



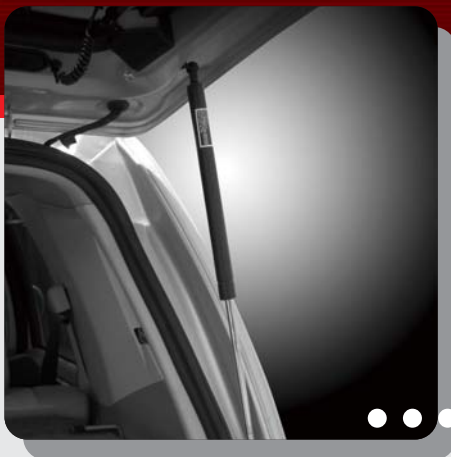
ISO-9001/14001
ISO/TS-16949
OHSAS-18001

Product Information

Shock Absorber & Gas Spring Seals

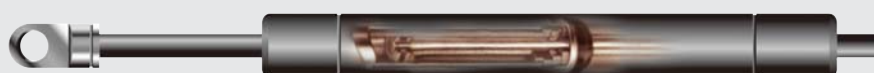
NAK Shock Absorber Seals

are specialty oil seals for use in the automotive shock absorber with double functions, to prevent the leakage of the dampening fluid / gas and to seal against external contaminants during the reciprocating motion of the shaft, which are critical requirements for the shock absorber in regard to its function and service life. The semicircular design of the secondary lip also helps reduce friction in addition to leakage prevention.



Gas Spring Seals

NAK Gas Spring Seals are also designed to prevent leakage of the dampening gas and to seal against external contaminants. Gas Spring Seals designed by NAK can work well for either the compression type of gas spring or the extension type with superior sealing capability.





Product Description

NAK Shock Absorber & Gas Spring Seals not only offer excellent sealing capability but also exhibit low friction and low temperature capabilities. NAK designs and manufactures seals in this category for automotive, motorcycle, bicycle, and many other industrial applications.



In designing shock absorbers and gas spring seals, NAK offers a wealth of expertise, product knowledge and know-how in this critical area of design application. Working with skilled application engineers, the most appropriate solution will be determined through examination of critical performance criteria related to:

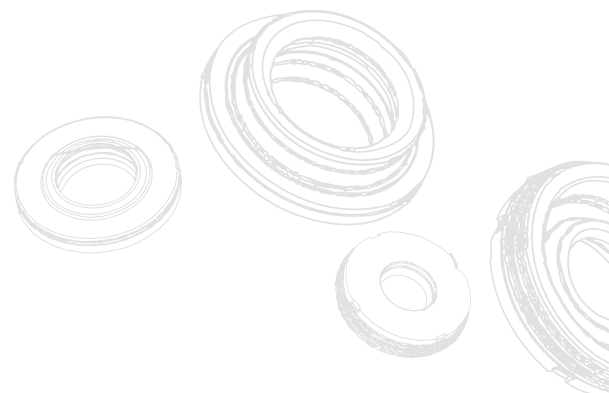
/ Friction / Service Life / Wear / Side Load / Extrusion/ Economy

Characteristics

- Resistant to high and low temperatures
- Resistant to high pressures
- Work well under high surface velocity
- Resistant to shock absorber & gas spring fluid / gas

Typical Types

- NAK TC4S Series Shock Absorber Seal
- NAK DC4S Series Shock Absorber Seal
- NAK AS Series Shock Absorber Seal
- NAK VCY / VGY Series Gas Spring Seal





Technical Information

NAK Deploys Specialty Testing Equipment for Automotive Shock Absorber Seals!!



NAK Shock Absorber Seals are developed through critical design considerations and quality requirements following international automotive standards. In the design and development of the shock absorber seal, proper testing done by qualified equipment with strict parametric controls is essential and can have a decisive impact.

In conducting the testing of shock absorber seals, NAK deploys special testing rig that stands to simulate the influential factors having an effect on shock absorbers during operational stress. The installed shock absorber is excited with several superimposed frequencies. Thereby the behavior of the seals may be investigated for the duration of the running time demanded by the customer.

In addition to special testing rig, NAK also employs dynamic testing rig to investigate the dynamic properties of shock absorber seals through the simulation of original conditions. To support our customers testing needs in different applications, NAK can conduct a variety of dynamic testing such as service life, friction, pressure, oil temperature, stroke length, rod velocity, and damper force of the shock absorber seals.



Application

NAK in Partnership with International Automotive Tier 2 Manufacturers for the Development of Shock Absorber & Gas Spring Seals!!



Disclaimer

1. NAK product is prohibited to use, install or apply in or on any aerospace related instrument and equipment.
2. NAK has no liability under any express or implied Warranty if NAK Product:
 - is modified or tampered;
 - is misused, abused or misapplied;
 - is used in a critical environment or specific equipment without NAK prior written acknowledgement;
 - is not used in accordance with the printed user instruction materials
 - is damaged owing to natural deterioration, decomposition or transformation of chemical structure
3. If NAK's product to be applied in critical environment or specific equipment, it is only allowed to launch into mass production when the sample has been passed the testing conducted by the user.

NAK has a strong and dedicated R&D team. Through years we have acquired approvals from many international automotive tier 2 manufacturers of shock absorbers and gas springs. Our seals are being installed in high-quality shock absorbers and gas springs in the world.

In addition to American and European markets, in recent years NAK has entered into partnership with the automotive tier 2 manufacturers of shock absorbers and gas springs in the "BRIC" countries.

Our project in Brazil includes development of specially engineered compounds to meet the customer's diverse requirements because the customer's products are being used worldwide.

In Russia where weather condition is extreme and temperature constantly goes down to minus degrees, we offer shock absorber seals and gas spring seals made of specialty rubber that has excellent low temperature capability.

In India as the road condition and traffic can often be challenging to the vehicle especially the suspension system and shock absorbers, NAK seals have proved to be superior both in terms of function and long life.

In China NAK shock absorber seals are being used in many well-known Japanese motorcycles.

In addition to the BRIC's, NAK is also in partnership with customers in many other countries to develop and supply shock absorber and gas spring seals.



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