

Application example

Insulator mat on plastic part

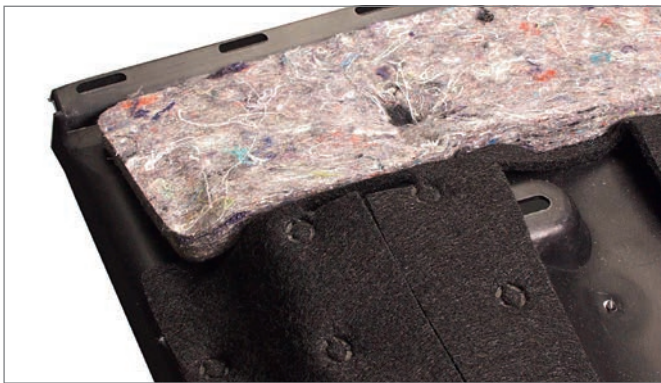
PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

For automotive applications, an insulating pad must be applied at several points on a deep-drawn plastic cover. The process should take place semi-automatically, i.e. the parts to be joined are positioned in the system by hand and the cycle is manually started by pressing the start knob. There are no special requirements with regard to welding quality.

Solution

This spot welding application is implemented with several integrated IPA3505 actuator units in a special-purpose system. The IPA3505 actuator unit includes a pneumatic feed with a maximum welding force of 450N and 50mm stroke. If the system builder uses its own actuator units, the integrated welding unit is also available without a pneumatic actuator (IPM3505 model).

Configuration advantages

The IPA3505 actuator unit combines a compact actuator, generator and converter in one compact unit, with no need for expensive cabling for high-frequency applications and communication. As a result, the IPA3505 actuator unit can be integrated into special-purpose systems with simplicity and flexibility. Additional advantages include high repeat precision and process fidelity, position-independent and process-optimised fitting as well as reliable operation across a long lifespan.



The application was carried out with integrated 35 kHz IPA3505 actuator units, 500W power, fitted into a special-purpose system.