



# MONARK EVO



## For virtual racing and smart training

Monark EVO is built for modern e-cycling and controlled training. With electronic shifters, sprint buttons, and Monark's trusted Electric Pendulum System (EPS), EVO delivers precise accuracy and a powerful cycling sensation.

### KEY FEATURES

- **EPS** - Electric pendulum system
- **Monark Novo Duo display** - Monochrome touchscreen for clear and quick reading of data.
- **Wireless connections** - Supports BLE and ANT+ for seamless device pairing
- **Wired connections** - Includes USB-B port for stable data transfer
- **Communicates SMART** - Both via ANT+ and BLE
- **Perfect fit frame** - Vastly increases adjustability to fit every unique user.
- **Electronic shifters and sprint buttons** - Set according to your own wishes
- **Load is controlled with** - Watts (speed independent) or force (in kp, speed dependent)
- **Easy to calibrate and control**
- **Designed for external control**

Max User Weight 150 kg

Monark Test Software

External Systems

SMART Connect

Wired/Wireless Connection



# Specifications

## MONARK EVO

<b>CERTIFICATIONS</b>	EU directive 93/42/EU class IIa
<b>FRAME</b>	
Type	Sport, perfect fit
Handlebar	Racing handlebars
Stem	Adjustable, horizontal 60 mm, vertical 500–910 mm
Seatpost	Adjustable, horizontal 60 mm, vertical 530–940 mm
Saddle	Racing Unicus, black
BB	68/110 mm
Crank	Steel, 172,5 mm
Pedals	9/16", Combipedals basket/ SPD
<b>RESISTANCE</b>	
System	Electric pendulum system
Flywheel	20 kg (44,09 lbs)
<b>DISPLAY</b>	Monochrome touchscreen (Novo Duo)
RPM	Yes
HR	Yes, ANT+
Time	Yes, HH:MM:SS
Speed	Yes, km/h
Distance	Yes, km
Power/Watt	Yes
<b>CONNECTIVITY</b>	
Wired connection	USB
Wireless connection	BLE and ANT+
<b>WEIGHT &amp; DIMENSIONS</b>	
Max user weight	150 kg (330 lbs)
Recommended user length	>150cm (>59 inches)
Length (mm)	1405 mm (55,31 inches)
Width (mm)	640 mm (25,20 inches)
Height (mm)	Max 1240 mm (48,82 inches)
Weight (kg)	62 kg (137 lbs)
<b>POWER REQUIREMENTS</b>	220V (12V, 5,0A)



### CONNECTION

Direct connectivity.

**Wired:** USB-B

**Wireless:** BLE and ANT+



### SOFTWARE

### SOFTWARE COMPABILITY

For fitness testing and in some cases, even training can be used with this model.



### HEART

### HEART RATE MONITORING

Displays heartrate when connected via chestbelt (ANT+)



### TEST

### TEST FUNCTIONALITY

For aerobic testing including VO<sub>2</sub>max, CPET and endurance protocols



### POWER

### CONSTANT POWER MODE

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:

- 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.

- **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.monarkexercise.se](http://www.monarkexercise.se) / [www.monarksportsmed.com](http://www.monarksportsmed.com)**



PRODUCTS FOR LIFE AND PERFORMANCE



MONARK EXERCISE

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