Aerospace Sealing Solutions

The Parker Seal Group develops and manufactures rubber, plastic, metal and composite seals and sealing systems for airframes, engines, wheels and brakes, fuel systems, flight controls, landing gear, bleed air management and ducting systems, auxiliary power units, space shuttle solid rocket boosters, space shuttle fuel cells and waveguides.

The Sealing Environment
- Aggressive chemicals, including hydraulic fluids, jet fuels, engine lubricants, and solvents/degreasers
- Temperatures to 320 °C (608 °F)
- Diameters to 396 cm (13 feet)
- High and low pressures ranging from 1,380 bar (20,000 psi) to vacuum
- High frequency oscillations
- Dynamic, static, and rotary applications
- Thrust, propulsion, and g-forces
- Weightlessness
- The continual threat of fire and explosion

It’s a Numbers Game
AS9100, BQMS/D1-9000, AMS 7257C, ISO 9001, ISO/IEC 17025, EN 9100 ... aerospace quality certifications and accreditation are as numerous as the opportunities for critical events in this most demanding industry. Which is why Parker works hard to get it right, right from the beginning. Our team of application experts can help you find the most reliable, cost-effective sealing solution. Using finite element analysis software our engineers can simulate performance of the proposed sealing systems, eliminating costly prototype tooling and dramatically reducing development lead times. World-class test labs allow us to check your products for compliance and evaluate seal performance under a wide variety of conditions.
Gask-O-Seals® and Integral Seals® for access doors can be used in areas that require containment of fuel, mechanical, or electronic systems. The seals are ideal for quick, easy, and precise installation on the assembly line or in the field and draw on Parker’s over 50 years of experience in bonding and sealing technology developed expressly for the military and aerospace industries. 

Bulletin CSS 5107-USA
(Access Doors / Seals for Retrofit)

EnerRing® metal seals have been developed especially for extreme applications. Parker metal seals are ideal for high-pressure, high-temperature, harsh-chemicals and vacuum applications. High-temperature-resistant metal seals, so-called “E-rings”, for example are used at locations where different degrees of thermal expansion result in flange movements. The rings withstand temperatures of up to +800 °C. A special surface coating prolongs their service life. 

Brochure PDE 3012 GB (EnerRings®)

Spring-energised PTFE seals – FlexiSeals® – are used in aircraft air systems. Here, the hot, high-pressure bleed air from the compressor stage of the engines is conducted into the air conditioning packs. The seals have to withstand temperatures of up to 260 °C.

Brochure PDE 3016 GB (FlexiSeals®)

O-rings are used in aircraft fuel and hydraulic systems, turbine engines, control systems and other applications where special safety, technical and quality requirements must be met. Our O-ring materials are approved for international specifications like MIL, MS, AMS, AN, AS, BS, NSA, DTD, WL and other standards. Tooling is available for dimensions according to AS568A / DIN 3771 / ISO3601 (2-xxx), MS33656/657 (3-xxx) and non-standard sizes (5-xxx). 

Catalog ODE 5712 GB (O-Ring Guide)