



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 electronic 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** - Electronic 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 (FTMS), ANT+ (FE-C) or Wired: connection RS232, USB-B (3 m)
- **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)
- **Power modes** - RPM-independent (constant power) & RPM-dependent (constant force)

Max User Weight 180 kg

Monark Test Software

Medical Device Class IIa

Pendulum System



Specifications

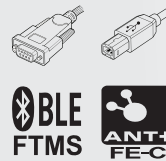
MONARK LC7 TT

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	
RPM	Yes
HR	Yes, ANT+ and BLE Smart
Time	Yes, HH:MM:SS
Speed	Yes, km/h
Distance	Yes, km
Watt / KP	Yes
CONNECTIVITY	
Wired	RS232 and 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	1240 mm at saddle, 1500 mm at display, (49-59 in)
Weight	77 kg (170 lbs)
POWER REQUIREMENTS	
220V (12V, 5.0A)	



ECG

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



CONNECTION

Wired: RS232 and USB-B (3 m)
Wireless: BLE (FTMS), ANT+ (FE-C)



SOFTWARE

SOFTWARE COMPATIBILITY

External control (Monark Test Software, third party sim/ERG/resistance). CPET/ECG integration.



HEART

HEART RATE MONITORING

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



TEST

TEST FUNCTIONALITY

For TT simulations, open-end protocols and aerobic performance testing.



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:

- 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 ideal 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.

It supports:

- **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-B (3 m).
- **External system integration** – Supports ECG systems, metabolic carts, and software platforms for automated test control.
- **Wireless connectivity** – BLE (FTMS) and ANT+ (FE-C) 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

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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.monarksportsmed.com



PRODUCTS FOR LIFE AND PERFORMANCE



MONARK EXERCISE

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