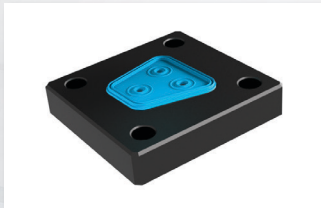
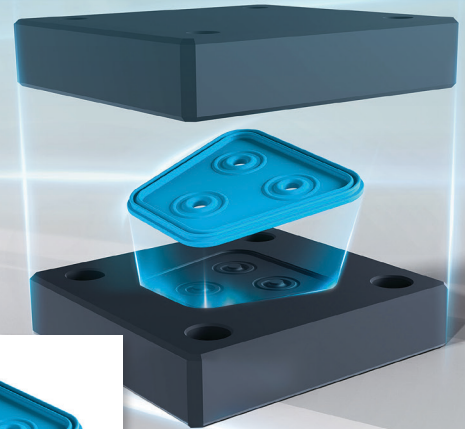




iCast™ LSR

Accelerate Small Batch Production of LSR Parts

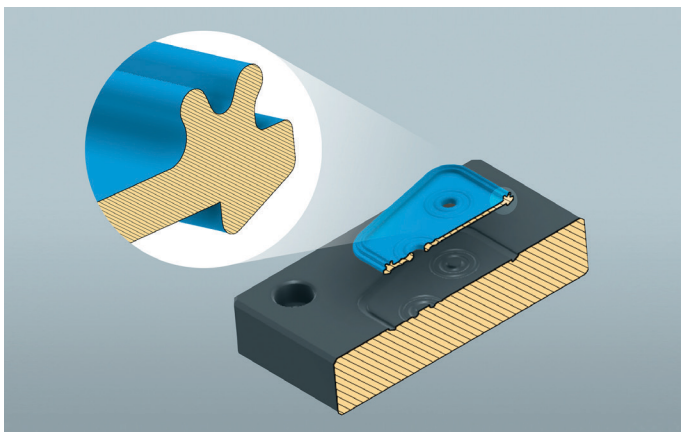


Supporting manufacturers with a fast and flexible digital manufacturing process for small batch production and product development of LSR parts.

The unique iCast™ digital manufacturing process is an innovation in liquid silicone rubber (LSR) processing. Involving no tool investment, it offers a cost-effective way to develop product variations or try out different design concepts before investing in serial production tools, as well as enabling the start of pre-series and series production with small batches.

Dramatically cutting concept to production time for prototypes from a typical four and a half months to a maximum of three weeks for the average part, it helps manufacturers meet the pressures of rapidly moving markets that are demanding faster new product introductions, improvements, and advancements.

With iCast™ LSR technology, quick and multiple design iterations of components in standard industrial grade two-component platinum-cured LSR can be made. These demonstrate the properties and quality levels of high-volume injection molded parts.



iCast™ LSR features and benefits

- New method of affordable, fast and flexible small batch production of LSR components
- Digital manufacturing means no tool investment required
- Parts produced have the same properties as injection molded components
- Standard industrial grade two-component platinum-cured LSR materials
- Tolerance levels to DIN-ISO 3302-1 M2 and ISO 3601
- Overall part dimensions up to approximately 50 by 50 by 20 millimeters
- 30 to 70 Shore A hardness
- Suitable for 1 to 2,500 parts
- Surface structure
 - o For two-dimensional surfaces according to VDI 3400 Ref. approx. 18 and ISO 1302 N6
 - o For three-dimensional surfaces according to VDI 3400 Ref. approx. 30 and ISO 1302 N8
- Supports larger number of product variations and customized products
- Facilitates customers, design verification processes

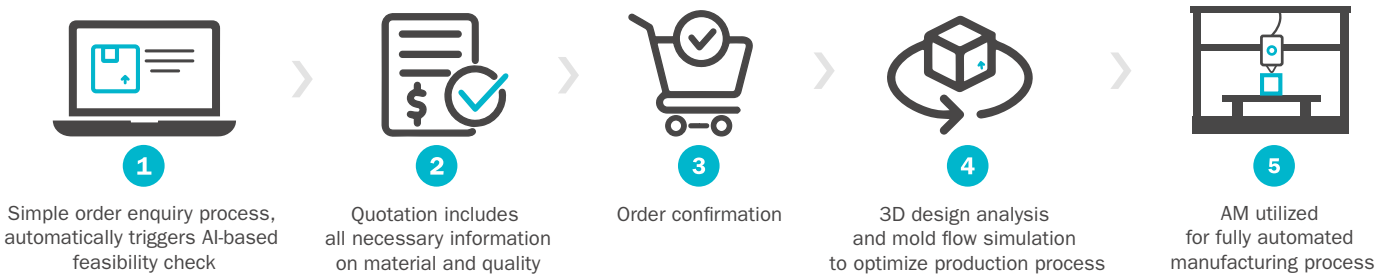
Applications

iCast™ LSR can be used to produce components, including:

- O-Rings
- Profile seals
- Diaphragms
- Custom-molded parts

Adaptable step-by-step process

The five-step iCast™ process utilizes digitalization and new manufacturing technologies to significantly speed up the time from enquiry to product production.



The iCast™ process starts with the order enquiry, requiring the submission of 3D part data and order details. This triggers a feasibility study based on artificial intelligence (AI), to see if the iCast™ process is suitable for production of the part. Delivered within 36 hours, the quotation includes all necessary information on material and quality, according to iCast™ specifications.

Upon completion of the feasibility study, the part design is analyzed, and the individual digital mold layout is created based on 3D data. If necessary, this undergoes mold flow simulation. In a virtual environment, this process identifies the optimum production process for the use of additive manufacturing (AM) technologies in order to avoid errors at an early stage and achieve the best possible quality.

Fully automated digital manufacturing process

Based on the order details, a data matrix code is created, which includes all production parameters. The code links to the mold so that when it is put into the iCast™ manufacturing system, parameters are known, and fully automated manufacturing can begin.

This type of smart mold enables similar productivity and process accuracy, comparable to traditional injection molding, while ensuring high quality parts, as well as effective and rapid scale up to production.