



Smart product design for complex applications

With micro additive manufacturing, functional printed mechanisms and fully integrated complex assemblies can be produced. Smart product design makes this possible in just one step. The arthroscopic shaver shown demonstrates how converting the design into a print-as-one assembly reduces the number of parts to be processed from 6 to one.

Challenge

Inquiry about the production of six individual components for an arthroscopic shaver for veterinary medicine, based on a novel technical idea and concept design. The redesign of the 6-part assembly, into a print-as-one solution, enables the production of a double shaver, the gear set, the housing, the clip as well as the housing in only one manufacturing step.

Solution and added value

- Print-as-one solution instead of 6 parts assembly
- Improved functionality by sturdy design
- Integrated water flushing and suction channels for shavings
- Integrated channel for lighting
- Tight tolerances reduce wear and tear
- Single part production without assembly
- Less total cost for the final part
- Reduced lead time to market availability
- Diameter: 6 mm

