

THE INNOVATOR OF OUR INDUSTRY®

Nitrogen Gas Springs

They truly are ... Better by Design



DESIGN₂-TITE[®] -Extended & Expanded

We are proud to announce our extended and expanded range of gas springs to meet all of our customers' gas spring requirements. We now offer 10 separate series of standard pre-engineered gas springs available from stock for quick delivery.

Our expanded range includes both SinterLube® self-lubricating and conventional design gas springs, all built with the finest materials and assembled with exacting precision to provide reliability and long life in your dies.

Try DESIGN₂-TITE[®] and experience for yourself the benefits of this superior line of nitrogen products.

> They truly are... Better by Design.

READY Nitrogen Gas Springs -

READY

Now Expanded into 10 Series

1. B and BE SeriesExtra Compact Linepage 6
2. C and CE Series Compact Line
3. P and PE Series <i>Performance Line page 22</i>
4. S and SE Series <i>North American Line</i>
5. L and LE Series ISO Line page 30
6. M Series <i>Micro Line page 36</i>
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9. R Series Threaded Line page 46
10. K Series Controllable Movement Line page 50
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Accessories..... page 63

DESIGN₂-TITE[®] is patented by READY Technology, Inc.



Design A Spring Program Order Worksheet

Cross over worksheet for READY Gas Springs For *FAST QUOTES* ... copy this and fax READY the details.

READY can manufacture special gas springs in as little as 3-5 days (quantity of springs will affect delivery).

Company:	
Contact Name:	Title:
Address:	
City, State, Zip:	
Phone:	Гах:
Email Address:	



Selection Criteria
Ø9
ØD
Stroke
Do
Dc
Stroke/mm
Force Needed
Threaded Body
Mounting Pattern

DESIGN₂-TITE[®] -Extended & Expanded

In addition to our complete line of standard gas springs, we offer what no other gas spring manufacturer offers: a re-engineer custom gas spring manufacturing service with incomparably quick delivery.

That's right. With our "Design a Spring Program", we can special manufacture gas springs to provide an exact cross to most other gas spring models or to your application specifications.

Simply fax us a completed Design A Spring Program Order Worksheet, and Ready will promptly respond with a design solution for your requirement. We invite you to try our new and remarkable Design a Spring Program for yourself.

Experience for yourself the benefits of DESIGN₂-TITE[®] gas springs.

They truly are... Better by Design.

READY TECHNOLOGY

333 Progress Rd. • Dayton, OH 45449 937.866.7200 • 800.543.4355 fax: 937.866.7226

www.readytechnology.com

Please read the following safety information carefully. We have designed a number of safety features into our gas springs, but ultimately there is no substitute for caution and good shop practice.

READY

Gas springs are elements that contain gas subjected to high pressure. It is therefore very important to adhere to the following warnings and recommendations. Any unauthorised operation carried out may bring about serious material damage and personal injuries. It is therefore essential to handle such elements with care and to respect these instructions.



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Gas springs must only be loaded with nitrogen gas (N_2) . The use of any other medium is expressly forbidden.

Protect the gas spring body or stem from blows. Any resulting imperfection could bring about the loss of pressure and affect the useful life of the gas spring. If the gas spring has been dented in its structure, discharge it completely before carrying out any rework or handling.

Carry and stock the gas spring in a way that it does not hit other gas springs.

Any mechanical operation (machining, drilling, welding...) on the gas spring is strictly prohibited.

There are specific tools to measure gas spring force. Never knock the stem with a hammer to check its pressure. Gas springs should not be improperly compressed in order to check their force.

Avoid sudden gas spring stem release to avoid sudden discharge or component damage.



We strongly recommend that you stay within 90% of the total stroke available. This will improve spring life and safety. If you use the maximum stroke available the spring could be over-stroked if any foreign matter becomes lodged between the top of the piston and its striker, and a crushed spring or explosion could result.



The gas spring should never be charged unless the piston has been extended to its full upstroke position (otherwise there is risk of structural damage). To be on the safe side, the stem should be inserted completely into the body without coming up again.

During gas spring discharging, the discharging

The use of protective goggles is recommended.

point should be placed as high as possible.





The gas spring should never be charged unless the piston has been extended to its full upstroke position (otherwise there is a risk of structural damage). It is first necessary to carry out a 5-to -10 bar precharge, checking the gas spring before carrying out the complete charge. Each model's maximum and minimum charging pressures should be respected, as indicated in the specifications for each gas spring model.



Once the useful life of the gas spring is over it should be completely discharged. The stem should remain fully inserted into the body.

All gas springs are capable of repair. All handling or maintenance operations should be carried out by authorised personnel, who should be especially trained for this purpose. Original components and accessories should always be used. For any doubts regarding the maintenance of the gas spring, please consult our Technical Department.





Safety Info

ASSEMBLY ON THE TOOL: FLAT SUPPORT

There should be a flat surface under the gas spring base. Inadequate support causes structural damage or reduces gas spring useful life.

ASSEMBLY ON THE TOOL: CORRECT FIXTURE

Fix the gas spring solidly onto the tool. If possible, fix the gas spring onto the tool using the fixing threaded holes at the bottom of the body or fixing accessories. Do not use the threaded hole on the stem for fixing onto the tool. This hole is only to be used in maintenance operations. Make sure the length of the screws is such that the base of the gas spring sits flatly on the tool.

ASSEMBLY ON THE TOOL: FIXING ELEMENTS

Follow the recommended methods for mounting gas springs to your tool. READY offers a wide variety of assembly options to satisfy different application needs.

ASSEMBLY ON THE TOOL: ASSEMBLY MUST BE PERPENDICULAR TO THE WORKING AXIS

Gas springs must always work completely perpendicular to the contact surface. Lateral forces produced by a badly aligned press can cause irreparable damage.

ASSEMBLY ON THE TOOL: PROTECTION FROM POLLUTANTS

Protect gas springs from liquid or solid pollution. Avoid particles making direct contact with the gas spring. Box cavities are to be cleaned regularly and should be equipped with drainage holes.













B series







Important!								
Pressure medium:	Nitrogen Gas (N ₂)							
Operating temperature:	0 to +80°C							
Force increase by temperature:	0,33% / °C							

The Extra Compact Line (B series)

Every DESIGN₂-TITE® Extra Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.

SinterLube® Top Cap

- Solid steel top cap with revolutionary SinterLube® lining.
- Designed with greater bearing area for improved support and guiding
- Threaded construction creates greater structural strength and safety.



SinterLube® is a proprietary alloy material having good sliding lubricity and hardness which we have successfully used for years in guide bushings. We have now adapted this same technology to manufacturing a new line of top caps for our B series of nitrogen gas springs.

Part Nº	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
B-350	25 - 115	15	180	50	B-350-SK
B-500	25 - 115	15	150	50	B-500-SK
B-750	25 - 90	15	150	50	B-750-SK
B-1000	25 - 90	15	150	50	B-1000-SK
B-1500	20 - 80	15	150	50	B-1500-SK

Part Nº				Ħ	<u>ii</u>	
B-350	1	1	SR 32	P 32	—	—
B-500	1	1	SR / SC 38	P 38	—	—
B-750	1	1	SR / SC 45	P 45	B 45	I 45
B-925	1	1	SR / SC 50	P 50	B 50	I 50
B-1500	1	1	SR / SC 63	P 63	B 63	I 63





Part Nº	Do	Dc	ØD	Ød	Р	r		Д		<u> </u>	П										
Model x stroke (mm)	mm	mm	mm	mm	mm	mm						Cylinders									
B 250 x 10	50	40					bar	dain	Gan 5%	Ng 21											
B-350 X 10	56	40							598	.21		2×M6(55mm)									
16	62	46							606	.23		EXHIG(5,5HH)									
19	68	49							612	.24											
25	80	55							620	.26											
32	94	62							626	.29											
38	106	68	32	16	12.5	1	180	362	629	.31	_	$(\circ \circ)$									
50	130	80							637	.35											
63	156	93							652	.40											
75	180	105							666	.44											
100	230	130							677	.54		20									
125	280	155							686	.64											
B-500 x 10	50	40							779	.30											
13	56	43							801	.31		2×M6(5.5mm)									
16	62	46							817	.33											
19	68	49							828	.34											
25	80	55							844	.37											
32	94	62							856	.40		$\left(\begin{array}{c} - \end{array} \right)$									
38	106	68	38	20	12.5	1	150	470	863	.43	—										
50	130	80							872	.49											
75	180	105							900	.55											
80	190	110							907	.65											
100	230	130							927	.76		25									
125	280	155							946	.90											
B-500 x 10	52	42	45 25						1286	.44											
13	58	45									1300	.46		2×M8(5,5mm)							
16	64	48								1325	.48										
19	70	51							1344	.50											
25	82	57							1370	.54											
32	96	64									1389	.58									
38	108	70		25	15.5	1	1 150	736	1400	.62	_										
50	132	82										1415	.70								
75	190	95										1420	.70								
80	192	112							1468	.07											
100	232	132							1518	.108		-20-									
125	282	157							1563	1.29											
B-1000 x 13	64	51							1543	.65											
16	70	54							1585	.67											
19	76	57							1617	.69											
25	88	63							1662	.74											
32	102	70							1697	.80		60									
38	114	76	50	28	15.5	2	150	925	1718	.84	_										
50	138	88							1747	.94											
53	188	113							1815	1.04											
80	198	118							1837	1.21											
100	238	138							1910	1.42		20									
125	288	163							1978	1.68											
B-1500 x 13	70	57							2411	1.14		2xM8(7mm)									
16	76	60							2493	1.17											
19	82	63							2558	1.21											
25	94	69							2655	1.29		A A A A A A A A A A A A A A A A A A A									
32	108	76	63						2733	1.38		-00									
38	120	82		63	36	19	2	150	1527	2783	1.45	_									
50	144	94							2852	1.61											
53	10/	107						I										2902	1.77		
80	204	124											2945	1.99							
100	244	144							3059	2.31		20									
125	294	169							3207	2.74											

Product improvement through research and development is an ongoing process. All specifications are subject to change without notice.



Important!								
Pressure medium:	Nitrogen Gas (N ₂)							
Operating temperature:	0 to +80°C							
Force increase by temperature:	0,33% / °C							

Solid steel top cap with revolutionary

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• Threaded construction creates greater

improved support and guiding

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The Extra Compact Line (B series)

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SinterLube® Top Cap



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Part №	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
B-2400	20 - 75	15	150	50	B-2400-SK
B-4200	20 - 65	15	150	50	B-4200-SK
B-6600	15 - 60	15	150	50	B-6600-SK

Part №				<u>iii</u>	<u>_</u>	1. E
B-2400	1	1	SR / SC 75	P 75	B 75	I 75
B-4200	1	1	SR / SC 95	P 95	B 95	I 95
B-6600	1	1	SR / SC 120	P 120	B 120	I 120



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Part Nº	D -	D		~ -	_			டி	en l	2	பு	O d'a de se
Model x stroke	Do	DC	ØD	Øđ	Р	r						Cylinders
(mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
B-2400 x 16	77	61							4193	1.73		
19	83	64							4304	1.78		4×M8(10mm)
25	95	70							4468	1.89		
32	109	77							4599	2.08		
38	121	83							4680	2.15		p q
50	145	95	75,2	45	21	2,5	150	2386	4793	2.35	1	
63	171	108							4873	2.60		(a0)
75	195	120							4925	2.80		
80	205	125							4942	2.90		
100	245	145							4996	3.25		Ø40
125	295	170							5041	3.70		1
B-4200 x 16	90	74							6714	3.20		4×M8(12mm)
19	96	77							6943	3.30		
25	108	83							7308	3.45		
32	122	90							7623	3.65		6-1-0
38	134	96							7830	3.85		
50	158	108	95	60	24	2,5	150	4200	8136	4.15	1	
63	184	121							8365	4.55		Q
75	208	133							8520	4.85		
80	218	138							8573	5.00		
100	258	158							8741	5.55		Ø60
125	308	183							8885	6.25		
B-6600 x 16	100	84							10,442	6.05		4×M10(11mm)
19	106	87							10,869	6.20		
25	118	93							11,579	6.50		
32	132	100							12,226	6.90		0-1-0
38	144	106	100	75	25 F	2.5	150	6600	12,670	7.20	,	
50	100	121	120	75	35.5	2,5	150	6600	13,331	7.00 9.55	•	
75	219	142							14 255	0.00		
80	210	143							14,200	9.20		
100	268	168							14,303	10.50		
125	318	193							15 171	11.85		
	0.10											

BE series





Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Extra Compact Line (BE series)

Every Extra Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.



Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
BE-90	35 - 80	0,5	175	50	Kit BE-00090
BE-140	30 - 95	0,5	175	25	Kit BE-00140
BE-275	30 - 95	0,5	175	50	Kit BE-00275

Part Nº				m	<u>i</u>	<u>1</u>
BE-90	1	1	—	—	—	—
BE-140	1	1	SR 19	—	—	—
BE-275	1	1	SR / SC 25	—	—	—



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Part Nº	Do	Dc	ØD	Ød	Р	r			Ô	ر م		Cylinders												
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases												
BE-90 x 7	56	49					175		110	0,07														
10	62	52					175	90	≈ 140	0,07														
15	72	57		8							140	70	~ 112	0,08		M6(5mm)								
25	92	67	15.2		17	0.8	140	70	~ 112	0,09	_													
38	118	80	10,2		.,	0,0	100	50	≈ 80	0,10														
50	142	92								0,11														
63	172	109					60	30	≈ 48	0,12														
75	195	120								0,14														
BE-140 x 7	44	37					175		0.10	0,07														
10	50	40					175	140	≈ 210	0,07		M6(4mm)												
10	60	40								0,08														
19	80	49					125	100	~ 150	0,09														
38	106	68					120		~ 150	0,03														
50	130	80	19,2	10	9,5	0,8				0,11	—													
63	156	93					95	75	≈ 115	0.13														
75	185	110								0,13														
80	195	115								0,14														
100	235	135					63	50	≈ 75	0,15														
125	285	160								0,16														
BE-275 x 7	44	37								0,08														
10	50	40					175	275	≈ 430	0,10														
12	54	42									0,10													
15	60	45												0,11		M6(5mm)								
16	62	46	25,2	25,2	25,2	25,2	25,2	25,2	25.2	25.2	25.2	25,2									0,11			
19	68	49																			130	200	≈ 320	0,12
25	80	55											14	17	1				0,13	_	(b)			
38	106	68							14	.,					0,15									
50	130	80									100	150	≈ 245	0,17										
63	156	93								0,20														
75	185	110								0,21														
80	190	110					65	100	≈ 160	0,22														
100	235	135								0,27														
125	205	100								0,30														
			1																					
					1		1																	

BE series









BE-925, 1000

Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Extra Compact Line (BE series)

Every Extra Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.



Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
BE-350	25 - 115	1	175	25	Kit BE-00350
BE-500	25 - 115	1	150	35	Kit BE-00500
BE-750	25 - 90	0,8	150	35	Kit BE-00750
BE-925	25 - 90	0,8	150	35	Kit BE-00925
BE-1500	20 - 80	1	150	35	Kit BE-01500

Part Nº						
BE-350	1	1	SR 32	P 32	—	—
BE-500	1	1	SR / SC 38	P 38	—	—
BE-750	1	1	SR / SC 45	P 45	B 45	I 45
BE-925	1	1	SR / SC 50	P 50	B 50	I 50
BE-1500	1	1	SR / SC 63	P 63	B 63	I 63

Product improvement through research and development is an ongoing process. All specifications are subject to change without notice.





Part Nº	Do	Dc	ØD	Ød	Р	r		ക	_	_22_	பு	
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN			Cylinders
BE-350 x 10	50	40							525	0.16		
13	56	43							530	0.17		
16	62	46							530	0,18		
19	68	49							530	0,19		
25	80	55							530	0,20		
32	94	62							530	0,22		
38	106	68	32	16	12,5	1	175	350	530	0,24	_	$(\circ \cdot \circ)$
50	130	80							530	0,28		
63	156	93							535	0,33		
75	180	105							535	0,36		
80	190	110							535	0,38		20
100	230	130							535	0,44		
125	280	155							535	0,51		
BE-500 x 10	50	40							650	0,25		
13	50	43							670	0,20		2×M6(5,5mm)
10	68	40							670	0,27		$\langle \rangle$
25	80	55							675	0,20		
32	94	62							680	0.34		
38	106	68	38	20	12,5	1	150	470	685	0,38	_	$(\circ \circ)$
50	130	80			,				690	0,42		
63	156	93							690	0,46		
75	180	105							695	0,50		
80	190	110							700	0,53		
100	230	130							700	0,55		- 25
125	280	155							710	0,68		
BE-750 x 13	58	45							1245	0,35		
16	64	48							1245	0,39		2×M8(5.5mm)
19	70	51							1250	0,40		
25	82	57							1255	0,44		
32	96	64					1 150		1255	0,47		
38	108	70	45	25	16,5	1		150 740	1255	0,50	_	
50	132	82							1260	0,59		
75	190	95							1265	0,05		
80	192	112							1265	0,85		
100	232	132							1265	0.98		20
125	282	157							1270	1,15		
BE-925 x 13	64	51							1295	0,53		
16	70	54							1310	0,55		2×M8(6mm)
19	76	57							1340	0,58		$\langle \rangle$
25	88	63							1385	0,62		
32	102	70							1410	0,67		
38	114	76	50	28	17.5	2	150	925	1445	0,72	_	$+ \Theta + \Theta +$
50	138	88			.,-	—			1470	0,82		
63	164	101							1485	0,93		
75	188	113							1495	1,10		
80	198	118							1510	1,15		
125	288	163							1540	1.45		20
BE-1500 x 13	70	57							2250	0.95		
16	76	60							2280	0,97		2×M8(7mm)
19	82	63							2345	1,15		\setminus
25	94	69							2400	1,27		
32	108	76							2455	1,35		A A A A A A A A A A A A A A A A A A A
38	120	82	63	26	10	2	150	1500	2470	1,40		-0-0-
50	144	94	03	30	19	2	150	1000	2495	1,55	_	
63	170	107							2530	1,71		-
75	194	119							2560	1,83		
80	204	124							2575	1,95		
100	244	144							2590	2,32		20
125	294	169							2610	2,82		

Product improvement through research and development is an ongoing process. All specifications are subject to change without notice.

BE series







Important!							
Pressure medium:	Nitrogen Gas (N ₂)						
Operating temperature:	0 to +80°C						
Force increase by temperature:	0,33% / °C						

The Extra Compact Line (BE series)

Every Extra Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.



Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
BE-2400	20 - 75	0,8	150	35	Kit BE-02400
BE-4200	20 - 65	0,8	150	35	Kit BE-04200
BE-6600	15 - 60	0,6	150	35	Kit BE-06600
BE-9500	15 - 50	0,6	150	35	Kit BE-09500
BE-20000	10 - 45	0,5	150	35	Kit BE-20000

Part Nº				<u>.</u>	<u>#</u>	
BE-2400	1	1	SR / SC 75	P 75	B 75	I 75
BE-4200	1	1	SR / SC 95	P 95	B 95	I 95
BE-6600	1	1	SR / SC 120	P 120	B 120	I 120
BE-9500	1	1	SR / SC 150	P 150	B 150	I 150
BE-20000	1	1	SR / SC 195	P 195	B 195	—





Dort NP	Do	Do	ØD	Ød	D			Д	- A	Ω	П	Cylindere	
Fait N	DU	DC		Øu								Cymiders	
Model X Stroke (mm)				mm		mm	Dai	uan	uan	NY		Dases	
BE-2400 x 16	77	61							3540	1,40		4×M8(10mm)	
19	83	64							3585	1,43			
25	95	70							3645	1,45			
32	109	77							3700	1,65		0-1-0	
38	121	83							3730	1,70			
50	145	95	75,2	45	21	2,5	150	2400	3770	1,80	-	0.0	
63	171	108							3790	2,10			
75	195	120							3820	2,15			
80	205	125							3845	2,25			
100	245	145							3865	2,60		Ø40	
125	295	170	-	-		-			3895	3,10			
BE-4200 x 16	90	74							6140	2,80		4×M8(12mm)	
19	96	77							6275	2,90			
25	108	83							6465	3,10			
32	122	90							6625	3,25		0 2	
38	134	96							6745	3,70			
50	158	108	95	60	24	2,5	150	4200	6880	3,90	-		
63	184	121							6990	4,40		×	
75	208	133							7060	4,75			
80	218	138							7100	4,90			
100	258	158							7175	6,00		Ø60	
125	308	183							7225	6,50			
BE-6600 x 16	100	84								8775	5,20		4×M10(11mm)
19	106	87							8995	5,35			
25	118	93							9345	5,40			
32	132	100							9650	5,60		0 0	
38	144	106							9855	5,95			
50	168	118	120	75	25,5	2,5	150	6600	10160	6,30	-		
63	194	131							10400	6,70		0	
75	218	143							10585	7,05			
80	228	148							10620	7,55		1	
100	268	168							10805	8,40		Ø80	
125	318	193	-	-		-			10940	9,45			
BE-9500 x 16	110	94							12950	9,50		4×M10(11mm)	
19	116	97							13200	9,60			
25	128	103							13620	9,85			
32	142	110							13950	10,50			
38	154	116	450		07.5	0.5	450	0500	14155	10,85			
50	178	128	150	90	27,5	2,5	150	9500	14475	11,45	~		
63	204	141							14690	12,05		00	
/5	228	153							14865	12,45			
80	238	158							14910	13,70			
100	278	178							15105	14,80		Ø100	
125	328	203							15210	15,75			
BE-20000 X 16	142	126							25405	20,85		4×M12(16mm)	
19	148	129							25925	21,45			
25	100	135							20840	22,10		6	
32	174	142							27635	22,85			
38	180	148	105	100	22.5	25	150	20000	20100	23,45	,		
50	210	160	195	130	33,5	2,5	150	20000	28970	24,70	*		
63	236	1/3							29585	20,10		ia ø	
/5	260	185							30025	27,25			
80	270	190							30110	28,20			
100	310	210							30525	31,10		ø120	
125	360	235						1	30900	35,20	1		

C series







Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Sub Compact Line (C series)

Every DESIGN₂-TITE® Sub Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.

SinterLube® Top Cap

- Solid steel top cap with revolutionary SinterLube® lining.
- Designed with greater bearing area for improved support and guiding
- Threaded construction creates greater structural strength and safety.



SinterLube® is a proprietary alloy material having good sliding lubricity and hardness which we have successfully used for years in guide bushings. We have now adapted this same technology to manufacturing a new line of top caps for our C series of nitrogen gas springs.

Part Nº	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
C-1000	25-80	15	150	50	C-1000-SK
C-1800	25-80	15	150	50	C-1800-SK
C-4700	20-65	15	150	50	C-4700-SK

Part Nº				<u></u>	<u></u>	
C-1000	1	1	—	_	_	_
C-1800	1	1	—	—	—	I 50
C-4700	1	1	—	—	—	I 75





Part Nº	Do	Dc	ØD	Ød	Р	r		д	r e n	کر	கு	Cylinders
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Кg		bases
C-1000 x 6	61	55							2039	0.43		
10	78	68							2609	0.54		2×M6
16	100	84							3345	0.68		
25	135	110	38	25	_	—	150	1060	4228	0.90	—	$(\circ - \circ)$
32	167	135							4776	1.11		
40	195	155							5173	1.28		17
50	230	180							5814	1.49		
C-1800 x 6	66	60							3109	0.80		2
10	80	70							3780	0.94		2XMB
16	106	90					150		4613	1.22		
25	135	110	50,2	35	_	—		1885	5572	1.50	_	
32	162	130							6147	1.78		
40	190	150							6555	2.05		26
50	220	170							7201	2.35		
C-4700 x10	80	70							8140	1.94		2×M8
16	106	90		55					9641	2.55		
25	135	110	75.2		_		150	4676	11,362	3.15	_	$\left(\begin{array}{c} \\ \end{array} \right)$
32	167	135	10,2				100	4070	12,393	3.95		$\left(\varphi + \varphi \right)$
40	200	160							13,123	4.75		
50	240	190							14,279	5.65		40

CE series





CE-750, 1000, 1800, 3000

READY

Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Sub Compact Line (CE series)

Every Sub Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.



Part Nº	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
CE-420	35 - 60	20	150	50	Kit CE-00420
CE-750	25 - 60	20	150	50	Kit CE-00750
CE-1000	25 - 60	20	150	50	Kit CE-01000
CE-1800	25 - 60	20	150	50	Kit CE-01800
CE-3000	25 - 50	20	150	50	Kit CE-03000

Part Nº					<u> </u>	
CE-420	1	1	SR 25	—	—	—
CE-750	1	1	SR / SC 32	—	—	—
CE-1000	1	1	SR / SC 38	—	—	—
CE-1800	1	1	SR / SC 50	—	—	I 50
CE-3000	1	1	SR / SC 63	_	_	_





Part Nº	Do	Dc	ØD	Ød	Р	r		д	r n	<u> </u>	பு	Cylinders	
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases	
CE-420 x 6	56	50							865	0,13			
10	70	60							780	0,15		MP(2WW)	
16	91	75	25	12	9	1	133	420	765	0,20	—		
25	120	95							790	0,30		\odot	
32	140	108							785	0,38			
CE-750 x 6	63	57							1560	0,29			
10	80	70					150		1325	0,35		2XM6(7mm)	
15	100	85							1285	0,42			
25	135	110	32,1	18	10,5	1		750	1235	0,51	_		
32	140	108							1195	0,55			
40	165	125							1235	0,61		15	
50	195	145							1300	0,67			
CE-1000 x 6	61	55							1730	0,35			
10	78	68							1900	0,40		2XM6(9mm)	
16	100	84							1785	0,48			
25	135	110	38,1	18	10,5	1	142	1000	1695	0,56	—		
32	167	135							1610	0,63			
40	195	155							1630	0,75		17	
50	230	180							1615	0,90			
CE-1800 x 6	66	60							2650	0,52			
10	80	70							3025	0,63		2XM6(9mm)	
16	106	90							2790	0,75			
25	135	110	50	50 30	14,5	2	142	1800	2895	0,88	_	5	
32	162	130							2830	1,10			
40	190	150							2850	1,15		26	
50	220	170								2910	1,32		
CE-3000 x 10	85	75							4580	1,25			
15	100	85		36 18				0 3000	4820	1,38		2XM8(11mm)	
16	103	87				2	150		4890	1,42			
25	130	105	63		18				5100	1,60	_		
32	150	118							5275	1,67		20	
40	175	135							5360	1,87			
50	205	155							5350	2,17			

CE series





Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Extra Compact Line (CE series)

Every Extra Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.



READY

Part Nº	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
CE-4700	20 - 45	20	150	50	Kit CE-04700
CE-7500	15 - 30	20	150	50	Kit CE-07500
CE-11800	15 - 30	20	150	50	Kit CE-11800
CE-18300	10 - 25	20	150	50	Kit CE-18300

Part Nº				<u>.</u>	<u> </u>	11 A
CE-4700	1	1	SR / SC 75	—	—	I 75
CE-7500	1	1	SR / SC 95	_	—	I 95
CE-11800	1	1	SR / SC 120	_	—	I 120
CE-18300	1	1	SR / SC 150	_	—	_





Part № Model x stroke (mm)	Do mm	Dc mm	ØD mm	Ød mm	P mm	r mm	bar	□ daN	☐ daN	۲ لے Kg		Cylinders bases			
CE-4700 x 10	80	70							7490	1,50		4×M8(9.5mm)			
16	106	90							7175	1,78					
25	135	110							7500	2,10					
32	167	135	75	45	18	2,5	5 150	4700	7150	2,32	_				
40	200	160							7045	2,65					
50	240	190							7010	3,05		Ø40			
CE7500 x 10	90	80							11720	3,10		4×M8(10mm)			
16	116	100							11350	3,30					
25	145	120	95	60	21	2.5	150	7500	12025	3,85					
32	182	150	33	00	21	2,5	150		11160	4,46					
40	210	170							11315	4,69		ø52			
50	255	205							11040	5,50					
CE11800 x 10	100	90										17650	5,60		4×MIU(IImm)
16	126	110		70	70 22,5			11800	17480	6,39		·			
25	155	130	119.5			25	150		18140	7,15		$+ \dot{\phi} - \phi +$			
32	187	155	110,0			2,0		11000	17630	7,96		\\`'			
40	220	180							17420	8,91					
50	260	210							17395	10,15		Ø68			
CE18300 x 10	110	100							25050	9,10		4×M10(11mm)			
16	136	120							25395	9,95		·			
25	165	140	149.5	90	24.5	25	150	18300	26640	10,80	_	$+ \dot{\phi} - \phi + $			
32	197	165	140,0	00	24,0	2,0	100	10000	26180	13,26		·			
40	235	195							25795	15,10					
50	270	220							26275	16,80		ø90			

P series







Important!								
Pressure medium:	Nitrogen Gas (N ₂)							
Operating temperature:	0 to +80°C							
Force increase by temperature:	0,33% / °C							

The Perfomance Line (P series)

Every $DESIGN_2$ -TITE® Perfomance gas spring provides greater force in a smaller body than the S and L series gas springs.

SinterLube® Top Cap

READ

- Solid steel top cab with revolutionary SinterLube® lining.
- Designed with greater bearing area for improved support and guiding
- Threaded construction creates greater structural strength and safety.



SinterLube® is a proprietary alloy material having good sliding lubricity and hardness which we have successfully used for years in guide bushings. We have now adapted this same technology to manufacturing a new line of top caps for our P series of nitrogen gas springs.

Part Nº	Max. strokes / min	Max. stem speed m/min		Max. cha	Max. charging pressure (bar)		charging pressure (bar)	Order No for Spare Parts Kit
P-500	40 - 115	15	15		150		50	P-500-SK
P-750	30 - 90	15	15		150		50	P-750-SK
P-1000	30 - 90	15	15		150		50	P-1000-SK
Part Nº					Ħ		<u>III</u>	<u>.</u>
Part Nº P-500			SR / S	SC 38	P 38			
Part N° P-500 P-750		- - -	SR / S	SC 38	P 38 P 45		<u>—</u> В 45	— — I 45
Part Nº P-500 P-750 P-1000	2 2 2 2		SR / S SR / S SR / S	SC 38 SC 45 SC 50	P 38 P 45 P 50		 B 45 B 50	 I 45 I 50
Part Nº P-500 P-750 P-1000	✓ ✓ ✓	✓ ✓ ✓	SR / S SR / S SR / S	SC 38 SC 45 SC 50	P 38 P 45 P 50		 B 45 B 50	



Part N ^o Model x stroke (mm)	Do mm	Dc mm	ØD mm	Ød mm	P mm	r mm	Dar		daN	ح ل ہم ا		Cylinders bases
										Ŭ		
P-500 x 10	70	60							663	.45		2×M6(5.5mm)
13	20	66							721	.40		
25	100	75							721	.40		
38	126	88	38	20	12.5	1		470	821	.52		600
50	150	100	50	20	12,5			470	855	.00		
63	176	113							886	73		
80	210	130							915	.13		20
100	250	150							940	.00		- 20 -
D 750 x 12	230	62							1220	.93		
P-/50 X 13	01	66							1220	.07		2×M8(12mm)
10	100	75							1209	.69		
25	100	75							1004	.70		
38	120	88	45	25	16,5	1		736	1394	.65	1	
50	150	100							1425	.93		
63	176	113							1447	1.02		
08	210	130							1482	1.15		_ 20
100	250	150							1535	1.32		
P-1000 x 13	76	63							1724	.83		2×M8(12mm)
19	88	69							1824	.88		
25	100	75							1887	.94		
38	126	88							1968	1.05		
50	150	100	50	29	16,5	2		990	2010	1.15	~	$+ \Theta + \Theta +$
63	176	113							2039	1.26		
80	210	130							2065	1.40		
100	250	150							2084	1.57		20
125	300	175							2101	1.79		

READY

PE series





Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Perfomance Line (PE series)

Every gas spring provides greater force in a smaller body than the SE and LE series gas springs.



Max. Max. stem speed Max. charging pressure Min. charging pressure Order No for Part Nº strokes / min m/s (bar) (bar) **Spare Parts Kit** Kit PE-0500 PE-500 40 - 115 1 150 35 Kit PE-0750 PE-750 30 - 90 0,8 150 35 Kit PE-1000 PE-1000 30 - 90 1 150 35

Part №					<u>ii</u>	
PE-500	1	1	SR / SC 38	P 38	—	—
PE-750	1	1	SR / SC 45	P 45	B 45	I 45
PE-1000	1	1	SR / SC 50	P 50	B 50	I 50

Product improvement through research and development is an ongoing process. All specifications are subject to change without notice.





Part Nº	Do	Dc	ØD	Ød	Р	r		டி	- - -	ح	Д	Cylinders
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
PE-500 x 10	70	60							560	0,45		M8(10mm)
13	75,4	62,7							575	0,46		
16	82	66							580	0,48		
25	100	75	38	20	12.5	1	150	470	600	0,53	_	$(-\phi)$
38	126	88	00	20	12,0		100		630	0,62		
50	150	100							645	0,69		
63	177	114							660	0,76		
80	210	130							675	0,86		
PE-750 x 13	75,4	62,7							1100	0,60		2×M8(12mm)
19	88	69							1150	0,65		
25	100	75							1170	0,70		
38	126	88	45	25	15,5	1	150	750	1190	0,80	1	(
50	150	100							1210	0,88		
63	1//	114							1230	0,98		
80	210	130							1250	1,10		- 20
100	250	150							1265	1,24		2. MQ(12mm)
PE-1000 X 13	75,4	62,7							1570	0,77		
19	88	69							1655	0,80		
25	100	75							1725	0,85		
38	120	100	50	30	15,5	2	142	1000	1730	0,97	1	$+ \oplus + \oplus +$
50	150	100							1770	1,07		
03	210	114							1015	1,20		
100	210	150							1925	1,50		20
100	250	150							1025	1,50		







Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The North American Line (S series)

Every DESIGN₂-TITE® North American gas spring meets all ISO and VDI piston rod and body diameter standards, in addition to mounting and charge port specifications and features the shorter body height common in Noth America.

SinterLube® Top Cap

- Solid steel top cap with revolutionary SinterLube® lining.
- Designed with greater bearing area for improved support and guiding
- Threaded construction creates greater structural strength and safety.



SinterLube® is a proprietary alloy material having good sliding lubricity and hardness which we have successfully used for years in guide bushings. We have now adapted this same technology to manufacturing a new line of top caps for our S series of nitrogen gas springs.

Part Nº	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
S-500	30 - 105	15	150	50	S/L-500-SK
S-750	30 - 105	15	150	50	S/L-750-SK
S-1500	30 - 70	15	150	50	S/L-1500-SK

Part Nº				<u>i</u>	<u>i</u>	<u>.</u>
S-500	1	1	SR /SC 45	P 45	B 45	I 45
S-750	1	1	SR / SC 50	P 50	B 50	I 50
S-1500	1	1	SR / SC 75	P 75	B 75	I 75





Part Nº	Do	Dc	ØD	Ød	Р	r		А	ren -	ہے	Д	Cylinders
Model x stroke	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
(mm)												
S-500 x 6	62	56							670	0.65		
13	76	63							709	0.69		2×M8(12mm)
10	88	60							710	0.71		
25	100	75							729	0.73		
38	126	88							738	0.85		
50	150	100	45	20	16,5	1	150	470	746	0.00	1	(
00	170	140							740	1.00		
63	210	113							704	1.02		
100	210	150							766	1.14		
100	300	175							700	1.20		20
120	500	175							// 1	1.40		
S-750 x 6	62	56							1070	0.79		
12	76	63							1171	0.84		2×M8(12mm)
10	88	69							1210	0.89		
25	100	75							1233	0.94		
38	126	88							1261	1.05		
50	150	100	50	25	17.5	2	150	736	1275	1.14	1	$+ \Theta + \Theta +$
63	176	113							1285	1.25		
80	210	130							1302	1.39		
100	250	150							1330	1.58		20
125	300	175							1354	1.82		-
S-1500 x 13	127	114							1788	3.10		4×(MQ(12mm))
25	151,6	126,6							1946	3.35		4XM8(12mm)
38	177	139							2066	3.60		
50	201,6	151,6							2149	3.85		prt Q
63	227	164	75	36	21	2,5	150	1527	2217	4.10	1	
80	261,6	181,6							2286	4.40		
100	301,5	201,6							2346	4.80		
125	351,6	226,6							2420	5.30		ø40
160	421	261							2515	6.10		
]									



Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Renault Line (SE series)

Renault line gas spring meets all ISO and VDI piston rod and body diameter specification, and they conform to the mounting, charge port, and body height specifications of the Renault norms.



Part Nº	Max. strokes / min	Max. ster m/	lax. stem speed m/s		Max. charging pressure (bar)		charging pressure (bar)	Order No for Spare Parts Kit
SE-500	30 - 105	1	1		150		35	Kit SE-00500
SE-750	30 - 105	1	1		150		35	Kit SE-00750
SE-1500	30 - 70	1			150		35	Kit SE-01500
SE-3000	30 - 70	0,8	3	150		35		Kit SE-03000
Part Nº							<u>.</u>	
SE-500	1	1	SR / \$	SC 45	P 45		B 45	I 45
SE-750	1	1	SR / S	SC 50	P 50		B 50	I 50
SE-1500	1	1	SR / \$	SC 75	P 75		B 75	I 75
SE-3000	1	1	SR / S	SC 95	P 95		B 95	I 95





Part Nº Model x stroke (mm)	Do mm	Dc mm	ØD mm	Ød mm	P	r mm	bar		daN			Cylinders
SE-500 x 13	75.7	62.7						GUIT	590	0.55		2:
19	88	69							610	0,60		
25	100	75							630	0,65		
38	126	88							645	0,85		AI
50	150	100	45	20	15,5	1	150	500	655	0,88	1	
63	177	114							670	0,95		
80	210	130							690	1,05		
100	250	150							700	1,20		- 20-
SE-750 x 13	75,7	62,7							960	0,72		
19	88	69							990	0,75		
25	100	75							1025	0,80		
38	126	88	50	05	45.5	0	150	750	1045	0,92		
50	150	100	50	25 15,5	15,5	2		750	1060	1,02	•	
63	177	114							1085	1,15		
80	210	130							1090	1,31		
100	250	150							2015	1,50		_20_
SE-1500 x 25	110	85							1850	1,80		4×M8(12mm)
38	136	98	75,2						1895	1,90		
50	160	110		36	10	25	150	1500	1945	2,20		
63	186	123			15	2,5	130	1500	1985	2,45	*	0_0/
80	220	140						2015	2,80			
100	260	160							2040	3,20		ø40
SE-3000 x 25	120	95							3650	3,60		4×M8(12mm)
38	146	108			22 2 5	2 5 150	150 3000	3810	4,20	5		
50	170	120	95	50				3900	4,40			
63	196	133							3995	4,90	-	0.0
80	230	150							4050	5,40		
100	270	170							5025	6,50		¢60

L series







Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The ISO Line (L series)

Every $DESIGN_2$ -TITE® ISO gas springs meets all ISO and VDI piston rod, body and height standards, in addition to mounting and charge port specifications.

SinterLube® Top Cap

- Solid steel top cab with revolutionary SinterLube® lining.
- Designed with greater bearing area for improved support and guiding
- Threaded construction creates greater structural strength and safety.



SinterLube® is a proprietary alloy material having good sliding lubricity and hardness which we have successfully used for years in guide bushings. We have now adapted this same technology to manufacturing a new line of top caps for our L series of nitrogen gas springs.

Part №	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
L-500	20 - 85	15	150	50	S/L-500-SK
L-750	10 - 85	15	150	50	S/L-750-SK
L-1500	10 - 85	15	150	50	S/L-1500-SK
L-3000	10 - 85	15	150	50	S/L-3000-SK
L-5000	10 - 85	15	150	50	S/L-5000-SK

Part Nº				<u>iii</u>	<u>ii</u>	
L-500	1	1	SR / SC 45	P 45	B 45	I 45
L-750	1	1	SR / SC 50	P 50	B 50	I 50
L-1500	1	1	SR / SC 75	P 75	B 75	I 75
L-3000	1	1	SR / SC 95	P 95	B 95	I 95
L-5000	1	1	SR / SC 120	P 120	B 120	I 120





Part Nº	Do	Dc	ØD	Ød	Р	r		<u>م</u>	Ô	<u></u>	த	Cylinders
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
L-500 x 10	105	95							539	.94		2×M8(12mm)
13	111	98							553	.96		
25	135	110							564	.93		
38	161	123							625	1.12		
50	185	135	45	00	10.5	4	450	170	646	1.20		60
63	211	148	45	20	16,5	1	150	470	664	1.29		
80	245	165							682	1.41		
100	285	185							697	1.55		
125	335	210							711	1.72		
160	405	245							725	1.97		_ 20 _
L-750 x 13	121	108							866	1.26		2×M8(12mm)
25	145	120							944	1.35		
38	171	133							1003	1.46		
50	195	145							1043	1.56		
63	221	158	50	25	17 E	2	150	700	1077	1.66	,	60
80	255	175	50	20	17,5	2	150	730	1115	1.81		$(\psi \psi)$
100	295	195							1156	1.99		
125	345	220							1196	2.25		
160	415	255							1237	2.55		
200	495	295							1271	2.95		_ 20 _
L-1500 x 13	136	123							1745	3.25		4×M8(12mm)
25	160	135							1887	3.45		
38	186	148							2001	3.70		
50	210	160							2081	3.95		Co-t-o
63	236	173	75	26	01	2.5	150	1507	2151	4.20	,	
80	270	190		30	21	2,5	150	1527	2222	4.50	•	
100	310	210							2285	4.90		
125	360	235							2362	5.45		
160	430	270							2459	6.20		
200	510	310							2543	7.15		≠ Ø40 ►
L-3000 x 25	170	145							3780	6.10		4×M8(12mm)
38	196	158							4240	6.85		
50	220	170							4434	7.20		K-h-
63	246	183							4596	7.60		
80	280	200	95	50	24	2,5	150	2945	4756	8.10	1	
100	320	220							4897	8.75		0 0/
125	370	245							5030	9.50		
160	440	280							5290	10.85		
200	520	320							5519	12.40		Ø6U
L-5000 x 25	190	165							6138	10.65		4×M10(11mm)
38	216	178							6566	11.30		
50	240	190							6891	11.90		A-1
63	266	203							7185	12.55		
80	300	220	120	65	25,5	2,5	150	4977	7503	13.45	1	
100	340	240							7804	14.45		1331
125	390	265							8105	15.75		
160	460	300							8656	18.05		400
200	540	340							9181	20.70		- 080 -

LE series







Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The ISO Line (LE series)

Every ISO gas springs meets all ISO and VDI piston rod, body and height standards, in addition to mounting and charge port specifications.



Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
LE-500	20 - 85	0,8	150	35	Kit LE-00500
LE-750	10 - 85	0,8	150	35	Kit LE-00750
LE-1500	10 - 85	0,8	150	35	Kit LE-01500
LE-3000	10 - 55	0,8	150	35	Kit LE-03000
LE-5000	10 - 55	0,5	150	35	Kit LE-05000

Part Nº					<u>i</u>	.
LE-500	1	1	SR / SC 45	P 45	B 45	I 45
LE-750	1	1	SR / SC 50	P 50	B 50	I 50
LE-1500	1	1	SR / SC 75	P 75	B 75	I 75
LE-3000	1	1	SR / SC 95	P 95	B 95	I 95
LE-5000	1	1	SR / SC 120	P 120	B 120	I 120





Part Nº	Do	Dc	ØD	Ød	Р	r		А	Ê	2		Cylinders	
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases	
LE-500 x 10	105	95							575	0,87		2×M8(12mm)	
13	110,4	97,7							595	0,95			
25	135	110							645	0,99			
38	161	123							680	1,12			
50	185	135	45.2	20	16.5	1	150	470	710	1,21	1		
63	212	149	40,2	20	10,0		100	470	730	1,34	•		
80	245	165							745	1,50			
100	285	185							760	1,68			
125	335	210							780	2,00		20	
160	405	245							800	2,15			
LE-750 X 13	120,4	107,7							895	1,20			
20	145	120							900	1,35		2×M8(12mm)	
50	195	145							1030	1,40			
63	222	159							1070	1,32			
80	255	175							1085	1.82			
100	295	195	50	25	17,5	2	150	750	1095	1.85	1	+ + + + + + +	
125	345	220							1160	2,20			
160	415	255							1175	2,30			
200	495	295							1180	3,10			
250	595	345							1205	3,60		20	
300	695	395							1230	4,15			
LE-1500 x 13	135,4	122,7							1740	3,15			
25	160	135							1845	3,30		4×M8(12mm)	
38	186	148							1900	3,50			
50	210	160							1940	3,65			
63	237	174							1980	3,90		prt Q	
80	270	190	75	36	21	2.5	150	1500	2075	4,45	1		
100	310	210				_,_			2095	4,80			
125	360	235								2125	5,36		
160	430	270							2150	6,10			
200	510	310							2185	7,15		Ø40	
250	610	360							2200	7,86			
300 LE 2000 x 25	170	410							2225	8,86			
LE-3000 X 25	106	145							3015	5,75		4 10(40)	
50	220	170							3875	6.53		4×M8(12mm)	
63	247	184							4960	6.91			
80	280	200							4020	7,25		0-10	
100	320	220	95	50	24	2,5	150	3000	4275	8,00	1		
125	370	245	-	-		,-			4340	8,15			
160	440	280							4390	9,24		(a)	
200	520	320	1						4450	10,31			
250	620	370							4495	11,90		Ø60	
300	720	420]						4525	14,87			
LE-5000 x 25	190	165							6275	12,01			
38	216	178							6600	12,85		4×M10(11mm)	
50	240	190							6830	13,60			
63	267	204							7010	14,50		a-1-0	
80	300	220							7195	15,39			
100	340	240	120	65	25,5	2,5	150	5000	7340	16,48	1		
125	390	265							7495	18,05		0.3	
160	460	300							7610	19,83		0	
200	540	340							7700	21,70		Ø80	
250	640	390							7795	23,85			
300	740	440							7850	25,60			









Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The ISO Line (LE series)

Every ISO gas springs meets all ISO and VDI piston rod, body and height standards, in addition to mounting and charge port specifications.



Part №	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
LE-7500	10 - 50	0,5	150	35	Kit LE-07500
LE-10000	5 - 45	0,5	150	35	Kit LE-10000

Part Nº			2010	<u>.</u>	<u> </u>	<u>e</u>
LE-7500	1	1	SR / SC 150	RLP 150	B 150	I 150
LE-10000	1	1	SR / SC 195	RLP 195	B 195	_





Part Nº	Do	Dc	ØD	Ød	Р	r		Д	Ē	<u>ک</u>		Cylinders
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
LE-7500 x 25	205	180							9210	19,50		
38	231	193							9580	20,60		4×M10(11mm)
50	255	205							9900	21,50		
63	282	219							10240	22,30		(
80	315	235							10560	23,70		
100	355	255	150	80	27,5	2,5	150	7500	10850	25,40	1	- mi
125	405	280							11150	27,00		
160	475	315							11230	30,60		
200	555	355							11360	33,80		
250	655	405							11540	37,40		ø100
300	755	455							11700	40,10		-
LE-10000 x 25	210	185							11650	35,60		
38	236	198							12200	37,30		4×M12(16mm)
50	260	210							12430	39,10		
63	287	224							12650	41,20		6
80	320	240							12840	43,50		
100	360	260	195	95	33,5	2,5	141	10000	13100	46,10	1	
125	410	285							13420	50,50		
160	480	320							13530	55,90		V &
200	560	360							14070	62,00		
250	660	410							13810	67,30		ø120
300	760	460							13890	74,80		

M series





Important!							
Pressure medium:	Nitrogen Gas (N ₂)						
Operating temperature:	0 to +80°C						
Force increase by temperature:	0,33% / °C						

The small ISO Line (M series)

Every small ISO gas springs meets all ISO and VDI piston rod, body and height standards, in the smallest models.



Part Nº	Max. strokes / min	Max. stem speed m/s		Max. cha	rging pressure (bar)	Min.	charging pressure (bar)	Order No for Spare Parts Kit	
M-42	25 - 65	0.3		150		20		Kit M-00042	
M-50	20—50	0.3		175		50		Kit M-00050	
M-90	20 – 95	0.5		175		25		Kit M-00090	
M-180	25 –115	0.6			175		25	Kit M-00180	
M-230	25—105	0.6		175		25		Kit M-00230	
Part Nº									
M-42	1	1	_		_		_	_	
M-50	1	1		-	—	_		_	
M-90	1	1	SR	19	—	_		_	
M-180	1	1	SR	25	—		—	—	
M-230	1	1	SR	32	P 32		—	_	




Part Nº	Do	Dc	ØD	Ød	Р	r		A	Ē	2	Д	Cylinders							
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases							
M-42 x 7	56	49					450	10		0,03									
13	68	55					150	42	≈ 75	0,03									
15	72	57					135	38	≈ 70	0,04		M6(5mm)							
19	80	61	12,2	6	—	—				0,05	—								
25	92	67					90	25	≈ 50	0,05									
38	118	80					45	13	≈ 35	0,06									
50 M-50 x 15	72	92								0,06									
25	92	67					175	50	≈ 75	0.08		M6(5mm)							
38	118	80					142	40	≈ 60	0,09									
50	142	92	14,2	6	17,5	0,6	110	30	~ 50	0,10	_								
63	169	106					110	50	~ 30	0,12									
80	205	125					70	20	≈ 35	0,15									
M-90 x 7	56	49								0,08									
10	62	52					175	90	≈ 112	0,08									
13	67,4	54,4								0,08		M6(8mm)							
15	72	57					140	70	~ 90	0,09									
25	92	67					140	/0	~ 50	0,10									
38	118	80	19,2	8	18	0,8				0,12	_								
50	142	92					100	50	≈ 65	0,13									
63	168	105								0,15									
80	202	122								0,17									
100	245	145					60	30	≈ 38	0,10									
M-180 x 7	295	170								0,21									
10	62	52												175	200	≈ 270	0,13		
13	67.4	54.7					170	200	~ 210	0,14									
15	72	57								0,15		M6(5,5mm)							
16	74,3	58,3					135	150	≈ 210	0,15									
25	92	67		10	17					0,16									
38	118	80	25	12	17					0,19	_								
50	142	92						90	100	≈ 140	0,21		(\oplus)						
63	172	109								0,25									
80	205	125								0,26									
100	245	145					45	50	≈ 70	0,29									
125	295	170								0,33									
M-230 x 10	70	60					175	200	~ 270	0,30									
13	75,4	62,7					113	200	210	0,32									
16	100	55								0,33		uas charging M8							
20	100	75 88					135	150	≈ 210	0,37									
50	150	100	32	12	11.5	1				0,42	_	660							
63	177	114			,0		90	100	≈ 140	0,52									
80	210	130								0,60									
100	250	150					45	50	~ 70	0,75									
125	300	175					45	50	~ 70	0,85		10							

M Series





Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Semi Compact Line (M series)

Every Semi Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.



Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
M-300	20 – 85	0.8	150	50	Kit M-00300
M-350	35 -105	0.8	150	35	Kit M-00350
M-500	35 - 105	1	150	35	Kit M-00500
M-1000	15 – 60	0.5	150	35	Kit M-01000

Part №					<u>#</u>	
M-300	1	1	SR / SC 38	P 38	—	—
M-350	1	1	SR 32	P 32	—	—
M-500	1	1	SR / SC 38	P 38	—	_
M-1000	1	1	SR / SC 50	P 50	B 50	I 50





Part N ^o	Do	Dc	ØD	Ød	Р	r		д	Ê	2	Д	Cylinders
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
M-300 x 10	70	60							330	0.43		
13	75,4	62,7							340	0,44		2×M6(8mm)
16	82	66							355	0,46		2×M8(8mm)
25	100	75							370	0,51		
38	126	88							375	0,59		
50	150	100							385	0.66		(○ , ○
63	177	114	38	15	12,5	1	142	250	390	0.73	-	
80	210	130							400	0.83		
100	250	150							410	0.96		Gas charoing M6
125	300	175							415	1.05		
120	000								110	1,00		- 18
M-350 x 10	70	60							465	0,28		
15	80	65							475	0,30		M8(10mm)
25	100	75					138		500	0,32		
38	126	88	32	18	12,5	1		350	545	0,36	_	(+)
50	150	100							565	0,40		$(-\phi)$
63	176	113							595	0.44		
80	210	130							600	0.50		
M-500 x 10	75	65							610	0.38		
12	79	67							650	0.40		
15	85	70							685	0.43		M8(10mm)
25	105	80	38	22 11,5					710	0.45		
38	131	93			11,5	1	132	500	735	0.52	_	(+)
50	155	105							775	0,52		
50	196	100							705	0,00		
00	220	140							015	0,02		
M 1000 x 25	125	140							1295	1.20		
W-1000 X 25	161	102			15,5				1465	1,20		2×M8(12mm)
58	101	125						1400	1,00			
50	211	135							1515	1,40		
63	211	140	50	30		142	1000	1610	1,52	1	+ + + + + + + + + + + + + + + + + + +	
80	245	105							1610	1,73		
100	290	195							1070	2,41		
125	345	220			17,5				1695	3,10		20
160	415	200							1735	3,45		







Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Semi Compact Line (M series)

Every Semi Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and shorter body height of a bore seal cylinder.



Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for Spare Parts Kit
M-1500	15 - 50	0,5	150	35	Kit M-01500
M-2500	20 - 65	0,8	155	35	Kit M-02500
M-3000	15 - 60	0,5	150	35	Kit M-03000
M-4000	15 - 50	0,5	150	35	Kit M -04000
M-6500	15 - 45	0,6	150	35	Kit M-06500
	_				

Part Nº					<u> </u>	
M-1500	1	1	SR / SC 63	P 63	B 63	—
M-2500	1	1	SR / SC 75	P 75	B 75	I 75
M-3000	1	1	SR / SC 75	P 75	B 75	I 75
M-4000	1	1	SR / SC 95	P 95	B 95	I 95
M-6500	1	1	SR / SC 120	P 120	B 120	I 120





Part Nº	Do	Dc	ØD	Ød	Р	r		А	Ē	ഹ	Д	Cylinders				
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases				
M-1500 x 25	135	110							1990	1,86						
38	161	123							2110	2,10						
50	185	135							2195	2,25						
63	211	148	63	36	10	2	148	1500	2275	2,30	1					
80	245	165	05	50	15	2		1500	2310	2,55						
100	285	185							2560	3,15						
125	345	220							2545	4,06						
160	415	255							2390	5,23		_20_				
M-2500 x 25	145	120							3095	2,50		4×M8(10mm)				
38	171	133					5 155		3250	3,25						
50	195	145						2500	3340	4,00		0-1-0				
63	221	158	75,2	45	19	2,5			3425	4,40	1					
80	255	175							3510	5,05		a				
100	300	200							3605	5,55						
125	350	225							3680	5,98		Ø4U				
M-3000 x 25	145	120											3900	2,70		
38	171	133							4165	3,30		4×M8(10mm)				
50	195	145							4335	4,10						
63	221	158							4490	4,50		0-1-0				
80	255	175	75,2	50 19	2,5	150	3000	4615	5,10	1						
100	300	200							4725	5,90		a0				
125	350	225							4845	6,50						
160	425	265						5575	7,40		ø40					
200	510	310							5570	7,85						
M-4000 x 25	155	130							5050	4,20		4×M8(12mm)				
38	181	143							5345	4,90						
50	205	155			22				5525	5,30						
63	236	173	05	60	22	2.5	140	4000	6710	6,10	,					
80	270	190	33	00		2,5	142	4000	5915	7,20	•	0 0				
100	310	210							6050	7,80						
125	370	245			25				6205	8,30		100				
160	440	280			25				6350	9,50		<u>₽60</u>				
M-6500 x 25	165	140							7750	9,45		4×M10(11mm)				
38	191	153							8180	10,05						
50	215	165							8500	10,75		3-1-2				
63	241	178	120	75	24,5	2,5	147	6500	8745	11,67	1	B				
80	275	195							9125	12,28						
100	315	215							9210	13,35						
125	375	250							9595	14,29		≠ Ø80				

T series







Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Super Compact Line (T series)

Every Super Compact gas spring combines the convenience of a self-contained gas spring with the increased on-contact force and a very shorter body height of a bore seal cylinder.

BODY DIAMETER 50mm - STROKE 25mm



Part Nº	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
T-500	15 - 40	15	200	25	Kit T-00500
T-750	15 - 35	15	200	25	Kit T-00750
T-1200	15 - 45	15	150	50	Kit T-01200
T-2100	15 - 40	15	150	50	Kit T-02100
T-3000	15 - 40	15	150	50	Kit T-03000

Part Nº				<u>.</u>		
T-500	1	—	SR 32	—	—	—
T-750	1	—	SR / SC 38	—	—	—
T-1200	1	1	SR / SC 50	—	B 50	I 50
T-2100	1	1	SR / SC 63	—	B 63	_
T-3000	1	1	SR / SC 75	—	B 75	I 75





Part Nº	Do	Dc	ØD	Ød	Р	r		Ъ	Ē	<u> </u>	த	Cylinders
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
T-500 x 12	49	37							840	0,19		
16	58	42							855	0,21		
19	65	46							855	0,22		
25	76	51	32	18	5	1	190	500	865	0,24	_	(NO FIXING HOLES IN THE
38	102	64			-				865	0,27		BOTTOM)
50	127	77							870	0,30		
63	152	89							875	0,34		
80 T 750 v 40	186	106							8/5	0,41		
1-750 X 16	58	42							1180	0,27		
25	78	53							1195	0.32		
38	102	64	38	22	5	1	190	750	1205	0.35	_	(NO FIXING HOLES IN THE
50	127	77	00		0		100	100	1210	0.39		BOTTOM)
63	152	89							1215	0,42		
80	186	106							1225	0,51		
T-1200 x 13	55	41,5							3000	0,49		2×M8(5mm)
19	67	47,5							2090	0,52		
25	79	53,5							2075	0,59		$\langle \rangle$
38	105	66,5	50,2	32	7	2	150	1200	2050	0,68	_	$(\phi + \phi)$
50	129	78,5							2045	0,79		
63	155	91,5							2045	0,95		20
80	189	108,5							2040	1,10		
T-2100 x 13	60	46,5							3925	0,87		2×M8(6mm)
25	84	58,5							3895	0,92		
38	110	71,5	63,2	42	8,3	2	150	2100	3885	1,30	_	(-0-)
50	134	83,5							3885	1,55		
00	104	90,5							2975	1,70		20
T-3000 x 12	61	48							5680	1,05		4×M8(5mm)
25	87	61							5610	1.39		
38	113	74							5590	1,62		
50	137	86	75,2	50	8,3	2,5	150	3000	5580	1,72	_	
63	163	99							5580	1,99		
80	197	116							5575	2,18		ø40

H series







Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Maximum Force Line (H series)

Every Maximum Force gas spring provides the maximum force in a selfcontained gas spring with the increased on-contact force of a bore seal cylinder.



Part №	Max. strokes / min	Max. stem speed m/min	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
H-850	20 - 55	20	175	35	Kit H-00850
H-1000	15 - 30	15	200	35	Kit H-01000
H-1250	20 - 55	20	175	35	Kit H-01250
H-1700	20 - 60	20	175	35	Kit H-01700
H-2000	15 - 35	15	200	35	Kit H-02000
H-2800	20 - 55	20	175	35	Kit H-02800
H-4300	20 - 55	20	175	35	Kit H-04300

Part Nº				<u>in</u>		
H-850	1	1	SR / SC 38	—	—	_
H-1000	1	1	SR / SC 38	—	—	—
H-1250	1	1	SR / SC 45	—	—	I 45
H-1700	1	1	SR / SC 50	—	B 50	I 50
H-2000	1	1	SR / SC 50	—	B 50	I 50
H-2800	1	1	SR / SC 63	—	B 63	—
H-4300	1	1	SR / SC 75	_	B 75	I 75





Part Nº	Do	Dc	ØD	Ød	P	r	bar		daN	ل ک	Cylinders		
							Dai	uan	uain	Ny	Dases		
H-850 X 12	/4	62							1280	0,40	2XM6(9mm)		
25	100	75							1435	0,45			
38	130	92	38	25	21,5	1	175	850	1450	0,52			
50	100	105							1480	0,04	17		
80	100	145							1400	0,75			
H 1000 x 25	105	90							1473	0,00			
H-1000 X 25	125	07							1600	0,50	4XM6(9mm)		
50	160	110	20	25	21.5	1	195	1000	1675	0,57	<u>-</u>		
50	205	142	- 30	20	21,5	1	100	1000	1540	0,09			
80	200	142							1600	0,00	20		
H-1250 x 12	79	67							1800	0.62			
25	105	80							2050	0.75	2XM6(9mm)		
38	135	97							2120	0.83			
50	160	110	45	30	23,5	1	175	1250	2150	0.91			
63	190	127							2195	1.10	20		
80	230	150							2120	1.17			
H-1700 x 12	84	72							2485	0.82			
25	110	85							2800	0.91	2XM6(9mm)		
38	140	102	50 35								2895	1.12	
50	165	115		35	26,5	2	175	1700	2960	1,25	S S		
63	195	132								2975	1,35	26	
80	235	155							2970	1,48			
H-1925 x 25	135	110							2610	1,02			
38	165	127							2780	1,32	2XM6(9mm) 2XM8(9mm)		
50	190	140	50	35	26,5	2	185	1925	2910	1,45	S C C C C C C C C C C C C C C C C C C C		
63	220	157							2995	1,55			
80	255	175							3120	1,68	26		
H-2800 x 12	94	82							3825	1,31			
25	120	95							4410	1,52	2XM8(11mm)		
38	150	112							4595	1,85			
50	175	125	63,2	45	28	2	175	2800	4630	1,97			
63	210	147							4695	2,05	20		
80	250	170							4740	2,22			
H-4300 x 12	94	82							5910	1,82	 4×M8(9.5mm)		
25	120	95							6795	2,10			
38	150	112	75.2	56	20	2.5	175	4300	7095	2,42			
50	175	125	13,2	50	25	2,5	175	4300	7365	2,61			
63	210	147							7270	2,70			
80	250	170							7345	3,05	ø40		

R series





Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Threaded Line (R series)

READY

Every threaded gas spring provides design flexibility.





Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kit
R-16	20 - 65	0,5	175	35	Kit R-16
R-16.1	15 - 55	0,5	175	35	Kit R-16
R-24	20 - 65	0,5	175	25	Kit R-24
R-24.1	15 - 55	0,5	175	25	Kit R-24

Part №	2 2	8
R-16	1	R 16
R-16.1	1	R 16
R-24	1	R 24
R-24.1	1	R 24



Here's How to order the KEY R16KEY, for R-16 & R-16.1 model R24KEY, for R-24 & R-24.1 model





Part Nº	Do	Dc	ØD	Ød	Р	r		Д	Ē	<u>ک</u>	டி	Cylinders
Model x stroke (mm)	mm	mm	mm	mm	mm	mm	bar	daN	daN	Kg		bases
R-16 x 10	80	70					35	10	≈ 12	0,07		
20	100	80					50	15	≈ 15	0,08		
30	120	90					70	20	≈ 25	0,09		
40	140	100					90	25	≈ 30	0,15		(NO MOUNTING HOLES
50	160	110	M16x1,5	6	35	3	110	30	≈ 35	0,20	—	ON BOTTOM)
60	180	120					125	35	≈ 45	0,22		
70	200	130					140	40	≈ 50	0,25		
80	220	140					160	45	≈ 55	0,27		
100	260	160					175	50	≈ 60	0,28		
R-16 x 10.1	65	55					35	10	≈ 13	0,06		
20.1	85	65					50	15	≈ 18	0,07		
30.1	105	75					70	20	≈ 25	0,08		
40.1	125	85					90	25	≈ 32	0,10		(NO MOUNTING HOLES
50.1	145	95	M16x1,5	6	35	3	110	30	≈ 40	0,15	—	ON BOTTOM)
60.1	165	105					125	35	≈ 45	0,18		
70.1	185	115					140	40	≈ 50	0,20		
80.1	205	125					160	45	≈ 55	0,21		
100.1	245	145					175	50	≈ 60	0,23		
R-24 x 10	80	70					25	20	≈ 25	0.20		
20	100	80					50	40	≈ 50	0,22		
30	120	90					75	60	~ 75	0,24		
40	140	100					75	00	~ 75	0,25		(NO MOUNTING HOLES
50	160	110	M24x1,5	10	40	5	100	80	≈ 100	0,27	—	ON BOTTOM)
60	180	120					125	100	≈ 125	0,30		
70	200	130					150	120	≈ 150	0,35		
80	220	140					175	140	≈ 175	0,41		
100	260	160					110	110		0,45		
R-24 X 10.1	65	55					25	20	≈ 25	0,18		
20.1	105	75					50	40	≈ 55	0,20		
30.1 40.1	125	85					75	60	≈ 80	0,22		
50.1	145	95	M24x1 5	10	40	5	100	80	≈ 105	0.25		ON BOTTOM)
60.1	165	105	ME IX1,0	10	10	0	100	00	100	0.28		
70.1	185	115					125	100	≈ 135	0.32		
80.1	205	125					150	120	≈ 160	0,38		
100.1	245	145					175	140	≈ 185	0,42		

R series





Important!	
Pressure medium:	Nitrogen Gas (N ₂)
Operating temperature:	0 to +80°C
Force increase by temperature:	0,33% / °C

The Threaded Line (R series)

Every threaded gas spring provides design flexibility.



Part Nº	Max. strokes / min	Max. stem speed m/s	Max. charging pressure (bar)	Min. charging pressure (bar)	Order No for spare parts kits
R-200	25 - 95	0,6	175	25	Kit R-200
R-250	25 - 80	0,8	150	50	Kit R-250
R-750	30 - 90	0,8	150	35	Kit R-750
R-1000	30 - 90	0,8	150	35	Kit R-1000

Part Nº		
R-200	R 28	R 28
R-250	R 38	R 38
R-750	R 45	R 45
R-1000	R 50	R 50



Part Nº	Do	Dc	ØD	Ød		<u> </u>		<u>_</u>	Д
Model x stroke (mm)	mm	mm	mm	mm	bar	daN	daN	Kg	
R-200 x 15	72	57						0,15	
25	92	67						0,17	
38	118	80						0,20	
50	142	92	M28x1,5	12	175	200		0,22	_
63	172	109						0,25	
80	205	125						0,30	
125	292	167						0,38	
R-250 x 12	75,4	63,4					350	0,35	
25	100	75					375	0,40	
38	126	88					380	0,46	
50	150	100	M38x1,5	15	142	250	395	0,54	—
63	177	114					405	0,61	
80	210	130					410	0,72	
100	250	150					410	0,80	
R-750 x 13	57,4	44,7					1100	0,40	
19	70	51					1160	0,47	
25	82	57					1175	0,50	
38	108	70	M45x1,5	25	150	750	1200	0,61	_
50	132	82					1230	0,69	
63	159	96					1240	0,80	
80	192	112					1250	0,91	
100	232	132					1265	1,10	
R-1000 x 13	63,4	50,7					1580	0,59	
19	76	57					1665	0,63	
25	88	63					1700	0,69	
50	114	70	M50x1,5	30	142	1000	1750	0,00	—
63	165	102					1810	0,90	
80	103	118					1850	1,10	
100	238	138					1865	1,10	
100	200	100					1000	1,40	









Cylinders with Controlled Movement

Cylinders with stem controlled movement can stop at the desired working position, with the possibility of deciding when stem withdrawal is to take place by means of an electric signal, in accordance with the application that is being executed.

Each unit has the following elements:

- . working cylinder
- pressure accumulator
- adaptor plate
- hydraulic valve

The adaptor plate locates each unit and links it to the other units in the system. The working cylinder, which is full of oil, is connected through the adaptor plate to the pressure accumulator. This is subjected in one of its parts to nitrogen gas pressure, thus providing pressure for the whole system. The accumulator has the capacity to absorb the whole of the volume of oil displaced by the working cylinder.

The working cylinder is activated by the movement of the press, displacing the hydraulic volume freely through the adaptor plate up to the pressure accumulator. Once the working stroke has been attained, the hydraulic valve, which is controlled by means of an electric signal, stops the return of hydraulic fluid from the accumulator to the working cylinder, at which point the piston movement stops. When the hydraulic valve opens once again, the hydraulic volume returns to the working cylinder, thus bringing about the return of the stem to its stand-by position.

The pressure accumulator is regulated in accordance to pressure device norms, as it is charged with nitrogen gas at a pressure of 150 Bar.





Operation

Stroke



Description of Components:



Compact Application



Modular Application

- 1 Working cylinder 2 Hydraulic valve
- 3 Pressure accumulation cylinder
- 4 Adaptation plate
- 5 Hydraulic hoses

Example of an application connected to a control panel



Figure a



Example of

Figure b



Example of an application of a connected modular version



How to Order a Modular Application



 Model:
 K1500, K 3000, K 4500, K 6500

 Stroke:
 12, 25, 38, 50, 63, 80, 100, 125 (other strokes under order)

 Hydraulic Valve:
 + Yydraulic valve: E 24, E 110, E 220

 Length:
 - distance between modules (min. 175mm)

Figure d

Figure c







PED 97/23/CE

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Medium Pressure

-RMF-D

The K 1500 model is also available equipped with RMF-D. When placing an order, please indicate the reference: K 1500x ... C



Nitrogen Gas (N₂) / oil

Model		La mm	Lc mm	Fa daN	Fc daN
K 1500x12	12	124	112		1715
K 1500x25	25	150	125		1875
K 1500x38	38	176	138		2000
K 1500x50	50	200	150	1500	2100
K 1500x63	63	226	163	(±5%)	2190
K 1500x80	80	260	180		2285
K 1500x100	100	300	200		2375
K 1500x125	125	350	225		2465

Hydraulic Valve	Supply Voltage	Power Consumption
E 24	24V DC	17w
E 110	110V AC	17w
E 220	220V AC	17w

Required information:

•	Working stroke:	

- Press speed:
- Maximum press rate:

mm
m/min
strokes/min

Maximum Charging Pressure150 BarMinimum Charging Pressure50 BarN2 Nominal Pressure150 BarRod Seal Area10.18 cm²Maximum Working Temperature60°CForce Increase by Temperature33/°CMaximum Stern Speed10 m/min



Assembly Possibilities



Compact application



How To Order:



Stroke · 12, 25, 38, 50, 63, 80, 100, 125 (other strokes under order)











Medium Pressure



K3000 model is also available equipped * with RMF-D. When placing an order, please indicate the reference: K 3000x ... C



Nitrogen Gas (N₂) / oil

Model		La mm	Lc mm	Fa daN	Fc daN
K 3000x12	12	129	117		3360
K 3000x25	25	155	130		3740
K 3000x38	38	181	143		4065
K 3000x50	50	205	155	3000	4320
K 3000x63	63	231	168	(±5%)	4560
K 3000x80	80	265	185		4835
K 3000x100	100	305	205		5100
K 3000x125	125	355	230		5380

Hydraulic Valve	Supply Voltage	Power Consumption
E 24	24V DC	17w
E 110	110V AC	17w
E 220	220V AC	17w

Required information:

- Working stroke:
- Press speed: .

• Maximum press rate:

mm m/min strokes/min **Maximum Charging Pressure** 150 Bar Minumim Charging Pressure 50 Bar **N2 Nominal Pressure** 150 Bar **Rod Seal Area** 19.63 cm² Maximum Working Temperature 60°C Force Increase by Temperature 33°C Maximum Stern Speed 10 /min



How to Order



Assembly Possibilities



Compact Application



Modular Application

Stroke 12, 25, 38, 50, 63, 80, 100, 125 · other strokes under order)





(2) Flow regulator for controlling stem expansion speed



M10(x6) 269

72

24

The K 4500 model is also available equipped with RMF-D. When placing an (1) order, please indicate the reference: K 4500x ... C

RMF-D



Model		La mm	Lc mm	Fa daN	Fc daN
K 4500x12	12	140	128		4710
K 4500x25	25	166	141		5130
K 4500x38	38	192	154		5490
K 4500x50	50	216	166	4500	5775
K 4500x63	63	242	179	(±070)	6040
K 4500x80	80	276	196		6340
K 4500x100	100	316	216		6635
K 4500x125	125	366	241		6935

Hydraulic Valve	Supply Voltage	Power Consumption
E 24	24V DC	17w
E 110	110V AC	17w
E 220	220V AC	17w

Required information:

•	Working stroke:	mm

- Press speed:
- Required gas spring expansion speed:
- · Maximum press rate:

mm
m/min
m/min
strokes/min

12

Medium Pressure

Nitrogen Gas (N₂) / oil

Maximum Charging Pressure	150 Bar
Minimum Charging Pressure	50 Bar
N2 Nomial Pressure	150 Bar
Rod Seal Area	28.27 cm ²
Maximum WorkingTemperature	60°C
Force Increase by Temperature	33 /ºC
Maximum Stern Speed	10 m/min



How to Order

E 220 K 4500 125 Χ E 24 · 24V DC E 110 · 110V AC E 220 · 220V AC Hydraulic Model Stroke Valve

Assembly Possibilities



Compact Application



Modular Application

Stroke: 12, 25, 38, 50, 63, 80, 100, 125 (other strokes under order)







(2) Flow regulator for controlling stem expansion speed





RMF-D

(1) The K 6500 model is also available equipped with RMF-D. When placing an order, please indicate the reference: K 6500x ... C



Model		La mm	Lc mm	Fa daN	Fc daN
K 6500x12	12	152	140		7280
K 6500x25	25	178	153		7885
K 6500x38	38	204	166		8405
K 6500x50	50	228	178	6500 (+5%)	8825
K 6500x63	63	254	191	(±070)	9220
K 6500x80	80	288	208		9670
K 6500x100	100	328	228		10120
K 6500x125	125	378	253		10585

Hydraulic Valve	Supply Voltage Supply voltage	Power Consumption
E 24	24V DC	17w
E 110	110V AC	17w
E 220	220V AC	17w

Required data:

- Working stroke:
- Press speed:
- Required gas spring expansion speed:
- Maximum press rate:

mm
m/min
m/min
strokes/min

Medium Pressure Nitrogen Gas (N₂) / oil **Maximum Charging Pressure** 150 Bar **Minimum Charging Pressure** 50 Bar N2 Nominal Pressure 150 Bar **Rod Seal Area** 44.18 cm² Maximum Working Temperature 60°C Force Increase by Temperature 0.33 %/°C Maximum Stern Speed 10 m/min



How to Order

K 6500 x 38 E 24 Model Stroke Hydraulic Valve E 24 · 24V DC E 110 · 110V AC E 220 · 220V AC

Assembly Possibilities





Modular Application

Stroke 12, 25, 38, 50, 63, 80, 100, 125 (other strokes under order)



Flanges for attaching gas springs onto tools



FLANGE FS



















READY

FLANGE FSC









FLANGE FP

















FLANGE FB





















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FLANGE FI

















FLANGE FRS











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Accessories











FR 24







Accessories

FITTING RMF-D1 MF1215 19

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G1/8



FITTING RMF-T

FITTING RMF-D2

FITTING RMF-D3

M16x2

G1/8″

FITTING RMF-D4



FITTING RMF-C







FITTING RMF-M





How to order





RMF-M4



Models:

P & PE 1000, S & SE 750, X & XE 2400

FITTING RMF-FH



PLUG M6-1

PLUG M6-2









PLUG G1/8



Accessories



FILLING VALVE TPFV1



FILLING VALVE TPFV3

FILLING VALVE TPFV4



THRUST PLATE TPSC-M6

Max. 1°+2°

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THRUST PLATE TPSC-M6OR

r25 4 B 9<u>.</u>0 М6 10







THRUST PLATE TPSC-M8C









PLATE TPSP

2====

ød max.	Modelo Model	Ø d max	A mm	B mm	C mm	D mm	E mm	F mm
	TPSP 22	22	40	21	10	15	9	15
	TPSP 36	36	56	32	13	20	11	18
	TPSP 65	65	71	48	13	20	11	18
	TPSP 95	95	84	60	13	25	11	18

- r100

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PLATE TPSPR



Modelo Model	Ø d max			C mm	Ø D1 mm	ØD mm		E1 mm	
TPSPR-1	15	50	25	12	7	11	32	8	7
TPSPR-2	20	55	50	12	7	11	40	14	7
TPSPR-3	25	70	35	15	9	15	48	14	9
TPSPR-4	36	75	50	15	9	15	56	30	9
TPSPR-5	50	85	60	15	9	15	66	40	9
TPSPR-6	65	100	80	20	11	18	72	56	11
TPSPR-7	80	110	100	20	11	18	85	75	11

MINI CONTROL PANEL P110



Max. 4 connectors



Mini-control panel: this small-sized device is used for the permanent control of gas-spring pressure. It is equipped with a quick-fit socket for gas charging and a discharging valve for decompression. P110 control panels have up to 4 G1/8" outlets for a gas spring interconnection. Pressure gauge range is from 0 to 400 Bar.

CONTROL PANEL P100

0

0





MULTIPLE CONTROL PANEL PM101





How to order Reference control panel - number of units

Example: PM101 - 3



This is the PM101 modular multiple control panel, for controlling nitrogen systems. Each module individually controls each gas spring or gas-spring system, making individual or group filling or emptying possible.

CHARACTERISTICS: each module has a G1/8 outlet for interconnection. The control panel can be assembled on its lower base or on its back. Each model has pressure gauge with a range from 0 to 400 Bar.

CONTROL PANEL FOR MANIFOLD PLATE P100M



Standard control panel with a rear outlet for manifold plates: this device is used for the permanent control of gas springs interconnected by means of a manifold plate. It is equipped with a quick-fit socket for gas charging and a discharging valve for decompression. Pressure gauge range is from 0 to 400 Bar.





- 1. Discharging valve VD-1
- 2. Quick coupling for charging ERM
- 3. Pressure gauge MP-1

FLEXIBLE HOSE MF1215-RR

READY





FLEXIBLE HOSE MF1215-RC





FLEXIBLE HOSE MF1215-CC



Rmin. 20 Rmin. 20 S12.65X1.5 L

FLANGE FOR HOSE FIXTURE BL-1







HOSE INSTALLATION GUIDELINES

In order to avoid pressure losses during the interconnected gas spring connection process, the two ends of the hose are to be screwed in simultaneously.



Hose length should be a little more than the exact length (10 or 20% more).



The hose must not be twisted during the installation process.



Avoid sharp bends in the hose.



During the installation the minimum curve radius should be respected, 20mm.



To avoid damage in the connection, the hose should extend in a straight line for at least 15 mm.



Flange the hose so as to avoid mechanical damage due to vibration, with BL-1 or BL-2 flange.



DISTRIBUTION BLOCK BD 6



On delivery, all ports are fitted with sealing plugs

DISTRIBUTION BLOCK BD 10



On delivery, all ports are fitted with sealing plugs

INTERCONNECTED GAS SPRINGS EXAMPLES







PRESSURE GAUGE MP-1

PRESSURE GAUGE MP-2



PRESSURE SWITCH



ERM



MALE QUICK-COUPLING FOR CHARGING





FEMALE QUICK-COUPLING FOR CHARGING

VD-1



DISCHARGING VALVE


INSTRUCTIONS OF USE

For gas springs with a G1/8" thread

Step 1: unscrew the G1/8"spindle half-way until the needle goes in fully. Step 2: screw the gas spring on to the G1/8"connector.

For gas springs with a M6 or M8 thread

- Step 1: screw an M6-A or M8 adaptor (as necessary) onto the G1/8" connector thread. If necessary, also screw in a M6-B or M6-C adaptor to the M6-A adaptor.
- Step 2: screw the gas spring in the charging tool on to the M6-A or M6-B or M6-C or M8 connector (as necessary).
- Step 3: plug the UC-103 charging hose into the quick coupling fitting.
- Step 4: slowly open the valve in the UC-103 charging hose until the desired pressure is attained in the pressure gauge. Close the valve.



UC-102 CHARGING UNIT FOR AUTONOMOUS GAS SPRINGS

The UC-102 charging unit is a charging device for autonomous gas springs. It is supplied with G1/8, M6A, M6-B, M6-C and M8 poses and charging couplings.

UC-103 CHARGING UNIT FOR CONTROL PANEL



The UC-103 charging unit is a charging device for gas springs that are interconnected by means of a control panel.

Accessories



TPN2-AA30 NITROGEN GAS CHARGER



Nitrogen gas charger TPN2-AA30 allows an optimum use of nitrogen bottles until a residual pressure of 20 bar is reached. Simple and safe to use, it has been designed to charge or complete gas charging for gas springs or manifold systems. The TPN2-AA30 charger uses pressurised air (max. 7 bar) and is composed of a hydro-mechanic pump, the piston accumulator for the compression of nitrogen, inlet and release decompression valves. The system is assembled on a base with handles for easy transportation.

EXP-01 DOWEL PIN EXTRACTOR

Impact head Draw bar Impact sleeve Adaptors M3 M4 M5, M6 Interchangeable extracting screw DIN ISO 4762 Dowel pin



Content: 355 mm draw bar Sliding impact sleeve Adaptor with interchangeable screw M3 (DIN ISO 4762) Adaptor with interchangeable screw M4 (DIN ISO 4762) Adaptor with interchangeable screw M5 y M6 (DIN ISO 4762) Adaptor with interchangeable screw M8 y M10 (DIN ISO 4762) M12 adaptor M16 adaptor

UM-102 PRESS (TABLETOP VERSION)



This is a specific tool for measuring the force of the gas spring, designed to periodically check gas spring normal force.

It is quick and simple to use, and reliable. The digital pressure gauge requires connection to the electrical mains (220V AC). To check the force of a gas spring, it is necessary to compress it 1-3mm in the press. The initial force (daN) of the gas spring appears in the digital pressure gauge.

Measuring capacity: 0-10Ton. Resolution: 5 daN Maximum gas spring height: 380 mm



UM-103 PRESS (STANDING VERSION)

This is a specific tool for measuring the force of the gas spring, designed to periodically check gas spring normal force.

It is quick and simple to use, and reliable. The digital pressure gauge requires connection to the electrical mains (220V AC). To check the force of a gas spring, it is necessary to compress it 1-3mm in the press. The initial force (daN) of the gas spring appears in the digital pressure gauge.

Measuring capacity: 0-10Ton. Resolution: 5 daN Maximum gas spring height: 800 mm



M6 EXTRACTOR KEY EM6



M8 EXTRACTOR KEY EM8



MAINTENANCE KIT



VALVE DEVICE DV-M6



VALVE DEVICE DV-G1/8







IDENTIFICATION PLATE



LEAK DETECTOR SPRAY





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