

Project Note

Convenient control panel for chassis adjustment

Zühlke developed the control panel for a passenger car, from design specifications to readiness for series production. The project focused on modern design, pleasant operation and reliable functionality for the entire service life.

Task

Marquardt is a well-known system supplier of individual switches or switch systems for the automotive industry. Plastics engineers from Zühlke joined forces with the customer's project team to develop the control panel for adjusting the chassis of the Porsche Cayenne. The main challenges facing the team were stringent product quality requirements, compliance with estimated production costs and a short development period.

Implementation

The design and installation space for the control panel were already stipulated. The plastics engineers devised the design in a concept study. Critical functions such as haptics and the imperiousness of the rocker switches in the cola test were verified with simple functional models from the Zühlke workshops. The design specifications described the electromechanical concept for the control panel in detail and served as the basis for implementation, a phase that began with the production of the prototypes.

The Zühlke optics engineers simulated the geometry of the LEDs for illuminating the icons, whilst the plastics experts verify the design of the housing and the functional parts to meet the requirements for the injection moulding process. Preliminary prototypes made with silicone tools allowed initial tests to be run on the functions and operation of the panel. The test results were then applied to the construction of the prototypes. The customer tested an initial preliminary series of 100 units made with aluminium tools in field trials with vehicles. Series corrections in the 25 plastic parts were carried out in close cooperation with the Marquardt development team. This step ensured that expertise was transferred from Zühlke to the customer.



Technical Data

Optics Simulation:
Fred

Customer benefits

- Zühlke's expertise in plastics engineering, electromechanics and optics guaranteed a high quality product.
- The customer received everything from a single company, from the initial concept stage to readiness for series production.
- Free of daily business responsibilities, the Zühlke development engineers implemented the control panel in very short order and relieved the customer's team in the process. The customer will be able to use the expertise passed on to it in future projects.

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