

Bio-Guardian® inflatable seals

The most effective technique for sealing between surfaces which move in relation to one another is the Bio-guardian® pneumatic seal. Bio-guardian® seals expand and retract to provide a secure, reliable seal that can hold, position, or handle objects in a wide range of applications.

As a result of this patented design, modern manufacturing techniques, and the most advanced elastomers, Bio-guardian® seals can be used in a multitude of sealing, handling and holding applications.

Bio-guardian® seals withstand temperatures from -100°C (-148°F) to +250°C (+482°F) and pressures from 0.5 to 10.4 bar (7 to 150 psi) in a variety of liquid or gaseous media.

Manufacturing

Bio-guardian® pneumatic seals are either moulded or manufactured from extruded profiles that are joined together by a moulded joint. The moulded joint ensures uniform wall thickness while restricting stress at the joint, and provides substantial flexibility. The HP and LP are the standard profiles: however, other profiles and elastomers are available for special sealing, locking, gripping, and handling applications.

Operation

Bio-guardian® seals are homogeneous elastomeric seals with a high modulus of elasticity and considerable tensile strength. The seals are designed to be fitted into grooves and are restricted to low pressures to prevent bursting. They expand and retract with the pressurization and deflation of the seal within a groove. The exact groove and gap dimensions are **critical** in designing and producing the correct seal for your application.

Bio-Guardian®

Microbial protection is a must in the medical, pharmaceutical, food and beverage process industry. Avoiding bacteriological and microbial growth on equipment and materials by means of smooth and protected surfaces is a major step forward. To meet this high level of protection Garlock has developed a new elastomer Bio-Guardian® which formulation prevents the development of bacteria and micro-bio-film. Garlock offers the Bio-Guardian® elastomeric compound in extruded profiles, moulded parts and Cefil'air inflatable seals.

The Bio-Guardian® concept

is based on a silver anti-microbial technology. Bio-Guardian® prevents biofilm generation and eliminates micro organism of the surface of the rubber parts.

Conventional rubber elements

Micro-organism at untreated rubber parts promote undesired bacteria throughout the equipment. Undesired effects, eg. foul smell, discoloration and corrosion up to formation of mildew, slime mould occur, thus leading to early damage and destruction.

Bio-Guardian® elements

With a specific technology using silver ions throughout the entire rubber section, the Bio-Guardian® inhibits and blocks any growth of micro-organism.



World premiere

Extruded Silicone Profiles

Inflatable Cefil'air® Seals

Endless Tubular Seals

Moulded Parts

Microbes

Biofilm

Silver

