



MONARK LC4



Versatile ergometer for reliable testing and training

Compact high-performance ergometer for labs, training centers and universities. Monark's electronic pendulum system (EPS) delivers accurate, repeatable loads with quick calibration, while wired and wireless connectivity enables external control and real-time data. Well suited for clinical testing, occupational health, sports performance and education.

KEY FEATURES

- **EPS** - Electronic pendulum system
- **Monark Novo Duo display** - Monochrome touchscreen for clear and quick reading of data.
- **Wireless Connections** - BLE (FTMS) and ANT+ (FE-C) for seamless device pairing.
- **Wired connections** - Includes USB-B (3 m) port for stable data transfer
- **Perfect fit frame** - Vastly increases adjustability to fit every unique user.
- **Power modes** - RPM-independent (constant power) & RPM-dependent (constant force)
- **Compact high-performance ergometer** - Perfect for limited-space environments
- **Easy to calibrate and control**
- **Designed for external control**

Max User Weight 180 kg

Monark Test Software

Medical Device Class IIa

Pendulum System



Specifications

MONARK LC4

CERTIFICATIONS	
EU directive 93/42/EU class IIa	
FRAME	
Type	Sport, perfect fit
Handlebar	Racing handlebars
Seatpost	Monark standard, H/V adjustable
Saddle	Racing Unicus, black
BB	68/110 mm
Crank	Steel, 172.5 mm
Pedals	9/16", Combi SPD
RESISTANCE	
System	Electronic pendulum system
Calibration	Electronic (Novo Duo) and mechanical (Pendulum with 4 kg calibrated weight)
Flywheel	20 kg (44.1 lbs)
DISPLAY	
Monark Novo Duo Display Monochrome Touchscreen	
RPM	Yes
HR	Yes, ANT+
Time	Yes, HH:MM:SS
Speed	Yes, km/h
Distance	Yes, km
Watt / KP	Yes
CONNECTIVITY	
Wired	USB-B (max 3 m)
Wireless	BLE (FTMS), ANT+ (FE-C)
WEIGHT & DIMENSIONS	
Max user weight	180 kg (397 lbs)
Recommended user height	>150 cm (>59 in)
Length	1405 - 1630 mm (55-64 in)
Width	640 mm (Max 25 in)
Height	1265 mm at display, 1240 mm at saddle, (49-50 in)
Weight	77 kg (170 lbs)
POWER REQUIREMENTS	
220V (12V, 5.0A)	



CONNECTION



Wired: USB-B (3 m)

Wireless: BLE (FTMS), ANT+ (FE-C)



SOFTWARE

SOFTWARE COMPATIBILITY

Standalone or externally controlled (Monark Test Software + third-party sim/ERG/resistance). Compact-lab friendly.



HEART

HEART RATE MONITORING

Displays heart rate when connected via chest belt (ANT+)



TEST

TEST FUNCTIONALITY

For aerobic testing in sports science and compact lab environments



POWER

CONSTANT POWER

Maintains a fixed power output regardless of cadence (RPM)



FORCE

CONSTANT FORCE

Maintains a fixed resistance (kp) regardless of cadence (RPM)

ISO 9001

Monark Exercise AB has been ISO 9001 certified since 1992. The model is:

- Approved under CE Certificate No. 15 36 01 (MDD IIa)
- Anti-corrosion treated and powder coated
- Made in Sweden



Description

MONARK LC4

APPLICATIONS

Monark LC4 is a compact ergometer for performance testing in labs, training centers, and universities – even in limited spaces. It features Monark's electric pendulum system (EPS) for accurate calibration and consistent resistance. With wireless and USB connectivity, it supports both training and research needs.

LC4 is ideal for:

- **Professional cycling teams and endurance athletes** – For reliable testing and performance tracking.
- **Sports science laboratories** – For analyzing power output and training response.
- **Coaches** – For developing and evaluating structured training programs.
- **Universities** – For aerobic and anaerobic performance research.

SOFTWARE & INTEGRATION

The LC4 supports a wide range of connection modes for seamless integration with training and testing platforms.

It supports:

- **Wired** – USB-B (3 m)
- **Wireless** – BLE (FTMS), ANT+ (FE-C)
- **Heart rate** – Displays heart rate when connected via chest belt (ANT+)
- **Simulation Mode** – Resistance is adjusted based on virtual terrain and gear settings from platforms like Zwift.
- **ERG Mode** – Application controls the target watt output for structured workout sessions.
- **Resistance Mode** – Set a specific resistance level (0–7 kp) from an external app.
- **Manual Mode** – No external control, but apps can still receive live data (cadence, power and speed).



Description

MONARK LC4

MEASUREMENT ACCURACY

The Monark pendulum system is built for long-term accuracy and reliability. When calibrated regularly, the system consistently delivers power measurements with an error margin typically below 2%.

Thanks to its mechanical construction, calibration can be performed quickly and easily without the need for external tools or advanced software. This allows users to verify and ensure accuracy as often as needed – even daily – which is critical in research, rehabilitation, and performance testing.

Unlike many electronic systems that rely solely on internal sensors and estimated values, the Monark pendulum offers a direct, physical indication of the applied resistance. This makes it uniquely dependable in environments where trust in the workload is essential.

PRODUCTION AND SUSTAINABILITY

Monark has been manufacturing ergometers since 1954 with a philosophy of delivering precise, reliable, and durable products for research, rehabilitation, and performance development.

LC4 is assembled in Sweden, with the majority of its components sourced from Swedish manufacturers.

Our products are used daily by professionals in research, physiotherapy, and sports worldwide. Through continuous product development and close collaboration with experts, we have built a strong reputation for measurement accuracy and ergonomics.

Monark LC4 – A compact ergometer built for reliable performance testing.

Monark Exercise AB

Monark has over 100 years of experience in bicycle production.

This long tradition has resulted in deep know-how, hands-on expertise, and a genuine understanding of product quality and performance. Since the early 1900s, Monark cycles have represented precision, reliability, durability, and quality.

Today, we are a trusted global provider of high-precision cycle ergometers for research, sports science, clinical use and performance testing.

We develop, manufacture, and market ergometers and exercise bikes. Our largest customer groups are within health care, sports medicine, and exercise physiology.

For more information: www.monarksportsmed.com



PRODUCTS FOR LIFE AND PERFORMANCE



MONARK EXERCISE

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