



GAS SPRINGS AND DAMPERS

STANDARD PROGRAM

LIFT-O-MAT

BLOC-O-LIFT

STAB-O-SHOC

STAB-O-MAT



STABILIS

STABILIS



A BROAD PATH TO SUCCESS

As the world market leader for gas springs, hydraulic vibration dampers and kinematics, Stabilus is a competent partner for its customers. With more than 15,000 product variants, it can offer the right solution for any application. Our unique gas spring technologies are classified into the following product groups:

■ **LIFT-O-MAT:** Gas springs for variable opening, positioning and holding across the entire adjustment range. They are used in the furniture sector and the automotive and commercial vehicle industry, in building mechanical systems and other industrial applications.

■ **BLOC-O-LIFT:** Locking gas springs for variable adjustment with even force distribution across the entire stroke, such as in height-adjustable tables, standing desks, work surfaces and applications in medical technology.

■ **STAB-O-MAT:** Ready-to-install swivel chair gas springs in different installation lengths for comfortable shock absorption over the entire adjustment range.

■ **STAB-O-SHOC:** Supportive damper technology in various models for applications requiring high forces, such as convertible roofs, belt tensioning and steering systems in automotive applications, commercial vehicle seats, washing machines, smoke exhaust flaps, as well as heavy lids and doors that open vertically.

Stabilus stands for technology leadership, excellent service, professional consulting and guaranteed quality standards.

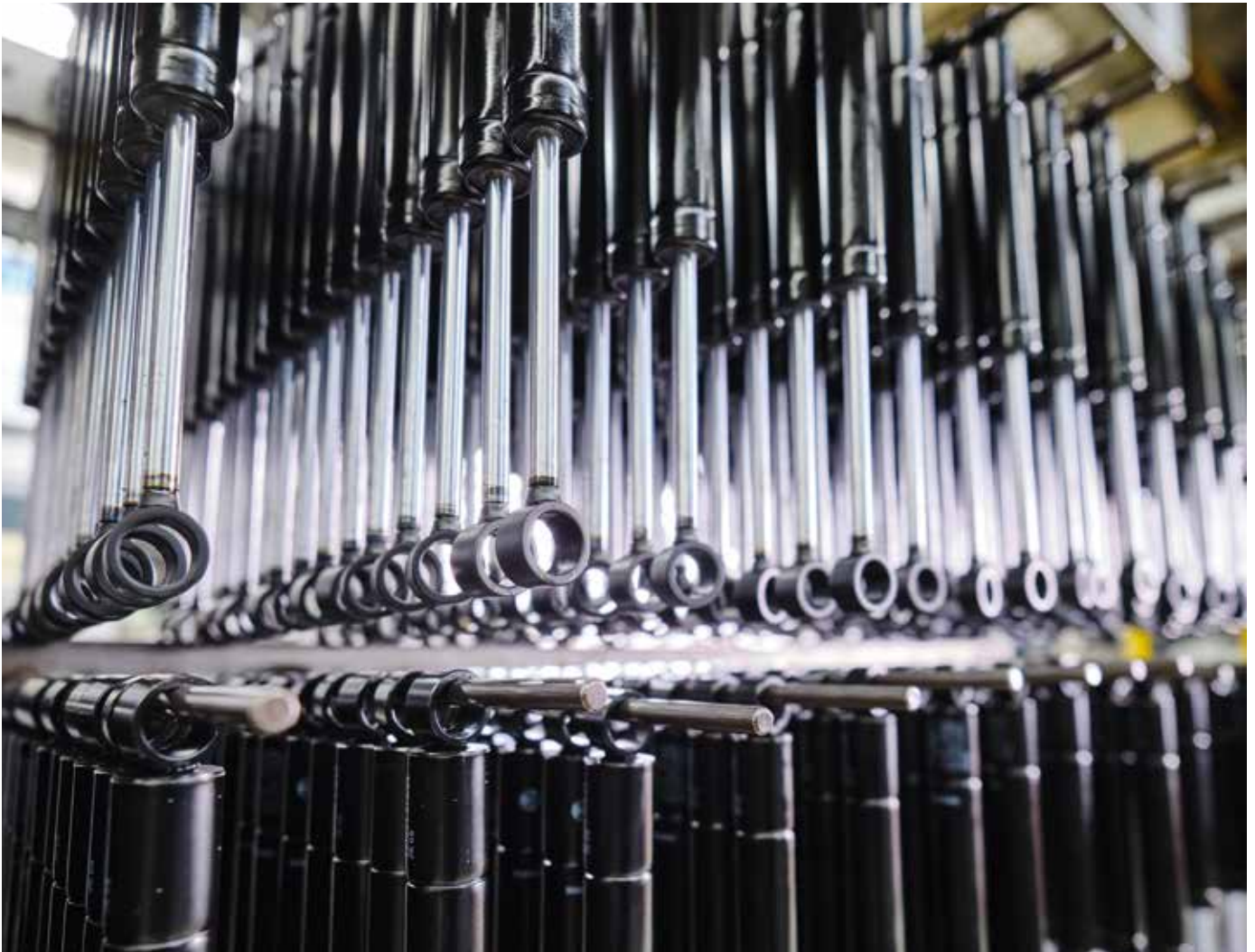
STABILUS MOVES

The innovative gas springs and dampers from Stabilus assist with lifting and lowering, opening and closing. They move, hold and dampen. Our gas springs and dampers are used wherever automatic, force-assisted opening at a defined speed, variable positioning and safe holding are required, such as lids, doors, etc. – be it in automobiles or utility vehicles, swivel chairs or industrial systems.

In addition to innovative high quality, high-end products, Stabilus stands for efficient, customer-oriented solutions. We take a standard product and customize it according to the requirements and wishes of our customers. Or we develop a new one. Continuously. We refine, optimize, improve.

As a Stabilus customer, you expect the highest quality and maximum performance in service and individualized consultation. When designing our processes, the most important benchmark we use is always customer satisfaction:

Your satisfaction is our goal.





QUALITY AND ENVIRONMENT

We stand behind the quality of our products, which we ensure through continuous improvement processes and by developing and systematically monitoring our production processes. An important success factor for Stabilus: All major production technologies and machines in the plants worldwide are Stabilus' own design; they are developed and built in Koblenz. Combined with highly qualified and committed employees, we can guarantee consistently high product quality. Of course, we meet the high requirements of international standards, such as DIN EN ISO 9001:2015 and ISO/TS 16949:2016.

The highest quality that you can rely on!

Our environment matters: Stabilus assumes responsibility – not just for quality, technology and customer service. Our company complies with environmental conditions and regulations and uses proactive, gentle processes to save natural resources. Sustainability is an important part of our company philosophy.

The success of our environmental protection measures is documented by our certification according to DIN EN ISO 14001:2021 and validation according to the EC Eco-Audit Regulations (EMAS).

Our technologies of today will protect the world of tomorrow.

GAS SPRINGS AND DAMPERS – A MULTITUDE OF USES

Successfully used in the vehicle and furniture industries for decades, our gas springs and hydraulic dampers are now an essential design element in numerous industrial applications in a wide range of industries. Their compact design, high level of functional convenience and operational safety will support a vast range of new applications for Stabilus products.

Gas springs and dampers assist in adjusting table and chair height, opening horizontal kitchen cabinet doors or lifting bedframes and head boards. They are used in hospital beds, operating tables, massage tables and in the rehab sector. Or they make opening skylights and operating awnings easier. Thanks to gas springs and dampers, flaps, hoods and lids are easier to open and adjust. They are also used to conveniently open engine hoods, cab doors and hatches and safely hold them in place. In busses and airplanes they provide ease of

opening and damped closing in luggage compartments and easy adjustment of passenger seat recline. In agricultural machinery, they dampen jolts from uneven driving surfaces, allowing for comfortable, relaxed and ergonomic seating.

Stabilus technology provides comfort!





SERVICE INCLUDES APPLICATION CONSULTING

Every application has its specific requirements. Providing individual solutions for your task is what drives us. We offer service, meaning extensive application consulting, including installation proposal and construction of samples. System and standards are defined in a dialog with our customer. From the initial idea to optimum custom production solution, the expertise of our team of engineers, specialists, and experienced application consultants will be at your fingertips.

Visit our website, where you can use the CAD-Configurator to download your individual gas spring from our standard product line as a 3D model or 2D drawing into your CAD system:

<https://stabilus.cadclick.com/>



Put us to the test!
We will grow with your demands.

BROAD STANDARD PRODUCT LINE

Our gas springs and dampers have become a staple in our comfort-oriented world. They provide safety in function and use. Any product properties that the user experiences as especially pleasant will increase value perception. Gas springs and dampers from Stabilus assist with lifting and lowering, opening and closing. They provide force assist and weight compensation, but are also used for damping and locking.

Our comprehensive standard product line will take your individual solution to series production, as it will save elaborate

development time for many applications. It includes a wide variety of gas springs and dampers with different dimensions, speed curves, and push-out variants. Stabilus also offers a broad range of fittings – from metal ball studs to metal joints, which are very quick and easy to install.



THE BENEFITS AND CHARACTERISTICS OF THE GAS SPRING

■ How gas springs work

A gas spring is a hydropneumatic adjustment element consisting of a pressure cylinder, piston rod with piston, as well as suitable end fittings. It is filled with compressed nitrogen, which – at the same pressure – acts on different-size piston cross sections, creating a force in the extension direction. This extension force can be accurately defined within physical limits by selecting the right fill pressure.

■ Spring characteristic curve and F1 force

The spring characteristic curve describes the force curve over the stroke, i.e., from the extended to the compressed state or vice-versa. Gas springs have a very flat, almost linear characteristic curve, allowing for even, smooth adjustment or swivel motion.

In addition to its dimensions, the F1 force is the most important descriptive characteristic when choosing a gas spring. It defines the spring force value and is measured 5 mm before the extension motion ends in hydraulic damping and 10 mm in dynamic damped gas springs.

■ Extension speed and damping

A major advantage of a gas spring over a mechanical spring is the definable extension speed, allowing for a damped and convenient adjustment motion. In hydraulic damping, the extension speed depends on the arrangement and diameter of the bores in the piston, as well as the viscosity of the oil used. If the gas spring is installed with the piston rod pointing down, the piston will move first through the gas-filled, then the oil-filled part of the pressure cylinder when extending. As soon as the piston enters the oil, the piston rod will move at a much slower speed.

Dynamic damped gas springs have a longitudinal groove in the pressure cylinder wall instead of a bore in the piston, acting as a bypass. The groove geometry and length will determine the damping curve. This technology allows for orientation-independent gas spring damping



Optimum
weight balance



Individual spring
characteristic possible



Compact construction



Plug & Play



Motion control



Certified quality



Maintenance-free



Additional functions and
accessories available



CONTENT

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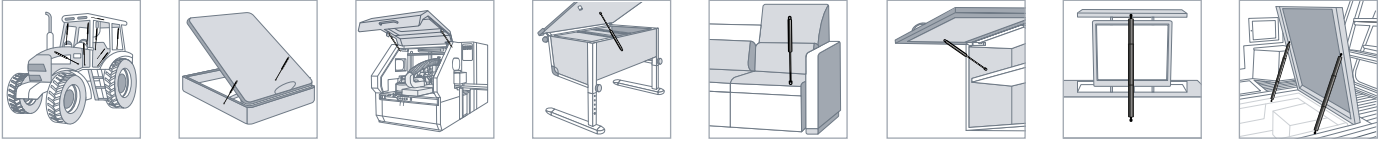




LIFT-O-MAT®

- Hydraulic Damping - HD
- Dynamic Damping - DD
- Supplementary line
- Push to Lock - PTL
- Stainless Steel - Inoxline
- Accessories



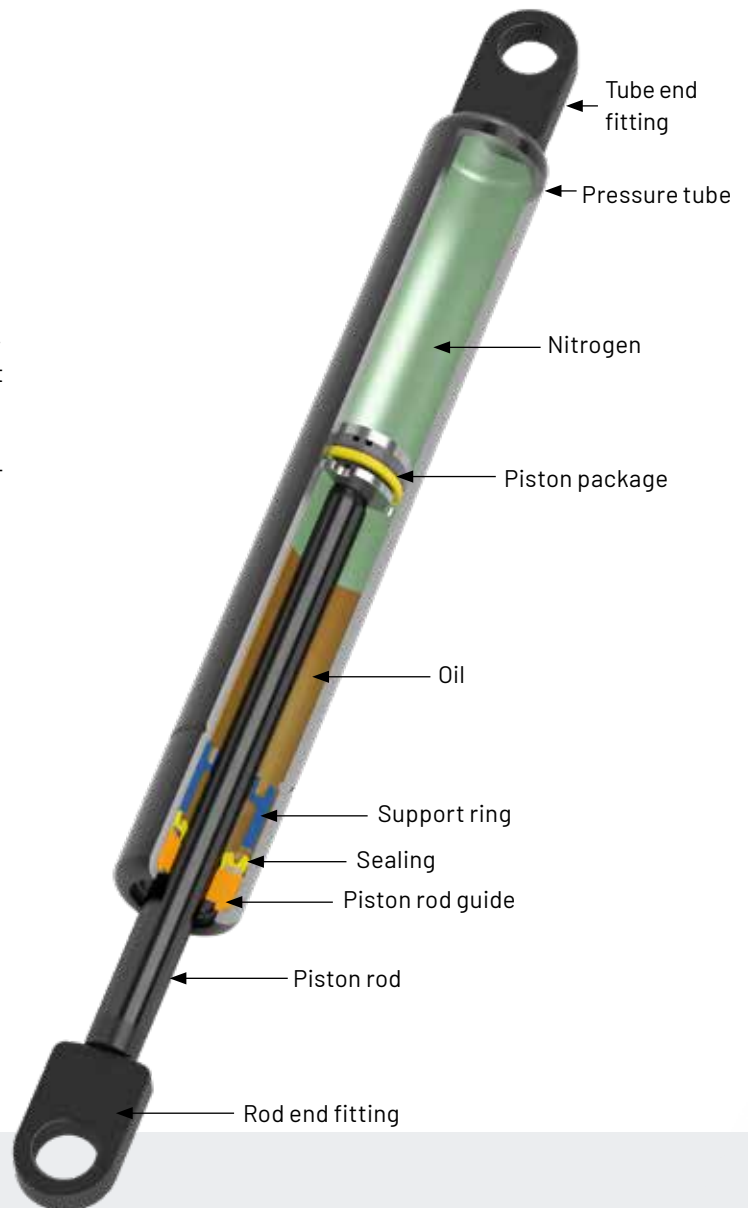


LIFT-O-MAT HD

Gas spring with hydraulic end position damping

Gas springs have become essential in our comfort-oriented world. They create safety in function and application. The properties that users consistently perceive as extremely pleasant increase the feeling of value associated with the respective product. Gas springs help with lifting, lowering, opening and closing and controlling speed. They make technology comfortable.

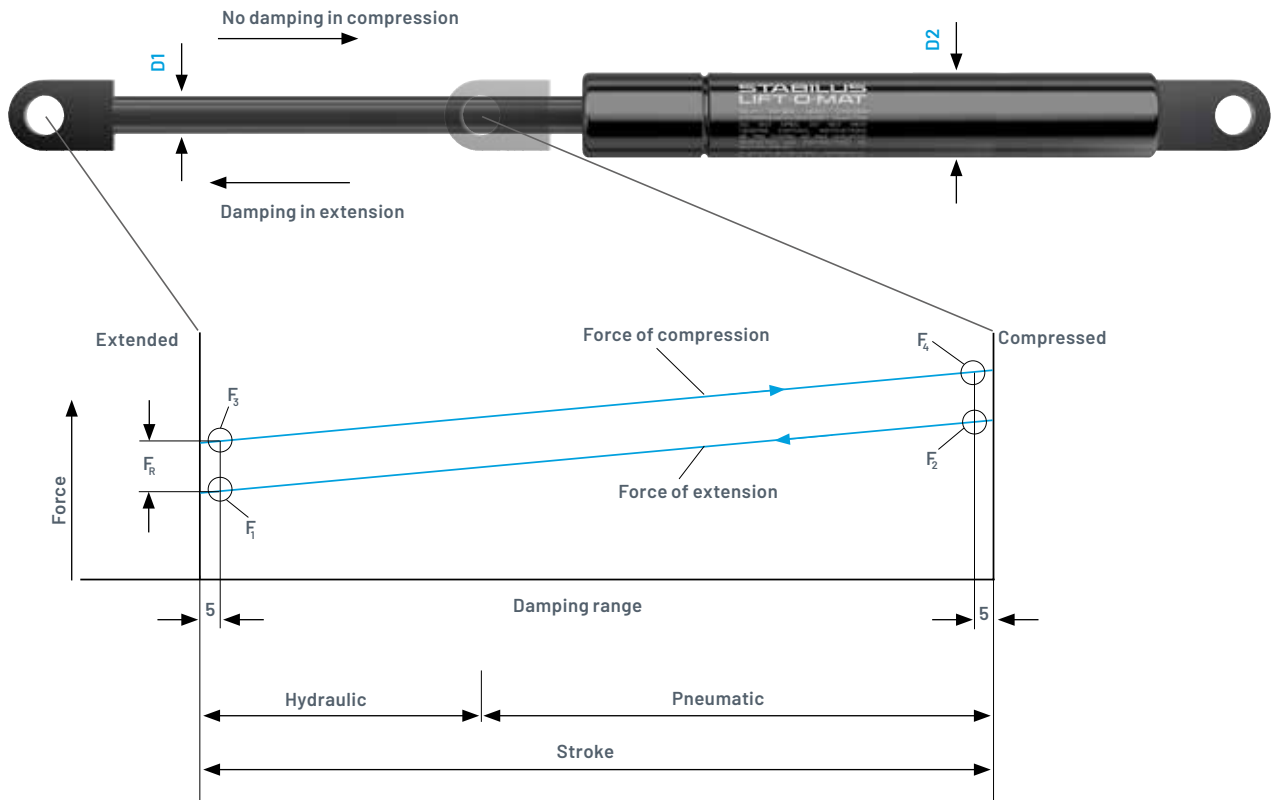
The gas springs with the product name LIFT-O-MAT are non-locking gas springs. They are used wherever a component needs to be conveniently moved to defined end positions, e.g. doors, flaps, lids. LIFT-O-MAT can control the extension force and damping according to function and enables user-friendly movement sequences.



Advantages and properties:

- Optimized weight compensation during lifting, lowering, opening, and closing actions
- Broad range of sizes and force variants available as standard products
- Dynamic and hydraulic damping available
- Flat spring characteristic curve; i.e., low force increase, even with high forces and large strokes
- Choice of linear, progressive, or decreasing spring characteristic curves
- Compact form factor for installation in small spaces
- Large variety of end fittings for efficient assembly

FORCE-PATH DIAGRAM

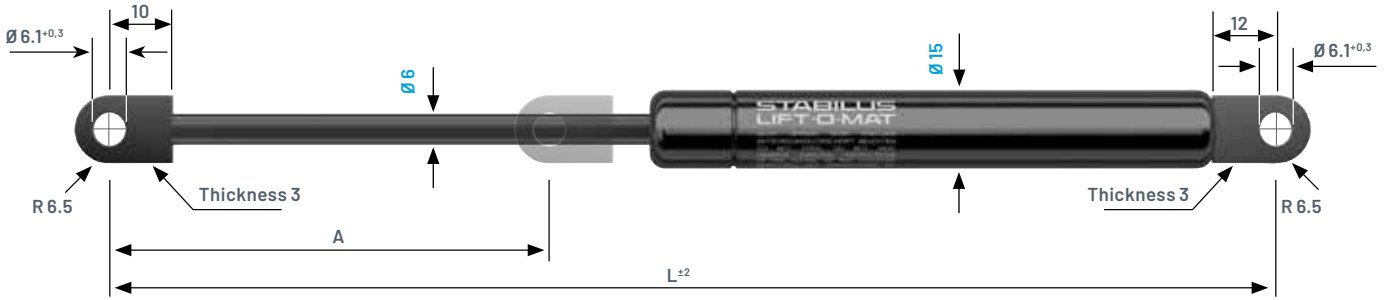


D1	D2	Force of extension F_1	Stroke max.	Spring rate x	Friction F_R max.
mm	mm	N	mm	$x = F_2 / F_1 (\approx)$	$F_R = F_3 - F_1 (N)$
6	15	50 - 400	150	1.30	50
8	19	100 - 800	250	1.35	60
10	22	150 - 1150	400	1.40	80
14	28	500 - 2100	500	1.50	80

Installation instruction STAB-Spec. 10005593

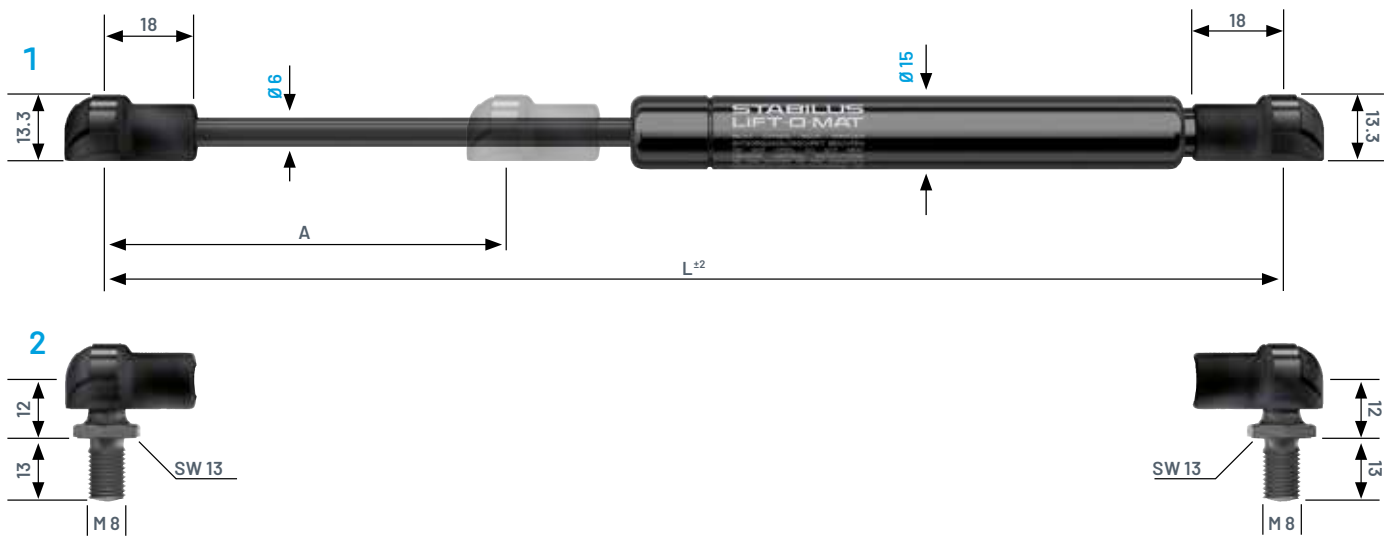
Statically measured forces STAB-Spec. 10009033

Disposal instruction STAB-Spec. 10009375, www.stabilus.com/de/kontakt-und-support/umweltgerechtes-recycling



Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
192910	50	20	106.5
192929	100	20	106.5
192937	150	20	106.5
192945	200	20	106.5
192953	250	20	106.5
192961	300	20	106.5
192988	350	20	106.5
192996	400	20	106.5
185175	50	40	145.5
191752	100	40	145.5
192805	150	40	145.5
192813	200	40	145.5
192821	250	40	145.5
082309	300	40	145.5
082317	350	40	145.5
094307	400	40	145.5
192848	50	60	185.5
192856	100	60	185.5
192864	150	60	185.5
192872	200	60	185.5
192880	250	60	185.5
082384	300	60	185.5
082392	350	60	185.5
094315	400	60	185.5
082406	50	80	226.5
082414	100	80	226.5
082422	150	80	226.5
082430	200	80	226.5

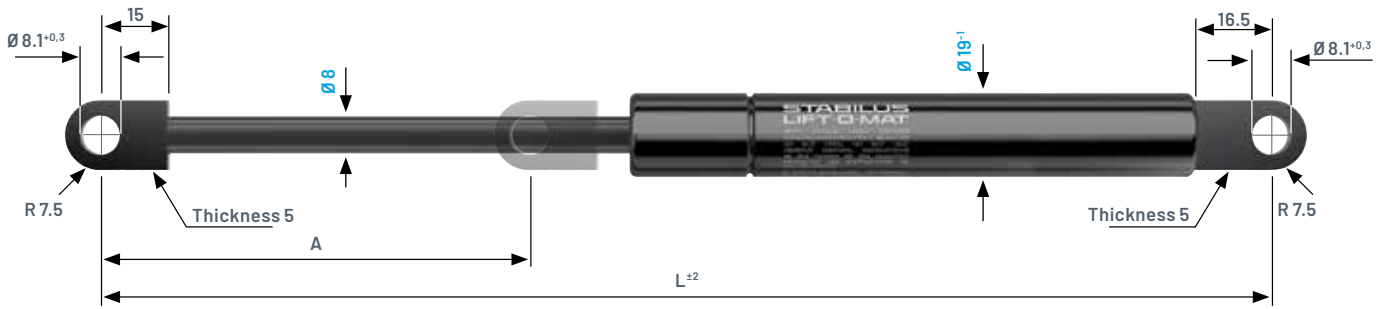
Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
082449	250	80	226.5
082457	300	80	226.5
082465	350	80	226.5
094323	400	80	226.5
082473	50	100	265.5
082481	100	100	265.5
082503	150	100	265.5
082511	200	100	265.5
082538	250	100	265.5
082546	300	100	265.5
082554	350	100	265.5
094331	400	100	265.5
082562	50	120	305.5
082570	100	120	305.5
082589	150	120	305.5
082597	200	120	305.5
082600	250	120	305.5
082627	300	120	305.5
082635	350	120	305.5
094358	400	120	305.5
082643	50	150	365.5
082651	100	150	365.5
082678	150	150	365.5
082686	200	150	365.5
082694	250	150	365.5
082708	300	150	365.5
082716	350	150	365.5
6756RS	400	150	365.5



Suitable for ball studs according to DIN 71803 Ø 10

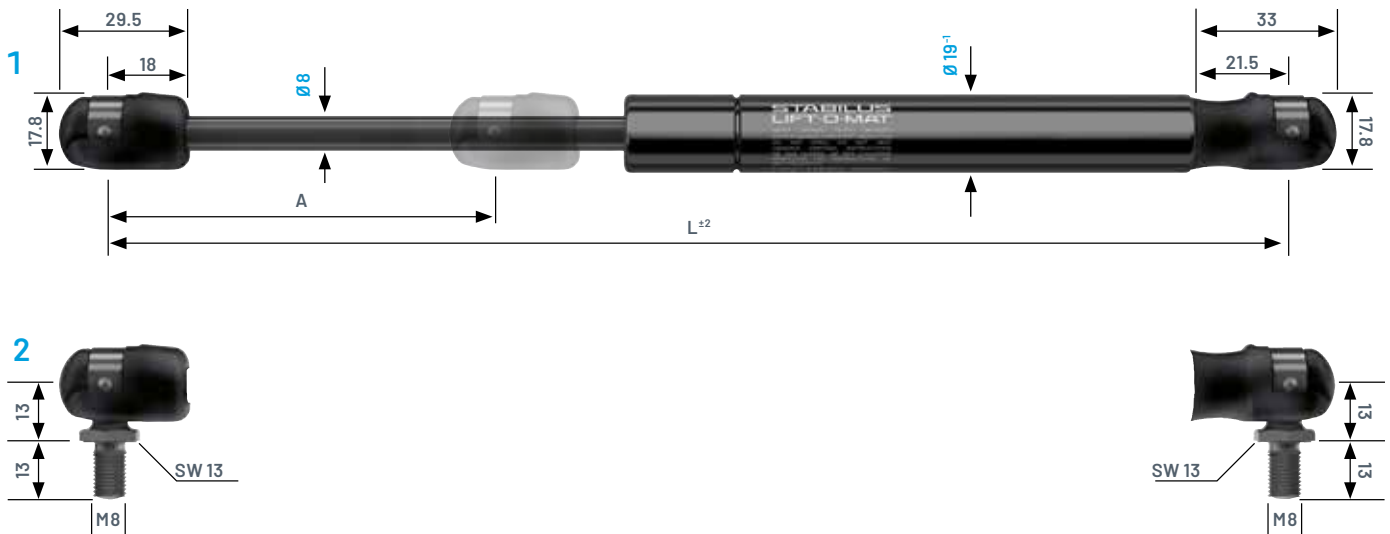
1 Ref.-No.	2 Ref.-No.	Force F_1 N	A Stroke mm	L extended mm
4727PB	4829DF	50	20	115.5
4728PX	4832DH	100	20	115.5
4729PS	4834DY	150	20	115.5
4731PZ	1324DI	200	20	115.5
4732PU	4836DO	250	20	115.5
4733PP	4838DE	300	20	115.5
4734PK	4842DB	350	20	115.5
4735PF	4844DS	400	20	115.5
2606NW	4846DI	50	40	155.5
2607NR	4848DZ	100	40	155.5
2608NM	4851DA	150	40	155.5
2609NH	1338DJ	200	40	155.5
2611NO	4853DR	250	40	155.5
2612NJ	4855DH	300	40	155.5
2613NE	4857DY	350	40	155.5
2615NV	4859DO	400	40	155.5
6444IK	4862DQ	50	60	195.5
6488IU	4534DS	100	60	195.5
6489IP	4904DI	150	60	195.5
6491IW	1345DS	200	60	195.5
6492IR	4906DZ	250	60	195.5
6493IM	4908DP	300	60	195.5
6494IH	4911DR	350	60	195.5
6495IC	4913DH	400	60	195.5
6449IM	4915DY	50	80	235.5
6501IP	4917DO	100	80	235.5
6502IK	4919DE	150	80	235.5
6503IF	1395DP	200	80	235.5

1 Ref.-No.	2 Ref.-No.	Force F_1 N	A Stroke mm	L extended mm
6504IA	4922DG	250	80	235.5
6505IW	4924DX	300	80	235.5
6506IR	4926DN	350	80	235.5
6507IM	4928DD	400	80	235.5
6458IL	4931DF	50	100	275.5
6508IH	4933DW	100	100	275.5
6509IC	4935DM	150	100	275.5
6511IJ	1406DD	200	100	275.5
6514IV	5004DJ	250	100	275.5
6515IQ	5007DV	300	100	275.5
6516IL	5009DL	350	100	275.5
6517IG	5012DN	400	100	275.5
6462II	5025DT	50	120	315.5
6519IX	5027DJ	100	120	315.5
6521ID	5031DG	150	120	315.5
6522IZ	1515DW	200	120	315.5
6523IU	5033DX	250	120	315.5
6524IP	5035DN	300	120	315.5
6525IK	5037DD	350	120	315.5
6526IF	5069DC	400	120	315.5
6467IK	5072DE	50	150	375.5
6539IL	5075DQ	100	150	375.5
6541IS	5077DG	150	150	375.5
6542IN	1562DH	200	150	375.5
6543II	5079DX	250	150	375.5
6544ID	5082DZ	300	150	375.5
6545IZ	5084DP	350	150	375.5
6153PC	1205RU	400	150	375.5



Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
084018	500	60	205
084026	600	60	205
084034	700	60	205.5
094684	800	60	205.5
084093	500	80	245
084107	600	80	245
084115	700	80	245.5
094692	800	80	245.5
084174	500	100	285
084182	600	100	285
084190	700	100	285.5
094706	800	100	285.5
084247	500	120	325
094714	600	120	325
084263	700	120	325.5
094722	800	120	325.5
084352	400	140	365
084360	500	140	365
084379	600	140	365
084387	700	140	365.5
094749	800	140	365.5
084395	100	160	405
094765	150	160	405
084409	200	160	405
094773	250	160	405
084417	300	160	405
094781	350	160	405
084425	400	160	405
084476	500	160	405
084484	600	160	405
084492	700	160	405.5
094757	800	160	405.5
084506	100	180	445
094803	150	180	445
084514	200	180	445
094811	250	180	445
084522	300	180	445
094838	350	180	445

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
086363	400	180	445
084549	500	180	445
084557	600	180	445
084565	700	180	445.5
094846	800	180	445.5
084573	100	200	485
094854	150	200	485
084581	200	200	485
094862	250	200	485
084603	300	200	485
094870	350	200	485
084611	400	200	485
084638	500	200	485
084646	600	200	485
084654	700	200	485.5
094889	800	200	485.5
084662	100	220	525
094897	150	220	525
084670	200	220	525
094900	250	220	525
084689	300	220	525
094919	350	220	525
084697	400	220	525
084700	500	220	525
084719	600	220	525
084727	700	220	525.5
094927	800	220	525.5
084735	100	250	585
094935	150	250	585
084743	200	250	585
094943	250	250	585
084751	300	250	585
094951	350	250	585
084778	400	250	585
084786	500	250	585
084794	600	250	585
084808	700	250	585.5
094978	800	250	585.5



Suitable for ball studs according to DIN 71803 Ø 10

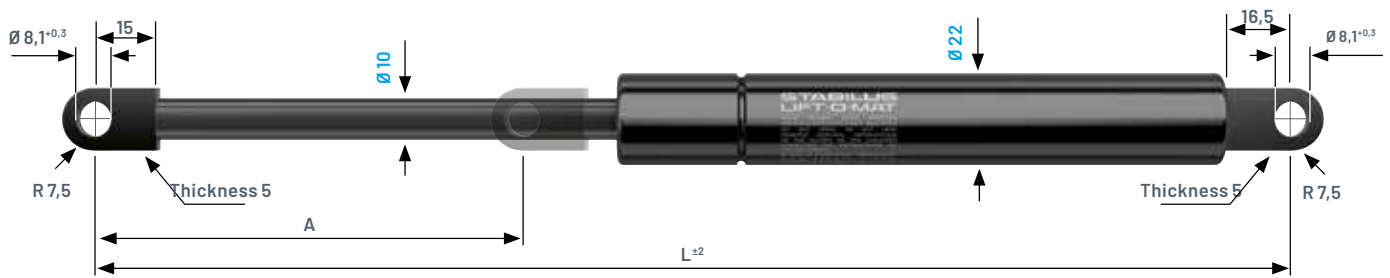
1	2	Force F_1	A	L
Ref.-No.	Ref.-No.	N	Stroke mm	extended mm
2616N0	094471	500	60	205
2617NL	083240	600	60	205
2618NG	083259	700	60	205
2619NB	094412	800	60	205
752614	447609	100	80	245
752622	466441	150	80	245
1417EP	381926	200	80	245
752630	287806	250	80	245
1418EK	368237	300	80	245
1419EF	550817	350	80	245
752649	278076	400	80	245
752657	083305	500	80	245
752665	083313	600	80	245
2622ND	083321	700	80	245
2623NZ	094420	800	80	245
752673	321400	100	100	285
752681	0927SH	150	100	285
1421EM	315826	200	100	285
752703	150344	250	100	285
1422EH	632600	300	100	285
1423EC	462047	350	100	285
752711	709492	400	100	285
752738	083380	500	100	285
752746	083399	600	100	285
2624NU	083402	700	100	285
2625NP	094439	800	100	285
752754	253308	100	120	325
752762	265802	150	120	325
1424EY	3008AM	200	120	325
752770	244880	250	120	325
1425ET	377007	300	120	325
1426EO	510599	350	120	325
752789	684872	400	120	325

1	2	Force F_1	A	L
Ref.-No.	Ref.-No.	N	Stroke mm	extended mm
752797	094498	500	120	325
752800	083461	600	120	325
2626NK	083488	700	120	325
2627NF	094447	800	120	325
711506	177032	100	140	365
711745	287814	150	140	365
031970	630896	200	140	365
033973	253723	250	140	365
2819WF	3579UR	300	140	365
711984	152495	350	140	365
2628NA	083534	400	140	365
2629NW	083542	500	140	365
2631NC	083550	600	140	365
2632NY	083569	700	140	365
2633NT	094455	800	140	365
752819	083577	100	160	405
752827	095621	150	160	405
1427EJ	083585	200	160	405
752835	095648	250	160	405
1428EE	083593	300	160	405
1431EG	095656	350	160	405
752843	083607	400	160	405
752851	083615	500	160	405
752878	083623	600	160	405
2634N0	083631	700	160	405
2635NJ	094463	800	160	405
2636NE	083658	100	180	445
2638NV	094501	150	180	445
2639N0	083666	200	180	445
2641NX	094528	250	180	445
2642NS	083674	300	180	445
2643NN	094536	350	180	445
2644NI	083682	400	180	445



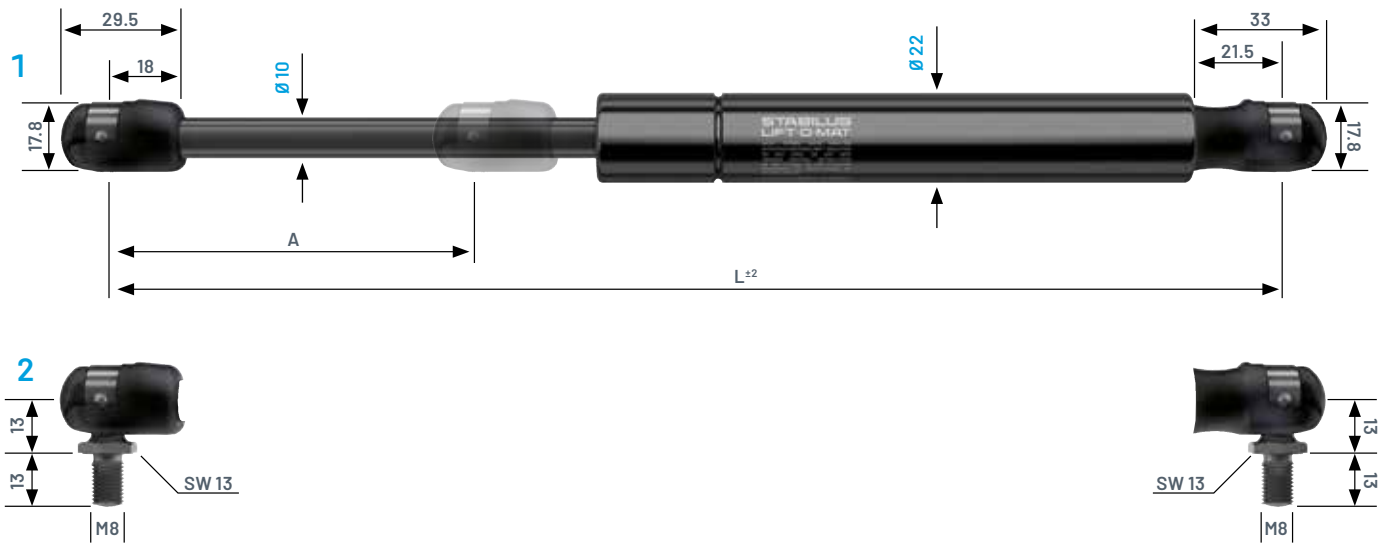
1	2		A	L
Ref.-No.	Ref.-No.	Force F ₁	Stroke	extended
		N	mm	mm
2645ND	083690	500	180	445
2646NZ	083704	600	180	445
2647NU	083712	700	180	445
2648NP	094544	800	180	445
752886	083720	100	200	485
752894	094552	150	200	485
1432EB	083739	200	200	485
752908	094560	250	200	485
1433EX	083747	300	200	485
1434ES	094579	350	200	485
752916	083755	400	200	485
752924	083763	500	200	485
752932	083771	600	200	485
2649NK	083798	700	200	485
2651NR	094587	800	200	485
2652NM	083801	100	220	525
2653NH	094595	150	220	525
2654NC	083828	200	220	525
2655NY	094609	250	220	525

1	2		A	L
Ref.-No.	Ref.-No.	Force F ₁	Stroke	extended
		N	mm	mm
2656NT	083836	300	220	525
2657NO	094617	350	220	525
2658NJ	083844	400	220	525
2659NE	083852	500	220	525
2661NL	083860	600	220	525
2662NG	083879	700	220	525
2663NB	094625	800	220	525
752940	083887	100	250	585
752959	094633	150	250	585
1435EN	083895	200	250	585
752967	094641	250	250	585
1436EI	083909	300	250	585
1437ED	094668	350	250	585
752975	083917	400	250	585
752983	083925	500	250	585
752991	083933	600	250	585
2664NX	083941	700	250	585
2665NS	094676	800	250	585



Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
084832	900	96	285
084840	1000	96	285
094986	1150	96	285
084875	900	145	385
084883	1000	145	385
094994	1150	145	385
084913	900	196	485
084921	1000	196	485
095001	1150	196	485
084964	900	246	585
084972	1000	246	585
095028	1150	246	585
095036	150	296	685
095044	200	296	685
095052	250	296	685
095060	300	296	685
095079	350	296	685
095087	400	296	685
095095	500	296	685
095109	600	296	685
084980	700	296	685
084999	800	296	685
085014	900	296	685
085022	1000	296	685
097306	1150	296	685

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
095117	150	346	785
095125	200	346	785
095133	250	346	785
095141	300	346	785
095176	350	346	785
095168	400	346	785
095184	500	346	785
095192	600	346	785
085030	700	346	785
085049	800	346	785
085057	900	346	785
085065	1000	346	785
095214	150	396	885
095222	200	396	885
095230	250	396	885
095249	300	396	885
095257	350	396	885
095265	400	396	885
095273	500	396	885
095281	600	396	885
085073	700	396	885
086401	800	396	885



Suitable for ball studs according to DIN 71803 Ø 10

1 Ref.-No.	2 Ref.-No.	Force F_1	A	L
		N	Stroke mm	extended mm
2666NN	085146	900	100	285
2667NI	085154	1000	100	285
2668ND	095303	1150	100	285
2669NZ	085189	900	150	385
2671NF	085197	1000	150	385
2672NA	095311	1150	150	385
1442EW	497614	700	200	485
1443ER	232785	800	200	485
1444EM	085227	900	200	485
1445EH	085235	1000	200	485
2673NW	095338	1150	200	485
1446EC	292001	700	250	585
1447EY	303925	800	250	585
1448ET	085278	900	250	585
1449EO	085286	1000	250	585
2674NR	095346	1150	250	585
2675NM	095354	150	300	685
3935LP	095362	200	300	685
1438EZ	095370	250	300	685
2677NC	095389	300	300	685
1652CK	095397	350	300	685
753009	095400	400	300	685
2679NT	095419	500	300	685
2682NV	095427	600	300	685
753017	085294	700	300	685
2683NQ	085308	800	300	685

1 Ref.-No.	2 Ref.-No.	Force F_1	A	L
		N	Stroke mm	extended mm
753025	085316	900	300	685
753033	085324	1000	300	685
2684NL	095435	1150	300	685
2685NG	095443	150	350	785
2686NB	095451	200	350	785
1439EU	095478	250	350	785
2687NX	095486	300	350	785
2688NS	095494	350	350	785
753041	095508	400	350	785
2689NN	095516	500	350	785
2691NU	095524	600	350	785
753068	085332	700	350	785
2692NP	085340	800	350	785
753076	085359	900	350	785
753084	085367	1000	350	785
2694NF	095540	150	400	885
2695NA	095559	200	400	885
1441EA	095567	250	400	885
2696NW	095575	300	400	885
2697NR	095583	350	400	885
753092	095591	400	400	885
2698NM	095605	500	400	885
2699NH	095613	600	400	885
753106	085375	700	400	885
2701NN	085383	800	400	885



Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
1847LW	1300	100	302
2038LR	1500	100	302
2039LM	1700	100	302
2041LT	1900	100	302
2042LO	2100	100	302
1851LT	1300	150	402
2043LJ	1500	150	402
2044LE	1700	150	402
2046LV	1900	150	402
2047LO	2100	150	402
1854LE	1300	200	502
2048LL	1500	200	502
2049LG	1700	200	502
2051LN	1900	200	502
2052LI	2100	200	502
1858LL	1300	250	602
2055LU	1500	250	602
2056LP	1700	250	602
2057LK	1900	250	602
2058LF	2100	250	602
1862LI	1300	300	702
2059LA	1500	300	702
2061LH	1700	300	702

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
2062LC	1900	300	702
2063LY	2100	300	702
1865LU	1300	350	802
2064LT	1500	350	802
2065LO	1700	350	802
2066LJ	1900	350	802
2067LE	2100	350	802
1868LF	1300	400	902
2069LV	1500	400	902
2071LB	1700	400	902
2072LX	1900	400	902
2073LS	2100	400	902
1872LC	500	500	1102
2108LB	600	500	1102
2109LX	700	500	1102
2111LD	800	500	1102
2112LZ	900	500	1102
2113LU	1000	500	1102
2114LP	1100	500	1102
2115LK	1300	500	1102
2116LF	1500	500	1102
2117LA	1700	500	1102
2118LW	1900	500	1102

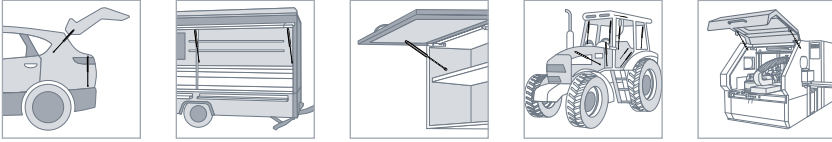


Suitable for ball studs according to DIN 71803 Ø 16

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
2029LS	1300	100	335.5
2357LQ	1500	100	335.5
2358LL	1700	100	335.5
2359LG	1900	100	335.5
2361LN	2100	100	335.5
2033LP	1300	150	435.5
2362LI	1500	150	435.5
2363LD	1700	150	435.5
2364LZ	1900	150	435.5
2365LU	2100	150	435.5
2036LA	1300	200	535.5
2366LP	1500	200	535.5
2367LK	1700	200	535.5
2368LF	1900	200	535.5
2369LA	2100	200	535.5
2075LI	1300	250	635.5
2371LH	1500	250	635.5
2372LC	1700	250	635.5
2373LY	1900	250	635.5
2374LT	2100	250	635.5
2078LU	1300	300	735.5
2375LO	1500	300	735.5
2376LJ	1700	300	735.5

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
2377LE	1900	300	735.5
2379LV	2100	300	735.5
2082LR	1300	350	835.5
2381LB	1500	350	835.5
2382LX	1700	350	835.5
2383LS	1900	350	835.5
2384LN	2100	350	835.5
2085LC	1300	400	935.5
2385LI	1500	400	935.5
2386LD	1700	400	935.5
2387LZ	1900	400	935.5
2388LU	2100	400	935.5
2088LO	500	500	1135.5
2389LP	600	500	1135.5
2391LW	700	500	1135.5
2392LR	800	500	1135.5
2393LM	900	500	1135.5
2394LH	1000	500	1135.5
2395LC	1100	500	1135.5
2396LY	1300	500	1135.5
2397LT	1500	500	1135.5
2398LO	1700	500	1135.5





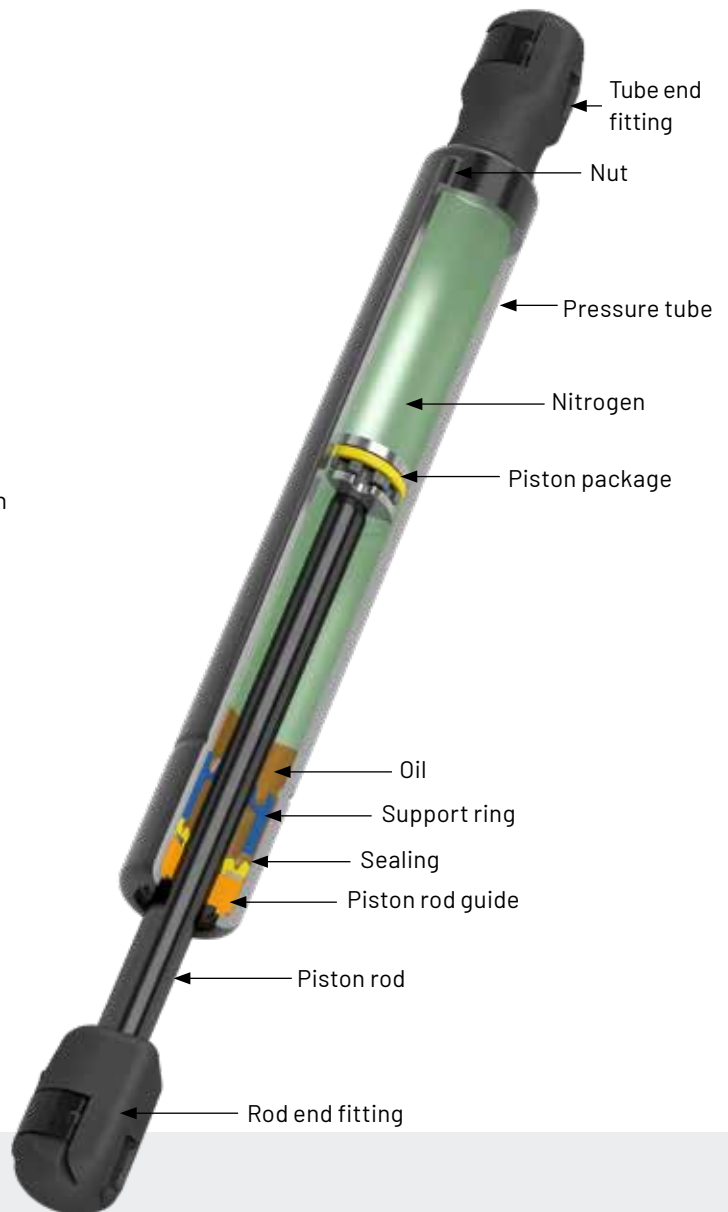
LIFT-O-MAT DD

Lift-O-MAT gas spring with dynamic damping for even more comfort.

The LIFT-O-MAT DD with dynamic damping is a gas spring whose damping properties and extension speed is controlled primarily through a longitudinal groove in the pressure cylinder.

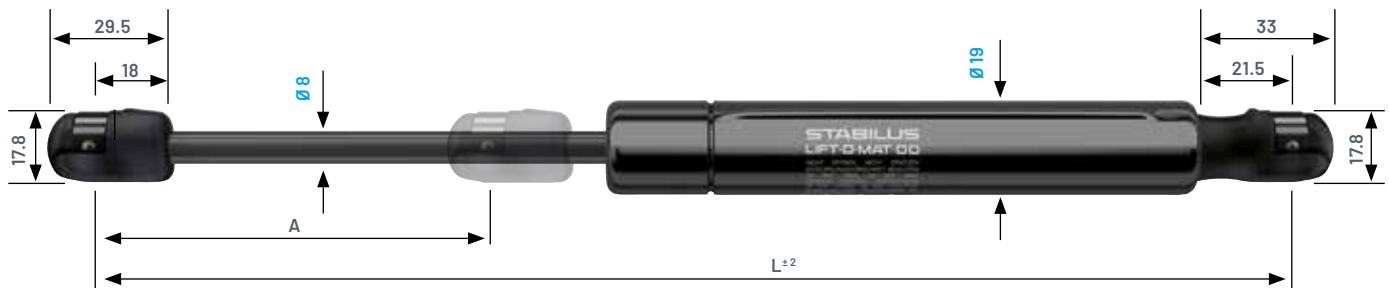
By reducing or increasing the groove cross-section, the piston rod's speed can be varied over the entire stroke, allowing it to be customized to the application. The motion can be slowed down smoothly and continuously until it comes to a stop. It allows implementing different compression and extension characteristics as well as a damped approach of intermediate positions.

The LIFT-O-MAT DD works regardless of its orientation, while approaching any position smoothly, without stressing hinges and joints.



Advantages and properties:

- Material friendly due to defined speed control
- Optimally adaptable to your application thanks to possible influence on the damping characteristics
- Damped approach of intermediate positions possible
- Simple integration into your application thanks to position-independent function



Suitable for ball studs according to DIN 71803 Ø 10

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
989233	100	100	285
992579	150	100	285
992818	200	100	285
993057	250	100	285
993296	300	100	285
993535	350	100	285
994013	400	100	285
994252	500	100	285
994491	600	100	285
042794	100	120	325
044467	150	120	325
044706	200	120	325
044945	250	120	325
045184	300	120	325
045423	350	120	325
045662	400	120	325
045901	500	120	325
046379	600	120	325
048530	100	140	365
068367	150	140	365
068606	200	140	365
069084	250	140	365
069323	300	140	365
069562	350	140	365
069801	400	140	365
070040	500	140	365
070279	600	140	365
072191	100	160	405
072908	150	160	405
073864	200	160	405
074103	250	160	405
074342	300	160	405
074581	350	160	405
074820	400	160	405
075059	500	160	405
075298	600	160	405

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
081273	100	180	445
081512	150	180	445
081751	200	180	445
083424	250	180	445
083663	300	180	445
083902	350	180	445
084141	400	180	445
084380	500	180	445
084619	600	180	445
085336	100	200	485
094896	150	200	485
095135	200	200	485
095374	250	200	485
095852	300	200	485
096330	350	200	485
096569	400	200	485
096808	500	200	485
097286	600	200	485
101588	100	220	525
101827	150	220	525
102066	200	220	525
102305	250	220	525
102544	300	220	525
102783	350	220	525
103022	400	220	525
103261	500	220	525
103739	600	220	525
105173	100	250	585
105412	150	250	585
105890	200	250	585
106129	250	250	585
106368	300	250	585
106846	350	250	585
107324	400	250	585
107563	500	250	585
108519	600	250	585

SUPPLEMENTARY LINE

LIFT-O-MAT HD

Create your individual gas spring with our supplementary program.

For each of our gas springs and dampers, there are numerous potential variants. Use them to configure the product variant that meets your requirements. Our options are almost endless.

Choose from different strokes, lengths, diameters and different fittings made from metal or plastic (K1 - K7 and D1 - D7). F1 force can also be selected individually. Optional guard or locking tubes (S1 or S2) are also available.

You can use our online CAD-Configurator to render your 3D model and your 2D drawing.



K1 Thickness 10, Metal, Ø8.1, 17, 22

K2 Thickness 10, Metal, Ø10.1, 17, 22

K3 Width 12, Metal, 24, 12, 6, Ø6

K4 Plastics, Ball Ø10, 18

K5 Plastics, Ball Ø10, 26, 13, M8, 18

K6 Metal, Ball Ø10, 18

K7 Metal, Ball Ø10, 24.3, 13, M8, 18

D1 Ref.-No. : 630268

D2 Ref.-No. : 630276

D3 Ref.-No. : 707228

D4 Ref.-No. : 698482

D5 Ref.-No. : 698482 + 4486MD

D6 Ref.-No. : 001649

D7 Ref.-No. : 001649 + 4486MD

S1 Protection tube, 10 mm stroke reduction, Plastics, Ø22.5

S2 Locking tube, 25 mm stroke reduction, Metal, Ø24, Ø27, 14

Ref.-No.	Force F_1 N	A Stroke mm	L extended mm
697567	*	50	154
9997RF	*	75	204
697605	*	100	255
9998RA	*	125	304
697656	*	150	356
9999RW	*	175	404
697699	*	200	462
2379SU	*	225	504
697737	*	250	560

* F_1 - Values from 100 - 900 N, in steps of 25 N

Ordering example

Ref.-No.	Force F_1	Piston rod end fitting	Pressure tube end fitting	Optional tube
123456	0350N	K2	D1	S1

Installation according to STAB-Spec. 10005630 We reserve the right to make modifications. Dimensions in mm.

K1 Thickness 12, 17, Metal, Ø8.1, Ref.-No.: 552550

K2 Thickness 10, 29, 17, Metal, Ø8.1, Ref.-No.: 371157

K3 Width 16, 32, 16, 8, Metal, Ø8, Ref.-No.: 454672

K4 Plastics, 25, Ball Ø10, Ref.-No.: 615269

K5 Plastics, 25, Ball Ø10, 26, 13, M8, Ref.-No.: 615269 + 4486MD

K6 Metal, 25, Ball Ø13, Ref.-No.: 000917

K7 Metal, 25, Ball Ø13, 28.8, 16.3, M10, Ref.-No.: 000917 + 352950

Protection tube, 10 mm stroke reduction

Plastics, Ø26, S1, Ref.-No.: 371157

Locking tube, 25 mm stroke reduction

Metal, Ø24, Ø27, 14, S2, Ref.-No.: 615269

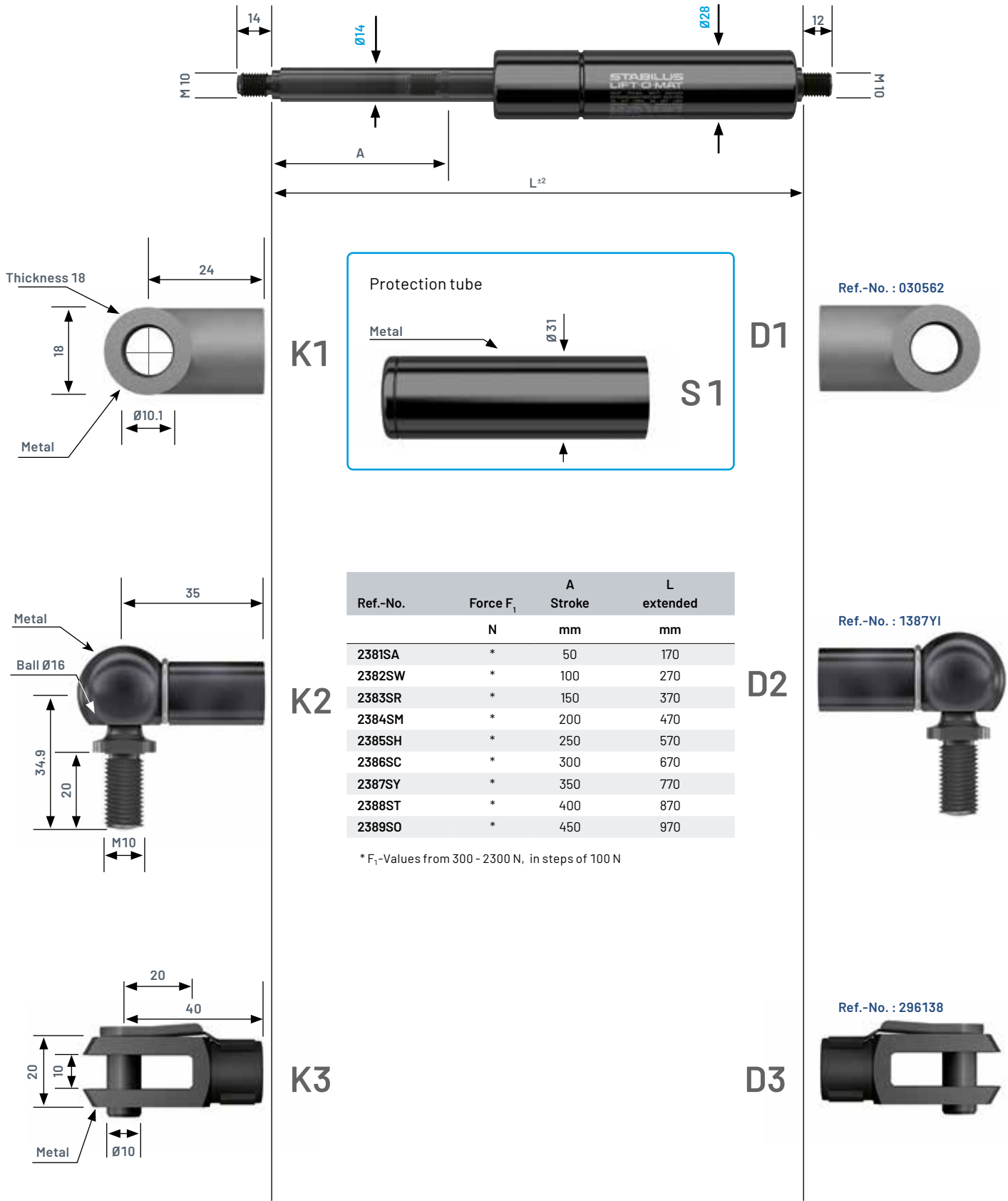
Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
555762	*	100	253.5
2066UA	*	125	304.5
555800	*	150	354.5
2065UF	*	175	405.5
555843	*	200	456.5
2064UK	*	225	504.5
555894	*	250	552.5
2062UU	*	275	603.5
555932	*	300	654.5
2063UP	*	325	705.5
555975	*	350	756.5
2061UZ	*	375	804.5
556017	*	400	852.5

* F_1 -Values from 150 - 1000 N, in steps of 50 N

Ordering example

Ref.-No.	Force F_1	Piston rod end fitting	Pressure tube end fitting	Optional tube
123456	0350N	K2	D1	S1

Installation according to STAB-Spec. 10005625 We reserve the right to make modifications. Dimensions in mm.



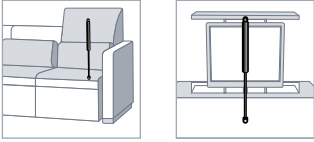
Ref.-No.	Force F_1 N	A Stroke mm	L extended mm
2381SA	*	50	170
2382SW	*	100	270
2383SR	*	150	370
2384SM	*	200	470
2385SH	*	250	570
2386SC	*	300	670
2387SY	*	350	770
2388ST	*	400	870
2389SO	*	450	970

* F_1 -Values from 300 - 2300 N, in steps of 100 N

Ordering example

Ref.-No.	Force F_1	Piston rod end fitting	Pressure tube end fitting	Optional tube
123456	0350N	K2	D1	S1

Installation according to STAB-Spec. 10021385 We reserve the right to make modifications. Dimensions in mm.



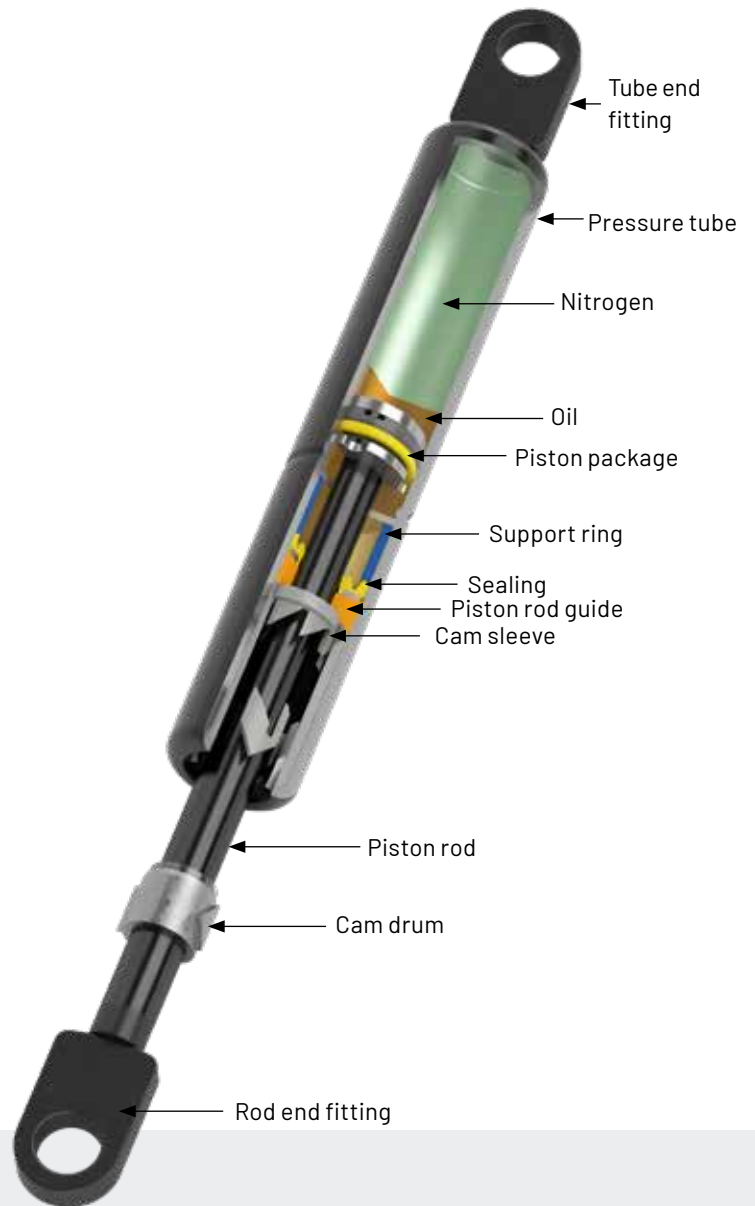
LIFT-O-MAT PTL

The gas spring with integrated locking mechanism.

The LIFT-O-MAT PTL (push to lock) from Stabilus is a hydraulically damped gas spring with an additional mechanical lock in the compressed position.

Similar to the ballpoint pen principle, the lock can be released by a light push on the gas spring; the gas spring will then automatically extend with damping.

In addition to the force assist function, the LIFT-O-MAT PTL features an end position lock, eliminating the need for installing additional locking elements. At the same time, it is easy and convenient to use.



Advantages and properties:

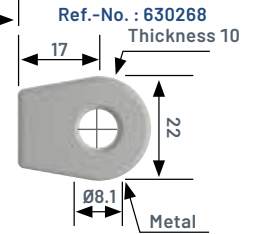
- Locking in compressed position
- End position lock without additional locking elements
- Simple release of the lock using the ballpoint pen principle
- User-friendly, convenient operation
- Maintenance-free



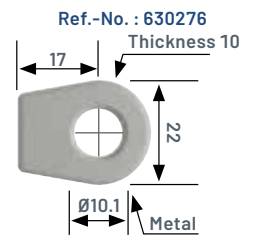
Ref.-No.	Force F_1	A	C	L
	N	Stroke mm	Lockposition mm	extended mm
814763	*	100	205	305
815719	*	150	255	405
818587	*	200	305	505
819304	*	250	355	605
820021	*	300	405	705
820977	*	350	455	805
822411	*	400	505	905

* F_1 -Values from 100–400 N, in steps of 25 N
 Temperature range -15°C to +60°C

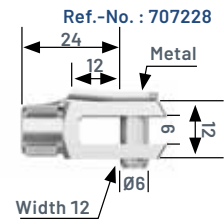
D1



D2



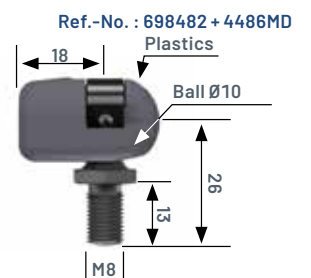
D3



D4



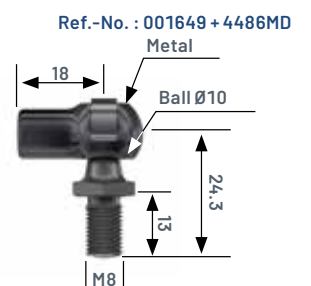
D5



D6



D7



Ordering example

Ref.-No.	Force F_1	Pressure tube end fitting
123456	0350N	D1

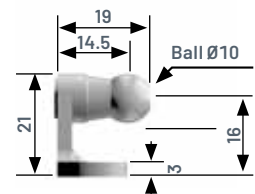
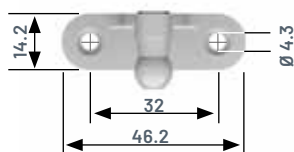
Installation according to STAB-Spec. 10203879 We reserve the right to make modifications. Dimensions in mm.

ACCESSORIES FOR GAS SPRINGS AND DAMPERS

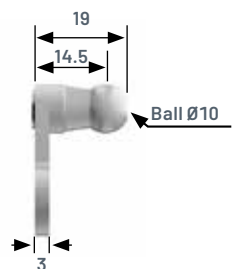
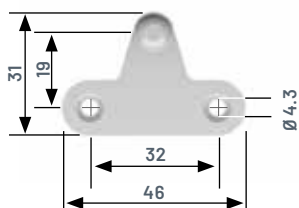
Stabilus offers a wide variety of bracket and ball pins for mounting gas springs.

BRACKETS

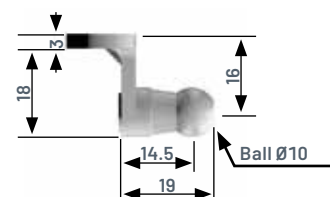
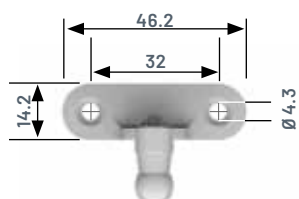
Ref.-No. 9222SJ
 $F_{max}^* = 500 \text{ N}$



Ref.-No. 7592TM
 $F_{max}^* = 350 \text{ N}$

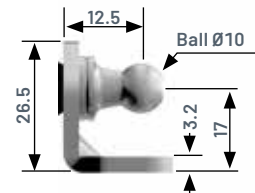
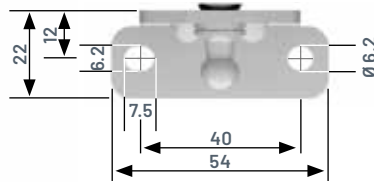


Ref.-No. 6284UG
 $F_{max}^* = 500 \text{ N}$



Ref.-No. 8262WE

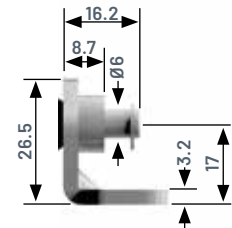
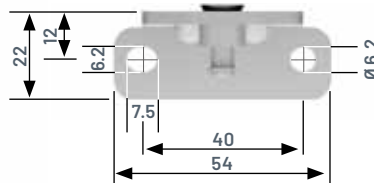
$F_{max}^* = 1000 \text{ N}$



Ref.-No. 8267WG

$F_{max}^* = 700 \text{ N}$

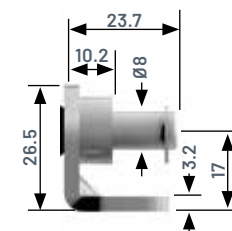
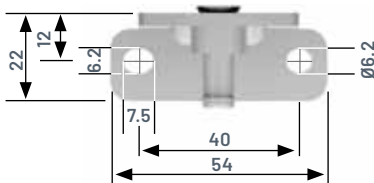
suitable for eyes
with max. 5 mm
Width



Ref.-No. 8261WJ

$F_{max}^* = 1000 \text{ N}$

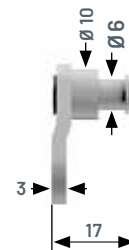
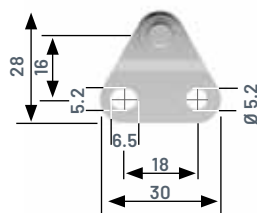
suitable for eyes
with max. 10 mm
Width



Ref.-No. 8268WB

$F_{max}^* = 700 \text{ N}$

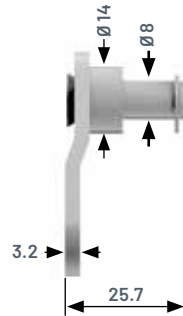
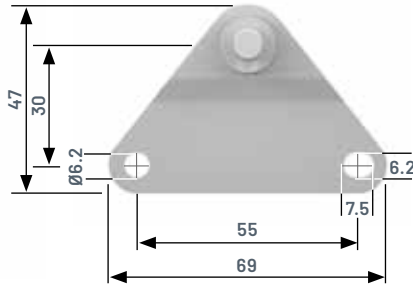
suitable for eyes
with max. 5 mm
Width



F_{max}^* = Maximum allowable force at 20°C in compressed position.
Material: steel, zinc-plated.

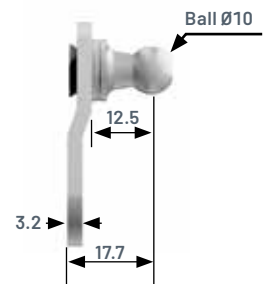
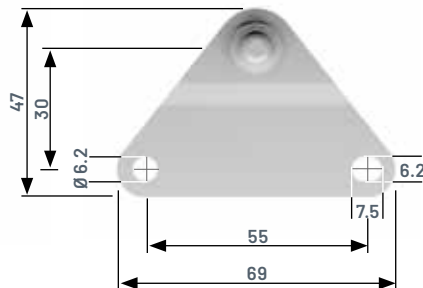
Ref.-No. 8264WV

$F_{max}^* = 1000 \text{ N}$



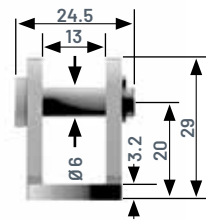
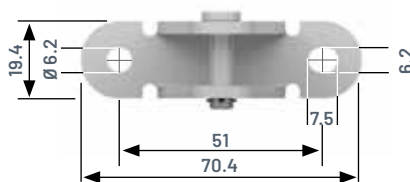
Ref.-No. 8265WQ

$F_{max}^* = 1000 \text{ N}$



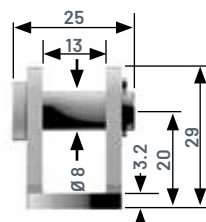
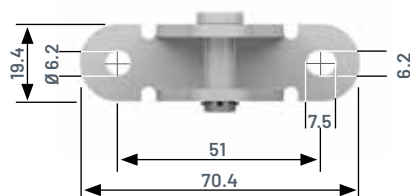
Ref.-No. 023189

$F_{max}^* = 700 \text{ N}$



Ref.-No. 023083

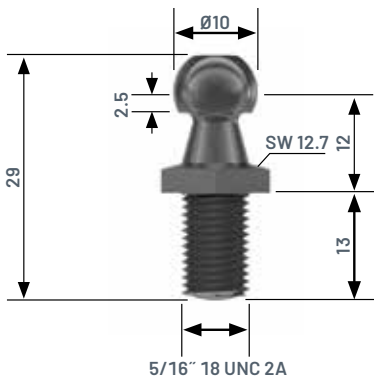
$F_{max}^* = 1600 \text{ N}$



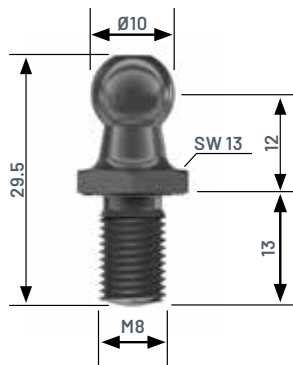
F_{max}^* = Maximum allowable force at 20°C in compressed position.
Material: steel, zinc-plated.

BALL STUD

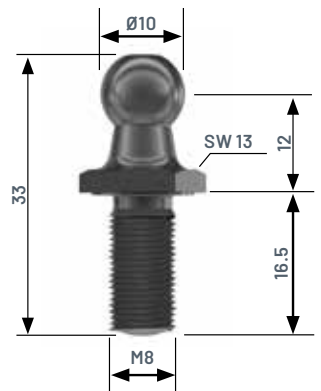
Ref.-No. 4565BD
Clear passivated



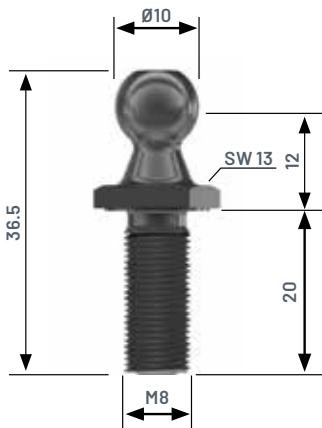
Ref.-No. 4486MD
Clear passivated



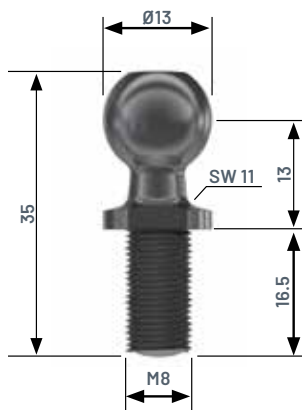
Ref.-No. 177583
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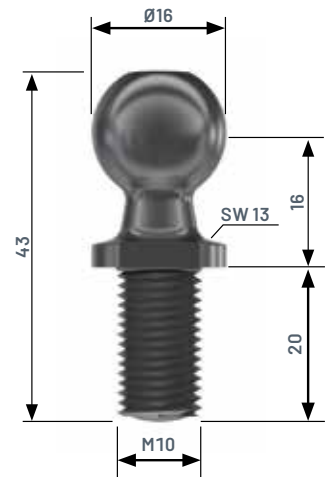
Ref.-No. 8442LT
Clear passivated



Ref.-No. 072796
Clear passivated



Ref.-No. 20540F
Clear passivated

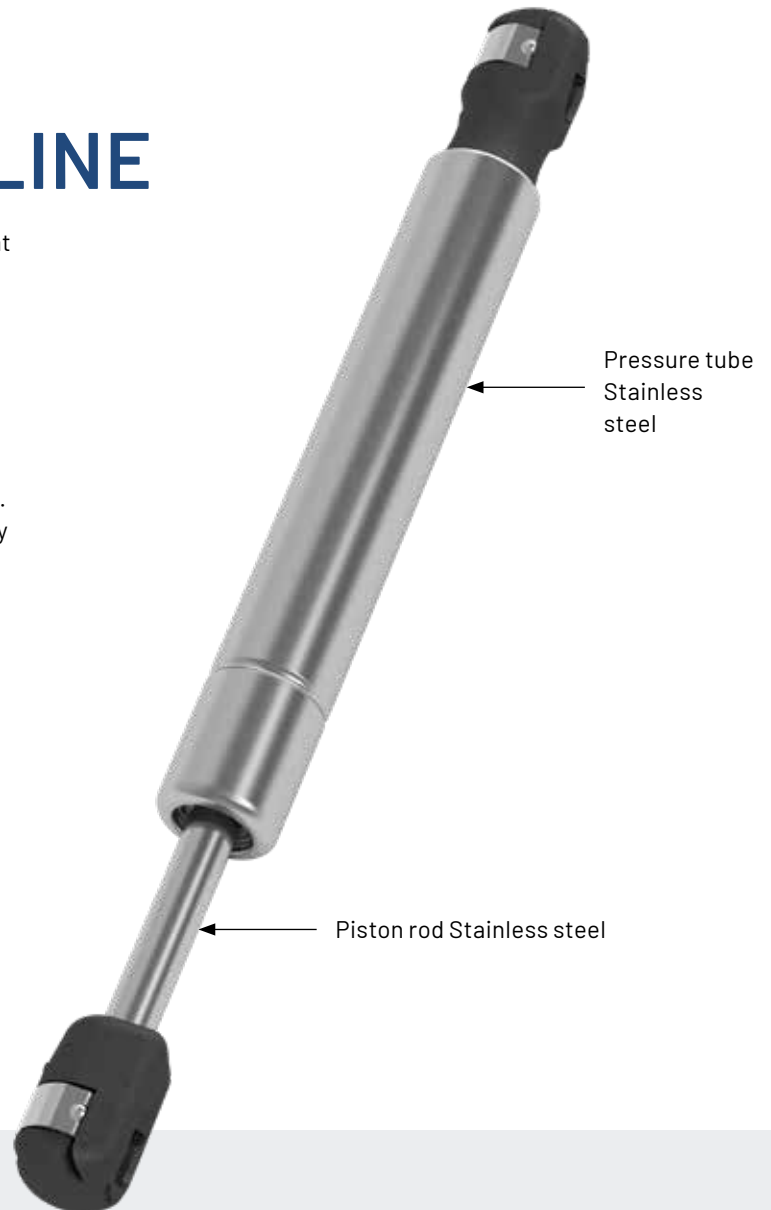




LIFT-O-MAT INOXLIN

The LIFT-O-MAT INOXLIN (Stainless Steel) is a gas spring that is particularly corrosion resistant due to the use of AISI 316L steel (see DIN EN 100 88-1). It is used in critical environments, such as corrosive sea water, sea air or industrial exhaust gases. Its corrosion resistance will ensure a high level of protection even during acid or lye exposure.

Carefully chosen materials for the LIFT-O-MAT INOXLIN components yield a virtually iron-free, non-magnetic product. This is especially attractive in medical and military technology as the stainless steel gas springs will barely interfere with the magnetic fields used in these industries. The oils used in the Stabilus INOXLIN gas springs are biodegradable and consequently eco-friendly; they are classified in the water hazard class "no hazard to water". This is especially important for the water supply and environmental technology areas.



Advantages and properties:

- High corrosion protection
- Environmentally friendly fluids
- Compact design
- Maintenance-free

Ref.-No.	Force F_1 N	A Stroke mm	L extended mm
9049RH	*	60	169
9051RO	*	80	209
9052RJ	*	100	249
9053RE	*	120	289
9055RV	*	140	329
9056RQ	*	160	369
9057RL	*	180	409
9058RG	*	200	449
9059RB	*	220	489
9061RI	*	250	549

* F_1 - Values from 100-600 N, in steps of 25 N

Ref.-No. : 97180M
Ref.-No. : 6383R0
Ref.-No. : 9935SU
Ref.-No. : 9938SF
Ref.-No. : 1827Q0
Ref.-No. : 1827Q0 + 7158NE

Ordering example

Ref.-No.	Force F_1	Piston rod end fitting	Pressure tube end fitting
123456	0350N	K2	D1

Installation according to STAB-Spec. 10022248 We reserve the right to make modifications. Dimensions in mm.

Thickness 10

18

15

Ø8.1

P1

T1

Ref.-No. : 9718QM

Thickness 10

18

15

Ø10.1

P2

T2

Ref.-No. : 6383RQ

Ball Ø10

18

P3

T3

Ref.-No. : 9935SU

Ball Ø10

18

24.3

13

M 8

P4

T4

Ref.-No. : 9938SF

Ball Ø10

18

P5

T5

Ref.-No. : 1827Q0

Ball Ø10

18

26

13

M 8

P6

T6

Ref.-No. : 1827Q0 + 7158NE

Ref.-No.	Force F_1 N	A Stroke mm	L extended mm
9062RD	*	100	249
9063RZ	*	150	349
9064RU	*	200	449
9065RP	*	250	549
9066RK	*	300	649
9067RF	*	350	749
9068RA	*	400	849

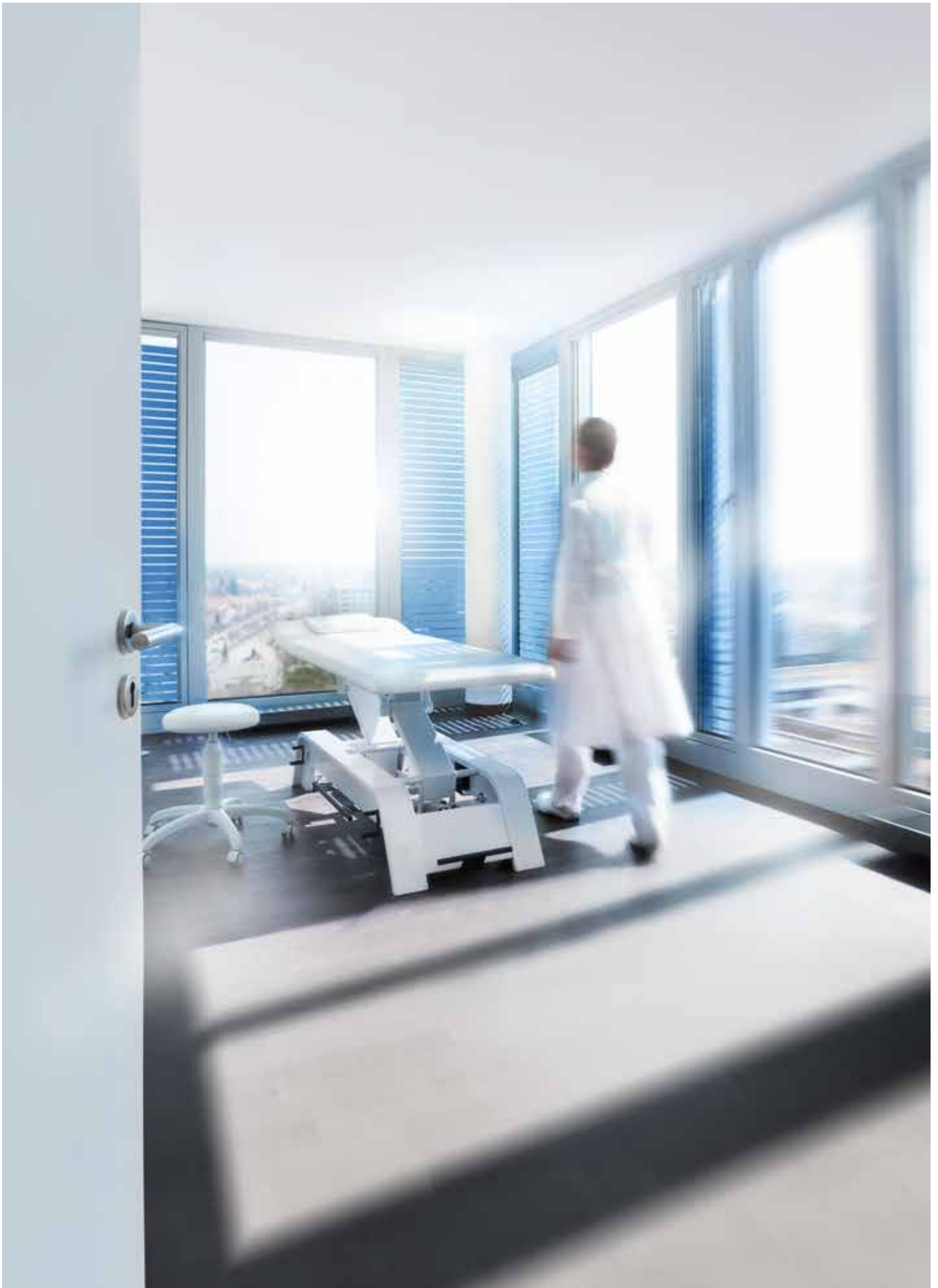
* F_1 -Values from 150 - 1000 N, in steps of 50 N

Ordering example

Ref.-No.	Force F_1	Piston rod end fitting	Pressure tube end fitting
123456	0350N	K2	D1

Installation according to STAB-Spec. 10022260

We reserve the right to make modifications. Dimensions in mm.

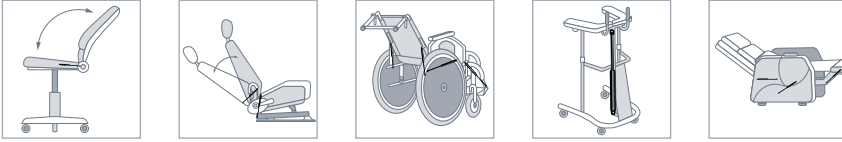




BLOC-O-LIFT®

- Rigid locking
- Rigid locking (tension)
- Rigid locking (push)
- BLOC-O-LIFT T
- Release systems + Accessories
- SOFT-O-TOUCH





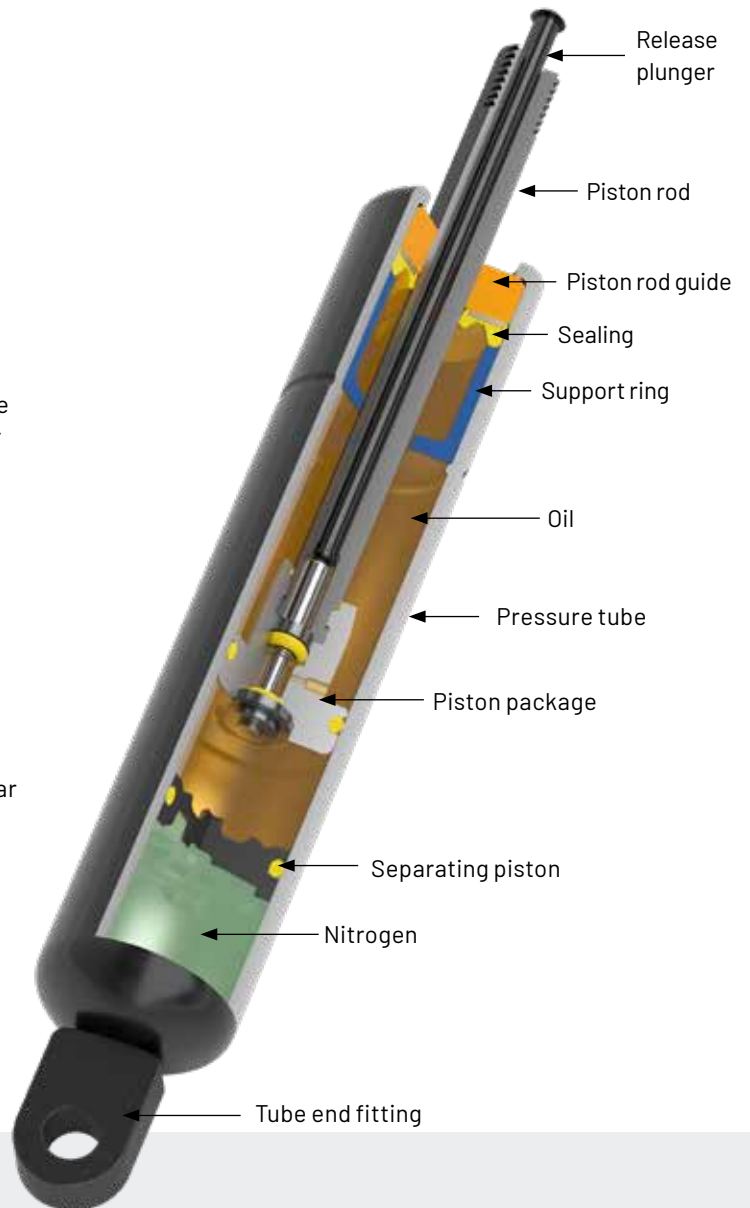
BLOC-O-LIFT

ADJUST CONTINUOUSLY, RIGID OR SPRINGING BLOCKING

Flaps and lids often have a high dead weight and are difficult to operate by hand. In these cases, lockable gas springs from Stabilus ensure optimum weight compensation and user-friendly movement sequences when opening, closing and positioning. Our products in the BLOC-O-LIFT series, lockable gas springs, can also be locked continuously, either elastic or rigidly in the tension or compression direction, depending on the desired design.

BLOCKING GAS SPRINGS AND HOW THEY WORK

Lockable gas springs from the BLOC-O-LIFT series are equipped with a special piston valve system that separates the two pressure chambers in the spring. If the valve plunger is released from the outside and the exchange between the two pressure chambers is interrupted, the gas spring locks. Lockable gas springs from Stabilus reliably hold even heavy loads in the desired position. When the valve is open, the linear spring characteristic of the BLOC-O-LIFT ensures a uniform increase in force over the entire range of movement.



Advantages and properties:

- Variable positioning with elastic or rigid locking
- Optimum weight compensation when lifting, lowering, opening and closing
- Installation depending on position or independent of position, depending on type
- Compact design for minimum space
- Maintenance-free, even under high loads with a long service life
- Control of the extension speed possible

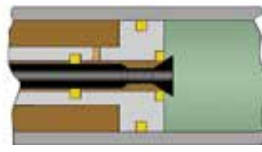
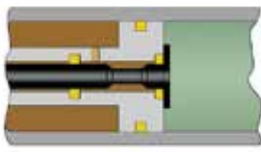
VARIANTS

- Spring blocking: Elastic blocking in tension and compression direction
- Rigid blocking: Very high blocking forces in pull or push direction

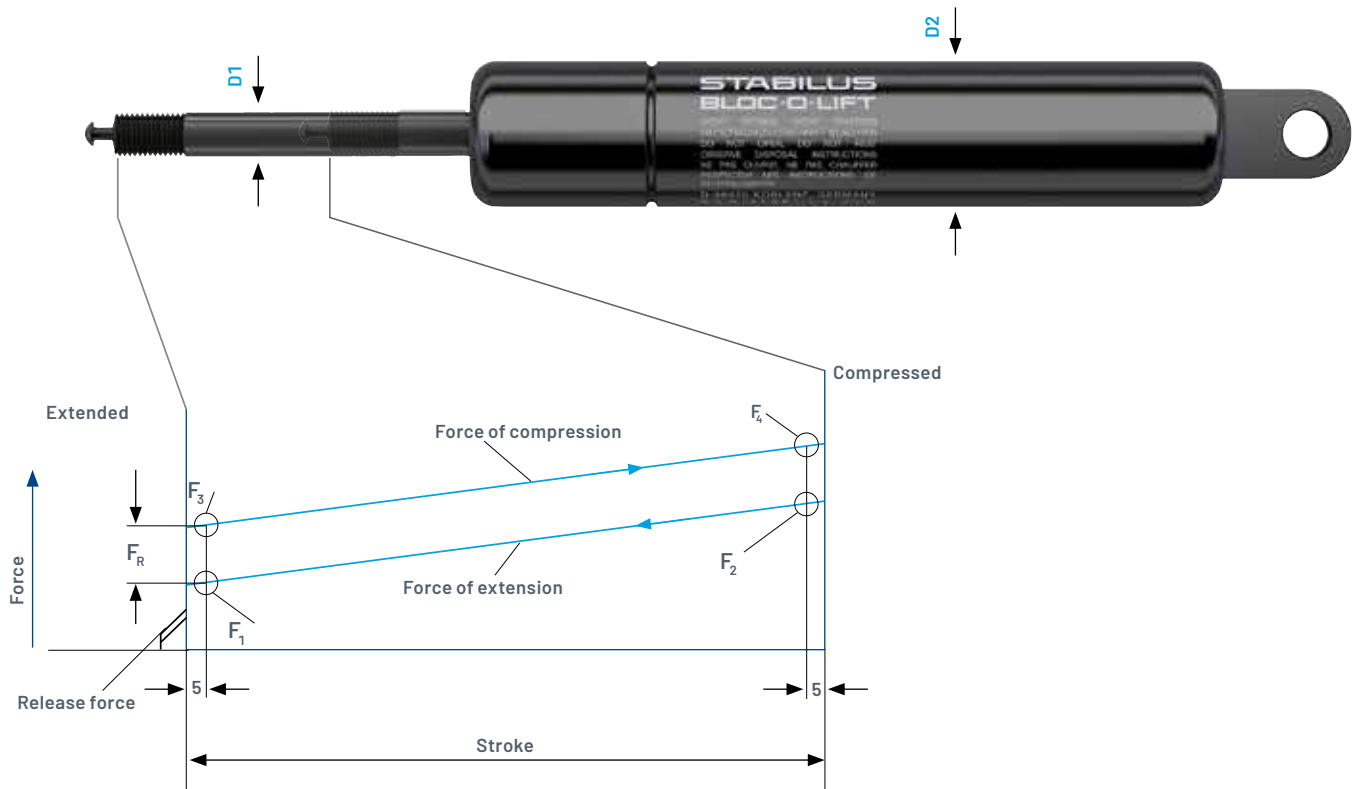
RELEASE TYPES

• Standard release: Release way 2.5 mm

• Short release: Release way 1 mm



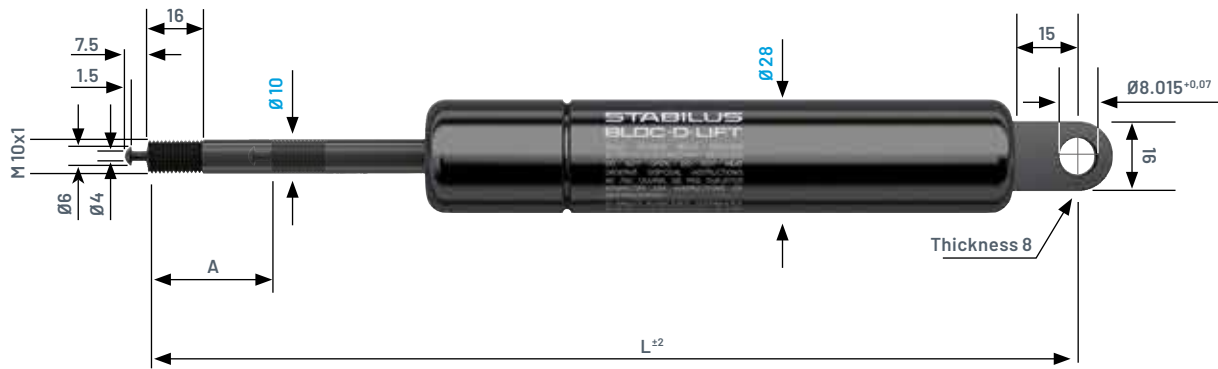
FORCE-PATH DIAGRAM



D1	D2	Force of extension F_1	Friction-force F_R max.	Spring rate x	Release force
mm	mm	N	N	$x = F_2 / F_1 (\pm)$	
8	28	200 - 1000	80	1.01 - 1.5	ca. 30 % F_1
10	28	200 - 1200	80	1.01 - 1.6	ca. 18 % F_1

Installation instruction STAB-Spec. 10005593
 Release force of valve according STAB-Spec. 10005233
 Statically measured forces STAB-Spec. 10009033
 Disposal instruction STAB-Spec. 10009375 www.stabilus.com/contact-and-support/recycling

BLOC-O-LIFT | 10-28 | SPRING-LOCKED, RELEASE WAY 2.5 MM



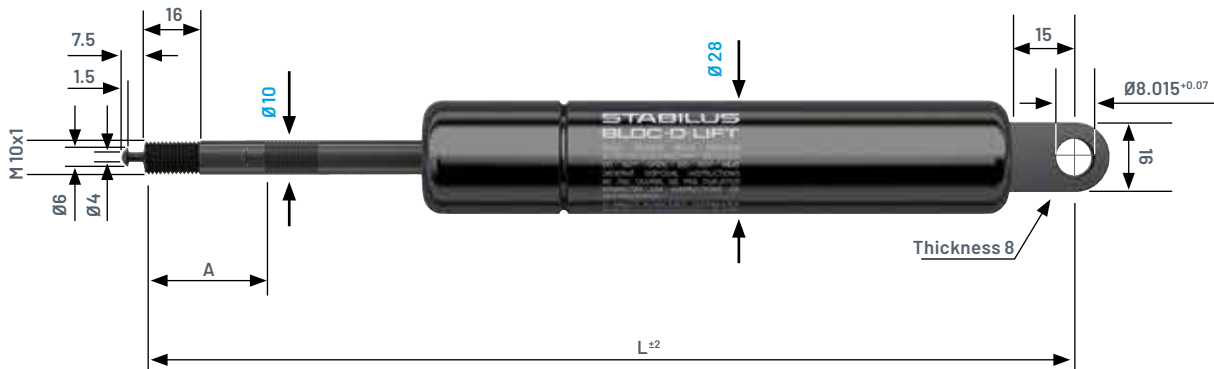
Installation position any

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
670685	300	20,0	149.5
728543	350	20,0	149.5
728594	400	20,0	149.5
670626	500	20,0	149.5
728640	600	20,0	149.5
691860	800	20,0	149.5
728659	1000	20,0	149.5
728667	1200	20,0	149.5
681830	250	25,0	157.5
728675	300	25,0	157.5
728683	350	25,0	157.5
728705	400	25,0	157.5
691879	500	25,0	157.5
728713	600	25,0	157.5
691887	800	25,0	157.5
728721	1000	25,0	157.5
728748	1200	25,0	157.5
681849	250	30,0	168.5
728756	300	30,0	168.5
728764	350	30,0	168.5
728772	400	30,0	168.5
691895	500	30,0	168.5
728780	600	30,0	168.5
691909	800	30,0	168.5
728799	1000	30,0	168.5
728802	1200	30,0	168.5
681857	200	40,0	187.5
728810	250	40,0	187.5
728829	300	40,0	187.5
728837	350	40,0	187.5
728845	400	40,0	187.5
691917	500	40,0	187.5
728853	600	40,0	187.5
691925	800	40,0	187.5
728861	1000	40,0	187.5
728888	1200	40,0	187.5
681865	200	60,0	228.5
729345	250	60,0	228.5
729353	300	60,0	228.5

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
729361	350	60,0	228.5
729388	400	60,0	228.5
691933	500	60,0	228.5
729396	600	60,0	228.5
691941	800	60,0	228.5
729418	1000	60,0	228.5
729426	1200	60,0	228.5
681946	200	80,0	269.0
729434	250	80,0	269.0
729442	300	80,0	269.0
729450	350	80,0	269.0
729469	400	80,0	269.0
691968	500	80,0	269.0
729477	600	80,0	269.0
691976	800	80,0	269.0
729485	1000	80,0	269.0
729493	1200	80,0	269.0
681873	200	100,0	310.0
729507	250	100,0	310.0
729515	300	100,0	310.0
729523	350	100,0	310.0
729531	400	100,0	310.0
691984	500	100,0	310.0
729558	600	100,0	310.0
691992	800	100,0	310.0
729566	1000	100,0	310.0
729574	1200	100,0	310.0
681881	200	120,0	348.0
729582	250	120,0	348.0
729590	300	120,0	348.0
729604	350	120,0	348.0
729612	400	120,0	348.0
692018	500	120,0	348.0
729620	600	120,0	348.0
692026	800	120,0	348.0
729639	1000	120,0	348.0
729647	1200	120,0	348.0
681903	200	160,0	430.0
729655	250	160,0	430.0

Ref.-No.	Force F ₁	A	L
	N	Stroke mm	extended mm
729663	300	160,0	430.0
729671	350	160,0	430.0
729698	400	160,0	430.0
692034	500	160,0	430.0
729701	600	160,0	430.0
692212	800	160,0	430.0
729728	1000	160,0	430.0
729736	1200	160,0	430.0
681911	200	200,0	509.0
729744	250	200,0	509.0
729752	300	200,0	509.0
729760	350	200,0	509.0
729779	400	200,0	509.0
692220	500	200,0	509.0
729787	600	200,0	509.0
692239	800	200,0	509.0
729795	1000	200,0	509.0
729809	1200	200,0	509.0
681938	200	250,0	610.0
729817	250	250,0	610.0
729825	300	250,0	610.0
729833	350	250,0	610.0
729841	400	250,0	610.0
692247	500	250,0	610.0
729868	600	250,0	610.0
692255	800	250,0	610.0
729876	1000	250,0	610.0
729884	1200	250,0	610.0

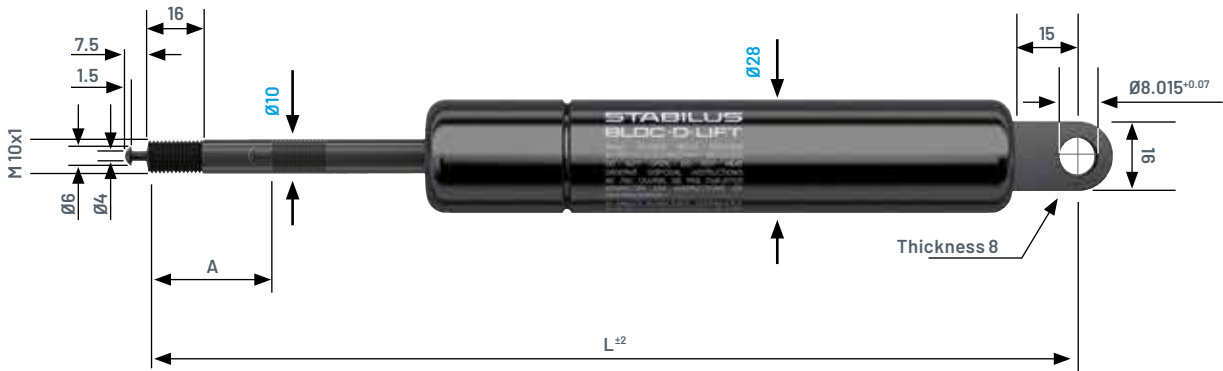
BLOC-O-LIFT | 10-28 | SPRING-LOCKED, RELEASE WAY 1 MM



Installation position any

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
681954	300	20.0	149.5
729892	350	20.0	149.5
729906	400	20.0	149.5
692263	500	20.0	149.5
729914	600	20.0	149.5
692271	800	20.0	149.5
729922	1000	20.0	149.5
729930	1200	20.0	149.5
681962	250	25.0	157.5
729949	300	25.0	157.5
729957	350	25.0	157.5
729965	400	25.0	157.5
692298	500	25.0	157.5
729981	600	25.0	157.5
692301	800	25.0	157.5
730009	1000	25.0	157.5
730017	1200	25.0	157.5
681970	250	30.0	168.5
730025	300	30.0	168.5
730033	350	30.0	168.5
730041	400	30.0	168.5
692328	500	30.0	168.5
730068	600	30.0	168.5
692336	800	30.0	168.5
730076	1000	30.0	168.5
730084	1200	30.0	168.5
681989	200	40.0	187.5
730092	250	40.0	187.5
730106	300	40.0	187.5
730114	350	40.0	187.5
730122	400	40.0	187.5
692344	500	40.0	187.5
730130	600	40.0	187.5

Ref.-No.	Force F_1	A	L
	N	Stroke mm	extended mm
692352	800	40.0	187.5
730149	1000	40.0	187.5
730157	1200	40.0	187.5
692360	200	60.0	228.0
730165	250	60.0	228.0
730173	300	60.0	228.0
730181	350	60.0	228.0
730203	400	60.0	228.0
682136	500	60.0	228.0
730211	600	60.0	228.0
692379	800	60.0	228.0
730238	1000	60.0	228.0
730246	1200	60.0	228.0
682144	200	100.0	310.5
730254	250	100.0	310.5
730262	300	100.0	310.5
730270	350	100.0	310.5
730289	400	100.0	310.5
692387	500	100.0	310.5
730297	600	100.0	310.5
692395	800	100.0	310.5
730300	1000	100.0	310.5
730319	1200	100.0	310.5
682152	200	200.0	509.0
730327	250	200.0	509.0
730335	300	200.0	509.0
730343	350	200.0	509.0
730351	400	200.0	509.0
692409	500	200.0	509.0
730378	600	200.0	509.0
692417	800	200.0	509.0
730386	1000	200.0	509.0
730394	1200	200.0	509.0



Installation position any

Ref.-No.	Force			A Stroke mm	L extended mm
	F ₁ N	F ₂ N	F ₀ N		
2691HR	400	9500	2000	19.5	164.5
2694HC	500	8500	2500	19.5	164.5
2696HT	600	7500	3000	19.5	164.5
2698HJ	800	5500	4000	19.5	164.5
2721HZ	1000	3500	5000	19.5	164.5
2723HP	1200	2000	6000	19.5	164.5
2727HW	400	9000	2000	25.5	177.5
2731HT	500	8000	2500	25.5	177.5
2733HJ	600	7000	3000	25.5	177.5
2736HV	800	5500	4000	25.5	177.5
2738HL	1000	3000	5000	25.5	177.5
2741HN	1200	1000	6000	25.5	177.5
2745HU	300	10000	1000	31.5	192.5
2748HF	400	9000	2000	31.5	192.5
2751HH	500	8000	2500	31.5	192.5
2753HY	600	7000	3000	31.5	192.5
2611HL	800	5000	4000	31.5	192.5
2776HY	1000	3000	5000	31.5	192.5
2787HN	300	10000	1000	40.5	212.5
2791HK	400	9000	2000	40.5	212.5
2793HA	500	8000	2500	40.5	212.5
2803HU	600	7000	3000	40.5	212.5
2805HK	800	5000	4000	40.5	212.5
2807HA	1000	2500	5000	40.5	212.5
5219HC	300	10000	1000	60.0	265.0
5224HV	400	9000	2000	60.0	265.0
5226HL	500	8000	2500	60.0	265.0
5228HB	600	7000	3000	60.0	265.0
5231HD	800	4500	4000	60.0	265.0
5233HU	1000	2500	5000	60.0	265.0
2784HB	200	10500	900	81.0	310.0

Ref.-No.	Force			A Stroke mm	L extended mm
	F ₁ N	F ₂ N	F ₀ N		
5238HW	300	9500	1000	81.0	310.0
5241HY	400	8500	2000	81.0	310.0
5243HO	500	7500	2500	81.0	310.0
5245HE	600	6500	3000	81.0	310.0
5248HO	800	4000	4000	81.0	310.0
5251HS	1000	1500	5000	81.0	310.0
5255HZ	200	10500	900	100.5	370.5
5258HK	300	9500	1000	100.5	370.5
5261HM	400	8500	2000	100.5	370.5
5263HC	500	7000	2500	100.5	370.5
5265HT	600	6000	3000	100.5	370.5
5267HJ	800	3500	4000	100.5	370.5
5273HX	200	10500	900	121.5	420.5
5281HA	300	9500	1000	121.5	420.5
5283HR	400	8000	2000	121.5	420.5
5285HH	500	7000	2500	121.5	420.5
5287HY	600	6000	3000	121.5	420.5
5289HO	800	3500	4000	121.5	420.5
5294HG	200	10500	900	160.5	510.5
5297HS	300	9000	1000	160.5	510.5
5299HI	400	8000	2000	160.5	510.5
5302HJ	500	7000	2500	160.5	510.5
5311HI	600	5500	3000	160.5	510.5
5313HZ	800	3000	4000	160.5	510.5
5317HF	200	10500	900	199.5	600.5
5321HC	300	9000	1000	199.5	600.5
5323HT	400	8000	2000	199.5	600.5
5325HJ	500	6500	2500	199.5	600.5
5328HV	600	5500	3000	199.5	600.5
5331HX	800	2500	4000	199.5	600.5

F₂ Blocking force in extension [N]
F₀ Blocking force in compression [N]

BLOC-O-LIFT | 10-28 | RIGID BLOCKING IN EXTENSION, RELEASE WAY 1 MM



Installation position any

Ref.-No.	Force			A Stroke	L extended
	F ₁ N	F ₂ N	F ₀ N		
5139HY	400	4500	2000	19.5	164.5
5144HQ	500	5500	2500	19.5	164.5
5146HG	600	7000	3000	19.5	164.5
5148HX	800	6000	4000	19.5	164.5
5151HZ	1000	4000	5000	19.5	164.5
5153HP	1200	2000	6000	19.5	164.5
5157HW	400	4500	2000	25.5	177.5
5169HG	500	6000	2500	25.5	177.5
5172HI	600	7000	3000	25.5	177.5
5174HZ	800	5500	4000	25.5	177.5
5176HP	1000	3500	5000	25.5	177.5
5178HF	1200	1500	6000	25.5	177.5
5183HY	300	3500	1000	31.5	192.5
5186HJ	400	5000	2000	31.5	192.5
5189HV	500	6000	2500	31.5	192.5
5192HX	600	7000	3000	31.5	192.5
5194HN	800	5500	4000	31.5	192.5
5196HD	1000	3500	5000	31.5	192.5
5198HU	1200	1500	6000	31.5	192.5
5203HL	300	4000	1000	40.5	212.5
5206HX	400	5000	2000	40.5	212.5
5208HN	500	6500	2500	40.5	212.5
5211HP	600	7000	3000	40.5	212.5
5213HF	800	5000	4000	40.5	212.5
5215HW	1000	3000	5000	40.5	212.5

Ref.-No.	Force			A Stroke	L extended
	F ₁ N	F ₂ N	F ₀ N		
5352HG	200	2500	900	60.0	265.0
5355HS	300	4000	1000	60.0	265.0
5357HI	400	5000	2000	60.0	265.0
5359HZ	500	6500	2500	60.0	265.0
5362HA	600	7000	3000	60.0	265.0
5364HR	800	5000	4000	60.0	265.0
5366HH	1000	2500	5000	60.0	265.0
5372HV	200	3000	900	100.5	370.5
5375HG	300	4500	1000	100.5	370.5
5377HX	400	6000	2000	100.5	370.5
5379HN	500	7000	2500	100.5	370.5
5382HP	600	6000	3000	100.5	370.5
5384HF	800	4000	4000	100.5	370.5
5388HM	200	3000	900	160.5	510.5
5392HJ	300	4500	1000	160.5	510.5
5395HV	400	6000	2000	160.5	510.5
5397HL	500	7000	2500	160.5	510.5
5399HB	600	6000	3000	160.5	510.5
5402HC	800	3000	4000	160.5	510.5
5406HJ	200	3000	900	250.5	730.5
5411HB	300	4500	1000	250.5	730.5
5413HS	400	6000	2000	250.5	730.5
5415HI	500	7000	2500	250.5	730.5
5417HZ	600	6000	3000	250.5	730.5
5419HP	800	3000	4000	250.5	730.5

F₂ Blocking force in extension [N]
F₀ Blocking force in compression [N]



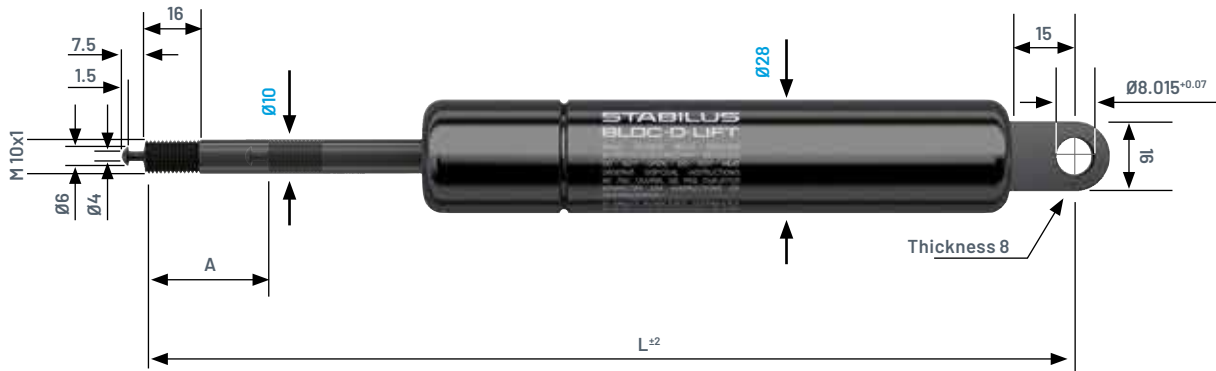
Installation position with piston rod upwards

Ref.-No.	Force			A Stroke mm	L extended mm
	F ₁ N	F _z N	F ₀ N		
684058	200	1000	1000	20.0	179.0
733199	250	1500	1500	20.0	179.0
733202	300	2000	2000	20.0	179.0
733210	350	2500	2500	20.0	179.0
733229	400	3000	3000	20.0	179.0
670138	500	4000	4000	20.0	179.0
733237	600	5000	5000	20.0	179.0
693391	800	4000	4000	20.0	179.0
733245	1000	1000	1000	20.0	179.0
684066	200	1000	1000	25.0	190.0
733253	250	1500	1500	25.0	190.0
733261	300	2000	2000	25.0	190.0
733288	350	2500	2500	25.0	190.0
733296	400	3000	3000	25.0	190.0
693405	500	4000	4000	25.0	190.0
733318	600	5000	5000	25.0	190.0
693413	800	3500	3500	25.0	190.0
733326	1000	500	500	25.0	190.0

Ref.-No.	Force			A Stroke mm	L extended mm
	F ₁ N	F _z N	F ₀ N		
684074	200	1000	1000	30.0	204.0
733334	250	1500	1500	30.0	204.0
733342	300	2000	2000	30.0	204.0
733350	350	2500	2500	30.0	204.0
733369	400	3000	3000	30.0	204.0
693421	500	4000	4000	30.0	204.0
733377	600	5000	5000	30.0	204.0
693448	800	3500	3500	30.0	204.0
733385	1000	500	500	30.0	204.0
684082	200	1000	1000	40.0	226.0
733393	250	1500	1500	40.0	226.0
733407	300	2000	2000	40.0	226.0
733415	350	2500	2500	40.0	226.0
733423	400	3000	3000	40.0	226.0
693456	500	4000	4000	40.0	226.0
733431	600	5000	5000	40.0	226.0
693464	800	3000	3000	40.0	226.0

F_z Blocking force in extension [N]
 F₀ Blocking force in compression [N]

BLOC-O-LIFT | 10-28 | RIGID BLOCKING IN COMPRESSION, RELEASE WAY 2.5 MM

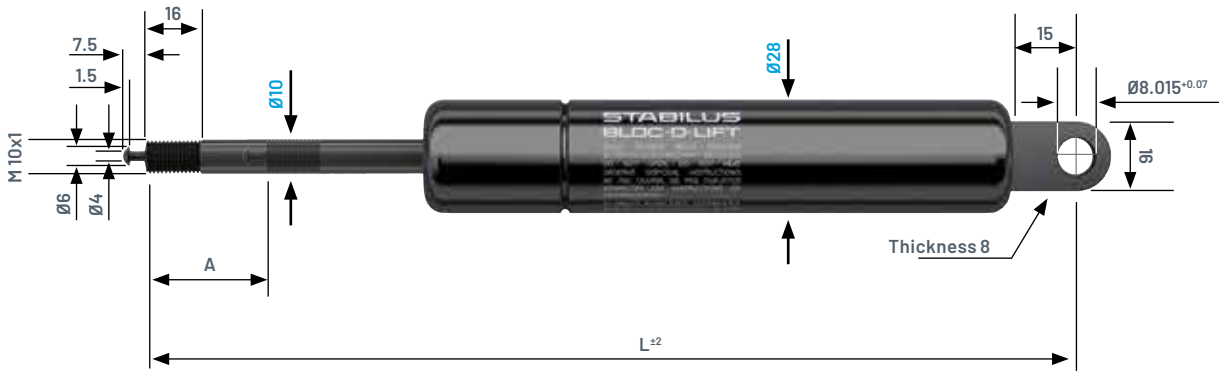


Installation position any

Ref.-No.	Force			A Stroke mm	L extended mm
	F ₁ N	F ₂ N	F ₀ N		
670669	500	2500	12000	20.0	191.5
682756	600	3000	11000	20.0	191.5
693278	800	4000	9000	20.0	191.5
732869	1000	5000	8000	20.0	191.5
732877	1200	3500	6500	20.0	191.5
682764	400	2000	12500	25.0	205.5
693286	500	2500	12000	25.0	205.5
732885	600	3000	11000	25.0	205.5
693294	800	4000	9500	25.0	205.5
732893	1000	5000	8000	25.0	205.5
767689	1200	3500	6500	25.0	205.5
682772	350	1500	13000	30.0	219.5
732907	400	2000	12500	30.0	219.5
693308	500	2500	11500	30.0	219.5
732915	600	3000	10500	30.0	219.5
693316	800	4000	9000	30.0	219.5
732923	1000	4500	7000	30.0	219.5
732931	1200	2500	5500	30.0	219.5
682799	350	1500	12500	40.0	241.5
732958	400	2000	12000	40.0	241.5
693324	500	2500	11000	40.0	241.5
732966	600	3000	10000	40.0	241.5
693332	800	4000	8500	40.0	241.5
732974	1000	3500	6500	40.0	241.5
682802	200	500	13500	80.0	350.5
732982	250	1000	13500	80.0	350.5

Ref.-No.	Force			A Stroke mm	L extended mm
	F ₁ N	F ₂ N	F ₀ N		
732990	300	1000	13000	80.0	350.5
733008	350	1500	12500	80.0	350.5
733016	400	2000	12000	80.0	350.5
670677	500	2500	11000	80.0	350.5
733024	600	3000	10000	80.0	350.5
693340	800	4000	8000	80.0	350.5
733032	1000	3000	6000	80.0	350.5
682810	200	500	13500	100.0	400.5
733040	250	1000	13000	100.0	400.5
733059	300	1000	12500	100.0	400.5
733067	350	1500	12000	100.0	400.5
733075	400	2000	12000	100.0	400.5
693359	500	2500	11000	100.0	400.5
733105	600	3000	10000	100.0	400.5
693367	800	4000	7500	100.0	400.5
733113	1000	2500	5500	100.0	400.5
684023	200	500	13500	120.0	450.5
733121	250	1000	13000	120.0	450.5
733148	300	1000	12500	120.0	450.5
733156	350	1500	12000	120.0	450.5
733164	400	2000	11500	120.0	450.5
693375	500	2500	10500	120.0	450.5
733172	600	3000	9500	120.0	450.5
693383	800	4000	7500	120.0	450.5
733180	1000	2000	5000	120.0	450.5

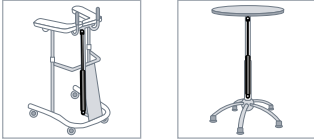
F₂ Blocking force in extension [N]
F₀ Blocking force in compression [N]



Installation position any

Ref.-No.	Force			A Stroke mm	L extended mm
	F ₁ N	F _z N	F ₀ N		
693189	500	2500	12000	20.0	191.0
682705	600	3000	11000	20.0	191.0
693197	800	4000	9500	20.0	191.0
732737	1000	5000	8000	20.0	191.0
732745	1200	3500	6000	20.0	191.0
682713	400	2000	12500	25.0	205.0
693200	500	2500	11500	25.0	205.0
732753	600	3000	11000	25.0	205.0
693219	800	4000	9500	25.0	205.0
732761	1000	4500	7500	25.0	205.0
827851	1200	3000	5500	25.0	205.0
682721	350	1500	13000	30.0	219.0
732788	400	2000	12500	30.0	219.0
693227	500	2500	11500	30.0	219.0
732796	600	3000	11000	30.0	219.0
693235	800	4000	9000	30.0	219.0
732818	1000	4500	7500	30.0	219.0
732826	1200	3000	6500	30.0	219.0
682748	350	1500	12500	40.0	241.0
732834	400	2000	12000	40.0	241.0
693243	500	2500	11500	40.0	241.0
732842	600	3000	10500	40.0	241.0
693251	800	4000	8500	40.0	241.0
732850	1000	4000	6500	40.0	241.0

F_z Blocking force in extension [N]
 F₀ Blocking force in compression [N]

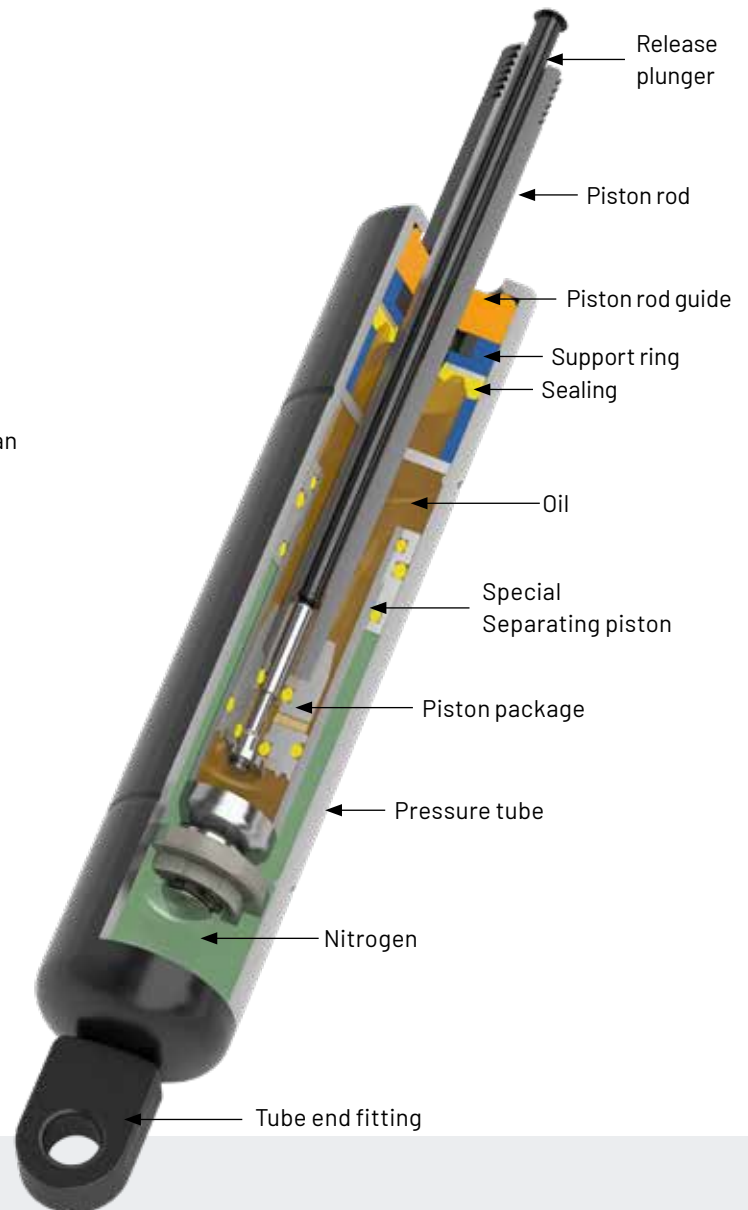


BLOC-O-LIFT T

WITH PARTICULARLY FLAT SPRING DETECTION

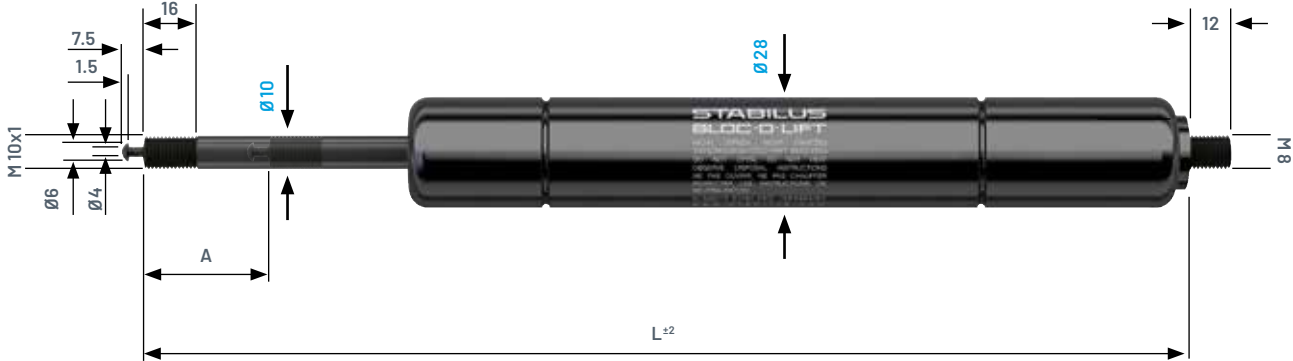
With the BLOC-O-LIFT T, a gas spring with particularly flat spring detection has been developed that offers an almost uniform force over the entire stroke. It enables precise, convenient adjustment and locking of the application. The BLOC-O-LIFT T is characterized by its compact design and can be installed in any position. The release mechanism can be operated by hand or foot using a lever or Bowden cable.

The BLOC-O-LIFT T has proven its worth in the furniture sector, particularly for single and double-column tables, desks, bedside tables or height-adjustable work surfaces.



Advantages and properties:

- Stepless positioning with rigid blocking
- Flat spring detection, i.e. low force increase even with high forces or large strokes
- Compact design for minimum space requirements
- Uniform force distribution over the entire stroke



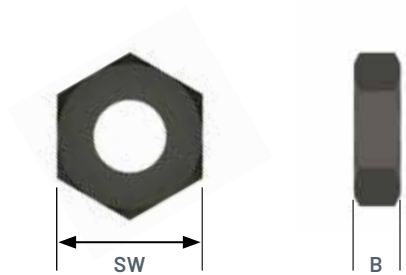
Installation position any

Ref.-No.	Force			A Stroke	L extended
	F ₁ N	F ₂ N	F ₀ N		
114255	150	480	860	440	1020
114494	200	640	980	440	1020
114733	250	800	980	440	1020
114972	300	960	980	440	1020

NOTE
Temperature range 0°C to + 40°C

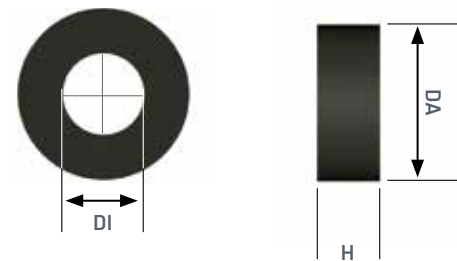
F_z Blocking force in extension [N]
F₀ BlockierForce in Druckrichtung [N]

ACCESSORIES FOR BLOC-O-LIFT



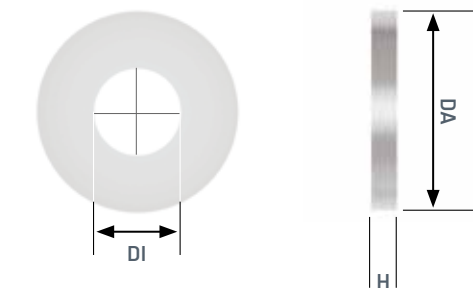
Screw nuts

Ref.-No.	Thread	B	SW
		mm	mm
012483	M8x1	5	13
012491	M10x1	6	17



Rubber bumper

Ref.-No.	DI	DA	H
	Piston rod		
	mm	mm	mm
269069	∅ 8	20	8
036862	∅ 10	20	4
036854	∅ 10	20	8



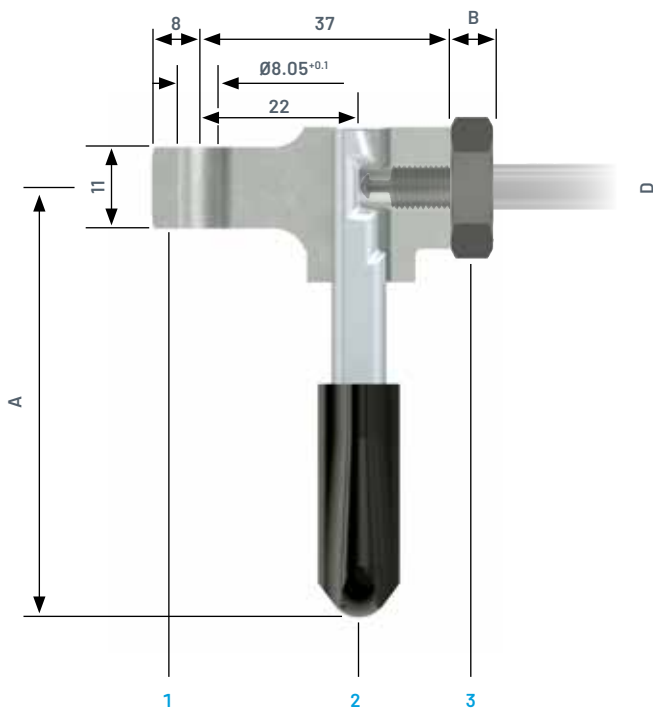
Washer

Ref.-No.	DI	DA	H
	Piston rod		
	mm	mm	mm
023582	∅ 8	19	3
363979	∅ 10	24	3

ACCESSORIES RELEASE SYSTEM FOR BLOCKING GAS SPRINGS

Stabilus has a range of different release systems for the BLOC-O-LIFT gas spring.

DIRECT LEVER RELEASE



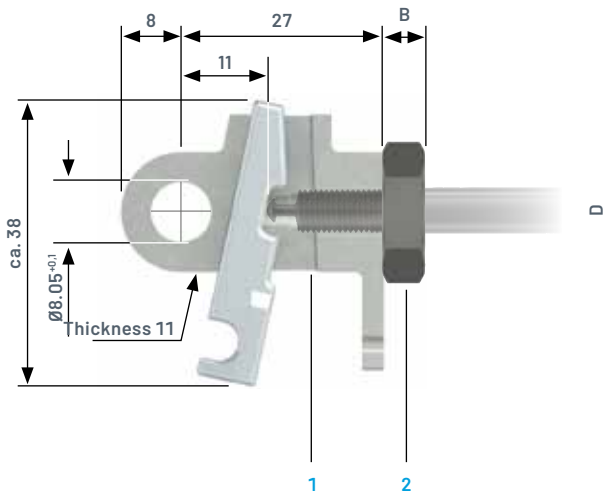
1		3			
Ref.-No.	Ref.-No.	D	Thread	B	Screw Nuts
Release head	Release head	mm		mm	
Standard release	Permanent release				
9102GW	0516CC	Ø 8	M8x1	5	012483
130850	271985	Ø 10	M10x1	6	012491

2	A
Ref.-No.	mm
Release lever	
992259	64
1041BN	104
132543	122
065056	167
125466	196

NOTE

Articles 1, 2 and 3 must be ordered for assembly

Release head suitable for all BLOC-O-LIFT from our standard programme with release way 1 mm.
Please pay attention to the mounting instructions for the BLOC-O-LIFT release head.
STAB-Spec. 1000 5725



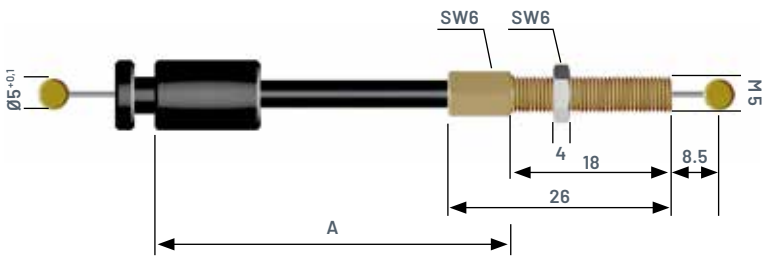
Release head for Bowden wire release

1 Ref.-No.	D	Thread	B	2 Screw Nuts
	mm		mm	
012820	Ø 8	M8x1	5	012483
007409	Ø 10	M10x1	6	012491

NOTE

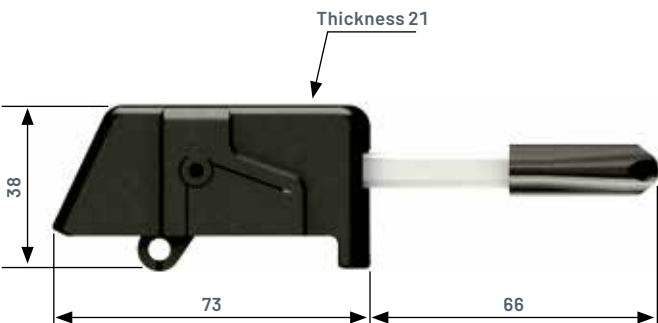
Screw nut must be ordered separately..

Release head suitable for all BLOC-O-LIFT from our standard programme.
Please pay attention to the mounting instructions for the BLOC-O-LIFT release head.
STAB-Spec. 1000 6476 und STAB-Spec. 1000 5635



Bowden wire

Ref.-No.	A
	mm
0345BH	200
878189	300
7605AV	400
0346BC	500
0347BY	600
5240AD	700
0304BJ	800
0298BX	900
0305BE	1000



Release unit

Ref.-No.	
1044BZ	Release unit

NOTE

For a release unit with a bowden-wire longer than 400 mm a BLOC-O-LIFT with release way 1 mm is necessary.

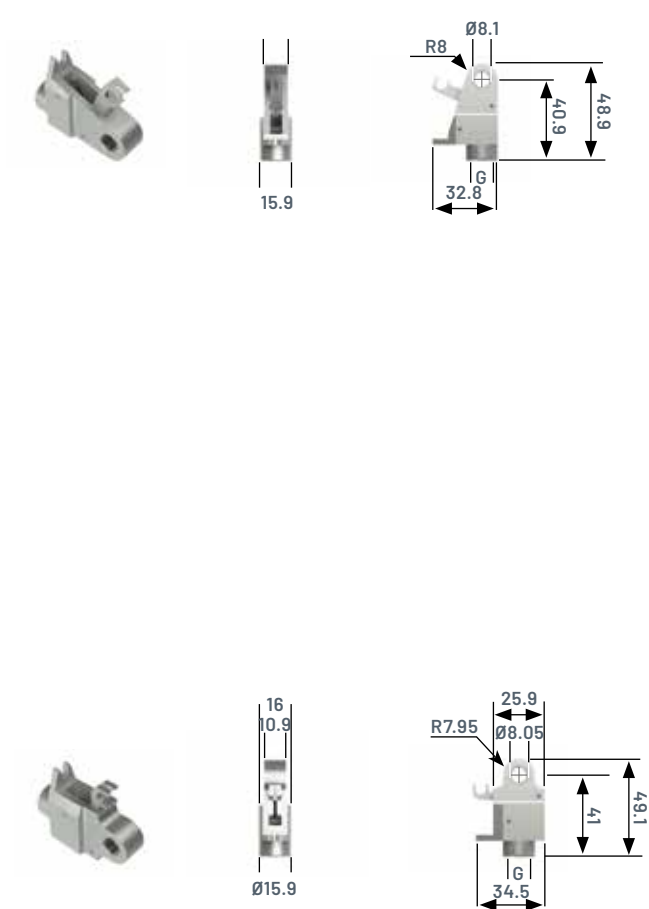


MECHANICAL RELEASE SYSTEMS FOR ULTIMATE CONVENIENCE

In combination with BLOC-O-LIFT gas springs, the SOFT-O-TOUCH from Stabilus makes lifting, lowering and adjusting particularly easy. Our SOFT-O-TOUCH range offers complete release systems for Stabilus BLOC-O-LIFT gas springs.

Pre-assembled Bowden wires connect BLOC-O-LIFT gas springs that are difficult to access with buttons that can be ideally positioned in the application. The ergonomic buttons are easy to operate thanks to specially designed release buttons.

RELEASE HEADS FOR PUSH-BUTTONS



Light release

Suitable for release strokes up to 2.5 mm

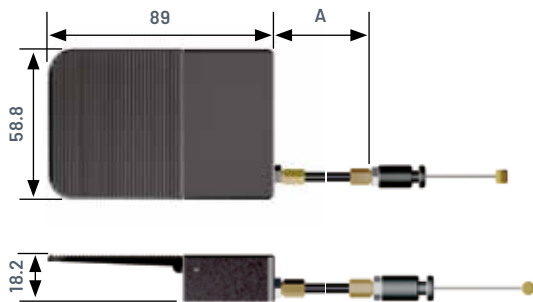
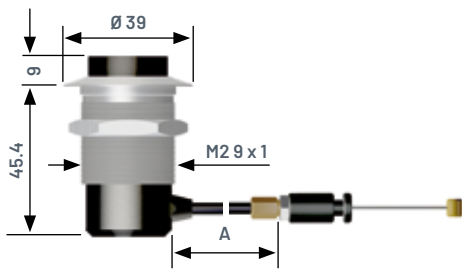
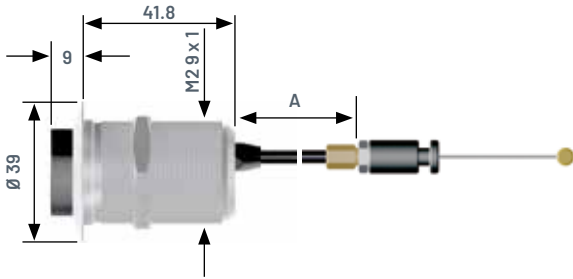
Ref.-No.	Thread G	Force F_1
	mm	N
075291	M8x1	For BLOC-O-LIFT Gas springs to $F_1 = 500$ N
006837	M10x1	For BLOC-O-LIFT Gas springs to $F_1 = 500$ N

Ultra light release

Suitable for release strokes up to 1,0 mm

Ref.-No.	Thread G	Force F_1
	mm	N
074574	M8x1	For BLOC-O-LIFT Gas springs to $F_1 = 1000$ N
112485	M10x1	For BLOC-O-LIFT Gas springs to $F_1 = 1000$ N

PUSH-BUTTONS



NOTE:

A BLOC-O-LIFT with a release stroke of 1 mm is required for the push-buttons.

Protruding push-button with axial bowden cable exit

Ref.-No.	Bowden cable length	Release heads	Material / Colour
mm			
077681	500	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
081266	750	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
082461	1000	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
069077	500	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
070272	750	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
074096	1000	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver

Protruding push-button with lateral bowden cable exit

Ref.-No.	Bowden cable length	Release heads	Material / Colour
mm			
079354	500	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
081505	750	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
082700	1000	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
069316	500	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
072901	750	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver
074813	1000	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: Plastic, black Housing: Aluminium, silver

Flat lever

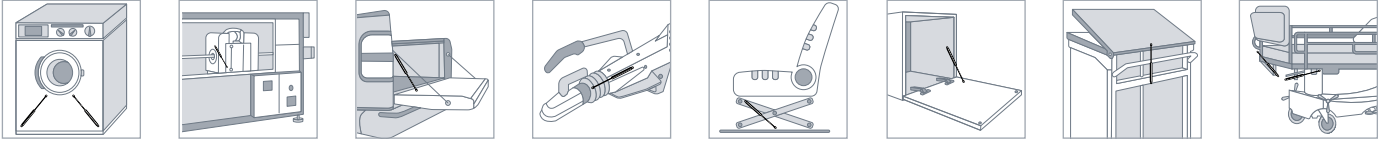
Ref.-No.	Bowden cable length	Release heads	Material / Colour
mm			
088197	500	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: zinc diecasting, black Housing: plastic, black
088675	750	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: zinc diecasting, black Housing: plastic, black
104927	1000	075291 (M 8 x 1) 006837 (M 10 x 1)	Button: zinc diecasting, black Housing: plastic, black
068838	500	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: zinc diecasting, black Housing: plastic, black
088436	750	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: zinc diecasting, black Housing: plastic, black
105166	1000	074574 (M 8 x 1) 112485 (M 10 x 1)	Button: zinc diecasting, black Housing: plastic, black



STAB-O-SHOC®

- HD15
- HD24
- HD24 MB
- TA20





STAB-O-SHOC

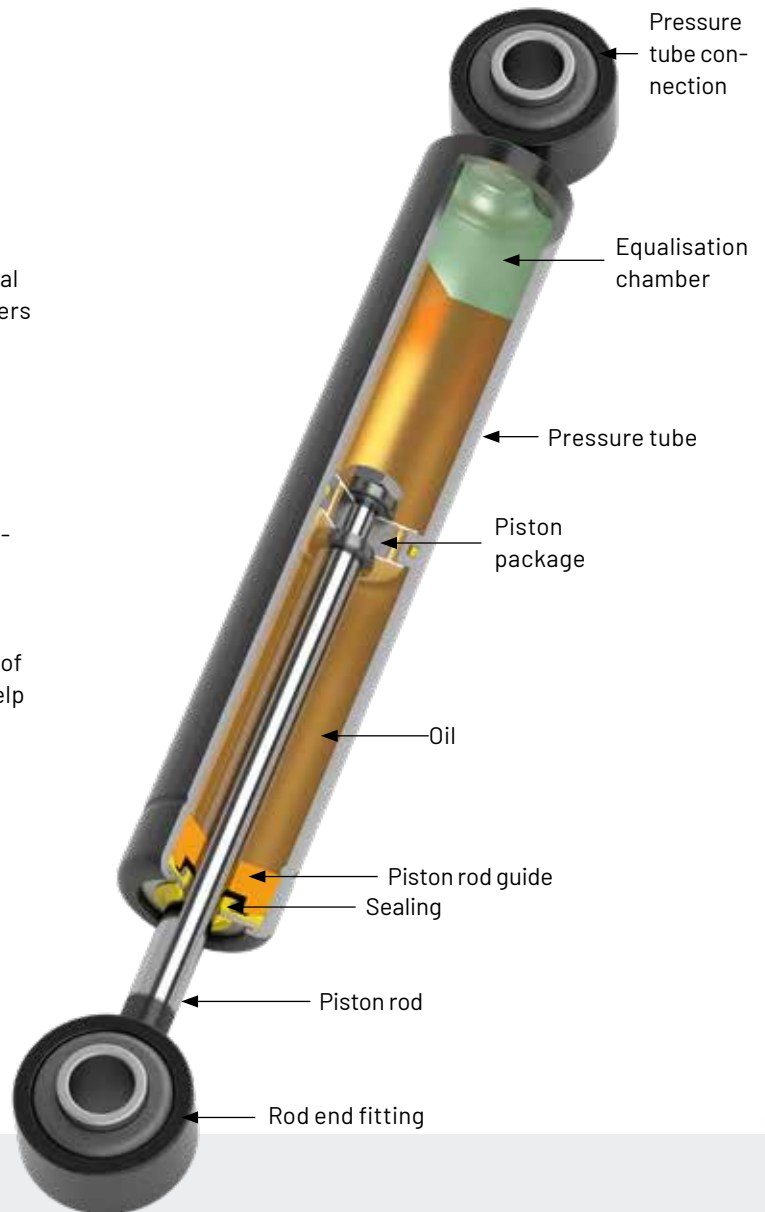
Stabilus offers dampers for a wide range of applications. Whether in vehicle construction, plant engineering, industrial applications or the furniture industry - STAB-O-SHOC dampers are always on hand when movements and vibrations need to be positively influenced. A distinction is made between the following damper types:

MOTION AND STOP DAMPERS

Motion and stop dampers from the STAB-O-SHOC series support controlled movement and protect the material by preventing a hard stop in the end position.

VIBRATION DAMPER

Vibration dampers from Stabilus convert the kinetic energy of moving components into thermal energy. In this way, they help to reduce hard stops and avoid large vibration amplitudes. Creating smoother application and reducing wear.



Advantages and properties:

- Easy opening and closing of doors and lids
- Dampened closing of doors
- Relieves the hinge mechanisms
- Reduce vibrations
- Simple installation
- Compact, attractive design
- Maintenance-free

STAB-O-SHOC HD15

DAMPERS FOR LOW DAMPING FORCES

The standard STAB-O-SHOC HD15 is a non-pressurized damper. It is orientation-specific and achieves its optimum function in almost vertical installation with force transmission without a no-load stroke in one direction of movement.

Special variants with horizontal function are also possible, as are models providing force support during extension or path-dependent damping.

K1

K2

K3

K4

K5

Damping in extension (pull)
Installation position: piston rod downwards

Ref.-No.	F _Z N	F _D N	¹ A Stroke mm	² A Stroke mm	L extended mm
4165Z0	75	< 25	30	30	110
4166ZL	300	< 25	30	30	110
4167ZG	800	< 25	30	30	110
4172ZZ	75	< 25	60	60	175.5
4173ZU	300	< 25	60	60	175.5
4174ZP	800	< 25	60	60	175.5
4179ZR	75	< 25	100	100	258.5
4181ZY	300	< 25	100	100	258.5
4182ZT	800	< 25	100	100	258.5

Damping in compression (push)
Installation position: piston rod upwards

Ref.-No.	F _Z N	F _D N	¹ A Stroke mm	² A Stroke mm	L extended mm
4168ZB	< 25	125	30	60	157
4169ZX	< 25	250	30	60	157
4171ZD	< 25	550	30	60	157
4175ZK	< 25	125	60	105	247
4176ZF	< 25	250	60	105	247
4177ZA	< 25	550	60	105	247
4183ZO	< 25	125	100	160	357
4184ZJ	< 25	200	100	160	357
4187ZV	< 25	550	100	160	357

1) Hydraulic stroke
2) Mechanical stroke

D1

Ref.-No. : 97180M

D2

Ref.-No. : 97190H

D3

Ref.-No. : 707228

D4

Ref.-No. : 001649

D5

Ref.-No. : 001649 + 4486MD

F_Z Damping force at 100 mm/s in Direction of pull [N]
 F_D Damping force at 100 mm/s in Direction of pressure [N]

Ordering example

Ref.-No.	Piston rod end fitting	Pressure tube end fitting
123456	K2	D1

Installation according to STAB-Spec. 10145882 We reserve the right to make modifications. Dimensions in mm.

STAB-O-SHOC HD24

DAMPERS FOR HIGH LOADS

The STAB-O-SHOC HD24 from Stabilus is a standard single-tube vibration damper for versatile applications, especially for high loads. Due to a special piston system with valve plates and a base piston with different reduction cross sections, this model is the ideal motion damper.

Damping in extension (pull)
Installation position: piston rod downwards

Ref.-No.	F _z N	F ₀ N	¹ A Stroke mm	² A Stroke mm	L extended mm
4196ZU	650	< 100	80	80	231
4197ZP	1500	< 100	80	80	231
4199ZF	5000	< 100	80	80	231
4204ZX	600	< 100	120	120	320
4205ZS	1500	< 100	120	120	320
4206ZN	5000	< 100	120	120	320
4212ZA	600	< 100	200	200	498
4213ZW	1500	< 100	200	200	498
4214ZR	5000	< 100	200	200	498

Damping in compression (push)
Installation position: piston rod upwards

Ref.-No.	F _z N	F ₀ N	¹ A Stroke mm	² A Stroke mm	L extended mm
4201ZL	< 100	600	80	129	308
4202ZG	< 100	1500	80	129	308
4203ZB	< 100	3000	80	129	308
4207ZI	< 100	600	120	188	426
4208ZD	< 100	1500	120	188	426
4211ZF	< 100	3000	120	188	426
4216ZH	< 100	600	200	305	660
4217ZC	< 100	1500	200	305	660
4218ZY	< 100	3000	200	305	660

1) Hydraulic stroke
2) Mechanical stroke

Ordering example

Ref.-No.	Piston rod end fitting	Pressure tube end fitting
123456	K2	D1

Installation according to STAB-Spec. 10145883

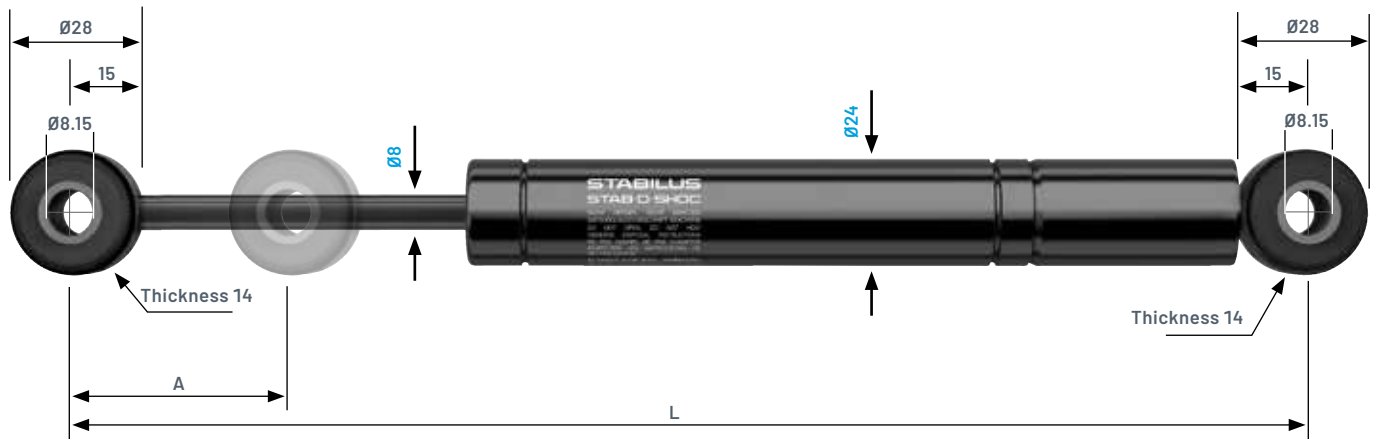
We reserve the right to make modifications. Dimensions in mm.

F_z Damping force at 100 mm/s in Direction of pull [N]
F₀ Damping force at 100 mm/s in Direction of pressure [N]

STAB-O-SHOC HD24 MB

DAMPER WITH BOTTOM VALVE AND DIAPHRAGM

The STAB-O-SHOC HD24 MB is a vibration damper with bottom valve and diaphragm. The closed diaphragm in the pressure tube combines the special features of the bottom valve with non-orientation-specific mounting. The damper is non-pressurized, so that the piston rod will stay in the pressure tube. Since there is no no-load stroke, dampening will be actuated instantly.



Damping in extension (pull) and compression (push)

Installation position: any

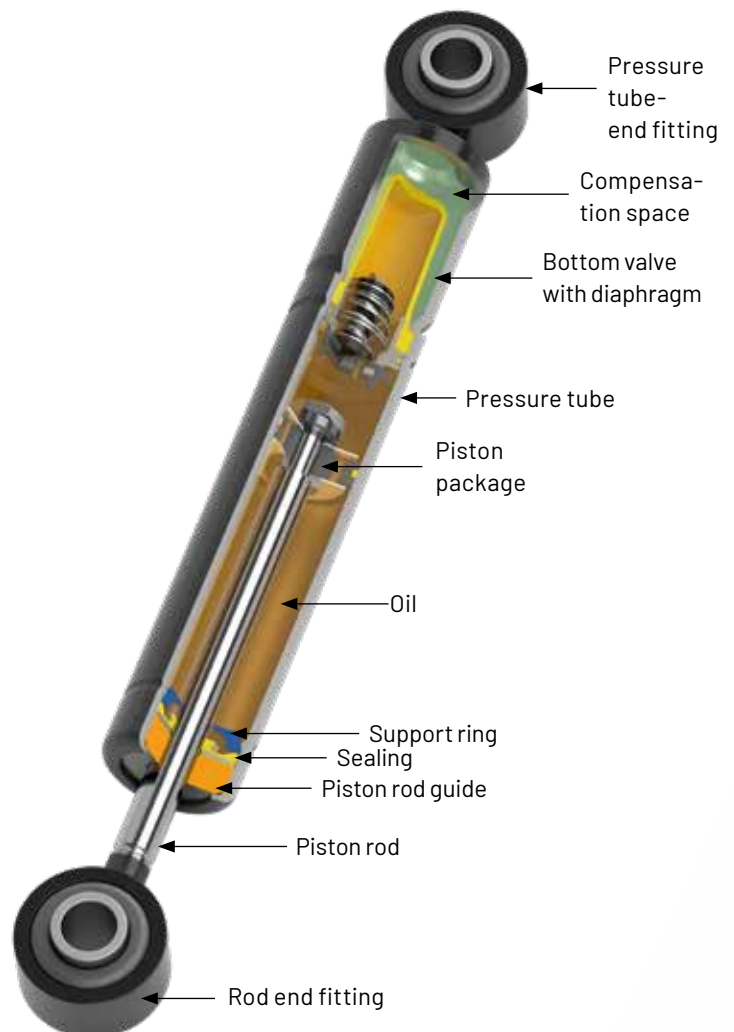
Ref.-No.	F_z N	F_D N	A Stroke mm	L extended mm
2529YM	100	100	30	213.5
2546YP	400	400	30	213.5
2548YF	1000	1000	30	213.5
2598YC	100	100	60	273.5
2602YZ	400	400	60	273.5
2611YY	1000	1000	60	273.5

Test speed 104 mm/s

Crank drive test: test stroke 20 mm/ test speed 100 rpm

Mounting instructions according to STAB-Spec. 10005593

Waste disposal according to STAB-Spec. 10009375



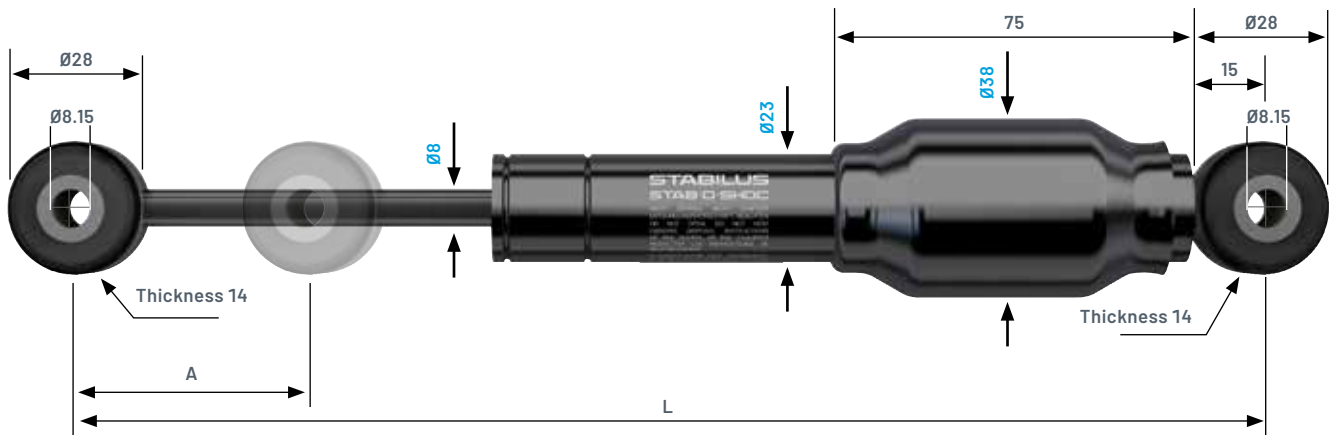
F_z Damping force in Direction of pull [N]
 F_D Damping force in Direction of pressure [N]

We reserve the right to make modifications. Dimensions in mm.

STAB-O-SHOC TA20

DAMPERS FOR VERY SHORT LENGTHS

In the STAB-O-SHOC TA20, the purpose of the diaphragm against the outside of the pressure tube is to absorb the additional piston rod volume for the shortest possible installation length. This provides slip-free force transmission in any mounting orientation. Due to the special piston system with valve plates, the damping forces can be set variably and virtually independently of each other.



Damping in extension (pull) and compression (push)

Installation position: any

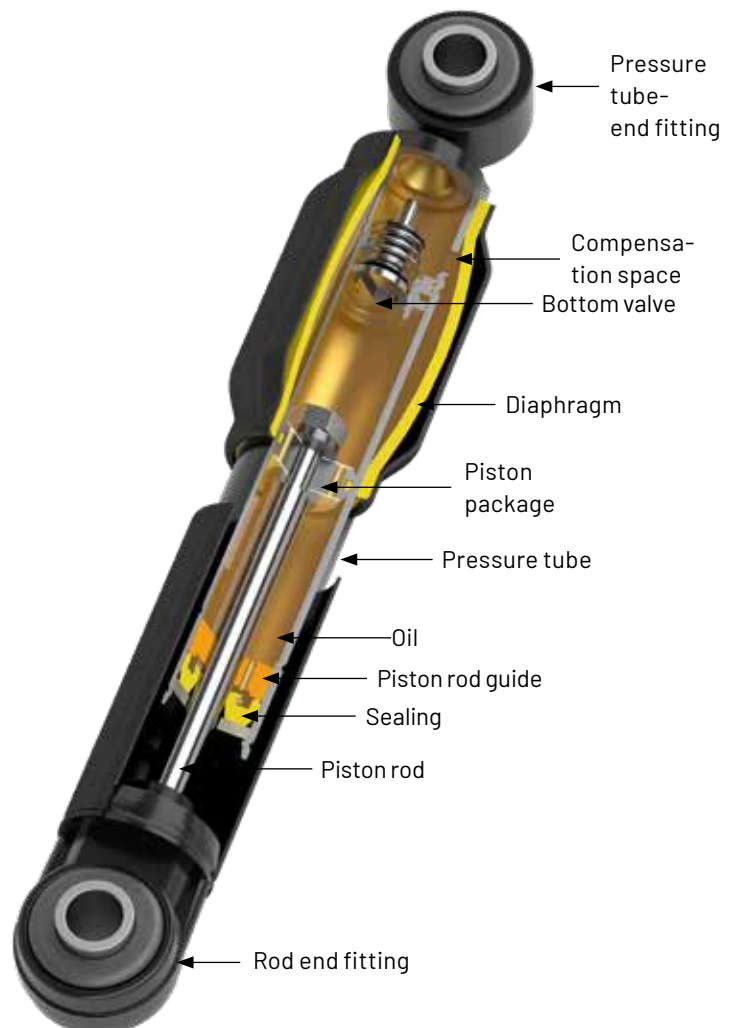
Ref.-No.	F_z N	F_o N	A Stroke mm	L extended mm
2366YR	100	100	60	249
2424YR	550	550	60	249
2426YH	1000	1000	60	249
2443YK	100	100	120	369
2433YQ	550	550	120	369
2456YQ	1000	1000	120	369
2466YK	100	100	200	529
2474YQ	550	550	200	529
2476YE	1000	1000	200	529

Test speed 104 mm/s

Crank drive test: test stroke 20 mm/ test speed 100 rpm

Mounting instructions according to STAB-Spec. 10005593

Waste disposal according to STAB-Spec. 10009375



F_z Damping force in Direction of pull [N]
 F_o Damping force in Direction of pressure [N]

We reserve the right to make modifications. Dimensions in mm.





STAB-O-MAT®

- Standard program
- Release system





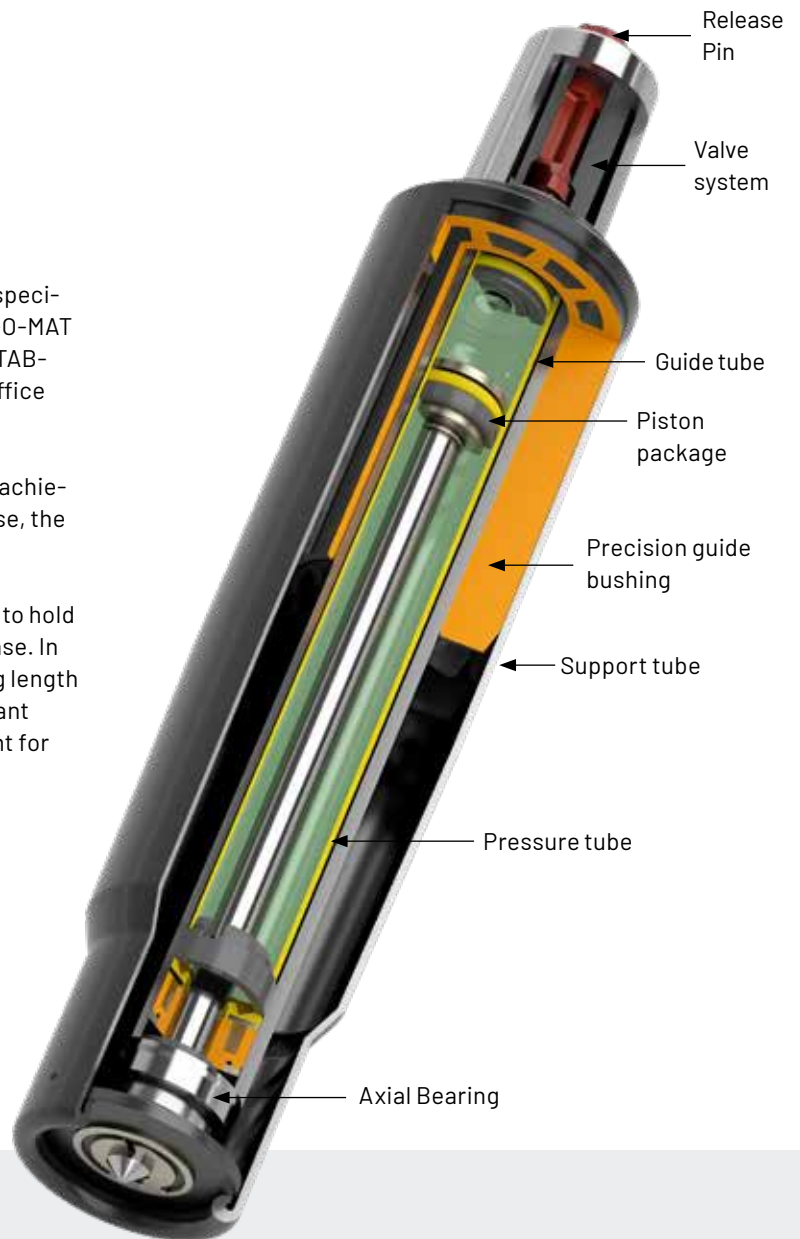
STAB-O-MAT

ELASTIC LOCKING GAS SPRINGS

STAB-O-MAT springs are elastic locking gas springs, especially for variably damped seat height adjustment. STAB-O-MAT gas springs combined with an outer tube are called a STAB-O-MAT column. They are used in applications such as office swivel chairs, task chairs, executive chairs and stools.

The locking function in the STAB-O-MAT gas springs is achieved through a valve at the pressure tube end. In this case, the piston of the STAB-O-MAT gas spring is closed.

Both the outer tube and the pressure tube have a taper to hold the swivel chair column in the star base and the seat base. In addition to the main characteristics, such as gas spring length and stroke, the outer tube's taper position is an important characteristic where meeting the standard requirement for seat height is concerned.



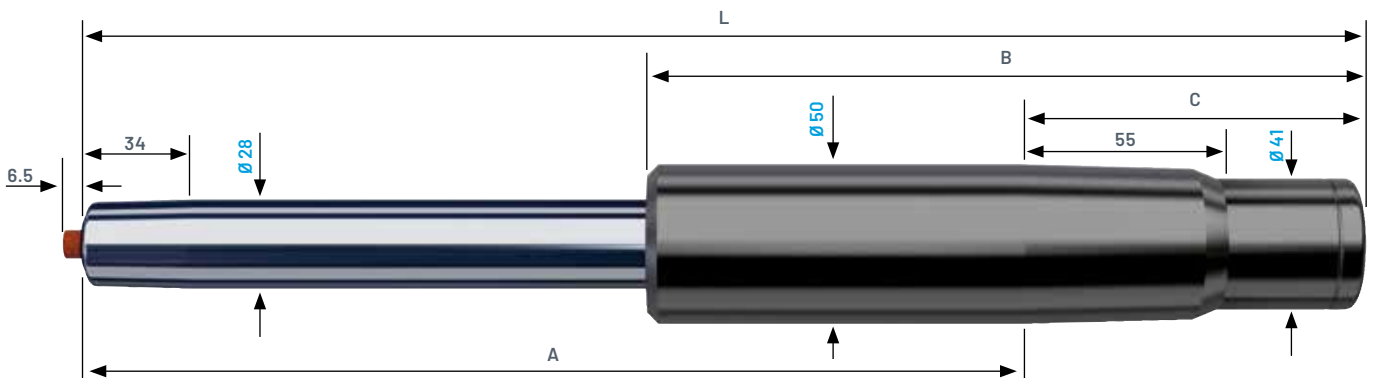
Advantages and properties:

- Available as complete columns or individual gas springs
- Available in different lengths and with strokes of 50 to 300 mm
- Rotating and swivel resistant versions
- Telescope column with a disproportionate adjustment range
- Different end position cushioning action systems for more comfortable seating
- Adjustable tappet projection
- Different actuation systems

STANDARD PROGRAM

DIN EN 1335 knows only three seat heights, types A, B and C. Due to the wide variety of seat mechanism and star base variants available on the market, the DIN requirement regarding the design variables for a column (extended length, stroke, taper position on the outer tube, color, etc.) results in more than 2,000 individual gas spring designs that often overlap or only differ by just a few millimeters. In order to provide you, our customer, with a simple and transparent solution for finding the right gas spring, the Stabilus standard product line was developed. All common seat heights can be achieved by combining just one single gas spring per seat height type with outer tubes featuring different taper positions.

And if you need a customized solution for your chair project, Stabilus application engineers and technicians will be at your disposal.

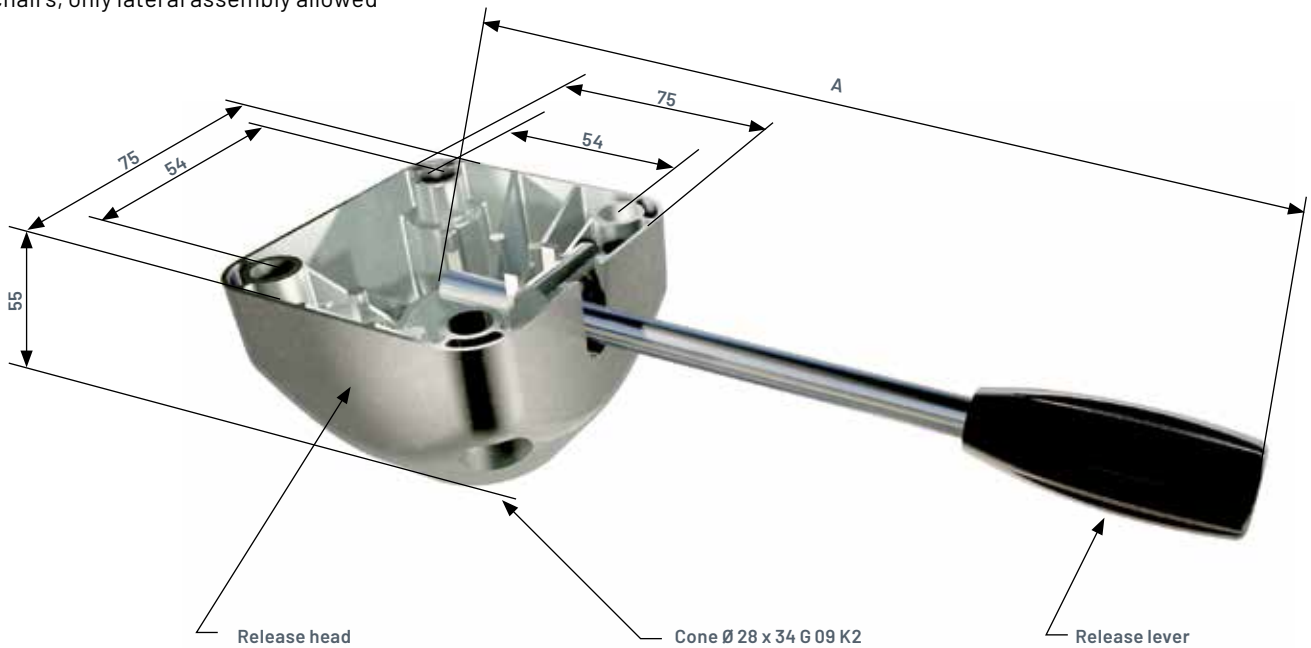


Ref.-No.	Stroke mm	A Chair base dimensions mm	L extended mm	C Taper position mm	B Length Standpipe mm	EN1335 class Adjustment range mm
086772	132.5	169 - 301.5	395.5	94	220	120
087967	132.5	159 - 291.5	395.5	104	220	120
088923	132.5	149 - 281.5	395.5	114	220	120
091552	132.5	139 - 271.5	395.5	124	220	120
093703	132.5	99 - 231.5	395.5	164	220	120
097766	111.5	167 - 278.5	354.5	76	200	100
101829	111.5	143 - 254.5	354.5	100	200	100
103263	111.5	133 - 244.5	354.5	110	200	100
100634	111.5	117 - 228.5	354.5	126	200	100
092747	90.5	147 - 237.5	313.5	76	174	80
094898	90.5	127 - 217.5	313.5	96	174	80
096332	90.5	119 - 209.5	313.5	104	174	80

F₁ Extension force for all variants = 350N

RELEASE MECHANISM FOR HEIGHT ADJUSTMENT

- Ensure screw retention tightening torque of 10Nm recommended
- For release pin length 6.5 ± 1
- In chairs, only lateral assembly allowed



Release head without lever

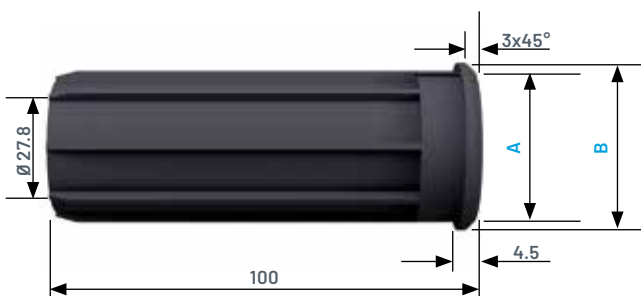
Ref.-No.
0119PR

Release head with lever

Ref.-No.	A
	Length of release lever
	mm
7616PW	ca. 221
7617PR	ca. 171

PLASTIC BUSHING

- black



Ref.-No.	B	A
	Diameter standpipe	Diameter bush
	mm	mm
044881	38	34.2
195626	40	36.2
022861	45	42.2
560405	50	46.2



NOTES ON GAS SPRING DESIGN AND INSTALLATION CALCULATION

The Stabilus installation program allows us to design your optimized gas spring and its connection for each unique application.

the following data is required for the application, e.g., a flap:

- Dimensions, location of the center of gravity and weight
- Opening angle to be accomplished
- Installation space available for the gas spring
- Point at which manual force is applied (handle)
- Temperature range
- Connection technology

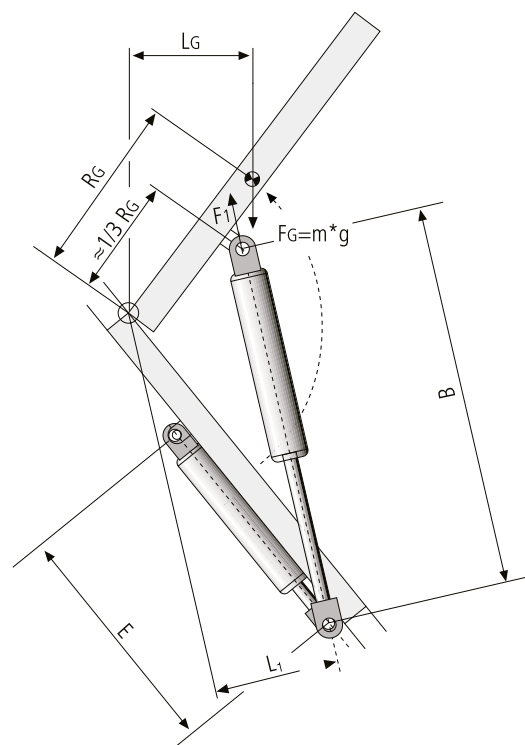
This will provided:
Best fit gas spring proposal

- Stroke A [mm]
- Extended length B [mm]
- Extension force F_1 [N]
- Manual force curve F_H [N] / α [degrees]

STROKE AND EXTENSION FORCE OF A GAS SPRING TO OPEN A FLAP

min. stroke	A = B - E	Extension force	$F_1 = \frac{F_g \times L_g}{n \times L_1} \times R$
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- A: Stroke of the gas spring [mm]
- B: Extended length of the gas spring [mm]
- E: Compressed length of the gas spring [mm]
- F_1 : Extension force of the gas spring [N]
- F_g : Weight force of the application in the centre of gravity [N]
- g: Acceleration due to gravity 9.81 [m/s²]
- L_1 : Vertical distance bearing/deformation axis F_1 [mm]
- L_g : Vertical distance bearing/deformation axis F_g [mm]
- R_g : Radius bearing/centre of gravity [mm]
- m: Mass (weight) of the application [kg]
- n: Number of gas springs [/]
- R: Reserve force factor 1.2 ... 1.3 [/]



HINTS AND TIPS FOR THE CORRECT INSTALLATION

■ Application

Gas springs can be customized for special applications – on the basis of specifications and drawings. Share your application and requirements with us and our consultants and application engineers will be glad to find the best possible solution.

■ Mounting Orientation

Standard gas springs are designed to be installed rod down in inactive state. This ensures optimum lubrication of the guide and sealing system at all times, maximizing gas spring life. However, special designs are available for other installation orientations.

■ No Jamming

For a long service life, gas springs must not jam or be subjected to bending or lateral forces. We offer suitable end fittings, such as angle joints. They will ensure non-jamming alignment.

■ Functional Safety

The functional safety of a gas spring comes mainly from the smooth piston rod surface and the seals that keep the gas pressure on the inside. Do not subject gas springs to bending stresses. You should not install gas springs that have been damaged in after-sales mechanical processing. Welding on the gas spring, as well as contamination or paint on the piston rod can cause device failure. Avoid modifications and manipulations, impacts, tensile stress, heating, painting and removal of the print. Be on the safe side: Do not install defective or improperly altered products.

■ Temperature Range

Stabilus gas springs are designed for a standard temperature range of -30°C to $+80^{\circ}\text{C}$. There are also gas springs for more extreme applications.

■ Life and Maintenance

Gas springs are maintenance-free! They do not require greasing or lubrication. They are designed for their corresponding applications and should work flawlessly for many years.

■ Transportation and Storage

Store gas springs with the piston rod pointing down. Actuate the gas spring after 6 months of storage. Avoid damage: Do not transport gas springs as bulk material. Make sure not to contaminate gas springs with thin packaging film or adhesive tape.

■ Disposal

When gas springs are no longer needed, they should be disposed of in an environmentally correct manner. For this purpose they should be degassed under control, the compressed nitrogen gas bled, and the oil drained. For more specific details, please refer to STAB specification 1000 9375. Please also consider our recycling instructions on our website

www.stabilus.com/contact-and-support/recycling



YOUR MOTION. OUR SOLUTION.

STABILUS

THE GLOBAL MOTION CONTROL SOLUTION PROVIDER TO THE INDUSTRY

- Specialized industrial brands with unique solutions and expertise for each market.
- Wide product range – from simple to complex requirements across all industries.
- Broad global presence that closely connects us with all markets.



Stabilus group of industrial brands

STABILUS

Globally leading series gas spring manufacturer meeting highest automotive quality standards for industrial products in all plants.



ACE

A STABILUS COMPANY

Expert in industrial damping and deceleration with excellent customer support satisfying most demanding application requirements.



DESTACO

A STABILUS COMPANY

A global leader in the design and manufacture of high-performance automation, workholding, and remote handling solutions.



FABREEKA

A STABILUS COMPANY

Leading supplier for individual vibration isolation and shock control solutions.



General Aerospace

A STABILUS COMPANY

Innovative supplier of distinctive airline motion control solutions.



HAHN

GASFEDERN

A STABILUS COMPANY

Experienced provider of customized and special gas springs with very fast time to market.



TECHPRODUCTS

A STABILUS COMPANY

Experienced manufacturer of elastomeric vibration isolators and shock mounts.



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