



Optimization of scalaBle rEaltime modeLs and functiOnal testing for e-drive COnceptS

EUROPEAN COMMISSION
Horizon 2020
GV-07-2017
GA # 769506

Deliverable No.	OBELICS D2.2	
Deliverable Title	Innovative E-motor modelling techniques	
Deliverable Date	2019-05-30	
Deliverable Type	REPORT	
Dissemination level	Confidential – member only (CO)	
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Approved by	Horst Pfluegl (AVL) – Project Coordinator	2019-06-19
Status	Final	2019-06-21



Publishable Executive Summary

This deliverable (D2.2) gives a detailed description of innovative modelling approaches, scalability techniques and parametrization tools for E-motors. In this task, multi-physical models for the main e-Motor technologies used for traction applications have been developed. A strong focus has been made on accurate representation of electromagnetic behavior, but also on the detailed thermal representation of the e-Motor. Simplification technics has been developed to reduce simulation time of the model while keeping a high accuracy, both regarding electromagnetic, thermal and mechanical domain. Innovative configurator enabling determination of e-Motor design and corresponding performance characteristics based on only fundamental e-Motor inputs have been developed. Then parameterization methods and tools enabling fast system level model characterization from detailed models or experimental characterization were developed.

The E-Motor models developed in WP2, Task 2.2 will be further used by WP4, WP5 and especially in the realistic EV use cases of WP6.



14 Acknowledgement

The author(s) would like to thank the partners in the project for their valuable comments on previous drafts and for performing the review.

Project partners:

Partner no.	Partner organization name	Short Name
1	AVL List GmbH	AVL
2	Centro Recherche Fiat SCpA	CRF
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This project has received funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 769506.

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