TELSONIC
ULTRASONICS

Application example

Plastic part with filter net

PLASTIC WELDING | METAL WELDING | CUTTING | CLEANING | SCREENING

The application was produced on a torsional SONIQTWIST® TSP750 system or with corresponding components in a special-purpose system.

Task

The opening of the slip-on cap of a medical inhaler device must be sealed with a fine filter net so that no particles of dust or dirt can enter. The filter net blank should be punched out of a belt and reliably welded to the cap without damage. This production step should be integrated into a fully automated manufacturing process and comprehensively monitored and logged.

Solution

The torsional SONIQTWIST® ultrasonic welding process enables the filter net to be simultaneously cut out and welded in in one work step. The application was implemented with a TSP750 torsional ultrasonic system and a TCS5 process controller or through integration of components in a special-purpose system. A razor-sharp, circular cutting blade on the sonotrode ensures the net is cut out reliably.

Configuration advantages

The torsional SONIQTWIST® joining technology optimally meets the high requirements of the joining task. The torsional stimulation of the tool ensures fibre-free cutting
of the filter net and reliable embedding in the plastic cap, without damaging the fine net mesh (no membrane effect). The process is economical and, in automated lines, the TCS5 controller offers many advantages - particularly when process monitoring and statistical evaluations are required.

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