

Esseda Wheelchair ergometer

Available 1st quarter 2017 (for research purposes only)



Highlights

Left / right independent speed and torque

The ergometer measures is not only the summation of left and right, but real left and right independent speed and torque. Differences between the left and right speed can be shown.

Force Measurement

The ergometer allows for measuring applied force on each hoop, provided that the correct diameter of the hoop is entered in Lode Ergometry Manager

Inertia Simulation

The ergometer can simulate inertia, independent of weight of the subject and the wheelchair. Through individual calibration each subject experiences real life wheeling circumstances. Surface resistance can be set!

Positioning Aid

Through an easy lever operated positioning system the wheels can be set correctly on the drive/brake rolls to ensure reproducible and reliable measurements

Fixation with Bruns Protectors

The subjects own wheelchair needs to be fixated on the ergometer. Therefore easy fixation with 4 Bruns Protectors is available standard with the product. Easy lock and easy release creates a safe test setup



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The Lode Edessa is a wheelchair ergometer developed together with input of rehabilitation centers and universities. The request of the rehab market for wheelchair patients and the sports market was the ability to test and train patients and sporters as realistic and at the same time as accurate as possible.

The Edessa is a wheelchair ergometer working according to the principles of inertia in order to simulate realistic wheelchair propulsion. The resistance of the ergometer can be adjusted to simulate surfaces with different friction or to create different test and training protocols. The ergometer is developed for easy access for all kind of wheelchairs, allowing athletes to use their own complete wheelchair. There is a very easy and flexible fixation system and the ergometer also has a tool to outline the wheelchair to ensure that the wheelchair is positioned well regarding to the ergometer. The calibration is done well the athlete is in the wheelchair, so the weight of the person is also counted in order to provide the best inertia simulation. Positioning can be done with the saved position data of previous test.

The individual propulsion of the left and right wheels makes it possible to measure the force separately on both sides. Together with the high measurement frequency it is possible to detect small differences between left and right or propulsion technique. Furthermore, small changes in propulsion can be detected and the effect on various outcome measurements will be visible. This is ideal for sports medical purposes.

Various protocols can be created in the iso-inertial mode, with fixed resistance. In the future more modes, like isokinetic, will be developed. The ergometer is controlled by the Lode Ergometry Manager Software (#955900), so multiple testing and training protocols can be created.

Features



Full dynamic inertia simulation

Full dynamic inertia simulation with parameters for:

- user weight
- wheelchair weight
- surface resistance



Full dynamic calibration

Full dynamic calibration enables a better arrangement and simulation of the resistance.



10 years service

This product can be serviced for 10 years after phase-out



THE STANDARD IN ERGOMETRY

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Specifications

Workload

Maximum speed	30 km/h	18.6 mph
Minimum operational speed	0.1 km/h	0.1 mph
Speed adjustment steps	0.1 km/h	0.1 mph
Maximum reverse speed	30 km/h	18.6 mph
Rotation direction clockwise	✓	
Rotation direction anti-clockwise	✓	

Accuracy

Speed readout accuracy	0.1 km/h	0.1 mph
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Connectivity

High Speed data input in LEM	✓
USB connector	✓

Dimensions

Product height (mm)	220 mm	
Product length (mm)	3000 mm	
Product width (mm)	1360 mm	
Product weight	200 kg	440.9 lbs

Power requirements

Power cord length	300 cm	118.1 inch
230 V AC 50/60 Hz	✓	

Standards & Safety

Integrated emergency stop	✓
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Included parts

PC included	✓
PC software included	✓
Keyboard and mouse included	✓
LCD screen included	✓
All cables included	✓

Order info

Partnumber: 988900

**Specifications are subject to change without notice.*