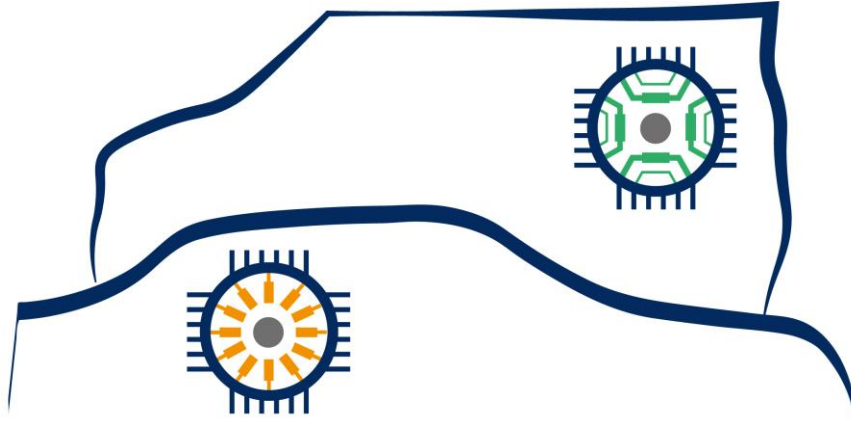




Rare Earth Free e-Drives Featuring Low Cost Manufacturing



ReFreeDrive

Collaborative Project

Grant Agreement Number 770143

Start date of the project: 1st October 2017, Duration: 36 months

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Deliverable no.:

2.1

Title of the deliverable:

KPI Key Performance Indicators Document

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Lead contractor for this deliverable:	Privé
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Work package contributing to the deliverable:	WP2
Nature:	Report (Confidential)
Version:	8.0 (final reworked)

Executive Summary

The electrical vehicles cover a wide range from the power level point of view. Consequently, ReFreeDrive proposes a scalable design covering the range of 15kW – 200kW, which will be tested for those two power range applications. In this case, the market that this project addresses covers all the possible options of fully electric vehicles and hybrids.

WP2 will define the boundary conditions for the motor development and tests:

- Identifying measurable Motors' Key Performance Indicators (KPI) to correspond with the vehicles performances and main equipment's requirements (Driving Cycle definition) necessary for the development and layout definition of powertrain per application to correspond with the State of the Art.
- Listing vehicle-system's and all the functional subsystems' components needed to design and realize the appropriate powertrains to be integrated in the vehicles in order to respond to initial KPI and requirements.

Task 2.1 aims at a joint definition of the motor KPIs to allow a comparison of the ReFreeDrive results with the current State of the Art.

Deliverable 2.1 defines the market research oriented to find the most relevant applications of the two power size motors (75kW and 200kW) in order to obtain a ranking list of vehicles. The vehicles have been sorted by category taking into account the different modes of use to carry out KPI families. Besides for each category the driving habit and the KPI at vehicle level have been also identified. Finally, through the vehicle level KPI and the kinematic chains the components KPI have also been identified.

This deliverable will be an input to deliverable 2.3 where the responsible of each subsystem will develop a full technical specification of the powertrain per Track application (75 kW or 200 kW).