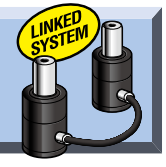




# GAS SPRINGS

— GLOBAL STANDARD TYPE GSV —



**RoHS** **GSV**

⚠ If a gas spring is used in excess of the specified stroke range S, it may cause gas leakage.  
Use the gas spring within the specified stroke range to avoid the Relief bushing is pushed down. **SP.1457**

GSV 170~320

GSV 350  
GSV 750~1500

GSV 500  
GSV 2400~20000

**Nitrogen gas charge pressure** **MPa(kg/cm<sup>2</sup>)**

GSV 170~350	18(183.5)
GSV 500~20000	15(153)

Cylinder body  
 □ Equivalent to SCM440  
 S Black oxide (Fe<sub>3</sub>O<sub>4</sub>)

Piston rod  
 □ Equivalent to SCM440  
 S 600HV ~ (Surface)  
 S Nitriding + Barrel finishing

⚠ Do not use the screw hole to fix the gas spring with a bolt nor to install an extension pin. **SP.1444**

⚠ Relief bush **SP.1457**

Weight (kg)	D	D1	d	L	H	e	R	T	F	G	Ma Tap hole for mounting	J	Q	C	Load N (kgf)		Catalog No.		Adaptable plate													
															Initial load	Maximum load	Type	Initial load - S														
0.06	19	17	11	44	37	17	1	6	-	-	1-M6×6	-	1	-	1700 (173)	2800 (286)	170-7	FCC19 FC19														
0.06				50	40											2800 (286)	170-10															
0.07				60	45											2800 (286)	170-15															
0.07				68	49											2800 (286)	170-19															
0.08				80	55											2800 (286)	170-25															
0.09				106	68											2800 (286)	170-38															
0.11				130	80											2800 (286)	170-50															
0.12				156	93											2800 (286)	170-63															
0.14				185	110											2800 (286)	170-75															
0.15				195	115											2800 (286)	170-80															
0.17				235	135											2800 (286)	170-100															
0.19				285	160											2800 (286)	170-125															
0.10				25	23											15	44		37	17	1	6	-	-	1-M6×6	-	1	3200 (326)	4800 (490)	320-7	FCC25 FC25	
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 (531)			320-25																										
0.15	106	68	5300 (541)			320-38																										
0.17	130	80	5300 (541)			320-50																										
0.19	156	93	5300 (541)			320-63																										
0.22	185	110	5300 (541)			320-75																										
0.23	195	115	5300 (541)			320-80																										
0.26	235	135	5300 (541)			320-100																										
0.30	285	160	5300 (541)			320-125																										
0.16	32	27	16			50	40	12.5	1.05	6	4	3.5	2-M6×6	20	2		M6	3600 (367)	5900 (602)										350-10	FSA32 FSD32 FFC32 FFCA32 FCQ32 FC32		
0.17						56	43												5200 (531)										350-13			
0.18						62	46												5300 (541)										350-16			
0.19						68	49												5600 (571)										350-19			
0.21				80	55	5500 (561)	350-25																									
0.23				94	62	5500 (561)	350-32																									
0.25				106	68	5500 (561)	350-38																									
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				38	33	20	50									40			12.5	1.05	6	4	3.5	2-M6×6	-	2	M6	4700 (479)	7200 (735)		500-10	FSA38 FSD38 FFC38 FFCA38 FT38 FTP38 FCQ38 FC38
0.25							56									43													7200 (735)		500-13	
0.26							62									46													7400 (755)		500-16	
0.28	68	49	7300 (745)				500-19																									
0.31	80	55	7200 (735)				500-25																									
0.34	94	62	7200 (735)				500-32																									
0.37	106	68	7200 (735)				500-38																									
0.42	130	80	7200 (735)				500-50																									
0.48	156	93	7200 (735)				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																									
0.36	45	40	25				52	42	16.5	1.05	6	4	3.5	2-M8×6	20	2	M6	7400 (755)											12100 (1235)	750-10	FSA45 FSD45 FB45 FBA45 FBB45 FCA45 FFCA45 FT45 FTP45 FCQ45 FC45	
0.38							58	45																					12100 (1235)	750-13		
0.39							64	48																					12100 (1235)	750-16		
0.41				70	51	11700 (1194)	750-19																									
0.45				82	57	11800 (1204)	750-25																									
0.50				96	64	11800 (1204)	750-32																									
0.54				108	70	11800 (1204)	750-38																									
0.61				132	82	11800 (1204)	750-50																									
0.70				158	95	11800 (1204)	750-63																									
0.77				182	107	11900 (1214)	750-75																									
0.81				192	112	11900 (1214)	750-80																									
0.93				232	132	11900 (1214)	750-100																									
1.10				282	157	11900 (1214)	750-125																									

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

Weight (kg)	D	D1	d	L	H	e	R	T	F	G	Ma Tap hole for mounting	J	Q	C	Load N (kgf)		Catalog No.		Adaptable plate													
															Initial load	Maximum load	Type	Initial load - S														
0.49	50	43	28	58	48	17.5	2.05	6	8	5	2-M8×6	20	3	M6	9200 (938)	13800 (1408)	1000-10	FSA50 FSD50 FB50 FBA50 FBB50 FFCA50 FFC50 FTP50 FCQ50 FC50														
0.51				64	51											13800 (1408)	1000-13															
0.54				70	54											14000 (1429)	1000-16															
0.56				76	57											14200 (1449)	1000-19															
0.61				88	63											14300 (1459)	1000-25															
0.67				102	70											14500 (1480)	1000-32															
0.71				114	76											14600 (1490)	1000-38															
0.81				138	88											14700 (1500)	1000-50															
0.91				164	101											14700 (1500)	1000-63															
1.05				188	113											14800 (1510)	1000-75															
1.09				198	118											14800 (1510)	1000-80															
1.21				238	138											14800 (1510)	1000-100															
1.41				288	163											14800 (1510)	1000-125															
0.92				63	56											36	70		57	19	2.05	6	8	5	2-M8×6	20	3	M6	15000 (1530)	24000 (2449)	1500-13	FSC63 FSD63 FB60 FBA50 FBB63 FFCA63 FTP63 FCQ63 FC63
0.96																	76		60											24200 (2469)	1500-16	
0.99																	82		63											24300 (2480)	1500-19	
1.06	94	69	23800 (2429)			1500-25																										
1.14	108	76	23900 (2439)			1500-32																										
1.21	120	82	24000 (2449)			1500-38																										
1.35	144	94	24100 (2459)			1500-50																										
1.51	170	107	24200 (2469)			1500-63																										
1.65	194	119	24200 (2469)			1500-75																										
1.71	204	124	24200 (2469)			1500-80																										
1.94	244	144	24300 (2480)			1500-100																										
2.23	294	169	24300 (2480)			1500-125																										
1.36	75	67	45			77	61	21	2.55	6	8	5	4-M8×6	40	3		M6	24000 (2447)	38300 (3908)											2400-16	FSA75 FSD75 FB75 FBA75 FBB75 FFCA75 FTP75 FCQ75 FC75	
1.40						83	64												38500 (3929)											2400-19		
1.50						95	70												38700 (3949)											2400-25		
1.61						109	77												38600 (3939)											2400-32		
1.70				121	83	38400 (3918)	2400-38																									
1.89				145	95	39200 (4000)	2400-50																									
2.09				171	108	39200 (4000)	2400-63																									
2.28				195	120	39200 (4000)	2400-75																									
2.36				205	125	39200 (4000)	2400-80																									
2.67				245	145	39300 (4010)	2400-100																									
3.07				295	170	39300 (4010)	2400-125																									
2.76				95	87	60	90									74			24	2.55	10.5	8	5	4-M8×13	60	3	G1/8	42000 (4283)	61700 (6296)	4200-16		FSA95 FSD95 FB95 FBA95 FBB95 FFCA95 FTP95 FCQ95 FC95
2.83							96									77													63700 (6500)	4200-19		
2.98							108									83													60800 (6204)	4200-25		
3.16							122									90													64300 (6561)	4200-32		
3.30							134									96													65800 (6714)	4200-38		
3.60	158	108	67000 (6837)				4200-50																									
3.93	184	121	67800 (6918)				4200-63																									
4.20	208	133	68000 (6939)				4200-75																									
4.35	218	138	68600 (7000)				4200-80																									
4.85	258	158	69100 (7051)				4200-100																									
5.47	308	183	69600 (7102)				4200-125																									
5.06	120	112	75				100	84	25.5	2.55	10.5	8	5	4-M10×13	80	3	G1/8	66000 (6730)											89000 (9082)	6600-16	FSA120 FSD120 FB120 FBA120 FBB120 FFCA120 FTP120 FCQ120 FC120	
5.17							106	87																					91000 (9286)	6600-19		
5.42							118	93																					93900 (9582)	6600-25		
5.69							132	100																					96100 (9806)	6600-32		
5.93							144	106																					98200 (10020)	6600-38		
6.40				168	118	100600 (10265)	6600-50																									
6.90				194	131	102400 (10449)	6600-63																									
7.40				218	143	103400 (10551)	6600-75																									
7.60				228	148	104100 (10622)	6600-80																									
8.40				268	168	105400 (10755)	6600-100																									
9.40				318	193	106500 (10867)	6600-125																									
9.51				150	142	90	116	97											27.5	2.55	10.5	8	5	4-M10×13	100	3	G1/8	95000 (9687)	135000 (13766)	9500-19		FSA150 FSD150 FB150 FBA150 FBB150 FFCA150 FTP150 FCQ150 FC150
9.90							128	103																					139000 (14174)	9500-25		
10.30							142	110																					142000 (14479)	9500-32		
10.70							154	116																					143000 (14582)	9500-38		
11.40							178	128																					146000 (14888)	9500-50		
12.20	204	141	148000 (15092)				9500-63																									
13.00	228	153	149000 (15194)				9500-75																									
13.30	238	158	150000 (15296)				9500-80																									
14.60	278	178	151000 (15397)				9500-100																									
16.10	328	203	152000 (15499)				9500-125																									
9.57	150	142	100				116	97	27.5	2.55	10.5	8	5	4-M10×13	100	3	G1/8	117000 (11930)											199000 (20292)	12000-19	FSA150 FSD150 FB150 FBA150 FBB150 FFCA150 FTP150 FCQ150 FC150	
9.96							128	103																					212000 (21618)	12000-25		
10.41							142	110																					225000 (22943)	12000-32		
10.81							154	116																					233000 (23759)	12000-38		
11.59							178	128																					246000 (25085)	12000-50		
11.88							204	141																					257000 (26206)	12000-63		
12.21				228	153	264000 (26920)	12000-75																									
12.43				238	158	267000 (27226)	12000-80																									
13.51				278	178	275000 (28042)	12000-100																									
15.14				328	203	282000 (28756)	12000-125																									
21.60				195	187	130	148	129											33.5	2.55	15	8	8	4-M12×16	120	3	G1/8	117000 (11930)	259000 (26410)	20000-19		FB195 FBA195 FBB195 FFCA195 FTP195 FCQ195 FC195
22.30							160	135																					27000			