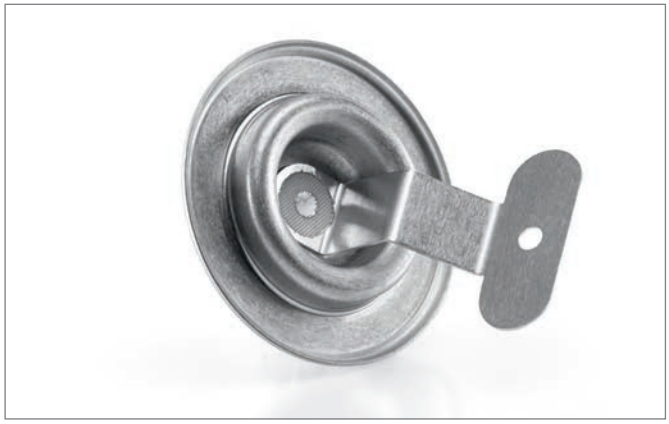
TELSONIC
ULTRASONICS

Application example

Electrical connections on a capacitor

PLASTIC WELDING | METAL WELDING | CUTTING | CLEANING | SIEVING



The application was welded using the torsional SONIQTWIST technology. The ultrasonic welding components were integrated into a special-purpose system.

Task

A deep-drawn cap to a capacitor needs to be electrically connected to a contact bow. Both components are made of aluminum. Due to the high levels of current, the connection must conduct electricity without any problems and the effective contact surface must be large enough to cope with the current. The contact point is located in a recess in the cap, which makes it difficult to access.

Solution

Ultrasonics are ideal for producing electrical connections in aluminum. The application is welded using torsional SONIQTWIST® ultrasonic technology. A torsional pneumatic TSP750 weld press with the universal machine and process controller was used for a high degree of flexibility and wide range of control options.

Advantages of this configuration

The excellent electrical conductivity between the aluminum components is down to the use of ultrasonics. The high-frequency vibrations break open the oxide layer, creating a firmly bonded molecular connection. Thanks to the use of slim cylindrical sonotrodes, torsional SONIQTWIST® technology is able to weld recessed points or locations that are hard to reach.
By monitoring energy and power levels, the process controller makes sure the weld surface remains consistent and quality remains high.