



# MONARK LC7 TT



## The ultimate tool for performance and research

The LC7 TT is a high-end ergometer developed for advanced testing and research in sports science. Equipped with Monark's electric pendulum system (EPS) and supports full external control. This allows time trials and open-end protocols to be performed with exceptional accuracy and repeatability.

### KEY FEATURES

- **EPS** - Electric pendulum system
- **External device compatibility** - Connect to ECG systems, metabolic carts, or software.
- **Time trial and open-end protocols** - Ideal for pacing analysis and performance profiling.
- **Connectivity** - Wireless BLE, ANT+ or Wired connection RS232, USB-B
- **Perfect fit frame** - Vastly increases adjustability to fit every unique user.
- **Training mode novo display** - Watt, KPM/min, VO2, kP and N
- **Workload range** - 4-1400 W (200 rpm) (8-2800 W option)
- **Easy to calibrate and control**
- **Designed for external control**
- **Speed independent and dependent power control**

Max User Weight 180 kg

Monark Test Software

Medical Device Class IIa

External Systems

Wired/Wireless Connection



# Specifications

## MONARK LC7 TT

| CERTIFICATIONS          | EU directive 93/42/EU class IIa                             |
|-------------------------|---|
| FRAME                   |   |
| Type                    | Sport, perfect fit  |
| Handlebar               | Racing handlebars   |
| Stem                    | Adjustable, horizontal 200 mm<br>Vertical 500-910 mm        |
| Seatpost                | Adjustable, horizontal 200 mm<br>Vertical 530-940 mm        |
| Saddle                  | Racing Unicus, black  |
| BB                      | 68/107 mm   |
| Crank                   | Steel, 172,5 mm   |
| Pedals                  | 9/16", Combi SPD  |
| RESISTANCE              |   |
| System                  | Electric pendulum system                                    |
| Flywheel                | 20 kg (44 lbs)  |
| DISPLAY                 |   |
| RPM                     | Yes   |
| HR                      | Yes, ANT+ and Bluetooth Smart                               |
| Time                    | Yes, HH:MM:SS   |
| Speed                   | Yes, km/h   |
| Distance                | Yes, km   |
| Power/Watt              | Yes   |
| CONNECTIVITY            |   |
| Wired connection        | RS232 and USB   |
| Wireless connection     | BLE and ANT+  |
| WEIGHT & DIMENSIONS     |   |
| Max user weight         | 180 kg (397 lbs)  |
| Recommended user length | >150cm (>59 inches)   |
| Length (mm)             | 1405 - 1630 mm (55.3-64.2 inches)                           |
| Width (mm)              | 640 mm<br>(Max 25.2 inches)                                 |
| Height (mm)             | 1240 mm at saddle<br>1500 mm at display<br>(48.8-59 inches) |
| Weight (kg)             | 77 kg (169.8 lbs)   |
| POWER REQUIREMENTS      |   |
|                         | 220V (12V, 5,0A)  |



### ECG

Can be controlled from different ECG brands either analogue or digital.



RS232



USB

### CONNECTION

Direct connectivity.

**Wired:** RS232 and USB-B

**Wireless:** BLE and ANT+

BLE  
FTMSANT+  
FE-C

### SOFTWARE COMPABILITY

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



SOFTWARE



HEART

### HEART RATE MONITORING

Displays heartrate when connected via chestbelt (ANT+)



TEST

### TEST FUNCTIONALITY

For aerobic testing and high-intensity time trial simulations



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 LC7 TT

### APPLICATIONS

The LC7 TT is developed for advanced performance testing and time trial simulations, where precise workload control and test repeatability are essential. Equipped with a perfect fit frame, Shimano Di2 gear shifters, and full external control support, it enables accurate and high-intensity testing in a realistic cycling position.

LC7 TT is an ideal tool for:

- **Sports Science and Research** – Suited for physiological studies, pacing analysis, and high-resolution performance testing.
- **Elite Athlete Testing** – Enables time trials, open-end protocols, and structured workload assessments.
- **Metabolic and ECG Integration** – Compatible with external systems for synchronized testing in clinical and diagnostic environments.

### SOFTWARE & INTEGRATION

The LC7 TT supports a wide range of connection modes for seamless integration with training and testing platforms:

- **Di2 gear control** – Resistance can be adjusted directly by the cyclist using Shimano Di2 shifters, simulating real-world gear changes.
- **PC control** – The ergometer can be operated via Monark Test Software or compatible systems through RS232 or USB.
- **External system integration** – Supports ECG systems, metabolic carts, and software platforms for automated test control.
- **Wireless connectivity** – BLE and ANT+ enable heart rate monitoring and real-time data transmission.
- **Manual mode** – Resistance and workload can be controlled from the Novo touch display without external devices.



# Description

## MONARK LC7 TT

### 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.

LC7 TT 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 LC7 TT – A high-performance ergometer for advanced testing and time trial simulations.**



# 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

Version: 2025

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