

Application example

Embedding thread bushes in flange

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

Four threaded bushes are to be inserted in an extraction-proof way into a cover flange made from polyoxymethylene with a tube inlet. For cost reasons, all inserts must be embedded simultaneously and economically.

Solution

Using ultrasonics, standard commercial SonicLok® threaded bushes can be prefitted and embedded in a prepared hole. Depending on the size of the bushes 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. To simultaneously embed the four inserts, a sonotrode is used with four pressed-in, hardened steel tips.

Configuration advantages

SonicLok® thread inserts are available cheaply on the standard commercial market in various designs and sizes. After refilling with plastic, the knurling batches installed in opposite directions in the thread inserts and a groove in the form of a recess guarantee high extraction forces in the axial and rotational directions, both clockwise and counter-clockwise. As several inserts can be embedded at the same time with a specially designed sonotrode, the process is among the most economical and efficient joining methods.



The application was produced on a 20kHz USP3000 ultrasonic welding system and with a multi-contour sonotrode.