



“High charging power and low heat generation for fast and device-friendly charging?  
That’s when I called Elektrosil.”

Wireless charging is practical; however, positioning, heat generation and charging speed are often tricky. Elektrosil made it possible to optimise these points.

### THE CHALLENGE

Our customer’s goal was to make fast charging by induction suitable for everyday use and user-friendly. The fast charging function had to generate at least 15 Watts and be integrated as harmoniously as possible into the design of the customer’s applications. The special focus was always on the optimal heat dissipation of the entire system.

### THE SOLUTION

Elektrosil developed a charging station with a powerful but low-noise radial blower inside the product. Cool air was absorbed from outside the product and an air flow was generated, which flowed around both the primary coil and the end device and dissipated the heat generated there.

In addition to heat dissipation, it was also important to address the overriding problem of heat generation in order to optimise the performance of the charging station. During the inductive charging process, energy losses occurred due to an inaccurate positioning of the secondary coil in relation to the primary coil. By using several primary coils, the positioning tolerance could be increased and the loss energy thus reduced. This form of energy is synonymous with low heat generation.

Thanks to the special arrangement of all components and the combination of passive and active cooling, the charging device was able to charge with a power of 15 Watts, which is above average for the market. The result was an overall solution with effective cooling, maximum compatibility and a modern and functional design.

### OUR STRENGTHS

- Great expertise in engineering and design
- Many years of experience in the field of cooling solutions and thermal management
- High-quality products that are already fully developed at the start of production
- One-stop shop: from consulting to development and simulation to manufacturing and delivery

**Are you also looking for a custom-fit solution for your system and a competent partner? Then give us a call: +49 40 840001-0.**

### Project information

- Client: a German medium-sized company
- Sector: automotive, transport, industry, POI/POS
- Project size: 5,000 units/year
- Product areas: system solutions
- Services: Optimisation of already existing technologies, implementation of specific tests, economic production

### Elektrosil’s services

- Application consultation, development assistance, design-in support
- Quality assurance
- Engineering and production
- Completely customised applications

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