

## The ESKAM-Project

### Research and Development:

BMBF-joint project **ESKAM**  
Electrically **SK**alable **A**xial Drive **M**odule

The Company Groschopp AG, in cooperation with six midsize-industrial companies and four research institutions, is developing an axial drive module for the application in electrically driven vehicles.

The basic idea is to design and produce two high-speed motors, combined with a double-reducer gear and a suitable power electronics unit (to be developed), as an axial drive module.

A lightweight-design is envisaged at the outset as a cost-effective and energy-efficient solution. The run-time for the project has been calculated as lasting three years. The project is Government-funded by the BMBF under the synonym **ESKAM**.

GEFÖRDERT VOM



Bundesministerium  
für Bildung  
und Forschung

# GROSCHOPP

GROSCHOPP AG  
Drives & More

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# Drives for your E-Mobility



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# Innovative Drive-module for E-Mobility

The complete drive-module for the front- and/or rear axle comprises two oil-cooled electric motors with reducer gear and electronics. The base of the structure is an innovative sub-frame. Seven notable mid-size-industrial companies, in cooperation with one Fraunhofer-Institute and three Universities, have developed this drive-module.

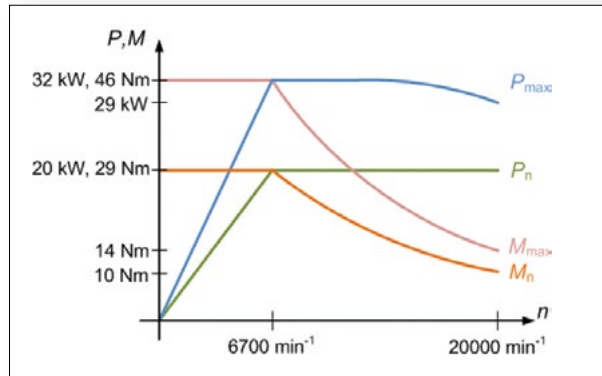
These newly developed electric motors do not depend on expensive permanent magnets and achieve a far better efficiency during the actual driving operation compared with traditional electric motors.

## Various application scenarios are possible for this drive-module.



It is also possible to retrofit existing vehicles, having internal combustion engines, to operate them electrically, or even to re-model them into a Hybrid vehicle. It is also possible to use this drive-module in small batch series for new vehicles, e.g for inner city motor cars or in luggage- or small transport-vehicles.

# Technical Data



Standard components are not sufficient for the realisation of certain products. Therefore, it is much better to avail of a manufacturer who designs, develops, produces and installs customer-tailored drive solutions.

# Drive solutions, customer-tailored according to your requirements

## Application

Our Team supports you in your design both in layout and in choosing the correct drive system. In that way, customer-tailored solutions are found that are suitable for any particular application.

## Development

Experienced engineers study newest developments and compare them with proven technologies. Any innovative idea is included in the product portfolio only after a thorough scrutiny and validation has been completed successfully. In the process, most modern equipment is used by the interdisciplinary teams involved.

## Rapid Prototyping & FEM

In order to shorten the development cycles and to accelerate the validation of a particular application on request of the customers involved, Groschopp relies on the technologies of the 'Rapid Prototyping' and of the 'Calculation of finite elements' (FEM).

## Quality-Management System

Groschopp's name is synonymous with quality. In order to maintain this high standard, the documented processes are reviewed on a regular basis and as part of the general audit. In that way, strict guidelines are established and adhered to, so as to guarantee future leadership in quality assurance.

