

Application example

Medical injection point

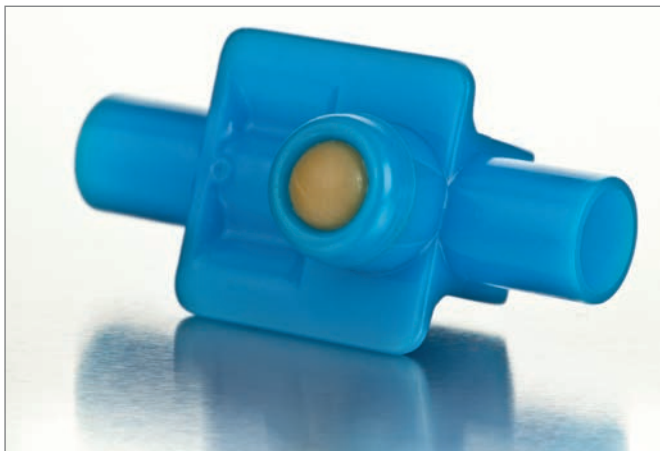
PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

A silicone ball is to be fixed in a plastic medical injection point in a reliable, particle-free and tight manner. Due to the high number of units, the part must be produced in a fully automated system after the validation process. The process parameters are to be recorded and analysed statistically for quality assurance reasons.

Solution

The silicone ball is fixed in the recess in the plastic part using the torsional SONIQTWIST® ultrasonic flanging process. This offers a number of key advantages during forming compared to the conventional, longitudinal technology. The flanging process can be carried out, monitored and logged quickly, reliably and fully automatically in a production system using the corresponding components of a TSP750 torsional welding system.

Configuration advantages

When using torsional flanging technology, the ultrasonics are applied to the component tangentially, i.e. parallel to the forming plane, rather than vertically. This ensures that the plastic in the contact area with the sonotrode is melted and formed in a gentle, particle-free manner. The result is an aesthetically perfect flange zone, and the silicone ball is fixed in the injection-moulded recess reliably and tightly. The TCS5 controller provides comprehensive process monitoring functions, thus ensuring consistently high flanging quality.



The application was produced on a torsional TSP750 SONIQTWIST® welding system, MAG generator and TCS5 process controller, or with corresponding components in a special system.