

Gas springs, Dampers and Adjustment systems

[Product catalog](#)

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Mechanical Systems

Industry

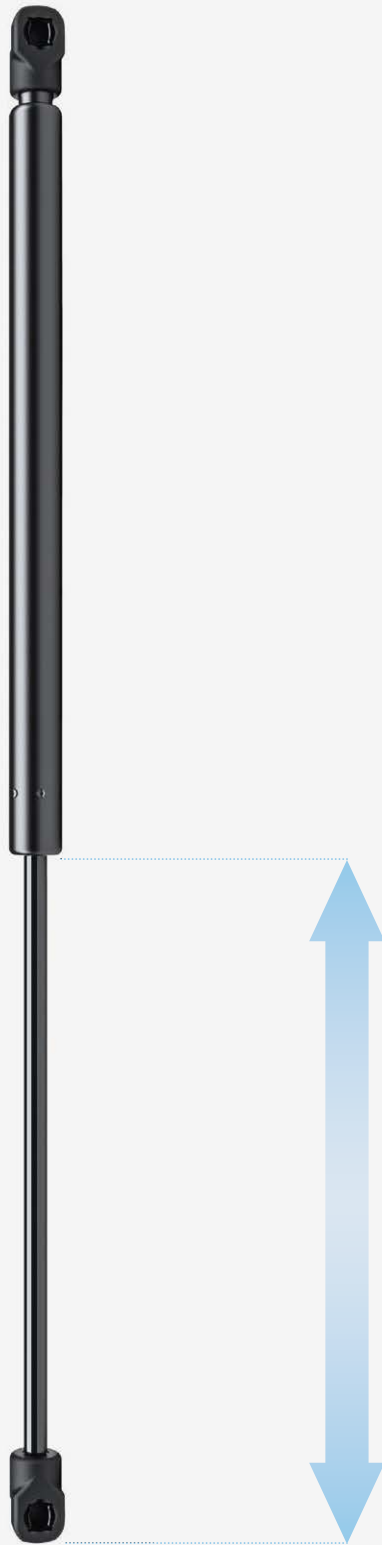
Office

Piston rods + Tubes

Dampers

Lockable Gas springs

Gas springs



Gas spring Liftline (standard program)

Liftline is an excellent gas spring program offered by SUSPA. Successfully proven in the market for decades and always state-of-the-art through constant innovation.

The SUSPA Liftline program includes five basic types: the types 16-12, 16-1, 16-2, 16-4 and 16-6.

The main differences are in the tube and piston rod diameters and the different extension forces. This way, we can meet your specific technical requirements with the optimal gas spring type.

Type	Ø Tube (mm)	Ø Piston rod (mm)	Stroke max. (mm)	Extension force F_1 (N)
16-12*	12	4	150	40 - 180
16-1*	15	6	150	50 - 420
16-2*	18.5	8	250	80 - 750
16-3	22	8	495	100 - 1,200
16-4*	22	10	495	100 - 1,200
16-6*	28	14	500	200 - 2,000

* Standard program, pages 9-13



Configure your individual gas strut at
www.suspa.com/global/configurator

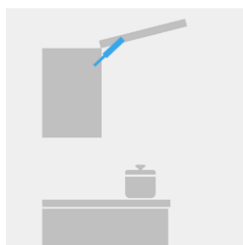
Applications



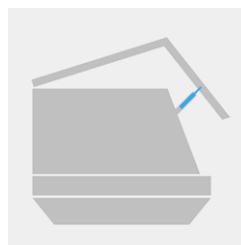
Tailgate



Steering columns



Kitchen cabinet



Machinery lids

Gas spring Liftline

Design and functionality

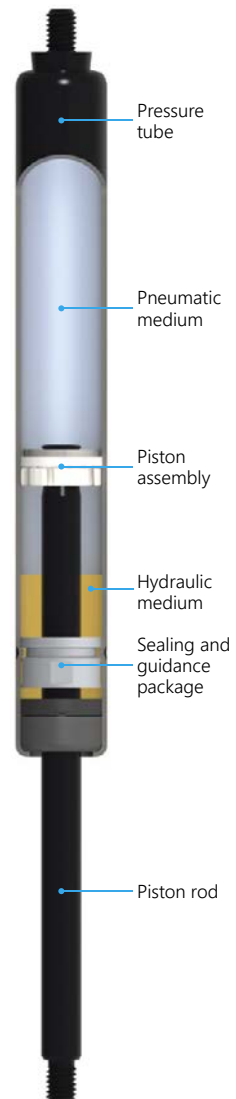
How force and effective cushioning are produced

Gas springs are hydropneumatic adjustment elements. They consist of a pressure tube plus piston rod with piston unit. Connecting elements on the pressure tube and the piston rod allow appropriate connection to your application.

At the core of the SUSPA gas spring is the special seal and guide system. This ensures hermetic sealing of the cavity with low friction, even under extreme environmental conditions.

The gas spring is filled with non-toxic nitrogen at high pressures. This produces a charging pressure that in turn exerts an effect on the cross section of the piston rod, generating the extension force. If the extension force of the gas spring is greater than the force of the counterbalance, the piston rod extends; if the extension force is smaller, it retracts. The speed of the extension is determined by the flow cross section in the damping system.

In addition to nitrogen, the cavity contains a defined quantity of oil for lubrication and end position cushioning. The cushioning effect of a gas spring can be determined depending on the requirements and the task involved.



Spring characteristic

As seen in the graphic, the spring characteristic curve shows the force path of the gas spring over the stroke, from the extended to the retracted state and back. The spring characteristic illustrates the balance of power of F_2/F_1 . For the design of gas springs, the force F_1 is, in addition to the dimensions, the most important criterion.

