



# GASAN<sup>®</sup>

Gas Springs

LEADER IN GAS SPRINGS  
MANUFACTURING



# YOUR SOLUTION PRODUCER

## About us

GASAN Gas Spring Co. is a leading manufacturer of high-quality, cost-effective gas springs, providing customized solutions since 2009. Our products are crucial for various global industries, ensuring reliable controlled movement and energy storage.

Located in Bursa, Türkiye, our 20,000 m<sup>2</sup> facility utilizes advanced robotic technology and employs over 200 skilled professionals. With extensive experience in the gas springs sector, a dedicated R&D team, and strong engineering expertise, we achieve a monthly production capacity exceeding one million units. Trusted by customers in over 42 countries, our products are known for precision and reliability in applications including furniture, automotive, industrial equipment, medical devices, and agriculture.

We adhere to ISO 9001, IATF 16949, and European standards in designing, testing, and manufacturing our products. Our dedication to innovation, competitive pricing, and customer satisfaction has established GASAN as a respected global supplier under the "GASAN" and "MG" brands.

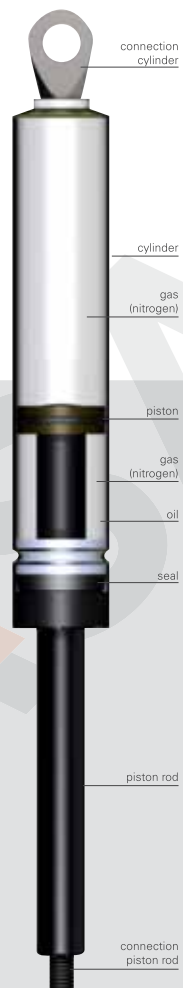
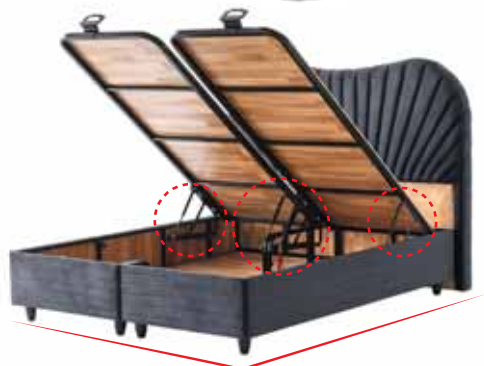
GASAN also prioritizes environmental sustainability by using sustainable raw materials and green energy, including solar panels to generate our energy, contributing to a more eco-friendly world for future generations.





**Lift**

# Lift



## Working Principle

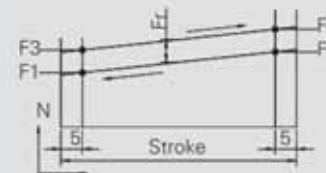
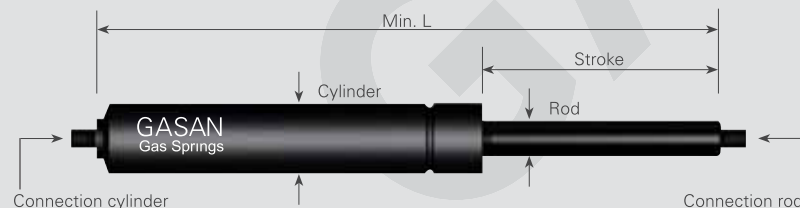
A gas spring is a hydropneumatic adjustment element, consisting of a pressure tube and a piston rod with a specially designed piston. A unique sealing and guide system ensures the tube is sealed. The gas spring is filled with 100% compressed nitrogen. This pressure acts on the cross-sectional area of the piston rod, producing an extension force, which can be adjusted within physical limits. The diameter, number, and length of the cross bores in the piston control the extension speed, while the damping performance of the gas spring can be tailored to specific needs and tasks.

### Materials

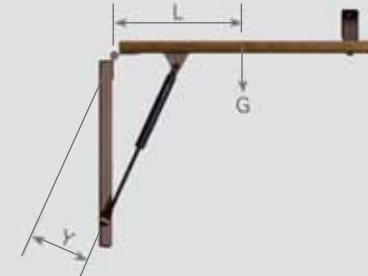
As standard, all cylinders are nano-phosphated and painted black. The piston rods undergo nitriding, resulting in a sleek satin black finish. As a result, all gas springs offer a minimum of 144 hours of corrosion resistance, fully complying with the DIN50021 salt spray test.

Type		0412	0615	0818	1021 - 1022	1428
Force	N	20-200	40-400	50-700	150-1200	200-2500
Stroke	mm	20-120	25-200	30-300	50-500	50-500
Cylinder	mm	12	15	18	21-22	28
Rod	mm	4	6	8	8-10	14
Min. L	mm	2x stroke+25	2x stroke+35	2x stroke+45	2x stroke+50	2x stroke+60

\* All gas springs are available with welded eye lets



Calculating the right gas spring  
for your application



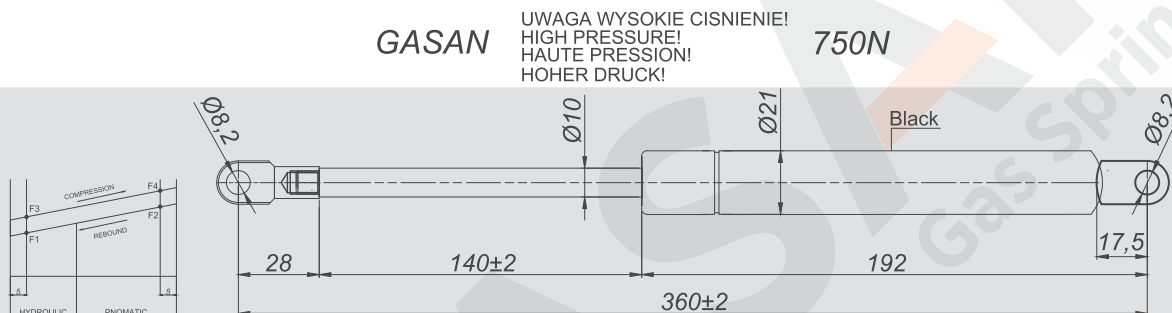
- F1 Force of gas spring
- G Weight of beam
- L Center of gravity
- Y Working arm of gas spring
- Z Quantity of gas springs


$$F1 = \frac{G \times L}{Y \times Z} + 10\%$$

1 Kg = 9,81N

**WARNING:** Due to the high pressure inside the tube, do not open, damage, or modify the gas spring.

- Gasan gas springs are tested with the piston rod facing down.
- The drawing scale is not accurate.
- The piston rod must be protected from damage, dirt, and paint.
- **Operating temperature range:** -30°C to +80°C
- **Paint color:** Black
- Printing colour is WHITE



Reference Number		GASAN				
Drawing Number						
Revision Number		00	Date	Signature	Material	Undefined Tolerances acc. to  ±1
Drawn by					LIFT GAS SPRING	
Designed by						
Approved by						
Scale 2:1	Form A4		1021 L 586002			
MG Code			Customer Code			

F1: 750N  
Damping: 30mm

STATIC	DYNAMIC
X	
F1(N)	750N
Min:	720N
Max:	825N



**Lockable Gas Springs**

# Lockable Gas Springs



## Working Principle

A gas spring is a hydropneumatic adjustment element that consists of a pressure tube and a piston rod with a specially designed piston and valve. A specialized seal and guide system ensure the tube is tightly sealed. The gas spring is filled with 100% compressed nitrogen. This pressure acts on the cross-sectional area of the piston rod, producing an extension force that can be adjusted within physical limits. The diameter, number, and length of the cross bores in the piston control the extension speed, while the damping performance can be tailored to meet specific needs and tasks.

### Materials

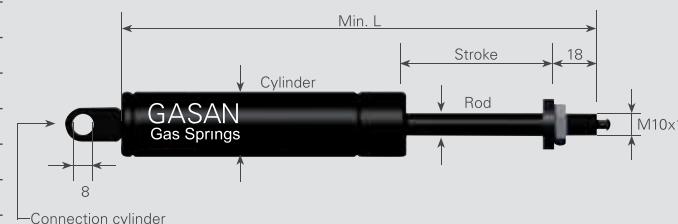
As standard, all cylinders are nano-phosphated and painted black. The piston rods undergo nitriding, resulting in a sleek satin black finish. As a result, all gas springs offer a minimum of 144 hours of corrosion resistance, fully complying with the DIN50021 salt spray test.

### Locking

When the valve in the piston is closed, the gas spring can be locked in any desired position. The rigidity or elasticity of the lock can be adjusted by modifying the oil quantity or by adding a separator piston.

### Elastic

Type		0822 BLE	0828 BLE	1022 BLE	1028 BLE
Force	N	50-700	50-700	80-1200	80-1200
Stroke	mm	10-250	10-250	10-400	10-400
Cylinder	mm	22	28	22	28
Rod	mm	8	8	10	10
Min. L	mm	2x stroke+70	2x stroke+70	2x stroke+70	2x stroke+70
Connection cylinder		Eyelet / M8	Eyelet / M8	Eyelet / M8	Eyelet / M8
Stainless		-	-	Possible	Possible
Locking		Elastic	Elastic	Elastic	Elastic
Locking in compression /		0 /	0 /	0 /	0 /
maximum load	N	6.500	10.000	6.500	10.000
Locking in extension /		0 /	0 /	0 /	0 /
maximum load	N	3.500	7.000	3.500	7.000



# Lockable Gas Springs

## Rigid

Type		0822 BL	0828 BL	1022 BL	1028 BL
Force	N	60-700	60-700	100-1000	100-1000
Stroke	mm	10-250	10-250	10-400	10-400
Cylinder	mm	22	28	22	28
Rod	mm	8	8	10	10
Min. L	mm	2,5x stroke +75	2,5x stroke +75	2,5x stroke + 80	2,5x stroke + 80
Connection cylinder		Eyelet / M8	Eyelet / M8	Eyelet / M8	Eyelet / M8
Stainless		-	-	Possible	Possible
Locking		Extension	Extension	Extension	Extension
Locking in compression / maximum load	N	5,6xF1 / 6.500	9xF1 / 6.500	3,6xF1 / 6.500	5,8xF1 / 10.000
Locking in extension / maximum load	N	2.250 / 2.250	4.500 / 4.500	3.500 / 3.500	7.000 / 7.000

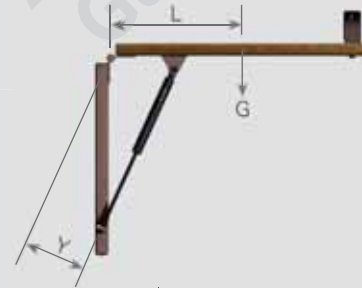
## Rigid

Type		0822 BLC	0828 BLC	1022 BLC	1028 BLC	1028 BL2
Force	N	60-700	60-700	100-1000	100-1000	100-1000
Stroke	mm	10-250	10-250	10-400	10-400	10-400
Cylinder	mm	22	28	22	28	28
Rod	mm	8	8	10	10	10
Min. L	mm	2,7x stroke +75	2,7x stroke +75	2,5x stroke +80	2,5x stroke +80	2,5x stroke +80
Connection cylinder		Eyelet / M8	Eyelet / M8	Eyelet / M8	Eyelet / M8	Eyelet / M8
Stainless		-	-	Possible	Possible	Possible
Locking		Compression	Compression	Compression	Compression	Rigid in both
Locking in compression / maximum load	N	6.400	6.400	10.000	10.000	10.000
Locking in extension / maximum load	N	2,9xF1	5,1xF1	2,6xF1	4,8xF1	10.000

## Elastic

Type		0828 BVLE	1028 BVLE	0828 BVLC	1028 BVLC
Force	N	100-1000	100-1000	100-1000	100-1000
Stroke	mm	10-400	10-400	10-400	10-400
Cylinder	mm	28	28	28	28
Rod	mm	8	10	10	8
Min. L	mm	2x stroke +70	2x stroke +70	2x stroke +70	2x stroke +70
Connection rod		Eyelet / M8	Eyelet / M8	Eyelet / M8	Eyelet / M8
Locking		Elastic	Elastic	Compression	Compression
Locking in compression / maximum load	N	0 / 3.500	0 / 5.000	5.000 / 5.000	2.000 / 2.000
Locking in extension / maximum load	N	0 / 3.500	0 / 5.000	1,5xF1 / 1,5xF1	3xF1 / 3xF1
Mounting position		Rod down	Rod down	Rod down	Rod down
Colour		Standard black	RAL	RAL	RAL

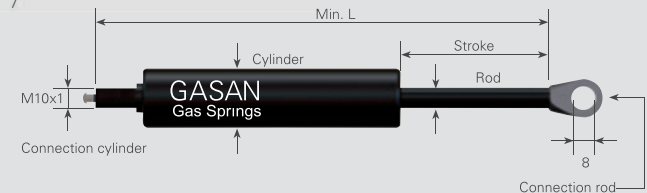
## Calculating the right gas spring for your application



- F1 Force of gas spring
- G Weight of ap
- L Center of gravity
- Y Working arm of gas spring
- Z Quantity of gas springs

$$F1 = \frac{G \times L}{Y \times Z} + 10\%$$

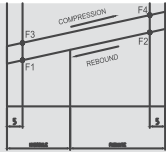
$$1 \text{ Kg} = 9,81 \text{ N}$$



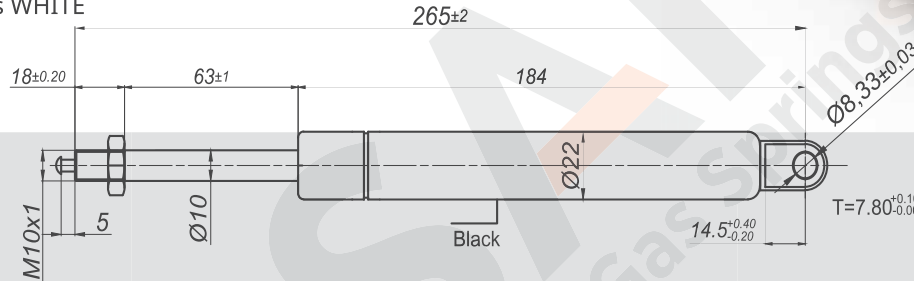
# Lockable Gas Springs

**WARNING:** Due to the high pressure inside the tube, do not open, damage, or modify the gas spring.


- Gasan gas springs are tested with the piston rod facing down.
- The drawing scale is not accurate.
- The piston rod must be protected from damage, dirt, and paint.
- **Operating temperature range:** -30°C to +80°C
- **Paint color:** Black
- Printing colour is WHITE



F1=500N <sup>+50N</sup>/<sub>-25N</sub>



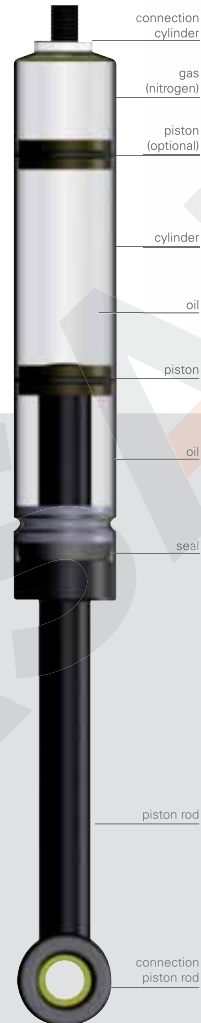
AÇMAYINIZ! YÜKSEK BASINÇ!  
GASAN DO NOT OPEN! HIGH PRESSURE!  
500N xx xx xx 1022 BL 101002

Reference Number / Referans No		GASAN					
Drawing Number / Resim No						1022 BL 101002	
Revision Number / Değişiklik No		04		Date / Tarih	Signature / İmza	Material / Malzeme	Undefined Tolerances acc. to/ Belirtilmeyen Toleranslar
Drawn by / Çizen						LOCKABLE GAS SPRING	
Designed by / Tasarlayan							
Approved by / Onaylayan							
Scale / Ölçek	Form	1022 BL 101002				±0.5	
1:1	A4						
MG Code / MG Kodu				Customer Code / Müsteri Kodu			



**Damper**

# Damper



## Working Principle

The damper is an energy-absorbing device consisting of a pressure tube and a piston rod with a specially designed piston and valve. A seal and guide system ensures the tube is sealed. The damper is filled with oil and/or nitrogen. When the piston rod moves due to external forces, the oil is pushed through the valve(s) in the piston, creating resistance that controls the movement. This resistance can be adjusted to meet the application's needs, whether in the pull or push direction of the piston rod, requiring a specific piston layout.

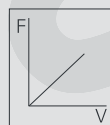
### Forces

Our dampers can also be equipped with an extension force, similar to a gas spring, for specialized purposes. Damper forces are specified as N/mm/second (damp) for a given piston rod speed. Our dampers can be adjusted to have linear, progressive, or degressive characteristics, with custom designs available upon request.

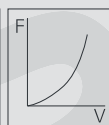
### Materials

As standard, all cylinders are nano-phosphated and painted black. The piston rods undergo nitriding, resulting in a sleek satin black finish. As a result, all gas springs offer a minimum of 144 hours of corrosion resistance, fully complying with the DIN50021 salt spray test.

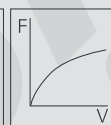
A	B	L	Colour
172	137	309	RAL 9005 black
172	137	309	RAL 9006 alu
116	92	208	RAL 9005 black
116	92	208	RAL 9006 alu
73	48	121	RAL 9005 black
73	48	121	RAL 9006 alu



Linear

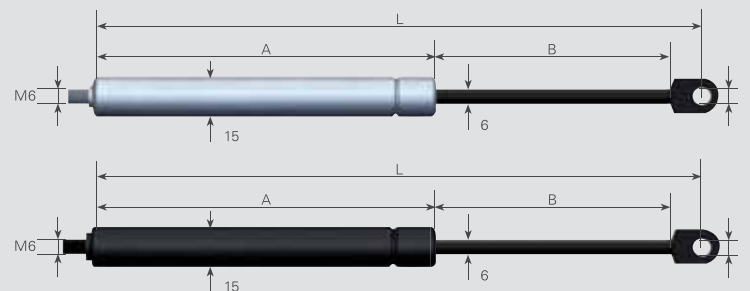
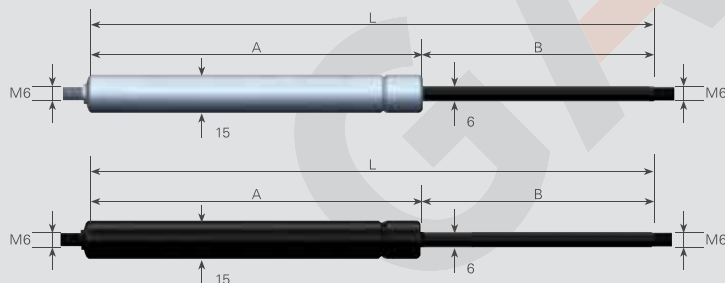


Progressive

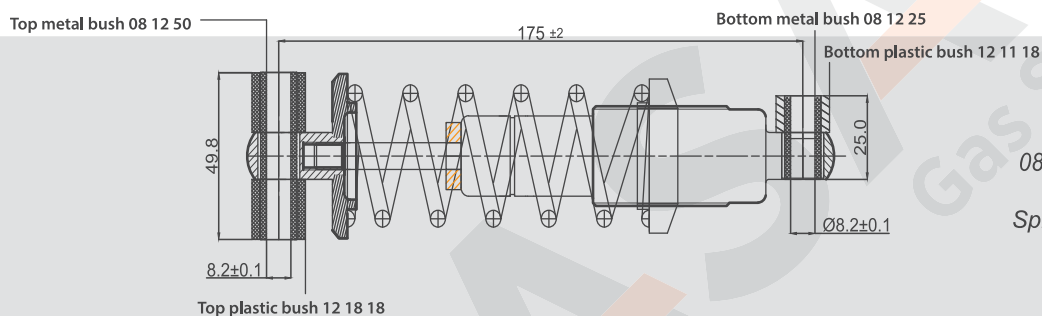
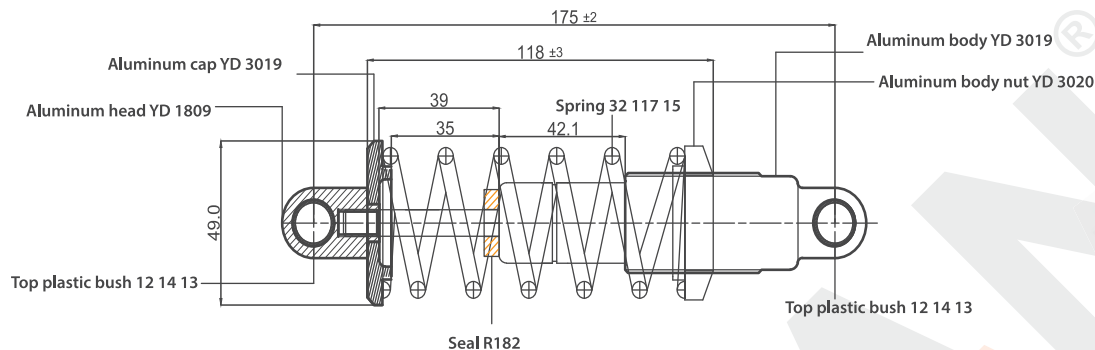


Degressive

A	B	L	Colour
172	142	325	RAL 9005 black
172	142	325	RAL 9006 alu
121	92	224	RAL 9005 black
121	92	224	RAL 9006 alu
78	46	135	RAL 9005 black
78	46	135	RAL 9006 alu




# Damper



0824-D00351750015N01

Spring 15N/mm 32 117 15

Reference Number		GASAN				
Drawing Number						TASLAK00
Revision Number		01	Date	Signature	Material	Undefined Tolerances acc. to  ±0.5
Drawn by				DAMPER		
Designed by						
Approved by						
Scale 2:1	Form A4			0824 SA 504006		
MG Code			Customer Code			

# End Fittings and Release Systems

GCM 6286



GCM 8286



ZM 1367



GDM 30138



GCM 8288



CM 3216



ZM 1633



ZM 1635



GKB 10810



GKB 13815



GDM 30138



GDM 1806



GDM 1808



GDM 1806  
GKB 10810



GKB 10810  
GKB 10810



ZM 1366



CM 24126



24126  
Security clip



3216  
Security clip



ZM 9030  
8 mm



ZMLA -ST  
8 mm (ratio 1:10)



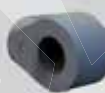
ZM 9090 with handle  
8 mm lever 230mm



GCM 8286



ZM 1633



ZM 1635



GPM 151  
GKB 10810



CM 3216



3216  
Security clip



All cables on request





**GASAN GAZLI AMORTİSÖR LTD. ŞTİ.**

Alaaddinbey Mh. Pazar Cd. No.10/1  
Nilüfer / BURSA / TÜRKİYE 16285



+90 224 494 27 26 - 27

+90 224 494 27 29



info@gasan.com.tr

satis@gasan.com.tr

export@gasan.com.tr

www.gasan.com.tr

