

Application example

Breathing mask with strap opening

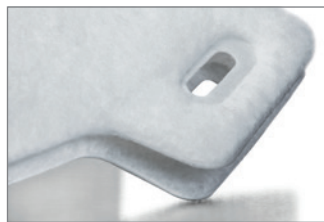
PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

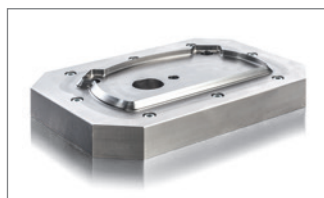
The edge of the cut-outs for a breathing mask has to be sealed with a soft finish, firstly in order to ensure good wear comfort and secondly in order to prevent the material from fraying. Feed-throughs must be inserted for looping and fastening the elastic strap. The edge zone of the feed-through openings must be able to withstand the tensile force of the elastic strap when the mask is worn.

Solution

Both steps – cutting out the outer contour of the mask and inserting the two fastening openings for the elastic strap – can be carried out simultaneously with corresponding ultrasonic tools. Two spring-loaded blade inserts are integrated into the anvil unit to cut the two openings. An additional step is required for the slot option.

Configuration advantages

The Cut & Seal process simultaneously seals the edge zone while cutting out the contour and cutting the openings. This ensures that the contour edge of the mask cut-out and the two openings or slots do not fray and that the mask is comfortable to wear.



The applications were produced on a USP8000 welding machine.
Hardened anvil with external contour for cutting masks.