



Project information

- Client: a major automotive supplier for a German luxury car manufacturer
- Sector: automotive/ e-mobility
- Project size: 60,000 units/year
- Product areas: Cooling solutions
- Services: Product development, thermal simulation, prototyping, acoustic measurements, design, manufacturing and delivery.

Elektrosil's services

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

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“High cooling capacity, minimal noise and low energy consumption in a very tight installation space?

That's when I called Elektrosil.”

Display cooling for e-sports cars: Elektrosil succeeded in integrating a cooling solution directly into an existing system – and meeting the high demands on cooling performance and acoustics.

THE CHALLENGE

In the digital central console of the new generation of e-sports cars, the heat generation of the display led to functional limitations. The customer contacted us to find a solution that met the requirements of the existing system: high cooling capacity and low noise generation in a very small installation space.

THE SOLUTION

Through simulations, Elektrosil determined the ideal cooling performance and gradually began to optimise the fan geometry with regard to acoustics. The fan housing and rotor were successively matched to each other, thus reducing the noise development step by step – while maintaining the same cooling capacity.

In addition, the system was decoupled to minimise vibrations and thus a potential source of noise. After all, in the quiet e-vehicles every decibel counts. The occupants should not notice the fan, neither visually nor acoustically – but the display should remain functional through the cooling and not overheat.

“The path to a customer-ready end product was a process of constant development and optimisation,” says Jan Wieland, Automotive OEM Project Manager

at Elektrosil. “We worked in close contact with the customer with daily coordination, updates and simulations to quickly develop a viable solution.”

The result was a complete solution that has been successfully in series production since 2019.

OUR STRENGTHS

- Development of cooling concepts: from standard fans to specific customer solutions
- Great expertise in the areas of cooling solutions and system solutions
- Customer proximity with daily coordination, updates and simulations
- One-stop shop: from consulting, 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.