

# Prototyping



## Challenge »

Prototyping is a critical step on the route from the idea to serial production. Manufacturing functional prototypes requires great technical skills, flexibility, and a state of the art infrastructure.

$$h_m = \frac{1}{\varphi_a - \varphi_e} \sin \kappa \int_{\varphi_e}^{\varphi_a} f_z \sin \varphi d\varphi$$

## Approach »

Thanks to a well-furnished workshop and a great deal of experience with high-precision parts, prototypes and small batches are manufactured in record time.

## Services »

- \_ **Mechanical production.** We quickly mill and turn your parts and provide you with feedback and adjustment recommendations.
- \_ **Miniature parts.** Our mechanics produce high-precision turned parts out of metal or polymer on watch-maker lathes.
- \_ **Fine blasting.** Finishing with selected blasting media produces burr-free components.
- \_ **Welding and joining.** With laser welding and UV bonding, we are able to join different materials using methods transferable to larger scale production.
- \_ **Assembly.** We assemble your prototypes and small batches under laminar flow and minimum contamination.
- \_ **Function tests.** As per request, we subject your prototypes to comprehensive mechanical stress tests.
- \_ **Cleaning.** Our cleaning processes in the ultrasonic bath are validated and can also be easily adapted to your parts.
- \_ **Sterilization.** For further testing in the preclinical phase, we can sterilize your prototypes in-house with steam or you can benefit from our contacts in the areas of EtO<sub>2</sub>, H<sub>2</sub>O<sub>2</sub> plasma and gamma sterilization.
- \_ **Electronics.** We produce your electronic components from circuit design and prototypes through small production batches.

## Trust »

As a long-term developer of medical devices, we know what it's all about: precision and flexibility with short response times. All of our processes are furthermore certified in accordance with EN ISO 13485.

## Uniqueness »

A leading interdisciplinary team in Switzerland is working for you – practically based and target-oriented.

**Do you require a prototype of your product as soon as possible?  
Preferably of a quality that corresponds to the end product?**



## Contact »

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## Carag »

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