



Industry Solutions for Medical Technology

Innovative Components for Medical Equipment and Devices



Your Technology Specialist



You don't accept compromises in the quality and reliability of your medical technology?

As the world's leading market specialists for elastomers and seals with extensive experience, Simrit offer top product and application expertise. With the Helix Medical portfolio of innovative silicone medical products, we now provide you with new quality standards for reliable and safe medical technology solutions.

Simrit – leading sealing and materials competence for demanding markets.

Offering a unique package of products and services, we at Simrit are setting standards in functionality and cost-effectiveness with our solutions. A wide product range focussed on specific markets, innovative manufacturing processes, numerous services and efficient 'single source' concepts make us the ideal seal partners, particularly for the demanding and complex requirements of medical technology. You will thus always receive the solution that is most suitable for your needs. Our decades of leadership in materials' competence is a key factor behind the success in giving outstanding service and the superior technological edge provided by Simrit products. That is what our renowned portfolio extending from Simmerrings®, O-rings, diaphragms and

shaped parts to a large range of hydraulic and special sealing products represents. As part of the Freudenberg Group, we have access to world-wide established in-house research, development and production expertise. Close international cooperation between Simrit Europe and Simrit America together with our partner NOK in Asia offers you uniform quality standards wherever you require our solutions.

Place your trust in a strong partner:

World's largest product range

Comprehensive solutions from a single source

Continuous innovations

Technological prominence for the competitive advantage of our customers

Unique expertise in materials and high quality standards

Leading know-how for safe and cost-effective applications

A huge number of integrated services

Support from development up to continuous product deployment

Globality

Global expertise with the knowledge of local market requirements



The Simrit range of products and services for modern medical equipment



With our innovative strength and technological know-how, we ensure peak performance of your medical technology systems and apparatuses.

The reliability of medical technology devices is of elementary

importance for manufacturers, users and patients alike. Through our established sealing and materials know-how, Simrit contribute to securing this trust over the long term. Simrit sealing technology is an important component of the system whether for diagnostics, dental technology or emergency medicine and also wherever complex medical technology systems are necessary.

PTFE parts

- Spring-assisted PTFE U-rings (Forseals) with virtually universal chemical stability and migration resistance



2 K-shaped parts

- High-precision 2 K-shaped parts for the medical device industry, e.g. anaesthetic equipment or hearing devices



Diaphragms

- Market leaders in diaphragms applications in areas of X-ray and computer tomography



O-rings

- High-precision O-rings for dental technology instruments



Simmerring® – quality has a name

Known throughout the world, the original Simmerring® from Simrit is synonymous with our quality claim. We offer Simmerring® solutions such as the PTFE HTS II specifically for the requirements of medical technology and these proven to be particularly ideal for the chemical and thermal stresses in mixers, pumps and medication dispensers. It's FDA-compliant and, due to its innovative dead space-free design, hygienic in use.

Leading materials technology – the basis of our success

Simrit possess the world's greatest expertise in materials development. This is where the development process begins – and at the end is an optimum sealing solution customised to meet your needs. Simrit offer in particular for medical technology, standard and biocompatible materials such as EPDM, NBR,



We don't either. With the Helix Medical product portfolio, Simrit is giving the medical

CIR and VMQ which have been tried and tested in numerous applications. High-performance elastomers such as FKM, HNBR or Simriz and PTFE also provide new possibilities for thermal and media applications. More than 1,000 mixtures produced in our own raw mixing facilities and our close cooperation with leading polymer and chemical manufacturers provide a secure foundation for targeted product developments.

Application-specific releases and approvals

As market specialists for medical technology, Simrit provide you with elastomer materials and products with all the necessary international approvals and releases. Precisely suited to your application, the solutions you receive are certified in accordance with FDA, USP Class VI, KTW, WRc, DIN 10993 for biocompatibility and many other standards.



Simrit Products	Applications
2 K parts, shaped parts	Anaesthesia, intensive care medicine, medical apparatus and device manufacture
Diaphragms	Computer tomography, X-ray applications, respiratory masks
Simmerrings	Bioreactors, laboratory technology
Hydraulic seals	Orthopaedics, dentists' chairs
O-rings	Dentists' drills, endoscopy, dialysis
PTFE parts	Biotechnology, apparatus manufacture

equipment and devices segments a successful common denominator.

Helix Medical stands for liquid and solid silicone components in pure form. Specialised in medical devices, our solutions encompass a wide range of products meeting the highest of requirements.

Processing of liquid and solid silicones requires solid knowledge of manufacturing and processes – knowledge possessed by only a few specialists in the area of medical technology. The know-how of Helix Medical ensures that you receive competent solutions for medical devices. Our knowledge assists you reliably from the conceptualisation phase to mass production – efficiently and economically, even for the most demanding of design specifications, and of course compliant with all the FDA specifications required of authorised medical device producers. Hence Helix Medical products are manufactured, for instance, solely in clean room conditions with clean room classes of 10,000 and 100,000.



Helix Products	Applications
2 K parts, shaped parts	Diagnostics, endoscopy, dental technology, orthopaedics
Implants	Cardiology, plastic surgery, ophthalmology
Voice prostheses	Laryngectomy
Catheters	Brain surgery, cardiology, urology
Tubes	Wound drains, peristaltic pumps, device technology



The Helix Medical range of products and services for medical devices

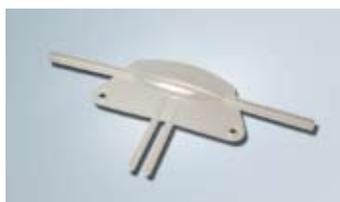
Helix Medical silicone components are available for three main application segments:

- Customer-specific shaped parts and implants
- Tubes
- Medical products for patients

All products are made from peroxide-free platinum-cured silicone with a special medical technology quality. They fulfil USP classes VI to XXII and can be safely sterilised using steam, ETO or gamma methods.

Broad extrusion range

offer an extremely extensive package of products and services in the area of extrusion. Examples include high-precision miniature as well as multi-lumen tubes, versions with tissue reinforcement, X-ray contrast strips and solutions for peristaltic pumps.



Multiple-component implants

- Leaders in the manufacture of stomach bands for treatment of obesity

Catheters

- Single- and multi-lumen catheters with pad printing and assembly

Shaped parts

- Complex shaped parts for the medical device industry, e.g. heart-lung machines

Micro shaped parts

- Precision shaped parts for customer-specific applications, e.g. suction devices in ophthalmology

Trendsetting solutions for voice prostheses

specialised knowledge of silicone components is unrivalled in certain segments. As development and manufacturing partners, we produce for instance globally exclusive voice prostheses. With customer-specific development of a silver oxide-coated silicone voice prostheses, we offer innovative solutions for laryngectomy patients with outstanding FDA-tested material properties.





Helix Medical – innovative silicone components for medical technology

With Helix Medical in USA, Simrit have integrated an outstanding specialist for silicone components into its product portfolio and now offers technologically sophisticated solutions for the 'medical devices' market segment. The technical know-how possessed by Helix Medical in the area of liquid silicone processing and the high-quality product programme for the medical technology, pharmaceutical and biotechnical industries based on this know-how ensure optimum standards for safe and functional applications for our customers. The product range encompasses everything from disposable medical products, catheters and tubes fasteners and seals through to implants.

Customer-specific services such as partnership-based support in design, materials selection, tool development and continuous product evolution accompany you proactively from development to application. The safety and reliability of Helix Medical products are thereby of prime

importance: manufacturing competence in accordance with Good Manufacturing Practice (GMP) as well as ISO 9001 and ISO 13485 certification ensure outstanding product quality at all times.

Solid know-how as market specialists

Over 20 years of experience as a FDA-certified supplier to the medical, biotechnology and pharmaceutical industries

Unsurpassed variety of materials

Leading materials programme with the largest range of silicone materials

Uncompromising quality standards

All products manufactured in accordance with quality systems for medical end products

Requirements-based clean room classes

Production in clean rooms of classes 10,000 to 100,000

Extensive services

services Added value through assembly, Tyvek Pouch® packaging, sterilisation and coating.

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