



## CUSTOMIZED TEST BENCH FOR THE ANALYSIS OF THE BIOMECHANICAL PERFORMANCES OF CYCLISTS.

THE FAST\_SPOR'IN (SPORT & WELLNESS) PROGRAM OF THE UNIVERSITY OF AIX-MARSEILLE (FRANCE), SUPPORTED BY THE CARNOT STAR INSTITUTE OF MARSEILLE, HAS COMMISSIONED MAGTROL TO DEVELOP A CUSTOM TEST BENCH FOR ANALYZING THE BIOMECHANICAL PERFORMANCE OF CYCLING ATHLETES.

After studying the project, Magtrol's CMTS (Custom Motor Test System) department proposed a simple solution that permits the use of a standard bike. The only handling required is to replace the rear wheel with a drive system that allows the bike to be coupled to a test deck that includes Magtrol's standardized components.

Mainly built around a TPB Series Powder Brake and a TM Series Torque Sensor, the system allows to regulate the effort provided by the rider by producing a load of up to 400 N·m. The mechanical design was intended to be very rigid in order to ensure the greatest possible stability for the system and the user.

This test bench is currently used on the TechnoSport platform (Faculty of Sport Sciences in Marseille) which works closely with top athletes to study and improve their biomechanical performance and physiological impacts.

Already present with its sensors and test benches in the market motor manufacturing and training systems for electrical bicycles, MAGTROL completes its contribution in the fields of cycling and mobility.

**You need specific Motor Testing System ?  
Do not hesitate to challenge us !**

### INDUSTRIAL DYNAMOMETERS BY MAGTROL

Magtrol offers 3 types of dynamometer brakes to absorb load: Hysteresis brakes (HD Series), Eddy-Current brakes (WB Series) and Magnetic Powder brakes (PB Series). Each type of Dynamometer has advantages and limitations and choosing the correct one will depend largely on the type of testing to be performed.

With over 50 standard models to choose from, Magtrol Sales professionals are readily available to assist in selecting the proper Dynamometer to meet your testing needs.

