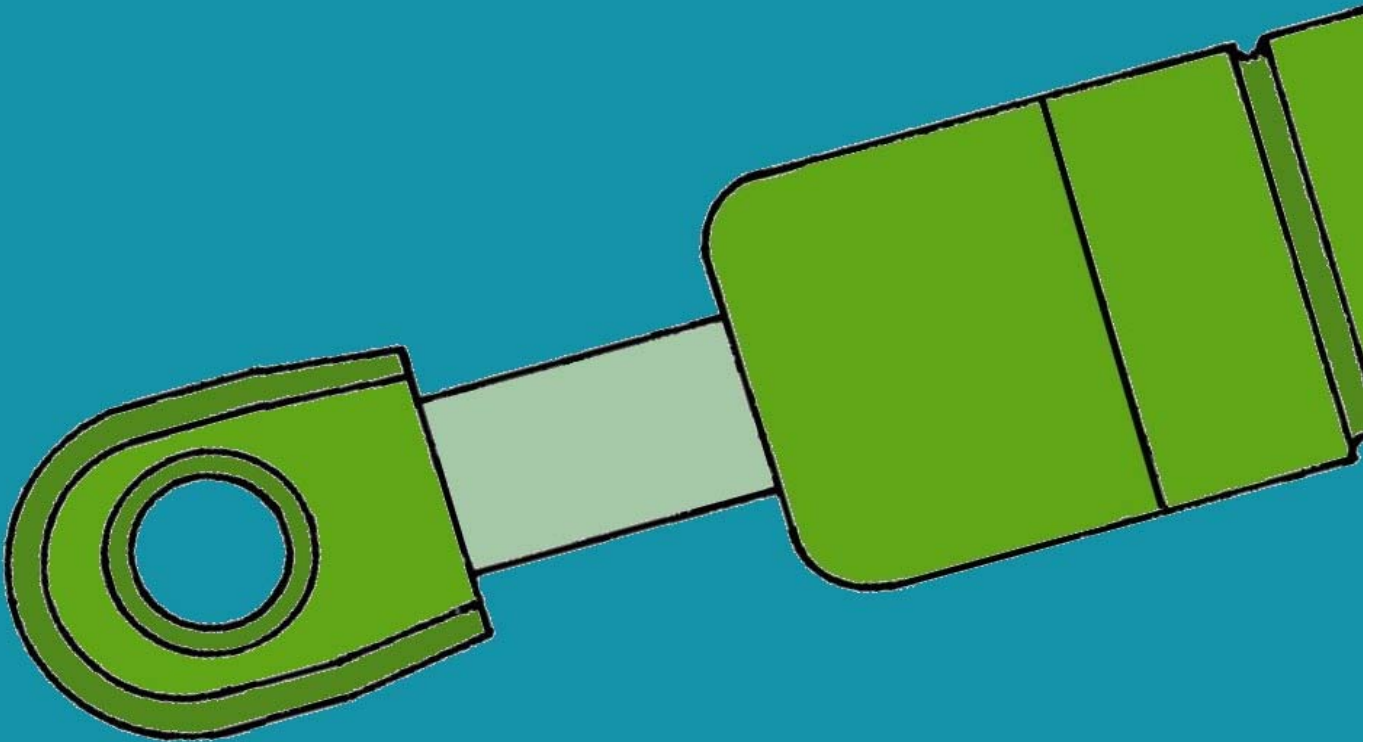


■ **GETO LIFT** gas springs



Vehicle Components

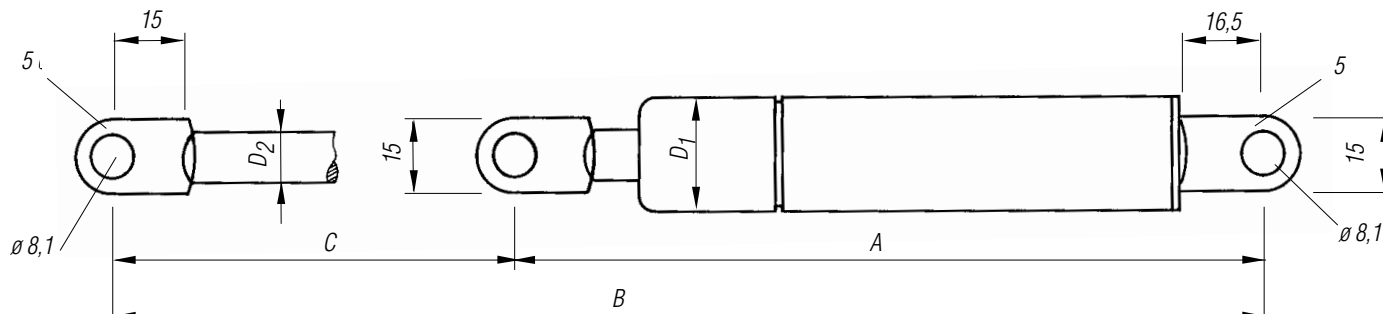
Struts and gas springs

Gas pressured springs

Gas pressured spring Model ST-1

Eyes welded on, sprayed black Cylinder, sprayed black

Piston rod, black, Nislide treated.



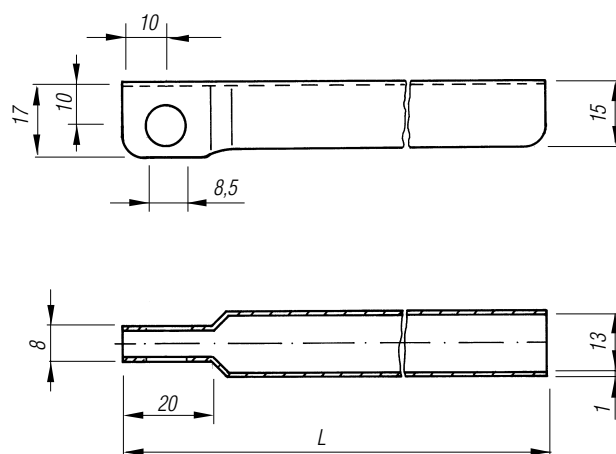
Spring pressure N	Length of stroke mm	Length		Cylinder D ¹ mm	Piston rod D ² mm	Weight approx. kg each	Appropriate safety bracket GTO No.	GTO No.
		A mm	B mm					
250	100	185	285	22	10	0.265	605 174	605 003
500								605 005
250	150	235	385			0.330	605 178	605 023
500								605 025
750								605 027
1000								605 029
1150								605 030
250	200	285	485			0.400	605 182	605 043
500								605 045
750								605 047
1000								605 049
1150								605 050
250	250	335	585			0.470	605 186	605 063
500								605 065
750								605 067
1000								605 069
1150								605 070
500	300	385	685			0.550	605 190	605 085
750								605 087
1000								605 089
1150				605 090				
500	400	490	890	0.650	605 194	605 095		
750						605 097		
950						605 099		

Safety bracket ST-1

for GETO LIFT-gas pressured springs.

Material: steel, galvanized

Stroke length of spring mm	L mm	Weight kg each	GTO No.
100	130	0.050	605 174
150	177	0.070	605 178
200	230	0.090	605 182
250	276	0.105	605 186
300	328	0.125	605 190
400	-	-	605 194



Technical specifications are for guidance only and without guarantee. Right to structural change reserved.

Struts and gas springs

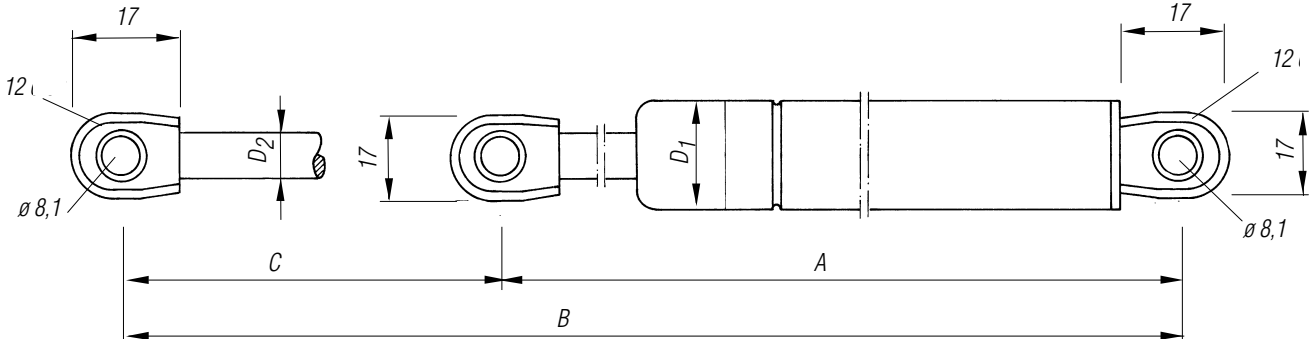
Vehicle Components

Gas pressured springs

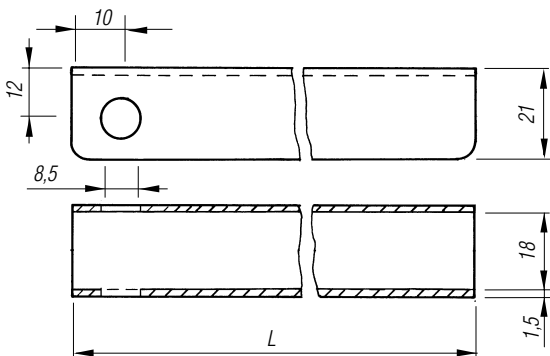
Gas pressured springs Model ST-2

Eyes screwed firmly onto cylinder and the piston rod.

Cylinder, black lacquered, piston rod, black, Nislid treated.



Spring pressure N	Length of stroke mm	Length		Cylinder D' mm	Piston rod D ² mm	Weight approx. kg each	Appropriate safety bracket GTO No.	GTO No.
		A mm	B mm					
250	100	201	300.5	22	10	0.290	604 061	603 990
500								603 992
250	150	295	444.5			0.392	604 063	604 000
500								604 002
750						604 004		
1000						604 006		
250	200	305	504.5			0.432	604 065	604 010
500								604 012
750						604 014		
1000						604 016		
250	250	402	651.5			0.540	604 067	604 020
500								604 022
750				604 024				
1000				604 026				
500	300	451	750.5	0.611	604 069	604 032		
750						604 034		
1000		450	749.5	604 036				
1250	400	496.5	896.5	28	14	1.092	604 069	604 038
1500								604 039
500								604 101
750								604 102
1000								604 103
1250								604 104
1500	604 105							
2000								604 106



Safety bracket ST-2

for GETO LIFT-gas pressured springs.

Material: steel, galvanized

Stroke length of spring mm	L mm	Weight kg each	GTO No.
100	113	0.080	604 061
150	173	0.130	604 063
200	223	0.160	604 065
250	273	0.190	604 067
300	323	0.230	604 069

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Vehicle Components

Struts and gas springs

Gas pressured springs

Fitting attachments

Apart from the model 604 047 the accessories are complete with axle (screw M6 x 18, DIN 923) and counter nut.

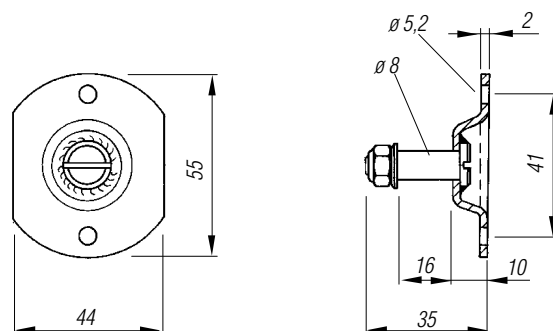
GTO No. 605 150

Base plate with axle ST-1 / ST-2

To secure and link the GETO LIFT gas pressured spring (eye of the piston rod) on frames. On the ST-2 model = clear axle opening (16 mm), not sufficient to take the safety bracket but will take the piston rod eye without safety bracket. With axle and counter nut.

Material: steel, galvanized

Weight: approx. 0.045 kg each



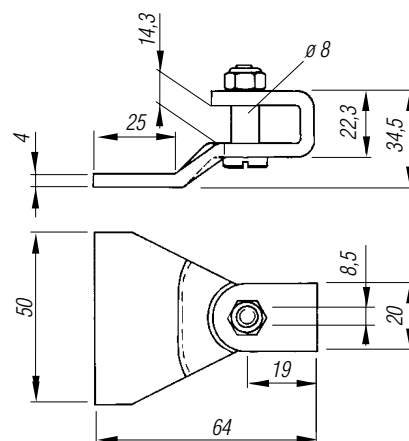
GTO No. 605 152

Bracket with axle ST-1 / ST-2

To secure and link the gas pressured spring (eye of the piston rod) on frames. On ST-2 models there is no possibility of taking the safety bracket. With axle and counter nut.

Material: steel, galvanized

Weight: approx. 0.095 kg each



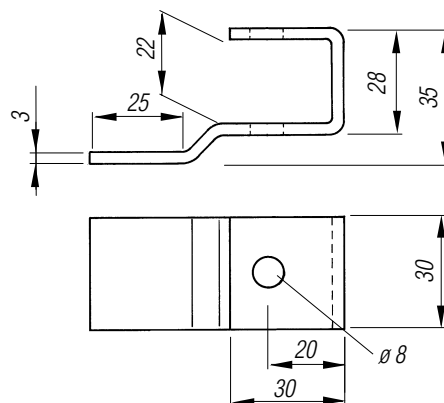
GTO No. 604 047

Bracket without axle ST-2

To secure and link the gas pressured spring (eye of the piston rod) on frames, including the possibility of taking the safety bracket. As an axle, a normal M8 screw is recommended.

Material: steel, galvanized

Weight: approx. 0.080 kg each



GTO No. 605 160 – small

605 162 – large

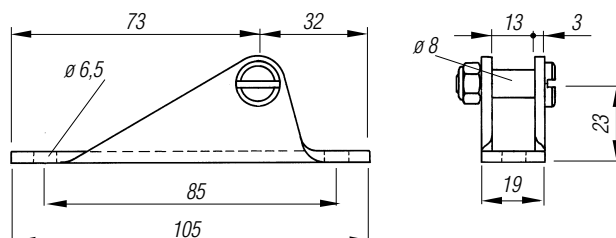
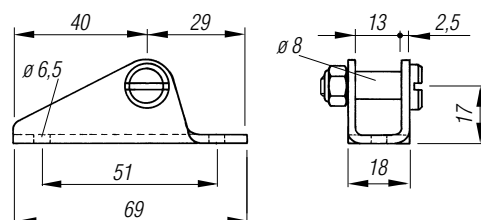
Base shoe with axle ST-1 / ST-2

To secure and link the GETO LIFT gas pressured spring (eye of the cylinder) onto an exposed object, e.g. a flap.

Material: steel, galvanized

Weights: 605 160 = approx. 0.065 kg each

605 162 = approx. 0.095 kg each



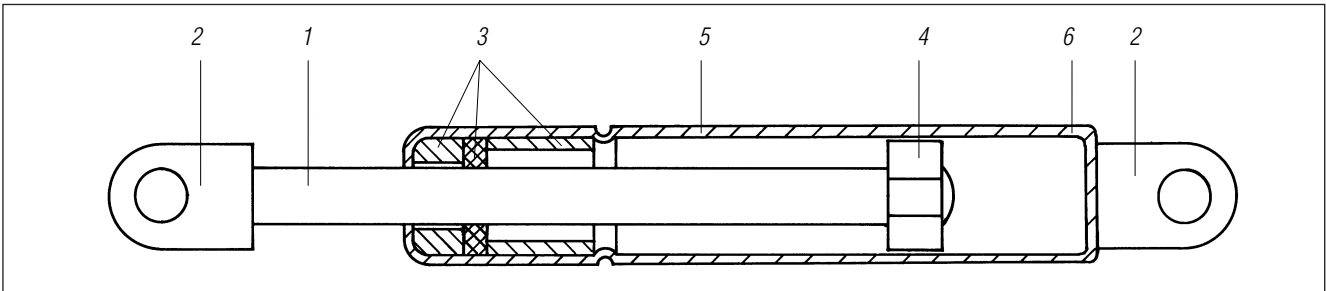
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Struts and gas springs

Vehicle Components

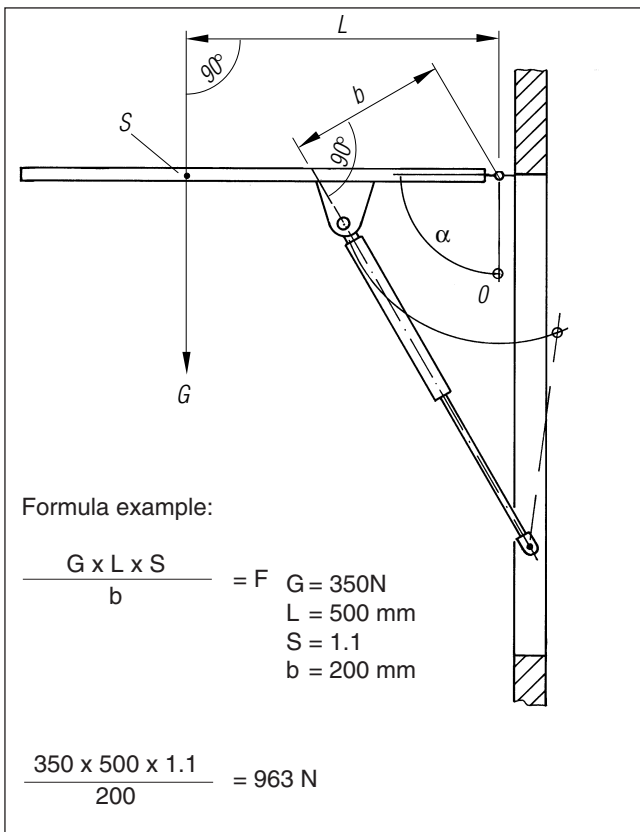
Gas pressured springs

Their design and principles of operation:



It is composed of a cylinder (5), which is made gas-tight by a cap (6) on one end and on the opposite end by a seal. A piston rod (1) is inserted into the seal, on whose end the damping piston (4) is attached. At the same time it prevents the piston being pushed out. The ends of the piston rod and the cylinder are fitted with suitable fixings.

The seal (3) in the cylinder (5) protects the cylinder against the atmosphere when it is filled with gas. The desired pushing force will be generated by filling the cylinder with a defined gas pressure. By pushing the piston rod (1) into the cylinder the volume of the gas pressure will be increased. This increase in pressure is the measure for the increase in power of the spring when the piston rod is in a „pushed in“ position. The result is the force "F".



Choosing the right GETO LIFT-gas pressured spring:

The following details should be taken into consideration (flap as example):

- G: Weight
- L: Dimension to pivot point
- S: Position of centre of gravity
- b: Included angle. For example stroke less 50 mm.
- F: Spring pressure

Calculation:

Weight of flap $G \times$ horizontal distance from centre of gravity S to the fulcrum: effective lever arm of the gas pressured spring (shortest distance from gas spring to fulcrum) = nominal theoretical pushing force $F \times 1.1$ safety margin s (10 % in addition to nominal pushing force F) = number and spring pressure N of the correct GETO LIFT gas pressured spring.

See diagram opposite for formula with example.

Attention:

Our assembly instructions and recommendations for proper assembly and effective function are with regard to the locking action over the dead centre and damping when pushing the piston rod (see page 7).

Technical specifications are for guidance only and without guarantee. Right to structural change reserved.

Vehicle Components

Struts and gas springs

Gas pressured springs

Please observe the following assembly instructions to ensure that your gas pressured springs serve you for a long time without problems.

Principles:

The cylinder is under high pressure.

Therefore:

1. Do not tamper with the gas pressured spring- this applies for all gas pressured springs!
2. Avoid heat, e.g. do not weld on the gas pressured spring!
3. Avoid damage and impurification of the piston rod!
This applies to scratches and marks as well as for impurification by grease, paint etc.
4. Wherever possible build our safety bracket on to the gas pressured spring!
Wind and snow pressure can change the support or cover weight, and this increased weight may surpass the spring pressure.

Assembly:

1. Mount the piston rod facing downwards!
In this position the most is made of the damping behaviour of the GETO LIFT gas pressured springs at the end of the pushing process. In addition, the rod will be kept constantly oiled and sealing material in the cylinder kept pliable.
2. Avoid tilting the gas pressured spring!
This leads to wear of the links, bearings and fixing attachments and overbudens the sealing material in the cylinder of the gas pressured spring. To avoid tilting of the gas pressured spring itself, it is of benefit to have a certain clearance in the securing and bearing attachments.

Maintenance:

1. Oil the eyes in the securing and bearing attachments from time to time.
Do not use grease!

Closing over the dead centre, Regulation of the pushing speed, Hydraulic dampening in pushed out position.

1. By appropriate choice of the link point, e.g. a support in the closed position can be shut with the GETO LIFT gas pressured spring (closed position over the dead centre), can open straight away after freeing or can first swing upwards automatically according to a known angle.
2. The opening speed can be adjusted to requirements by choice of the link point.
3. In every case, just before the end of the pushing process of GETO LIFT gas pressured springs, a hydraulic dampening takes place before the final strike of the piston in the cylinder takes place.



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TITGEMEYER ^{GTO}

Struts and gas springs

Gas pressured springs

Vehicle Components



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