

Dry hydraulics

Development of an autonomous electro-hydraulic linear axle

**Project management:** Prof. Dr. Ing. Andreas Ligocki

**Summary:** Development of mathematical models, through to a software tool for designing dry hydraulic cylinders

An autonomous electro-hydraulic linear axle is to be developed within the framework of this research project. For this purpose, all external hydraulic components are to be integrated into the working cylinder in several steps. The aim is for the previously separate components to be as integrated in the system as possible.

The following steps will be applied:

Identification of a reference application; design and manufacture of a test bed to check the individual components; procurement and measurement of samples; design and manufacture of a functional model; testing of the functional sample; revision of the functional sample; production of a prototype; comparison of the prototype with the reference application.

Using this system means that less input power is required for almost identical performance. Another benefit is that the design for and integration with this linear axle is very simple.

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**Organisational unit:** Faculty of Mechanical Engineering

**Research area:** Intelligent systems for energy and mobility



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