Worldwide — Where You Need Us.

Products That Perform

Parker Hannifin’s Seal Group is a leader in the design and manufacture of high performance sealing devices for the semiconductor processing industry.

From a single and simple latex mold to ultra-pure perfluorinated elastomers, to thermoset and thermoplastic materials, we offer a complete line of components and systems for use in physical and chemical vapor deposition (PVD, CVD), etching, striping, cleaning, sputtering, ion implantation and chemical-mechanical planarization (CMP) processes, among others.

Best of all, every product we manufacture is engineered to improve your equipment performance and productivity.

Experience and Innovation

At Parker, we’re uniquely qualified to answer your semiconductor sealing needs.

Some of the very first equipment manufacturers turned to us for help when they needed seals to withstand the aggressive acids, gases, temperatures and pressures of this evolving industry. And we’ve been helping ever since, developing unique sealing products and formulations to keep pace— and even anticipate— changing process technologies in fabs all over the world.

Our 50 years of experience, coupled with a strong commitment to research and development, make us your best resource for quality semiconductor sealing materials, products and support.

For more information about products, international locations:

Call: 1-800-C-PARKER
E-mail: c-parker@parker.com
Visit: www.parkerseals.com

Parker Hannifin Corporation
14300 Alton Parkway
Irvine, CA 92618
Phone: (949) 833-3000
Fax: (949) 851-3799
Worldwide — Where You Need Us.

Products That Perform

Parker Hannifin’s Seal Group is a leader in the design and manufacture of high performance sealing devices for the semiconductor processing industry. From o-rings and composite seals made with ultra-pure perfluorinated elastomers, to thermoplastics, extruded profiles and beyond, we offer a complete line of components and systems for use in physical and chemical vapor deposition (PVD, CVD), diffusion, etching, stripping, cleaning, ashing, ion implant and chemical-mechanical planarization (CMP) processes, among others.

Best of all, every product we manufacture is engineered to improve your equipment performance and productivity.

Experience and Innovation

At Parker, we’re uniquely qualified to answer your semiconductor sealing needs. Some of the very first equipment manufacturers turned to us for help when they needed to seal the aggressive fluids, gases, temperatures and pressures of this evolving industry. And we’ve been helping move equipment up to date and improve existing sealing products and formulations to keep pace with—and even anticipate—changing process technologies in fabs all over the world.

Our 50 years of experience, coupled with a strong commitment to research and development, make us your best resource for quality semiconductor sealing materials, products and support.
For critical semiconductor processing environments, have you considered the use of Parker’s Ultra-Performance® Ando Standards. These products are manufactured using a hot isostatic pressing process to ensure strength at the weld joint.

**Centering Rings**, or **DF-Style** ferrule seals, consist of an inner crimping helix to the inside or outside diameter of an aluminum or stainless steel ring. Available in standard ISO sizes, these rings are ideal for use in the specially mandrel. Technical service to semiconductor equipment manufacturers.

**Custom Engineered-Seals**, in a virtually infinite range of shapes and sizes, are used in semiconductor applications too complex or unique for standard products. These seals can be designed to work with an individual components in a system, or in combination with our other sealing products to improve process reliability and productivity.

**Quality Products – And More.**

We know that your business depends on sealing products of exceptional quality and reliability.

That’s why our critical semiconductor seal production (Parofluor, Parofluor Ultra and Fusedsilicone elastomers) begins right at the entrance to Parofluor’s factory high (UHF) work cells, where every step is closely monitored for high-aspect ratio chemical vapor deposition process control.

All of Parker’s American facilities are certified to ISO 14001:2004 standards and Parofluor products are manufactured to the highest available anywhere. Standard or custom, Parker can manufacture and deliver the components you need to keep your processing equipment running safely, reliably and profitably.

**Beyond Sealing ...**

In addition to our broad range of sealing products, we produce a complete line of thermal and electrically conductive pads materials. These products are utilized in a variety of semiconductor processes, and are manufactured in rigid (grip) and soft (rubber) surface finish requirements.

Component or in situ (California) environments of high purity and low electrical conductivity are designed to perform under extreme conditions, such as the use of solderless joints. Conductive seals, however, are not considered low total heat leakage and are typically used in semiconductor applications for improved reliability and performance.

**Thermotrac** Thermotrac can be manufactured in a variety of silicones and fluorocarbons to meet all of your thermal management needs. These materials can be used to provide a direct thermal interface between critical components.

**THERMO-LLO®** Parofluor ULTRA, a selection of next-generation Advanced Perfluorinated Elastomers, offers our customers an unprecedented level of performance and reliability. Parofluor ULTRA, a selection of next-generation Advanced Perfluorinated Elastomers, represents the highest level of performance.

When you choose Parofluor, you get these benefits included, plus an extra level of support and service that includes applications engineering services, advanced Finite Element Analysis (FEA) seal design and initial at the art testing facilities, where we can help you quantify your needs — and solve your sealing problems.
Parker offers the widest selection of sealants for sealing products and materials available anywhere. Whether you need materials to durably and reliably perform in any condition, or unusual applications, we can manufacture and deliver the components you need to keep your processing equipment running safely, reliably and profitably.

**High-Performance O-Rings**

Both static and dynamic sealing solutions for hydraulics, pneumatics and vacuum devices used in the fabrication of semiconductors. These coverings are available in all ASME steel sizes, as well as a wide range of internal and external diameters. Parker O-Rings can be installed in a wide range of elastomer compounds from basic resin to special performance materials such as Parofluor® said Parofluor ULTRA. Parker O-Rings solve critical application problems, increase performance between today’s (AFPE) improve process reliability and allow greater predictability for maintenance intervals. For applications that do not require the unique properties of Parofluor, we also offer rings in a variety of other elastomer compounds, including Fluiderm, Hyflon,® silicones, Teflon® et al.

**Thermoset Resistors**

For critical semiconductor applications, we make high-quality elastomer compounds that are designed to have high tensile strengths, modulus, and 2% modulus retention at increased heat to DIN (1387) and 100°C critical in a broad range of silicone.

**End Effects**

End effects, used in the transfer of waves between processes of the type, are found in sealers, water, and ceramic production. These sealers and fluid systems are ideal for use in applications where high heat resistance is required. They take advantage of a wide variety of elastomers for application requirements.

**THERMATTACH® Adhesive**

For critical semiconductor applications, we make high-quality elastomer compounds that are designed to have high tensile strengths, modulus, and 2% modulus retention at increased heat to DIN (1387) and 100°C critical in a broad range of silicone.

**End Effects**

End effects, used in the transfer of waves between processes of the type, are found in sealers, water, and ceramic production. These sealers and fluid systems are ideal for use in applications where high heat resistance is required. They take advantage of a wide variety of elastomers for application requirements.

**Parofluor Fluoropolymer Elastomers**

Parofluors are designed to have high tensile strengths, modulus, and 2% modulus retention at increased heat to DIN (1387) and 100°C critical in a broad range of silicone.

**End Effects**

End effects, used in the transfer of waves between processes of the type, are found in sealers, water, and ceramic production. These sealers and fluid systems are ideal for use in applications where high heat resistance is required. They take advantage of a wide variety of elastomers for application requirements.
Worldwide — Where You Need Us.

Engineered Sealing Solutions for Semiconductor Processing
Catalog PSG 5020/USA

For more information about products, international locations:
Call: 1-800-C-PARKER
E-mail: c-parker@parker.com
Visit: www.parkerseals.com

Products That Perform
Parker Hannifin's Seal Group is a leader in the design and manufacture of high performance sealing devices for the semiconductor processing industry.

From a single, composite seal made with ultra-pure perfluorinated elastomers, to high-temperature, metal bellows seals and bellows-to-rotor seals, we offer a complete line of components and systems for use in physical and chemical vapor deposition (PVD, CVD) oxidation, etching, stripping, cleaning, ashing and in-situ and ex-situ mechanical-partialization (CSMP) processes, among others.

Best of all, every product we manufacture is engineered to improve your equipment performance and productivity.

Experience and Innovation
At Parker, we're uniquely qualified to answer your semiconductor sealing needs.

Some of the very first equipment manufacturers turned to us for help when they needed to seal the aggressive fluids, gases, temperatures and pressures of this evolving industry. And we've been helping ever since, developing improved sealing products and formulations to keep pace with—and even anticipate—changing process technologies in fabs all over the world.

Our 50 years of experience, coupled with a strong commitment to research and development, make us your best resource for quality semiconductor sealing materials, products and support.