Product Name: Gas Spring – Lip Seal

Product Description:

Light/Medium Duty

AVM gas springs are custom-engineered and manufactured beyond industry standards to provide smooth operation and durability. The Lip Seals used in our gas springs are ideal for general use and in particular, for high-frequency applications. Gas springs manufactured with lip seals are an industry standard due to the ease of assembly and charging. The downside of a lip seal is that it is susceptible to damage because it only has a single lip containing the gas pressure inside the tube. Often the seal is designed with a wiper to try and prevent debris damaging the seal and in extreme cases manufacturers place a boot or cover over the seal area to increase durability.

Dampening in standard gas springs can be achieved by modifying the oil volume inside the gas spring. For dynamic dampening, see the information of Vmx gas springs.

Temperature plays a big part with gas springs. Output force will increase as the temperature rises and decrease as it drops. Gas springs function by utilizing compressed nitrogen gas to provide the force to extend the shaft via a differential in surface area of the piston. It is these gases that are affected by the temperature changes. In all applications, one must use a gas spring with enough force at the high end of the temperature range.

Also when developing the force required from the gas spring for your application, one should plan on a 1-2 % force loss per year. All gas springs manufactured today will loose some force over time because the gas molecules permeate through the rubber seal material. The amount of force lost depends on a number of factors, and this should be factored into the design to ensure the gas spring still lifts or balances the loads several years down the road.

Technical Details:

Cylinder	Heavy gauge steel body; painted and cured to a glossy finish.
Piston Rod	Chromium-plated or Black Nitride hardened steel, precision-ground and highly polished.
Piston Assembly	Self-cleaning design automatically opens during each compression stroke to keep the piston area free of contaminants. Not offered by all manufacturers.
Sealing System	AVM Lip Seal
Temperature Compensation (optional feature)	This module provides for an increase in the force when the temperature drops below approximately 40 F enabling the use of lower forces at room temperatures to provide easier closing efforts.
Nitrogen Gas Charge	Gas springs are charged with nitrogen most often to 1500 psi, but not more than 2500 psi. It does not react with any of the internal components. The amount of charge varies from 1/3 gram in the smallest springs to about 24 grams in the largest. Nitrogen is inert and is not flammable.

Glycol Fluid	Lubricant for internal components. Also provides dampening to slow down movement of liftgate just prior to full open. This is a high viscosity index synthetic oil with a pour point of -70 F.