

Special sealing solutions for high-performance motors in surgical power tools

Challenge	Production of a seal that meets all customer-specific, technical requirements on the one hand and complies with the requirements of the FDA medical device approval authorities on the other. In addition, the manufacturing process is subject to the medical standard DE EN ISO 13485.
Solution	For use in an electric motor for surgical power tools, ElringKlinger worked with the customer to develop an ElroSeal™ high-performance rotary shaft seal with a special sealing lip and material concept for use in medical technology.
Result/Conclusion	With the help of the ElroSeal™ high-performance rotary shaft seal , the customer can meet quality and safety standards that are crucial for use in medical technology and its validation.

Especially in the production of medical devices and components, it is crucial to meet all relevant medical standards. The components used and their material properties must be medically safe, repeatedly sterilizable, and also medically compliant according to FDA and RoHS & REACH regulation.

With power tools and their electric motors, rotational speeds of several thousand revolutions per minute are reached, bringing the seal to its load limit.

For this application, ElringKlinger developed a sealing system that meets customer requirements for low coefficients of friction, high media and temperature resistance, and strict sterilization specifications of 1,000 cycles. This high-performance seal is characterized in particular by its durability, ensured by a correspondingly careful selection of materials.

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