

## Important Advice for Installation

The use of easylift® gas springs requires the same knowledge and attention as other technical systems having to do with force development. Though our consultants will thoroughly explain all detailed technical facts pertaining to your application, the facts mentioned below are routine for many of our regular customers.

### 1.

Bansbach gas springs will operate in surrounding temperatures from -30°C to +80°C. We can equip our springs with special seals to withstand temperatures as low as -55°C or as high as +200°C. For applications in low temperature surroundings, a detailed clarification of the requirements is necessary. The surrounding temperature has influence on the gas spring characteristic. Changes of the extension force as well as of the damping characteristics have to be considered and should be tested in advance within the application. Gas springs should not be overheated or put in open fire! Other environmental conditions can also influence the considerable life time of gas springs. Please take appropriate, preventive measures into consideration.

### 2.

Gas springs are filled with pure nitrogen. Nitrogen is an inert gas, which does not burn, will not explode and is not poisonous.

However: Gas springs have very high internal pressure (up to approx. 300 bar).

Do not open without instruction!

### 3.

Disposal/Recycling: Gas springs consist mostly of metal and can be recycled, but first the gas spring must be pressureless.

### 4.

All Bansbach gas springs are labeled with the warning, "Do Not Open – High Pressure," the part number, and the production date. If these dates are illegible (i.e. removed, painted over, or otherwise influenced) we refuse the liability for damages. If any of this information is unreadable, the warranty will be void.

### 5.

Bansbach gas springs can be used generally as a limit stop in both directions. The occurring forces should not exceed the following approximate values. In case of reaching the limit range or a permanent use as limit stop please contact Bansbach easylift.

Series	Max. Force [N]	Series	Max. Force [N]	Series	Max. Force [N]
3/8	600	8/22	5000	12/40	12500
3/10	600	8/28	7000	14/28	7000
4/12	1500	10/22	5500	14/28 Nirostra	6250
6/15	2500	10/22 Nirosta	3000	14/40	15000
6/15 Nirosta	1750	10/28	8500	16/28	10000
6/19	2000	10/28 Nirosta	6500	20/40	15000
8/19	5000	10/40	7000	20/40 Nirosta	20000
8/19 Nirosta	300	10/22 Nirosta	3000	12/28	9250
8/20 Alu	3500	12/28	9250	12/40	12500

This isn't valid for lockable gas springs in push-in direction!

**Attention: The figures refer to the average pressure range of the respective size. Some connectors such as elbow joints may not be suitable for the above values.**

### 6.

Gas springs should be installed with the piston rod downwards. This position ensures the best damping

**14.**

Bansbach gas springs, which mostly consist of parts held in stock, are produced according to customer orders. A cancellation, post-production modification, order change or refusal is therefore not possible.

**15.**

Bansbach gas springs are built and tested for highest requirements and highest reliability. Installation advices as well as our comprehensive advices will help you in choosing your gas springs.

**NOTE: The examination and suitability for the respective application must be executed by the customer/installers!**

Do not use the gas springs in applications that are not suitable or in faulty products. We cannot assume any liability for the function and the lifetime of your final product.

**16.**

Damping characteristics can create vibrations which lead to a resonator within the application and may cause noise. Little changes concerning the installation or the attachments may help to avoid them.

effect. Only Bansbach gas springs include an integrated grease chamber which allows different directions of installation.

**7.**

Gas springs should not be exposed to any tilting or sideforces during operation. If this is unavoidable, please check the installation and use suitable connecting parts.

**8.**

If gas springs are visibly damaged (i.e. broken or deformed connecting parts, bent piston rod, dented cylinder, etc.) due to external causes (accident, collision, extreme overloading, etc.) the pressure of the gas spring **MUST** be released before the spring is dismantled or used. Please note our disposal and recycling instructions!

**9.**

Gas springs are maintenance-free. Do not grease or oil the piston rod.

**10.**

The piston rod must not be painted and should be protected against shocks, scratches and dirt. The cylinder should not be deformed. Such damage will destroy the sealing system.

**11.**

Bansbach gas springs can be stored in any position. Pressure loss through long storage is not to be expected. There are no negative values known, but there may be a sticking effect the first time you compress a spring, which may require a higher expenditure of force the first time (initial breakaway force).

**12.**

Warranty claims expire latest 1 year on date of production. Manufacturing mistakes and/or quality defects are immediately noticeable. If you are unhappy for any reason with the delivered quality, we ask you to return the springs immediately. Your complaint and a copy of the original invoice must be enclosed.

**13.**

If gas springs are sent to us for a detailed examination, the agreement for the demolition of this part is given and the property right expires.

A return delivery of single components is not possible.

If applicable please assign the delivery with e.g. "For functional testing and requesting you to send the parts back".

If there is no objective available, the delivered gas springs will be disposed 1 week after the announcement of the test result.

For unjustified claims, we reserve the right to charge a lump-sum or the actual costs incurred for handling and disposal.

**17.**

You can select your best dimensions yourself, within the mentioned limits. The tolerance for the lengths is generally deemed to be  $\pm 2,5$  mm; in series production, there is a tolerance of max.  $\pm 1$ mm. If very high demands are placed on durability and stability, please avoid the combination of small diameter + long stroke + high force