used in Olympic and professional sports where the muscles in the arms and shoulders play a mayor role, e.g. kayaking and swimming. Pedal Force Measurement allows for analysis of force balance and stroke efficiency. The arm ergometer for sports can deliver a load up till 2500 Watt. It can be connected to Lode Ergometry Software for data management, protocol creation and execution. This ergometer has built-in modified strain gauge technology that measures forces exerted on the pedals during exercise and is supplied with angle detection. Independent measurements of forces in both left and right crank are possible. Wireless transmission of the measured forces to the PC by blue tooth. Note: this setting comes standard with LEM and LEM PFM software, a computer (we recommend to use this PC only for the LEM software) and an interface cable ergometer - PC (part no. 930911). Various LEM extension modules are optional available.

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.

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.

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.

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.

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

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

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Lode Ergometry Manager - Pedal Force Measurement software module

Lode ergometers with Pedal Force Measurement come standard with the Lode Ergometry Manager - Pedal Force Measurement software module. The combination of software and ergometer results in a unique application for sport-medical stress testing, rehabilitation and research.

The Pedal Force Measurement module adds the following features to the Lode Ergometry Manager:
- Continuous registration of the forces exerted on the left and right crank;
- Specific Pedal Force Measurement visualisations;
- Specific Pedal Force Measurement reports and analysis: numeric data such as peak values, averages, absolute maximum, angle, total efficiency, rpm and left/right ratio are registered and saved. Export to statistical programs is possible with the optional LEM Expansion Module Export;
- Protocols for pedal force measurement can be programmed based on time intervals (with a maximum of 60 minutes), enabling a continuous registration of the pedal force;
- On-line visualizations of the forces and Torque on the left and/or right crank during the test;

The software offers the possibility to define “area’s of interest” (AOI) and to analyze these separately.

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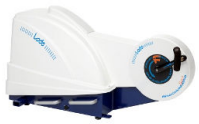

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The Brachumera Sport with Pedal Force Measurement can a.o be extended with the following options:

Programmable Control Unit

Easier and faster exercise testing by

Partnumber: 928811

Programmable Control Unit with SpO2 & Heart rate

Measurement of oxygen saturation

Partnumber: 928841

Heart rate

Heart rate controlled cycling

Partnumber: 928826

0-Watt start-up system

Lowest possible startup power

Partnumber: 925805

Adjustable sports cranks incl. pediatric range

Optimal force application of all leg

Partnumber: 925808

Adjustable wall fixation for Brachumera Sport

Versatile application of Brachumera Sport

Partnumber: 925830

Stand for adjustable wall fixation Brachumera Sport

Versatile application of Brachumera Sport

Partnumber: 925840

Electric adjustable chair for arm ergometer

Comfortable seating position in front of the

Partnumber: 917813

USB to Serial cable

Easy connection

Partnumber: 226012

RS232 cable

Easy connection

Partnumber: 930911

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Specifications

Workload	
Minimum load	7 W
Maximum peak load	2500 W
Isokinetic workload control	yes
Minimum load increments	1 W
Maximum continuous load	1500 W
Hyperbolic workload control	yes
Linear workload control	yes
Fixed torque workload control	yes
Maximum rpm independent constant load	150 rpm
Minimum rpm independent constant load	30 rpm
Optional heart rate controlled workload	yes
Electromagnetic "eddy current" braking system	yes
Dynamic calibration	yes
Accuracy	
Workload accuracy below 100 W	3 W
Workload accuracy from 100 to 1500 W	3 %
Workload accuracy over 1500 W	5 %
User Interface	
Readout Distance	yes
Readout RPM	yes
Readout Heartrate	yes
Readout target HR	yes
Readout Energy	yes
Readout Torque	yes
Readout Time	yes
Readout Power	yes
Set Display	yes
Set Resistance	yes
Set P-Slope	yes
Set Mode	yes
Manual operation mode	yes
Preset protocol operation mode	yes
Analog operation mode	yes
Terminal operation mode	yes
Selfdesigned protocol operation mode	yes
Connectivity	
Analog connector	yes
RS232 in connector	yes

Dimensions		
Product length (cm)	114 cm	44.9 inch
Product width (cm)	59 cm	23.2 inch
Product height	51 cm	20.1 inch
Product weight	65 kg	143.3 lbs
Power requirements		
115 V AC 50/60 Hz (130 VA)	yes	
230 V AC 50/60 Hz (130 VA)	yes	
Standards & Safety		
ISO 13485:2003 compliant	yes	
ISO 9001:2008 compliant	yes	
IEC 60601-1:2005	yes	
Certification		
CE class Im according to MDD93/42/EEC	yes	
CTüVus according to NRTL	yes	
CB according to IECEE CB	yes	
Included parts		
PC included for PFM	yes	
PC software included	yes	
Pedal Force Measurement		
Pedal Force accuracy	0.5 N	
Rotational measurement resolution	2 °	

Order info

Partnumber	925910

**Specifications are subject to change without notice.*

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ISO 9001:2008 and ISO 13485:2003 certified

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