

Application example

Toner cartridge end cap

PLASTIC WELDING

METAL WELDING

CUTTING

CLEANING

SCREENING



Task

To avoid toner powder leaking during global transport or usage, the cartridge must be hermetically sealed with an end cap after filling. A snap closure is not possible as the product could be tampered with.

Solution

The end cap is welded onto the cartridge economically in high quantities using ultrasonics. The joining zone is in the form of a pinch seam, which guarantees a tight weld. A device with a pneumatic clamp is used to fix and position the moulding around the neck of the end cap during welding. The application was produced on a USP3000 ultrasonic welding system, frequency 20 kHz, with MAG generator and TCS5 process controller.

Configuration advantages

The ultrasonic welding technology guarantees a tamper-proof, hermetically sealed closure and prevents any toner leaks. As a substance-to-substance connection technique, it does not require any consumables, e.g. environmentally harmful adhesive. The TCS5 process controller offers extensive quality assurance options.



The application was produced on a USP3000 ultrasonic welding system with MAG 3.6 kW generator and TCS5 controller.