



„We needed a pleasant in-car seating environment. That's when I called Elektrosil.“

A proactive seat cooling in summer heat – with the development of the ventilation solution for passenger car seats, Elektrosil has demonstrated how complex and efficient such a technology can be.

THE CHALLENGE

The customer wanted a sophisticated ventilation system based on condensation cooling. The requirements were clearly defined: High-performance, minimal noise and vibration, and robust material without plasticisers. The cooling should be effective, but not too powerful.

THE SOLUTION

Elektrosil decided on a new development based on the required fitting dimensions. In comprehensive measurement and tests they confirmed the required ventilation system performance, cooling, noise level and minimal vibration. The behaviour of the individual components was agreed in close collaboration with the customer in a simulated installed state.

For intelligent control, the fan was incorporated via a LIN-bus interface and connected to the central controller and operating panel. In addition to the operating functions, the team also programmed various safety features. A great deal of skill was required when designing the printed circuit board: All components were positioned on just a few square centimetres, and EMC specifications and numerous design wishes were considered.

Furthermore, Elektrosil optimised the fan housing by adding a stable guard bracket for mechanically protecting the blower. This measure replaced the separate steel bracket which was previously required and therefore reduced the production costs.

OUR STRENGTHS

- Development of cooling concepts, including fan development, printed circuit board design and software development
- Extensive expertise in cooling solutions and system solutions
- Many years of remote experience for optimal communication with manufacturers
- One-stop shop: From consulting to development and simulation to production and delivery



Project information

- Client: One of the world's largest car manufacturers
- Sector: Automotive
- Product area: Cooling Solutions
- Services: Current measurement tests, EMC, development of printed circuit board design, series construction
- Project size: > 1,000,000 units per year, duration > 11 years

Elektrosil's services

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

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.

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