



Press Release

Automatic – Precise – Efficient

Housings for the highest demands

One of the key competencies of 2E mechatronic GmbH & Co. KG is the production of plastic covers with inserts provided in very high quantity and quality. The plastics, in this case, the current thermoplastics such as PA, PBT, and PPS are processed. In these coverings, different sensors such as yaw rate (ESP®) and side airbag sensors are integrated. The corresponding printed circuit boards are pressed against these. A soldering process is no longer required. As a result, the covering is properly sealed by a lid. This is done by a laser welding process. In order to complete the relevant safety building components to the level of quality required a 0-mistake policy must be practiced by the company. Likewise a fully automatic production of the casings is required, as each manual operation is prone to error.

For the fully automatic production of our sensor casings, press-fit pins on tape are supplied, punched out and bent directly on the production line. The provision of the sockets is achieved thanks to subsidy funds. All parts to be inserted are placed in a gripping system and into a moulding unit and then over moulded with plastic. There follows an automated integrated inspection for tightness, dimensional stability, short circuit and completeness. The outward transfer of faulty parts and the packing of i.O parts are also achieved fully automatically.

A particular challenge in manufacturing these parts was the necessary absence of any chips or sequins. In order to achieve this, the various production processes such as separating and pressing the metal pins; or handling the sockets, must be coordinated exactly with each other process. The gripping system must place the inserted parts into the tool with high precision, in order to block out potential chips

or sequins. There are also very strict requirements for the cleanliness of the raw materials.

The valid standards in the car industry for high quality are justified by the certification according to the DIN ISO/TS 16949. The manufacturing of the sensor casings takes place in Germany. The current local infrastructure guarantees a reliably high standard of quality, short journeys and quick reaction times. Moreover, the fully automatic production process around the clock enables economical production of these products.

The professional project management at 2E guarantees an optimal solution for the creation of a manufacturing concept and its implementation. Years of experience help to optimize the feasibility of the products and so generate a smooth production process. From first contact regarding sample production up to series production the customers receive optimum support and are well advised. Requests for changes by the customer during the development phase are implemented quickly and flexibly.

Also included in the product range by 2E mechatronic and similar to precision die-cast casings are: DIN and customer specific plug connectors, capacitive inclination sensors, microliter pumps, MID electricity sensors and MID based LED/OLED lighting elements. Suitably adapted for the specific requirements of our customers, we also offer products, for example in the automotive industry, medicine technology, the electronics industry and applied automation.

Through our engagement in numerous research projects, we constantly create future-oriented production technologies and innovative products. A sustainable, environmentally friendly way of working is so important to us, but also social responsibility (for example, the Wilhelm-Narr foundation). Moreover we can react quickly and with flexibility to the market with our flat hierarchy and professional team attitude.



Housing for Rotation Rate Sensors ESP®