



Inductive Charging System

*Vision of a parking area equipped with
our new vertical inductive charging solution*

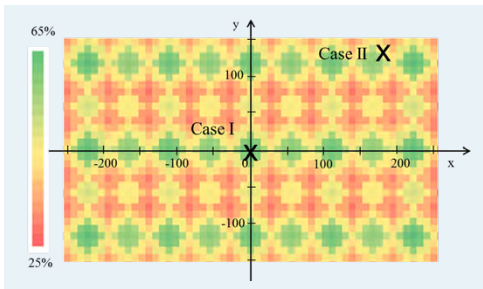
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We develop and realize complete inductive power transfer systems. From the FEM-simulation, over power electronics analysis/simulation and mechanical integration to the realization of complete demonstrators.

This new inductive charging solution consists of a primary and secondary coil system. Each coil system comprises several coils which are separately available for the optimal charging constellation.

High Position Tolerance

- Nine coils in two layers fit into a standardized license plate
- Orthogonal alignment between primary and secondary coil system
- Comparatively high coupling factors within the charging area
- Five primary (stationary) and nine secondary (mobile) coils lead to an effective charging area of 0.9 x 0.5 m²



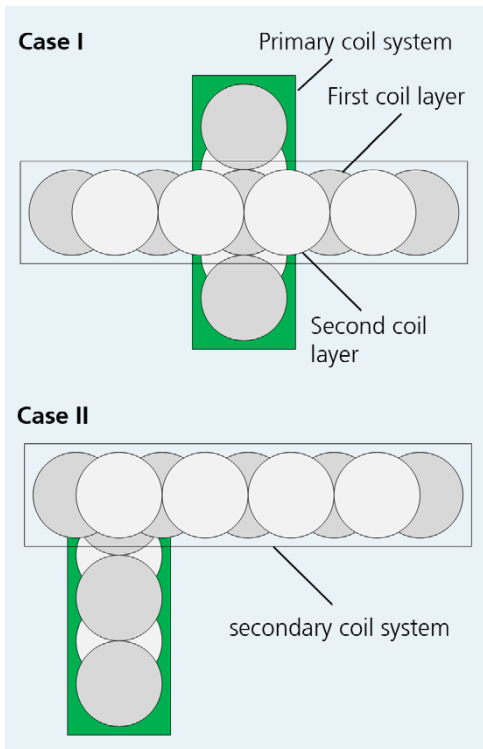
Characteristic coupling factor map
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Technical Data

Nominal power	3 kW
Efficiency	93 %
Operating frequency	≤ 150 kHz

System Advantages

- High transfer efficiency and small stray fields through minimal air gap
- High interoperability through orthogonal alignment
- High positioning tolerance
- Lightweight pick-up
- Coils fit in conventional and standardized license plate dimension
- Minimal package volume compared to underbody systems
- No moving parts
- Bidirectional operation mode
- Further efficiency improvement through wide-bandgap devices



Comparatively high coupling factors within the charging area © Christopher Joffe / Fraunhofer IISB



Primary and secondary unit of the vertically oriented IPT system developed by Fraunhofer IISB
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Fraunhofer IISB is your research and development partner for inductive power transfer.

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