

Edge-Welded Bellows

FOR SEMICONDUCTOR APPLICATIONS



Edge-Welded Bellows

Simrit has a long and respected history as a leader in supplying industrial sealing products. A division of the Freudenberg and NOK Group companies, Simrit represents the world's largest supplier of elastomeric seals and custom-molded products. We provide our customers with the dependability of a \$7 billion global company with an international network of technical expertise.

Simrit offers a line of edge-welded bellows designed and manufactured by our global partner, EKK Eagle Industries. These precision products demonstrate excellent durability, flexibility and corrosion resistance in a wide variety of applications, with superior performance in many corrosive environments including ultra-high vacuum, high pressure, and extreme temperatures.

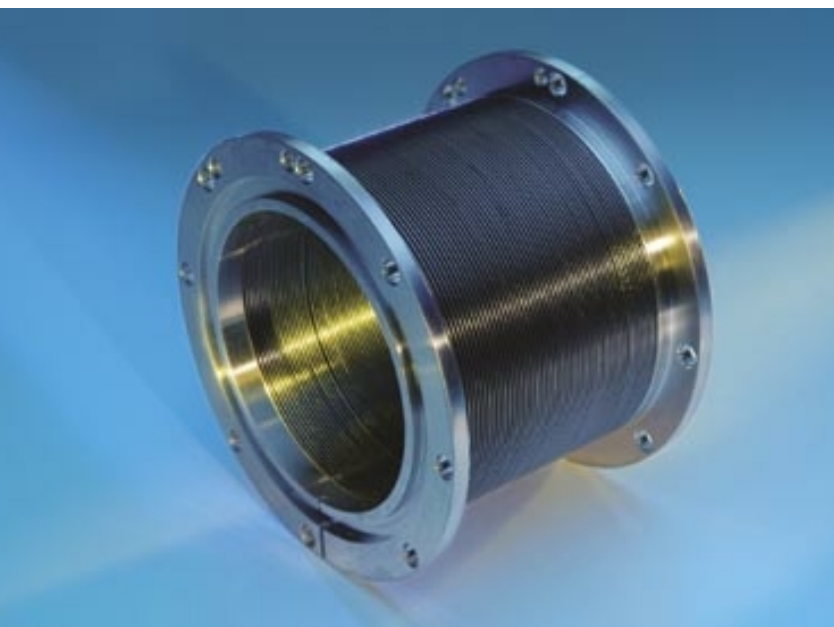
Our dedication to advanced technology while maintaining high standards for reliability is thorough and consistent. With our edge-welded bellows, as with all our product offerings, Simrit provides our customers with more than just superior products. Simrit has earned a reputation for:

- High quality
- Competitive pricing
- Outstanding customer service and quick delivery
- Custom designs
- Excellent technical engineering support

For information about our company and our products, please call **1-866-2SIMRIT**, or visit our web site, www.simrit.com

Features and Benefits of Edge-Welded Bellows

Edge-welded bellows are a nested-type bellows which are produced using a unique ultra-thin metal plate welding technology. The nested-type bellows can secure a wide stroke within a limited space which achieves a compact equipment design. These edge-welded bellows can be made almost completely with weldable materials, guaranteeing ultimate design efficiency in each specification for optimal performance.



Customers can depend on our edge-welded bellows for:

- Superior design and engineering, including fusion welding technologies and reverse engineering capabilities
- A controlled manufacturing process with testing and inspections that provide clean, precise products
- Full assemblies
- A wide range of material offerings, from stainless steel 316 to titanium, Hastelloy®, Inconel®, and other exotics
- Special surfacing: EP, anodization, nickel plating, etc.
- Dependable sealing performance and product longevity derived from excellent corrosion, pressure, and heat resistance

Hastelloy® is a registered trademark of Hayes International, Inc., Corp.
Inconel® is a registered trademark of Huntington Alloys Corp.

Simrit Development and Design

Our global network of engineers develops and extensively tests materials, procedures, and production methods. For edge-welded bellows, FEA analysis is just part of the rigorous testing process which includes:

- Material tensile testing
- Ultra-high vacuum bellows tests
- Vibration tests

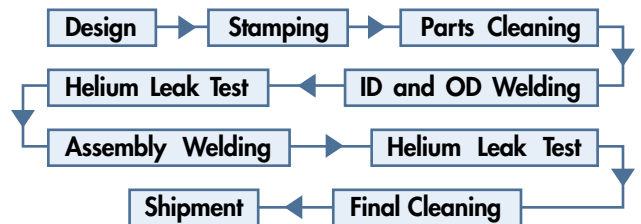
- Electro microanalysis
- Material fatigue testing
- Bellows cycle testing
- Helium leak testing

Customers may also contact Simrit at **1-866-2SIMRIT** with inquiries about custom designs for edge-welded bellows.

Simrit Global Partners Manufacturing

A unique production system has been established that enables flexibility in handling small-quantity, large-variety orders. With total control of our own materials and dependable clean-room production, we provide products of superior purity. In the welding process, all products are leakage tested and the production line is continually monitored to maintain quality and product reliability.

Typical Bellows Manufacturing Process



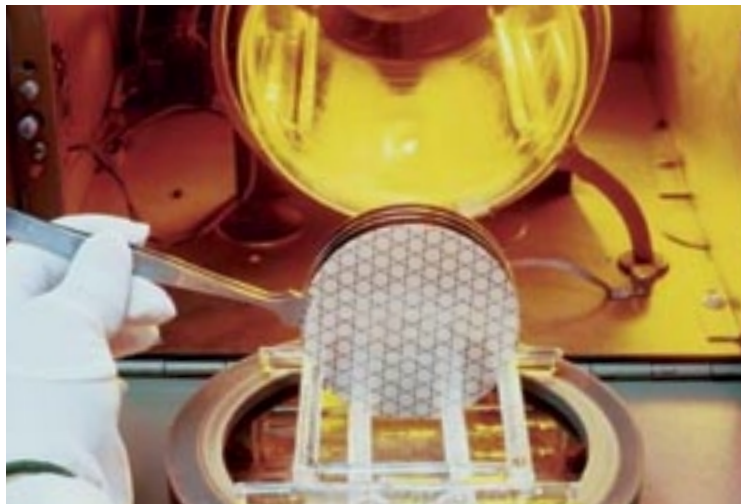
Edge-Welded Bellows Applications

In the semiconductor and the liquid crystal industries, Simrit has a respected reputation for supplying clean, dependable products. Our edge-welded metal bellows for semiconductor applications have demonstrated exceptional longevity, allowing increased productivity.

Edge-Welded Bellows Applications

- Chamber bellows
- Heater bellows
- Lift bellows

- Lift pin bellows
- Rotating shaft seals
- Slit valve bellows
- Solenoid valve
- Susceptor bellows
- Vacuum valve
- Valve stem
- Weldment bellows





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