



MONARK EVO



For virtual racing, smart training & testing

Smart ergometer for virtual racing and structured training. 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. Ideal for e-cycling, high-performance training and testing.

KEY FEATURES

- **EPS** - Electronic pendulum system
- **Monark Novo Duo display** - Monochrome touchscreen for clear and quick reading of data.
- **Wireless connections** - Supports BLE (FTMS), ANT+ (FE-C) for seamless device pairing
- **Perfect fit frame** - Vastly increases adjustability to fit every unique user.
- **Electronic shifters and sprint buttons** - Set according to your own wishes
- **Power modes** - RPM-independent (constant power) & RPM-dependent (constant force)
- **Easy to calibrate and control**

Max User Weight 180 kg

SMART Connect

Pendulum System



Specifications

MONARK EVO

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	
Wireless connection	BLE (FTMS), ANT+ (FE-C)
WEIGHT & DIMENSIONS	
Max user weight	180 kg (397 lbs)
Recommended user height	>150 cm (>59 in)
Length (mm)	1405 mm (55 in)
Width (mm)	640 mm (25 in)
Height (mm)	Max 1240 mm (49 in)
Weight (kg)	62 kg (137 lbs)
POWER REQUIREMENTS	
220V (12V, 5.0A)	



CONNECTION

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



SOFTWARE

SOFTWARE COMPATIBILITY

Smart-platform control (simulation/ERG/resistance); reliable standalone



HEART

HEART RATE MONITORING

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



TEST

TEST FUNCTIONALITY

For e-cycling, virtual racing, structured training and testing



CONSTANT POWER

Maintains a fixed power output regardless of cadence (RPM)



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:

- Anti-corrosion treated and powder coated
- Made in Sweden



Description

MONARK EVO

APPLICATIONS

Monark EVO combines accurate calibration with flexible system integration, ideal for indoor performance development, testing, and virtual cycling.

EVO is an ideal tool for:

- **E-cycling platforms and virtual racing** – Delivering realistic resistance and smooth performance through smart connectivity
- **High-performance training environments** – Allowing structured, controllable workouts with sprint buttons and programmable gear shifts
- **Sports science and simulation labs** – Providing accurate, consistent data for power analysis and testing

SOFTWARE & INTEGRATION

The Novo Duo system communicates via Bluetooth and ANT+ using standardized protocols (FTMS and FE-C), allowing integration with training applications across Android, iOS, Windows, and Mac. Monark EVO supports multiple connection modes to match the needs of both virtual cycling and structured training.

- **Wireless** – BLE (FTMS), ANT+ (FE-C)
- **Heart rate** – Displays heart rate when connected via chest belt (ANT+)
- **Simulation mode** – The application sends data about a virtual environment that controls the ergometer's resistance (e.g. road slope in Zwift).
- **ERG mode** – The application sets a target power output for the ergometer to maintain throughout the session.
- **Resistance mode** – The application adjusts resistance in percentage steps (0–100%), converted into 0–7 kp by Monark.
- **Manual mode** – No external control; the rider adjusts resistance manually, while the application can still read power and cadence values.



Description

MONARK EVO

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.

EVO 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 EVO – precision and performance for virtual racing and controlled training.



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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