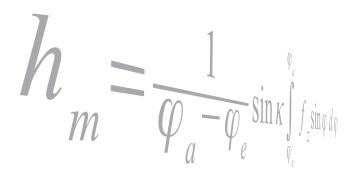


# Prototyping



## $Challenge \gg$

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.



#### 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.
- 3D printer. Our dual filament 3D printer offers the advantage of creating double-colored as well as double-material prints, allowing for greater design flexibility and aesthetic appeal already in the first prototypes.
- Miniature parts. Our mechanics produce high-precision turned parts out of metal or polymer on watchmaker 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 lager 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, 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. Our in-house SMD assembly line for PCBs enables us to guarantee short lead times.

#### 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 ờ

Carag is a leading Swiss engineering company and point of contact for physicians and medtech companies developing high-quality products for cutting-edge medical applications. Carag has an experienced, performance-driven, interdisciplinary team of engineers, physicians, medical technicians, electronic technicians and software developers. The broad range of specialized engineering and consulting services starts with technical feasibility checks and continues with product development through marketing approvals, regardless of the regulatory complexity.