

Engineering
Quality
Supply Chain
Assembly
Aftermarket & Production Kitting
Vendor Managed Inventory

SWIFTSEAL™

Rapid Turn Capabilities

Wipers
Piston Seals
Rod Seals
Radial Shaft Seals
Guide Rings
Backup Rings
Gaskets



**ENGINEERED
SEAL PRODUCTS®**
100% Employee-Owned

espint.com | 319.393.4310

SwiftSeal™ Advantages

Custom Options Based On Your Print

Some complex applications with special operating conditions require customized sealing solutions with individual sizes and design. This makes a precise match to the respective application possible. A tailor-made seal can be produced by modifying a standard profile.

Extensive Selction of Profiles & Materials

With ESP SwiftSeal you'll have a wide variety recognized rubber compounds to meet the critical demands and varying applications. Whether our own, or solutions from our supplier partners, we have the expertise to match the crititcal demands of your applicaiton.

Short Lead Time & Cost-Effective

ESP SwiftSeal offers economic and fast production of prototypes, small runs, and repair parts without the need for costly and time-consuming tooling production.

Engineering Review

Our engineering experts support you with market, application, material and product expertise. From simple profile and material selection to alternative designs, you'll receive best-fit solutions for every application.

MAX Diameter

19½" (500 mm)



MATERIALS



	Temperature Range (Recommended)	Hardness (Shore A)	Color	FDA	NSF 51	NSF 61	3A
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NBR	-34°F to +212°F	40 to 90	Black	•			•
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Nitrile Buna-N (NBR) is one of the most common and widely used sealing materials because of its excellent sealing and mechanical properties at a low cost. Nitrile offers excellent tensile strength, abrasion resistance, tear resistance, and compression resistance. Optimal environments include petroleum oils and fuels, silicone oils and greases, propane, ethylene glycol, butane, vegetable, mineral oils and greases, dilute acids, and water and steam applications (below 212°F).

AU	-40°F to +180°F	40 to 90	Natural	•			
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Urethane, polyurethane (AU) is produced by the poly addition reaction of a polyisocyanate with a polyol in the presence of a catalyst. AU has excellent wear resistance, high tensile strength, tear strength, extrusion resistance and elasticity in comparison with any other material. Can be used with propane, butane, mineral oil and grease, silicone oil and grease.

EPDM	-70°F to +300°F	40 to 95	Black	•	•	•	•
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Ethylene propylene can be used in water and steam (up to 300°F), glycol based brake fluids, silicone-based break fluids, many organic and inorganic acids, cleaning agents, sodium and potassium alkalis, phosphate ester based hydraulic fluids, silicone oil and grease, alcohols, ketones, esters and ozone. Not compatible with mineral oil products like oils, greases and fuels.

FKM, Viton®	-15°F to +400°F	55 to 90	Black	•			
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Fluorocarbon (FKM) offers excellent resistance to chemicals, oil, ozone and sunlight with a higher temperature range than nitrile, AFLAS, EPDM and some of the common industrial materials with an operating range up to 400° F. Can be used in petroleum oils and fuel, non flammable hydraulic fuels, acids, aircraft engine applications, synthetic hydraulic fluids, organic solvents, mineral and vegetable oil and grease, aliphatic hydrocarbons (butane, propane, natural gas), hard vacuum applications, silicone oils and greases, solvents and water or steam (up to 400°F).

VMQ	-65°F to +400°F	20 to 80	Rust	•			
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Silicone (VMQ) elastomer is made from silicone, oxygen, hydrogen and carbon. Silicones are used in the medical and food industry because they do not have any odor or taste. VMQ is resistant to oxygen, ozone, UV light, mineral and vegetable oils, diluted salt solutions, engine and transmission oil, brake fluids (non petroleum base), fire resistant hydraulic fluid, high molecular weight chlorinated aromatic hydrocarbons. Good flexibility and compression set.

PTFE, AFLAS®	+15°F to +450°F	60 to 90	Black	•			
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PTFE has excellent resistance to ozone and weathering along with a wide range of chemicals, including acid, base, and steam. A reliable choice for applications that work in tough environments. Applications include Automotive engine coolants, motor oils, some brake fluids, and steering fluids; food and pharmaceutical applications, wide temperature range.

TPE	-22°F to +500°F	20 to 95	White	•			
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TPE is a true thermoplastic, which does not require vulcanization or curing. TPE exhibits high elasticity of thermoset vulcanized rubber at room temperature and good processability of thermoplastic at high temperature. TPE is naturally chemical resistant and can be made flame retardant as well. TPE is also eco-friendly, cost effective, and has melt properties.

POM (Plastics)	-121°F to +185°F	80 to 95	Natural	•	•	•	•
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POM plastic is a semi-crystalline thermoplastic used in precision parts that require high stiffness, low friction, and excellent dimensional stability. POM has high mechanical strength and rigidity, and is available in food-grade formulations that meet FDA, USDA, NSF, Canada AG, and 3-A Dairy material standards.

PISTON SEALS

Piston seals are highly functional and long-lasting. Depending on the application, they can be single-acting or double-acting, and come in three types: lip rings, piston sealing sets, and compact piston sealing systems.

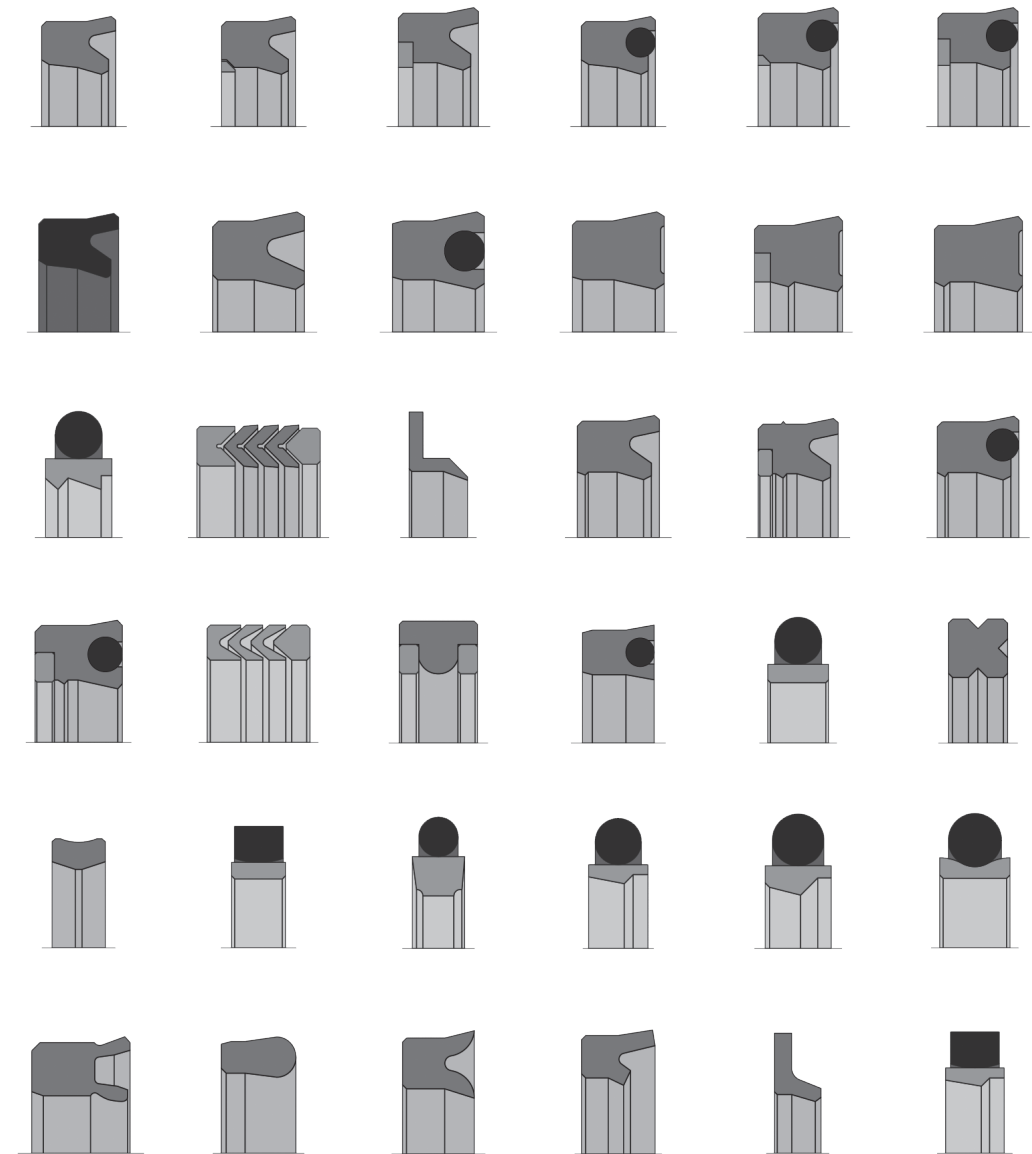


CUSTOM OPTIONS

Some complex applications with special operating conditions require customized sealing solutions with individual sizes and design. A tailor-made seal can be produced by modifying a standard profile. A sample or drawing is enough to develop a seal according to your individual needs.

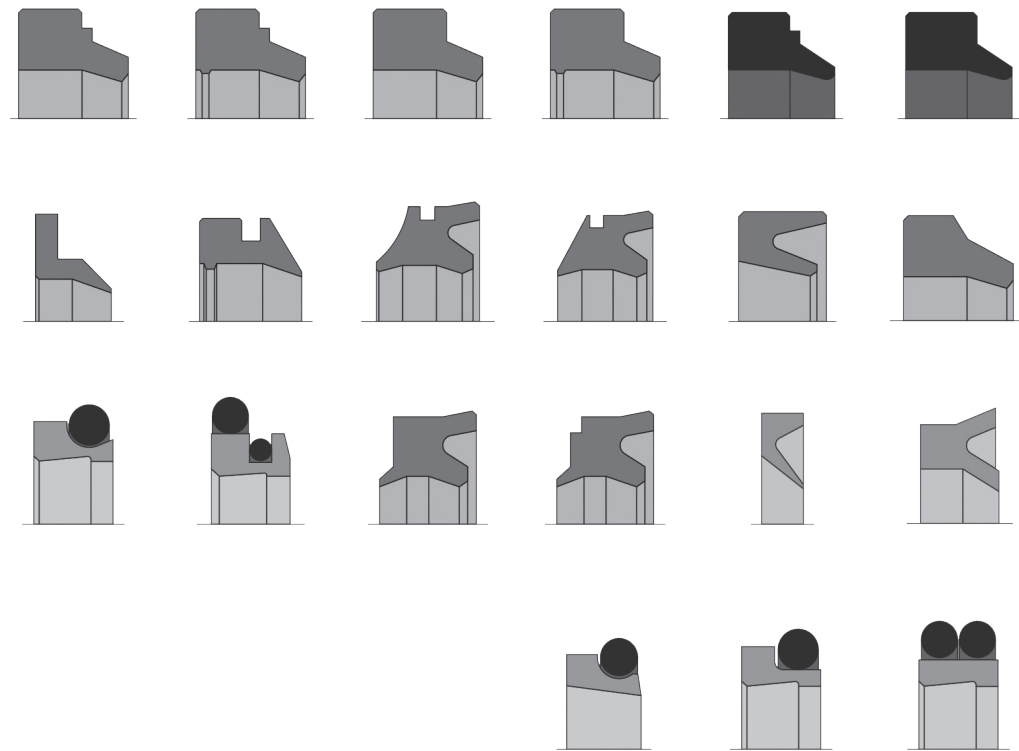
ROD SEALS

Rod seals are highly efficient and long-lasting. They consist of rod seals and upstream seals, which can be designed as one-piece u-cups or lip seals, or as multi-part compact sealing systems made from low-friction high-tech material grades. The design of the rod seal system depends on the specific application.



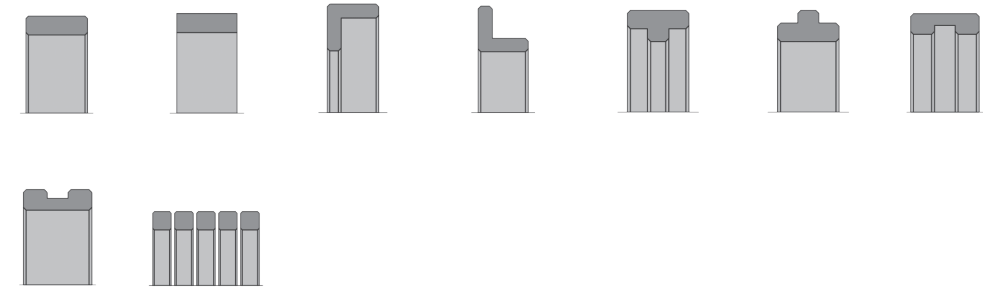
WIPERS

Wipers ensure optimal wiping of the piston rod in both dynamic and static conditions, significantly contributing to the cylinder's long service life.



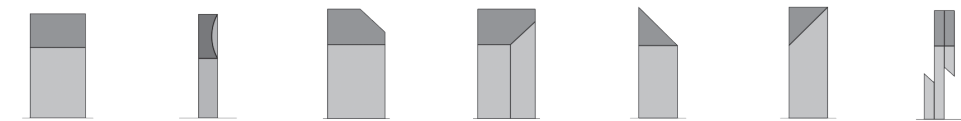
GUIDE RINGS

ESP manufactures wear bands in a variety of high-tech materials, primarily in straight or inclined slotted form. Straight wear bands are easy to mount, while inclined wear bands prevent drag flow pressure. These wear bands significantly lengthen the functional and operational reliability of the cylinder.

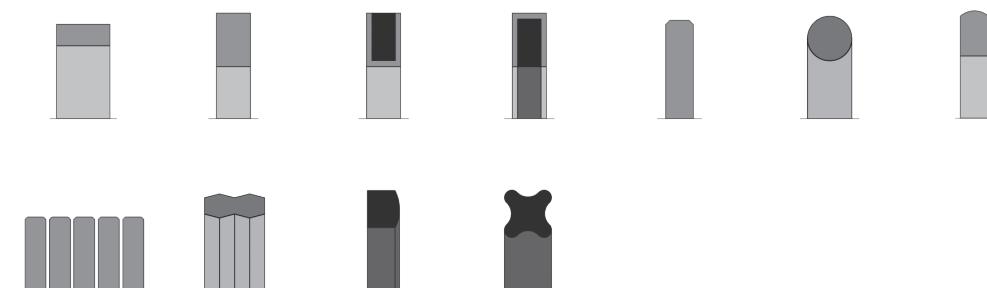


BACKUP RINGS

Backup rings are typically made of hard thermoplastics and are used to bridge large extrusion gaps in seals. They can withstand higher operating pressures, pressure peaks, and temperatures, even with rapid linear movements, when combined with an elastomeric sealing element. They are also available in slotted form for easier assembly.



STATIC SEALS

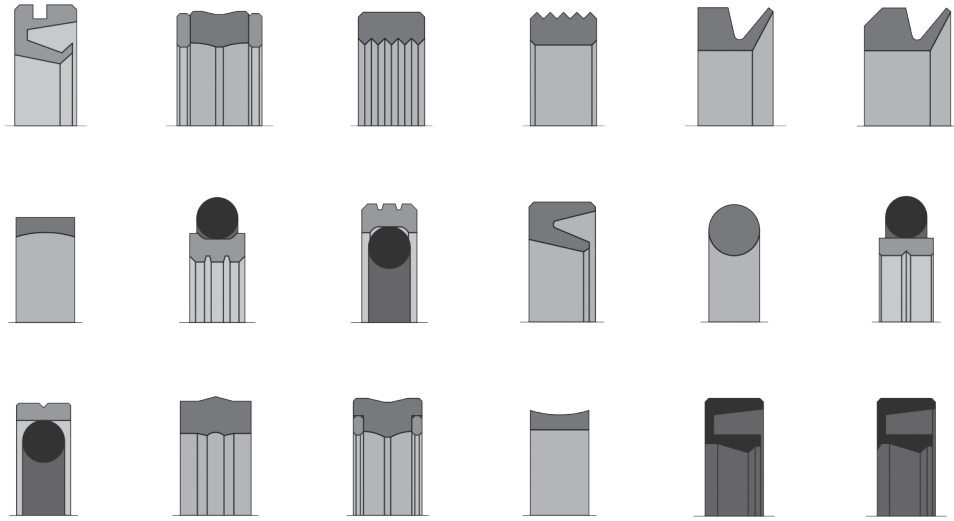


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RADIAL SHAFT SEALS

Radial shaft seals are one of the most common seals used in machine elements. They are seated between two opposing machine parts, one of which rotates and the other is stationary. The criteria for a rotor seal include the circumferential speed of the shaft to be achieved during operation, freedom from leakage in the case of oil seals, compressive strength, and high chemical and thermal resistance. These criteria can be met by special sealing profiles made of high-tech sealing materials that are tailored to the application.



CUSTOM OPTIONS

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