



## Cyclus2 – Technical Data, Properties

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### Mechanical data:

- non-slip transmission of high brake resistances up to 3000W
- Elastic mounting of any individual bike allows sustained loading (swaying-technique possible)
- Precise test- and training results by using the own bike (racing bike, track bike, mountain bike, triathlon bike, hand bike)
- 9-speed Shimano cassette sprocket (other sprockets available on request)
- Track version without freewheel available
- Ideal for mobile performance diagnostics  
(Compact transport case, optional battery powered version available)

### Operation:

- User friendly graphical control unit
- PC keyboard port
- Multi-language support  
(German, English, French, Spanish, Polish, Russian, Italian, further languages in prospective)

### Load types:

- Power controlled (Watt)
- Torque controlled (Nm)
- Isokinetic (cadence)
- Inclination (simulation of downhill, rolling friction and aerodynamic drag)

### Operational modes:

- Manual control
- Programme controlled  
(Simple setup of user-defined load patterns for individual tests and trainings)
- Externally controlled  
(Spiro-ergometry, or ECG-systems respectively, direct ergometry control with the winlactat software by [mesics GmbH](#))

### Incorporated tests:

- OBLA test
- Sinustest
- Wingate Anaerobic Test
- Isokinetic maximum force test
- Maximal-cadence-test
- PWC-Test
- CPI-Test

### Track simulation:

- The electronic gear change perfectly simulates the gear changing and replaces the gear change on the bike. Hence it is possible to simulate and test gear ratios, which are practically and physically not implementable on the bike. The electronic gear change enables realistic track simulations with inclinations of more than 15%.
- Import option for recorded track profiles (e.g. Garmin Edge). Supported import formats are TCX (Garmin) and GPX (common standard).

**Analysis options:**

- Direct analysis of test- and training results presented by visually impressive print-outs (Incorporation of an individual logo on the print-out possible)
- All print-outs of tests or training sessions can be saved as PDF- or TIF-files on the USB memory stick
- Comfortable, automated analysis of a lactate performance curve (Supporting various threshold models and compensating curves)
- Data export in CSV-format for further processing of the data with analysis software on the PC (e.g. MS Excel, Mathlab, etc.)
- Storage of test- and training data including analysis in the internal memory, on an USB-stick or on a network drive, reloading of the original data for new analysis possible

**Interfaces:**

- 2 x USB (e.g. for USB-stick, printer or additional keyboard)
- 1 x RS232
- 1 x LAN
- 1 x WLAN (optional)
- Controlling via TCP/IP or serial interface via a standard protocol, in addition the external protocol Ergoline 900 is supported

**Accuracy, Calibration:**

- Performance measurement: max. 2% of the displayed value (with power < 100 W max. 2Watts)
- Cadence: maximum error  $\pm 1$  RPM
- Calibration: recommended annually, including calibration protocol with measurement data, before and after calibration

**Dimensions, weight:**

- Mounting measurements: approx. 140 x 50 x 105 cm (L x W x H) depending on the individual bike being used
- Weight Cyclus2: approx. 30 kg
- Transport case (optional): 76 x 47 x 45 cm (W x H x D) approx. 45 kg incl. Cyclus2