

Project Note

# More stable and lower-priced plastic housings

Zühlke analysed a plastic housing to determine its stability and ease of maintenance and to explore ways of lowering the production cost. Design adaptations and optimal production processes yielded major savings.

## Task

SpinX-Technologies was developing a new lab-on-a-chip platform based on micro-fluids to increase flexibility in setting up experiments for biological studies. This tabletop device integrated the preparations for the experiment and the output of results and greatly reduced the manual work involved. The plastic housing that had been employed up to this point was too sensitive and too expensive to allow the commercial use of the device. Zühlke was commissioned to evaluate alternative production processes and to optimise the design. Higher mechanical strength also had to be achieved to comply with the IEC norms.

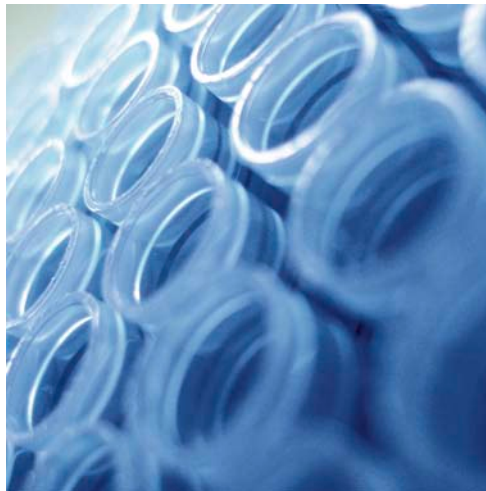
## Implementation

The Zühlke expert analysed the existing device housing based on three clear-cut goals the customer had set:

- Substantially reduced production costs
- Greater ease of maintenance
- Appealing design

A detailed study to determine appropriate production processes showed that various technologies would be worth considering. The pros and cons of each were compared to make a decision on how to proceed.

Together with the customer, the Zühlke expert selected vacuum forming and rotation forming as the processes to be used. The Zühlke engineer optimised the design in line with these two technologies and assisted the customer all the way to the launch of production with two suppliers.



## Technical Data

SolidWorks

## Customer benefits

- The customer benefited from a systematic analysis by the Zühlke specialist, whose field of expertise was different from the core expertise of the customer's team.
- The project goals were able to be achieved on schedule thanks to the broad expertise of Zühlke in the latest manufacturing technologies.

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