

Application example

Embedding threaded bolts in housing

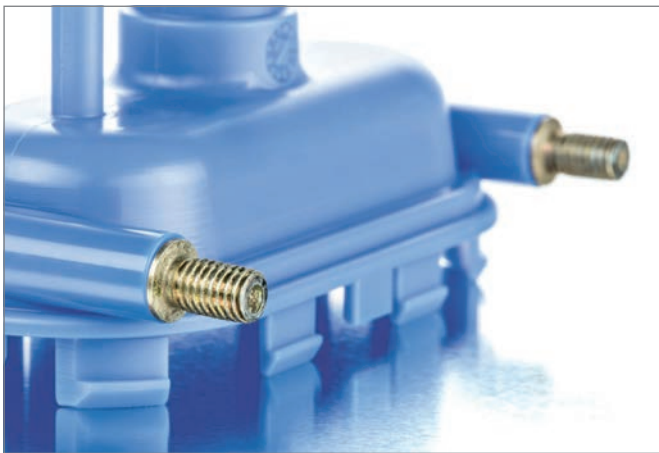
PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING

**Task**

Two brass threaded bolts for fixing should be applied to a plastic housing for an automobile door locking device. As the plastic part is produced in high numbers, the fastening bolts must be inserted into the housing by an efficient method.

Solution

Using ultrasonics, standard commercial SonicLok® threaded bolts and bushes can be prefitted and embedded in a prepared hole. Depending on the size of the bolts and geometric shape of the plastic part, noise insulation measures in the form of personal hearing protection or a complete noise protection housing may be required.

Configuration advantages

In contrast to the embedding of threaded inserts using heat or injection-moulded insertion, embedding with ultrasonics is convenient, quick and efficient. As a result of the low volume of melted plastic, the cooling time can be kept to a minimum and no dangerous heat stresses, which can lead to cracks, occur in the plastic. SonicLok® thread inserts are standard commercial products available cheaply on the market in various design shapes and sizes.



The application was created on a USP3000 20 kHz ultrasonic welding system with MAG generator and TCS5 process controller with noise protection cabin.