

# Bachelor's Thesis

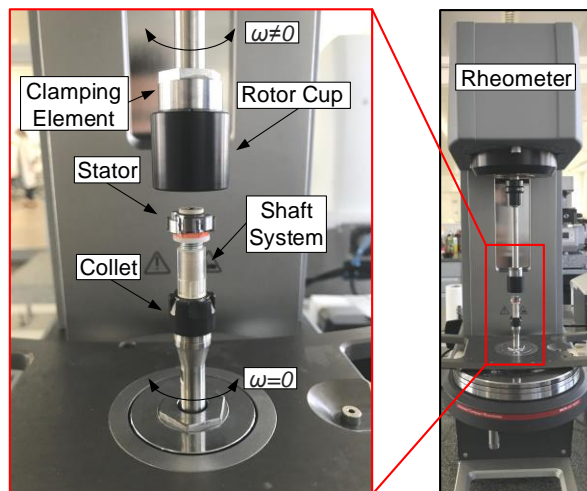
## Evaluation of Rheometer-Based End-of-Line Tests for Small Electric Drives

### Motivation

Rheology studies the flow and deformation behavior of viscoelastic materials. The used rheometers can not only be utilized to investigate, e.g., ketchup or toothpaste, but also—with a few modifications—certain characteristics of small electric motors (see [doi: 10.1109/TIA.2020.2990876](https://doi.org/10.1109/TIA.2020.2990876)). This bachelor's thesis aims to evaluate the suitability of rheometers to perform selected end-of-line tests for different small electric drive applications.

### Tasks

- Identification and description of different small electric drive applications (automotive, medical, consumer, industrial, aerospace, etc.).
- Categorization of these applications with respect to the speed, torque, voltage, current, and temperature ranges.
- Determination of possible end-of-line tests for selected drive applications.
- Identification of necessary modifications to perform the end-of-line tests.



### Further Information

- In cooperation with Anton Paar GmbH.
- Possibility of a work contract with Anton Paar GmbH.
- Paid thesis: 1500 €.
- Start: asap.

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