

Application example

Electricity meter with inspection window

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

An inspection window is to be welded into the cover of an electricity meter. The housing cover is made from ABS and the inspection window is PMMA. The inspection window must not be marked by the joining process.

Solution

A USP3000 20 kHz ultrasonic system with maximum welding power of 3000N was used with a TCS5 process controller for this welding application. The mounting device also includes a parallelism setting device. The joining seam is implemented as an energy director, as is often the case for plastics with an amorphous structure.

Configuration advantages

Even parts with a large surface area can be welded reliably with the USP3000 ultrasonic welding press. The energy director joining seam ensures a reliable weld connection. The parallelism setting device ensures optimal alignment between the sonotrode welding surface and the inspection window so that the transparency of the window is not impaired. The touch screen of the TCS5 controller with the intuitive graphical user interface makes it easy to programme the welding process.



The application was produced on a USP3000 20 kHz welding system, MAG generator and TCS5 process controller with touch screen operation.