



## Solenoid plunger and precision moulded parts for solenoid valves

Innovative sealing technology for the core of the solenoid valve

# Simrit, Your Technology Specialist for Seals and Vibration Control



Simmerring®



Fluid Power



Hydraulic Accumulator



O-Rings



Liquid Silicone Products



Special Sealing Products



Vibration Control

## **Our unique service package sets standards in quality, functionality and cost effectiveness throughout the industry.**

With its comprehensive product range and large number of services, Simrit provides a service package unique in the market for almost every application. Simrit employs its leading technological expertise so that you benefit: We analyse your entire system and fine-tune the individual components to each other in an optimum way. This means you get exactly the solution that best fulfils your requirements – cost effective and dependable. Reinforced by single sourcing, saving time and cost, you will find that Simrit is your ideal partner for all sealing- and vibration-related applications when it comes to complex systems.

We have been the leading experts in materials for decades, and this is a significant factor for success, exceptional performance and continuous technological advancement of our products. Famous product names

such as Simmerring®, Fluid Power, Hydraulic Accumulator, O-Rings or Liquid Silicone Products underpin this. Together with the fields of Special Sealing Products and Vibration Control, they are intrinsically connected with the Simrit brand name and constitute the world's largest product range for all applications throughout industry.

As part of the Freudenberg Group, we draw upon established research, development and production expertise within the Group to continuously extend our technological lead through innovative solutions for the purposes of – and in the service of – our global customers with their local market requirements. The close international cooperation of Simrit in Europe and America with our Japanese partner, NOK, in Asia provides you with consistent quality standards wherever our solutions are required. With Simrit Service Centres in all industrial markets, our global sales network supports you and more than 100,000 other customers dependably and on a basis of mutual trust and cooperation at sites on every continent.

## **The Simrit service package at a glance:**

- **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

# A unique range of services for your individual requirements

## **Simrit solenoid plunger can be precisely adapted to customised and especially critical applications with intelligent solution packages.**

Frequently, solenoid valves are used in especially critical and safety-relevant applications, e.g., in brake systems or in emergency respiration systems as found in the aerospace industry. Precise control is of great significance here and customised adaptation of the magnetic armature is the key to it. With its unique range of services and versatile know-how, Simrit offers the ideal foundation for technologically sophisticated solutions with long-lasting functional reliability.

## **Continuous research and development work**

Well thought-out product foundations in materials and design and knowledge of process engineering are the results of our continuous research and development work. Simrit materials are developed exactly for the areas of use and thus offer optimal durability. Both composite parts as well as precision mouldings can be individualised on this basis in an application-specific fashion. Important material approvals such as FDA, KTW (recommendations for materials that come into contact with drinking water) or USP Class VI are additional service features from which our customers profit.

## **More flexibility, the highest functional reliability**

Along with versatile material variants, additional possibilities of adaptation offer an optimal starting point for functionally reliable applications. Innovative RFN® treatment, integrated damping functions and PTFE coatings constitute a unique solution package with additional value added.





## Individual solution packages at a glance

### Chemical resistance

- Highly stable sealing and damping materials for use in aggressive media such as oils, natural gas, liquefied petroleum, blow-by gases, chemicals, water and more

### Temperature resistance

- Materials for a temperature range from  $-40^{\circ}\text{C}$  to  $+250^{\circ}\text{C}$

### Reduction of the sticking effect

- RFN<sup>®</sup>-treated surfaces for reduction of the sticking effect and for improvement of chemical resistance for a longer service life

### Design

- Complex designs and miniaturisation allow implementation of demanding solutions for our customers

### Releases

- Various material releases such as FDA, KTW or USP Class VI for critical applications

### Coatings

- PTFE coatings for friction reduction at the contact surface

### Lifting plunger

In the guiding mechanism, flexible lifting plunger combine the sealing and damping function in a single component. In addition, weight can be cut down by individualising the carrier material.



### Tilting plunger

Axially fixed tilting plunger with different carrier materials allow frequent switching and thus lasting process optimisation.



### Solenoid plunger with meander springs

Solenoid plunger with vulcanised sealing and damping hubs on meander springs allow minimal strokes with high frequencies and at the same time reduced available space.



# Integrated technological competence for tailor-made solutions



**Solenoid plunger and precision moulded parts from Simrit are versatile and guarantee highly precise control of modern solenoid valves.**

Switching, sealing, damping – all with an innovative sealing technology. Our Solenoid plunger offer these functions in one component. Our diverse adaptation possibilities play a central role with regard to their areas of use so as to precisely ensure optimal functional reliability for your area of application. You can find Simrit solenoid plunger in almost all industrial areas of application, such as:

- Automation technology
- Automotive industry
- Industrial pneumatic systems
- Aerospace industry
- Medical technology
- Printing technology
- Textile technology

## Competence in all disciplines

As worldwide leading sealing specialist, Simrit unites well-founded know-how in materials, design and process engineering foundations. The result is an outstanding overall technological package that is attractive due to its various possibilities of use. Special requirements for use in aggressive media or extreme

temperatures are likewise taken into account here, such as implementation of fast, highly precise and constant reaction times of the valve. In addition, international approvals and releases of our materials lastingly ensure Simrit solenoid plunger broad range of applications.

## Functional diversity that pays off

Innovative ideas for more efficiency – Simrit solenoid plunger offer lasting cost reduction due to the sealing and damping function combined in one component. You gain more available space and at the same time weight can be reduced due to this functional integration.



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