

# GAS SPRINGS

## Globe Standard Type



**RoHS** **GSV**

If a gas spring is used in excess of the specified stroke range S, gas leakage will occur and the piston rod will not return. Make sure to use the gas spring within the specified stroke range so that it does not contact the over stroke bushing.

Do not fix the gas spring using the screw hole at the front end or install an extension pin. **MS P.44**

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Nitrogen Gas Charge Pressure	MPa(kg/cm <sup>2</sup> )
GSV 170-350	18(183.5)
GSV 500-6600	15(153)

**Cylinder Body**  
**M** Equivalent to SCM440  
**S** Black oxide (FeS<sub>04</sub>)

**Piston Rod**  
**M** Equivalent to SCM440  
**H** 600HV~ (Surface)  
**S** Nitriding + Barrel finishing

Weight (kg)	D	D1	d	L	H	e	R	T	F	G	Ma Tap Hole for Mounting	J	Q	Load N(kgf)		Catalog No.	Plate		Base Unit Price
														Initial Load	Maximum Load		Type	No.-S	
0.06				44	37									2920(298)	170-7				
0.06				50	40									3110(317)	170-10				
0.07				60	45									3310(336)	170-15				
0.07				68	49									3410(348)	170-19				
0.08				80	55									3520(359)	170-25				
0.09	19	17	11	106	68	17	1	6	-	-	1-M6x6	-	1	1700(173)	170-38		FC19		
0.11				130	80									3710(378)	170-50				
0.12				156	93									3760(383)	170-63				
0.14				185	110									3810(388)	170-75				
0.15				195	115									3830(379)	170-80				
0.17				235	135									3880(375)	170-100				
0.19				285	160									3400(347)	170-125				
0.10				44	37									4800(489)	320-7				
0.10				50	40									4900(500)	320-10				
0.11				60	45									5100(520)	320-15				
0.12				68	49									5100(520)	320-19				
0.13				80	55									5200(530)	320-25				
0.15	25	23	15	106	68	17	1	6	-	-	1-M6x6	-	1	3200(326)	320-38		FC25		
0.17				130	80									5300(540)	320-50				
0.19				156	93									5300(540)	320-63				
0.22				185	110									5300(540)	320-75				
0.23				195	115									5300(540)	320-80				
0.26				235	135									5300(540)	320-100				
0.30				285	160									5300(540)	320-125				
0.16				50	40									5900(602)	350-10				
0.17				56	43									5200(530)	350-13				
0.18				62	46									5300(540)	350-16				
0.19				68	49									5500(561)	350-19				
0.21				80	55									5500(561)	350-25				
0.23				94	62									5500(561)	350-32				
0.25	32	27	16	106	68	12.5	1.05	6	4	3.5	2-M6x6	20	2	3600(367)	350-38	FFC32	FC32		
0.29				130	80									5500(561)	350-50				
0.33				156	93									5500(561)	350-63				
0.36				180	105									5500(561)	350-75				
0.38				190	110									5500(561)	350-80				
0.44				230	130									5500(561)	350-100				
0.51				280	155									5500(561)	350-125				
0.24				50	40									7200(734)	500-10				
0.25				56	43									7100(724)	500-13				
0.26				62	46									7200(734)	500-16				
0.28				68	49									7400(755)	500-19				
0.31				80	55									7300(744)	500-25				
0.34				94	62									7200(734)	500-32				
0.37	38	33	20	106	68	12.5	1.05	6	4	3.5	2-M6x6	20	2	4700(479)	500-38	FFC38	FC38		
0.42				130	80									7200(734)	500-50				
0.48				156	93									7200(734)	500-63				
0.54				180	105									7100(724)	500-75				
0.56				190	110									7100(724)	500-80				
0.66				230	130									7100(724)	500-100				
0.77				280	155									7100(724)	500-125				

Initial load and maximum load vary depending on the temperature and operation speed. The load error is ±10%.  
 • Load (kgf) = Load N x 0.101972 • Load (N) = Load kgf x 9.80665 • Nitrogen gas charge pressure kgf/cm<sup>2</sup> = MPa x 10.1972 MPa = kgf/cm<sup>2</sup> x 0.0980665.


Weight (kg)	D	D1	d	L	H	e	R	T	F	G	Ma Tap Hole for Mounting	J	Q	Load N(kgf)		Catalog No.	Plate		Base Unit Price
														Initial Load	Maximum Load		Type	No.-S	
0.36				52	42									12100(1234)	750-10				
0.38				58	45									12100(1234)	750-13				
0.39				64	48									12100(1234)	750-16				
0.41				70	51									11700(1193)	750-19				
0.45				82	57									11800(1203)	750-25				
0.50	45	40	25	108	70	16.5	1.05	6	4	3.5	2-M8x6	20	2	7400(755)	750-32	FFC45	FC45		
0.54				122	82									11800(1203)	750-38				
0.61				132	82									11800(1203)	750-50				
0.70				158	95									11800(1203)	750-63				
0.77				182	107									11900(1213)	750-75				
0.81				192	112									11900(1213)	750-80				
0.93				232	132									11900(1213)	750-100				
1.10				282	157									11900(1213)	750-125				
0.51				64	51									13800(1407)	1000-13				
0.54				70	54									13800(1407)	1000-16				
0.56				76	57									14000(1428)	1000-19				
0.61				88	63									14200(1448)	1000-25				
0.67				102	70									14300(1458)	1000-32				
0.71	50	43	28	114	76	17.5	2.05	6	8	5	2-M8x6	20	3	9200(938)	1000-38	FFC50	FC50		
0.81				138	88									14600(1489)	1000-50				
0.91				164	101									14700(1499)	1000-63				
1.05				188	113									14700(1499)	1000-75				
1.09				198	118									14800(1509)	1000-80				
1.21				238	138									14800(1509)	1000-100				
1.41				288	163									14800(1509)	1000-125				
0.92				70	57									24000(2447)	1500-13				
0.96				76	60									24100(2458)	1500-16				
0.99				82	63									24200(2468)	1500-19				
1.06				94	69									24300(2478)	1500-25				
1.14				108	76									23800(2427)	1500-32				
1.21				120	82									23900(2437)	1500-38				
1.35				144	94									24000(2447)	1500-50				
1.51				170	107</														



# GAS SPRINGS

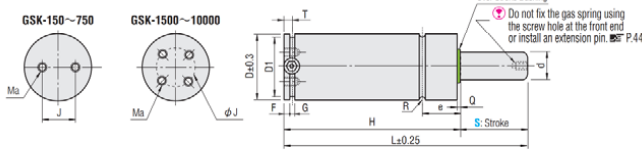
## ISO Compliant Type





**RoHS** **GSK**

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Do not fix the gas spring using the screw hole at the front end or install an extension pin. P.44

Nitrogen Gas Charge Pressure	MPa(kg/cm <sup>2</sup> )
GSK 150~10000	15(153)

Cylinder Body	Piston Rod
<ul style="list-style-type: none"> <li>Ⓜ Equivalent to SCM440</li> <li>Ⓝ Black oxide (Fe<sub>3</sub>O<sub>4</sub>)</li> </ul>	<ul style="list-style-type: none"> <li>Ⓜ Equivalent to SCM440</li> <li>Ⓜ 600HV~ (Surface)</li> <li>Ⓝ Nitriding + Barrel finishing</li> </ul>

Weight (kg)	D	D1	d	L	H	e	R	T	F	G	Ma Tap Hole for Mounting	J	Q	Load (N/kgf)		Catalog No. Type No.-S	Plate FFC FC		Base Unit Price
														Initial Load	Maximum Load				
0.28				70	60									2110	215	150-10			
0.29				75.4	62.7									2170	221	150-12.7			
0.30				82	66									2200	224	150-16			
0.33				100	75									2290	234	150-25			
0.36				105	88									2380	241	150-38			
0.40				150	100	12.5	1	6	4	3.5	2-M6x8	18	2	2400	245	150-50	FFC32	FC32	
0.44				177	113.5									2420	247	150-63			
0.49				210	130									2450	250	150-80			
0.55				250	150									2470	252	150-100			
0.64				300	175									2490	254	150-125			
0.40				70	60									3250	332	250-10			
0.41				75.4	62.7									3360	343	250-12.7			
0.43				82	66									3420	349	250-16			
0.45				88	69									3490	356	250-19			
0.48				100	75									3590	365	250-25			
0.54				126	88	12.5	1	6	4	3.5	2-M6x8	18 or 25	2	3710	378	250-38	FFC38	FC38	
0.60				150	100									3790	386	250-50			
0.66				177	113.5									3830	390	250-63			
0.74				210	130									3890	397	250-80			
0.81				250	150									3930	401	250-100			
0.98				300	175									3970	405	250-125			
1.00				110.4	97.7									6480	661	500-12.7			
1.09				135	110									7090	723	500-25			
1.20				161	123									7480	763	500-38			
1.29				185	135									7710	786	500-50			
1.38				212	148.5	16.5	1	10.5	4	3.5	2-M8x13	20	2	7860	801	500-63	FFC45	FC45	
1.50				245	165									8050	821	500-80			
1.64				285	185									8180	834	500-100			
1.85				335	210									8290	845	500-125			
2.10				405	245									8400	857	500-160			
1.28				120.4	107.7									10240	1044	750-12.7			
1.38				145	120									11580	1179	750-25			
1.48				171	133									12520	1277	750-38			
1.58				195	145									13140	1340	750-50			
1.69				222	158.5									13590	1386	750-63			
1.82				255	175	17.5	2	10.5	8	5	2-M8x13	20	3	14130	1441	750-80	FFC50	FC50	
1.99				295	195									14530	1482	750-100			
2.19				345	220									14900	1519	750-125			
2.52				415	255									15280	1556	750-160			
2.92				495	295									14940	1523	750-200			
3.40				595	345									15280	1556	750-250			
3.90				695	395									15480	1579	750-300			
3.47				160	135									23700	2363	1500-25			
3.66				186	148									24890	2538	1500-38			
3.84				210	160									25890	2650	1500-50			
4.05				237	173.5									26770	2730	1500-63			
4.30				270	190									27700	2825	1500-80			
4.60				310	210	21	2.5	10.5	8	5	4-M8x13	40	3	28410	2897	1500-100	FFC75	FC75	
4.98				360	235									29040	2961	1500-125			
5.51				430	270									29650	3023	1500-160			
6.14				510	310									28540	2910	1500-200			
7.10				610	360									29150	2972	1500-250			
8.05				710	410									29600	3018	1500-300			

⚠ The initial load and maximum load vary depending on the temperature and operation speed. The load error is ±10%  
 • Load (kgf) = Load N x 0.101972 • Load (N) = Load kgf x 9.80665 • Nitrogen gas charge pressure kgf/cm<sup>2</sup> = MPa x 10.1972 MPa = kgf/cm<sup>2</sup> x 0.0980665

Weight (kg)	D	D1	d	L	H	e	R	T	F	G	Ma Tap Hole for Mounting	J	Q	Load (N/kgf)		Catalog No. Type No.-S	Plate FFC FC		Base Unit Price
														Initial Load	Maximum Load				
6.00				170	145									47830	4877	3000-25			
6.29				196	158									52450	5348	3000-38			
6.57				220	170									55530	5663	3000-50			
6.09				247	183.5									57790	5893	3000-63			
7.30				280	200									60550	6174	3000-80			
7.78				320	220	24	2.5	10.5	8	5	4-M8x13	60	3	62700	6394	3000-100	FFC95	FC95	
8.38				370	245									64650	6592	3000-125			
9.22				440	280									66560	6787	3000-160			
10.19				520	320									60080	6126	3000-200			
11.40				620	370									62260	6349	3000-250			
12.84				720	420									63910	6517	3000-300			
11.07				190	165									85630	8732	5000-25			
11.60				216	178									94840	9671	5000-38			
12.08				240	190									101010	10300	5000-50			
12.70				267	203.5									105510	10759	5000-63			
13.28				300	220									111080	11327	5000-80			
14.08				340	240	25.5	2.5	10.5	8	5	4-M10x16	80	3	115390	11767	5000-100	FFC120	FC120	
15.10				390	265									119320	12167	5000-125			
16.50				460	300									123170	12560	5000-160			
18.10				540	340									99900	10187	5000-200			
20.10				640	390									101860	10387	5000-250			
22.12				740	440									103250	10529	5000-300			
19.10				205	180									121300	12369	7500-25			
19.95				231	193									134140	13679	7500-38			
20.70				255	205									143070	14589	7500-50			
21.50				282	218.5									149940	15290	7500-63			
22.50				315	235									158230	16135	7500-80			
23.70				355	255	27.5	2.5	10.5	8	7	4-M10x16	100	3	164980	16823	7500-100	FFC150	FC150	
25.20				405	280									171250	17463	7500-125			
27.40				475	315									177510	18101	7500-160			
29.80				555	355									151960	15496	7500-200			
32.90				655	405									159030	16217	7500-250			
35.90				755	455									164540	16778	7500-300			
35.09				210	185									153610	15664	10000-25			
36.55				236	198									163150	16637	10000-38			
37.89				260	210									169150	17249	10000-50			
39.40				287	223									1733					

# GAS SPRING PLATES

GSV • GST • GSK Plates



**RoHS** **FFC**

M FE37 or C45 (depending on size)  
S Black oxide (Fe<sub>3</sub>O<sub>4</sub>)

A	a	C	d	f	g	e	Catalog No.	Nitrogen Gas Spring Models Available			Recommended Bolt	Base Unit Price	
								GSV	GST	GSK			
50	35	49.5	6.6	12	7	4	FFC	32	GSV 350	GST 350	GSK 150	CB6-18	Quotation
55	40	56.6	6.6	12	7	4		38	GSV 500	GST 500	GSK 250	CB6-18	
70	50	70.7	9	20	7	4		45	GSV 750	GST 750	GSK 500	CB8-20	
75	56.5	79.9	9	24	12	8		50	GSV1000	-	GSK 750	CB8-25	
85	63.5	89.8	11	24	12	8		63	GSV1500	-	-	CB10-30	
100	73.5	104	11	24	12	8		75	GSV2400	-	GSK 1500	CB10-30	
120	92	130.1	13.5	24	12	8		95	GSV4200	-	GSK 3000	CB12-30	
140	109.5	154.9	13.5	24	12	8		120	GSV6600	-	GSK 5000	CB12-30	
190	138	195.1	17.5	24	12	8		150	-	-	GSK 7500	CB16-40	
210	170	240.4	17.5	24	13	8		195	-	-	GSK10000	CB16-40	

Order Example Catalog No. **FFC38**

Days to Ship **Quotation**

Price **Quotation**

**RoHS** **FC19 • 25**

M FE37 or C45 (depending on size)  
S Black oxide (Fe<sub>3</sub>O<sub>4</sub>)

**RoHS** **FC32 • 38 • 45 • 50 • 63 • 75 • 95 • 120 • 150 • 195**

M FE37 or C45 (depending on size)  
S Black oxide (Fe<sub>3</sub>O<sub>4</sub>)

A	a	B	b	C	d	t	h	Catalog No.	Nitrogen Gas Spring Models Available			Recommended Bolt	Base Unit Price	
									GSV	GST	GSK			
44	30	25	12	-	6.6	9	21.5	FC	19	GSV 170	-	-	CB6-18	Quotation
50	34	30	18	-	6.6	9	21.5		25	GSV 320	-	-	CB6-18	
60	-	35	-	49.5	6.6	9	17		32	GSV 350	GST 350	GSK 150	CB6-18	
68	-	40	-	56.6	6.6	9	17		38	GSV 500	GST 500	GSK 250	CB6-18	
86	-	50	-	70.7	9	13	23		45	GSV 750	GST 750	GSK 500	CB8-25	
95	-	56.5	-	79.9	9	13	24		50	GSV1000	GST 1000	GSK 750	CB8-25	
122	-	73.5	-	104	11	16	27		63	GSV1500	GST 1500	-	CB10-30	
122	-	73.5	-	104	11	16	29		75	GSV2400	GST 2400	GSK 1500	CB10-35	
150	-	92	-	130.1	13.5	18	33		95	GSV4200	GST 4200	GSK 3000	CB12-40	
175	-	109.5	-	154.9	13.5	21	36		120	GSV6600	GST 6600	GSK 5000	CB12-40	
220	-	138	-	195.1	17.5	27	41		150	-	-	GSK 7500	CB16-55	
290	-	170	-	240.4	17.5	27	47		195	-	-	GSK10000	CB16-55	

Order Example Catalog No. **FC38**

Days to Ship **Quotation**

Price **Quotation**