KEM Automotive
Auto Bodies
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**Our passion is your Process**
In the automotive industry some of the most cost and energy-intensive production processes are the steps around the preparation and completion of the painted bodywork.

Nowadays, the facilities are developed to be more resource and cost-efficient. This makes permanent further development with the various production processes of the utmost importance.

For maximum material savings and short cycle times, all the important steps in the auto body finishing process are automated.

KEM understands the product and process requirements in the individual application areas. She has been consistently developing new technologies in close cooperation with the leading manufacturers of automobiles and the manufacturers of production facilities.

- Painting and coating
- Dosing of solvents
- Filling operating supplies
- Sealing with UBS, NAD, PVC materials for underbody protection and seam sealing
- Steaming with bitumen materials for insulating mat applications
- Sill paint protection
- Wax application for cavity protection
- Shear-sensitive soft coatings for automotive interior components
- Adhesive bonding

As an independent manufacturer, we keep all design and manufacturing processes in our own hands at all times through our exceptionally high level of vertical integration.
The cleaned and pre-treated car bodies coated with cathodic dip pass through automated sealing processes. Here the underbody and rocker panel coating are very precisely dosed with partly abrasive PVC materials under high pressure. The same process applies to seam sealing. A distinction is made between coarse seam sealing (GAD) and fine seam sealing (FAD) or also the “cosmetic seams”. The crucial requirements in the dosing of PVC materials are for high process accuracy and repeatability.

In recent years, to achieve high acoustic efficiency, bitumen materials were applied automatically more and more instead of manually inserting insulating mats. This highly viscous insulating material can be applied in liquid form, with precisely matched damping characteristics. The layout plan and application thickness is geared to meet the needs of the respective vehicles, and guarantees the highest efficiency at minimum cost and weight.

Insulating materials are applied to the body sheets such as the floor assemblies on the front wall, footwell, the gearbox tunnel, rear seat, boot and roof lining. Insulation is also applied precisely to moving parts such as doors and flaps.

Together with the leading manufacturers of automated dosing systems, KEM develops and integrates various high-precision spindle and gear flowmeters to handle the most diverse processes.
KEM KÜPPERS IN BODY PAINTING

The continuous monitoring of paint application processes and the optimal dosing of the primers, topcoats or clearcoats play a decisive role in the surface treatment of metal or plastic parts in the automotive industry.

Today’s production facilities are gauged by their energy efficiency and by the conserving and efficient use of the liquids.

The focus in the development of the flowmeter at KEM is on the highly accurate and reliable flow measurement coupled to a very fast response time. This allows for easy handling and control of the systems and their complex processes.

KEM is constantly developing its flowmeters to meet the individual requirements of the automotive industry. The result of this is that KEM can place flowmeters on a robot arm directly in front of the application gun or the high-speed rotary atomiser.

Constant new requirements with water-based and UV coatings drive us to continuously develop new flowmeter systems. KEM uses Coriolis mass flowmeters in the applications of extremely reactive UV clearcoats.

For paint and solvent preparation, KEM Küppers turbines are used in paint mixing rooms for the dosing of solvents or water to adjust viscosity.

KEM not only has CAD and FEM systems to its disposal but also cutting-edge machining centres. High-precision manufacturing and high flexibility in the implementation of specific customer requirements are some of the distinguishing features of KEM.
In cavity protection precisely predetermined amounts of wax are injected into the cavities of the bodies after the painting process. These small quantities are dosed in very short time intervals and therefore require a very precise and quick-reacting measurement system.

KEM is the preferred partner in the automotive industry for the development of dosing systems in cavity protection. These are used in all leading robot systems and wax machine systems.

The most common joining technology in auto body construction is often adhesive bonding. These technologies, in many cases, replace conventional spot welding processes.

Adhesive bonding technologies offer advantages in terms of sealing and insulation compared with conventional spot welding technologies. KEM develops and delivers flowmeters for robot-assisted bonding plants in the automotive industry.

Thanks to our expertise and considerable investments in design, development and production, we deliver production quality Made in Germany.