

KGS

Creative spirit of **KCS**



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GAS CYLINDER





KCS

About Korea Gas Spring

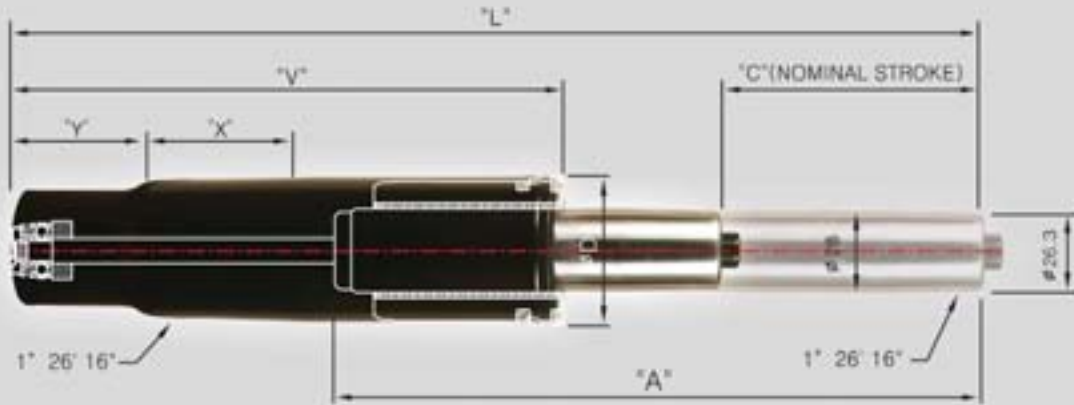
Manufacturers searching for a complete range of high quality gas springs for seating need look no further than the Korea Gas Spring(KGS)

Committed to pursuit of superior quality and technological innovation and development throughout its product line, KGS boasts a core management philosophy committed to satisfying every customer needs. Having achieved ISO9001 certification, this commitment is further evidenced in compliance of all KGS products with applicable ANSI/BIFMA standards and British standards as well as DIN and EU standard specifications.

KGS' primary manufacturing plant is located in Qingdao, China in a new state-of-the-art manufacturing facility. KGS Research and Development activities take place in its Korean headquarters as well as Qingdao plant.

Major world-wide customers throughout North America, Europe, China and other countries have utilized KGS products for years. These customers recognize the value, quality and innovation that KGS brings to their products-traits that new customers will enjoy upon choosing KGS.





CYLINDER WITH COLUMN

Available Sizes (in mm)

► Stroke 60~100

STROKE		L	C	V	D	X	Y	A
60	A	262	52	165	50	60	0	185
	B	262	52	167	50	58	17	185
	C	262	52	167	50	58	43	185
	D	262	52	150	50	65	0	185
	E	262	52	150	50	58	17	185
80	A	287	72	170	50	58	14	190
	B	306	72	185	50	60	0	209
	C	306	72	187	50	58	17	209
	D	306	72	187	50	58	43	209
	E	306	72	168	50	58	0	209
100	F	306	72	170	50	58	17	209
	A	349	92	200	50	58	37	232
	B	349	92	200	50	58	14	232
	C	349	92	197	50	58	0	232
	D	349	92	185	50	60	0	232
	E	349	92	197	50	58	17	232
	F	349	92	197	50	65	0	232
G	349	92	200	50	58	27	232	

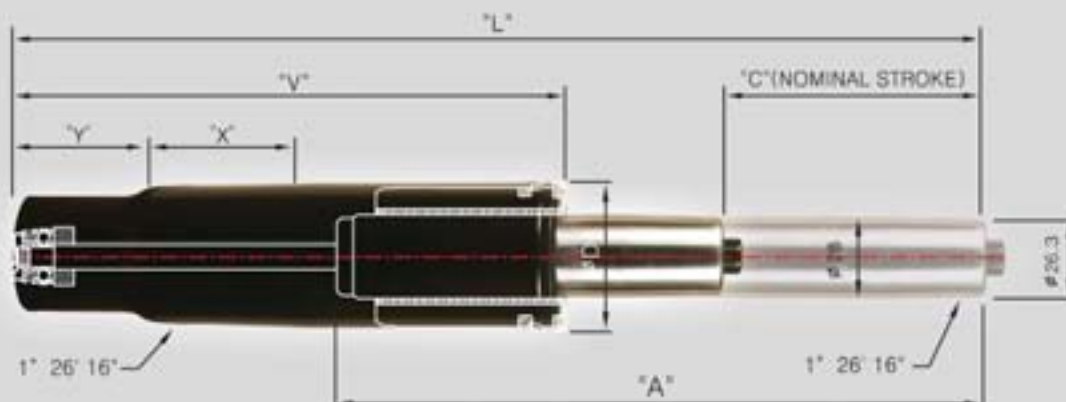
► Stroke 100~116

STROKE		L	C	V	D	X	Y	A
100	H	349	92	195	50	60	0	232
	I	349	92	197	50	58	17	232
	J	349	92	197	50	58	43	232
	K	349	92	185	50	70	0	232
	L	369	92	197	50	58	17	252
	M	359	92	195	50	58	30	242
	N	359	92	185	50	58	37	242
108	O	326	92	185	50	58	27	209
	A	357	100	217	50	101	0	232
	B	355	100	185	50	70	0	230
	C	350	100	197	50	65	0	225
	D	355	100	195	50	70	0	230
116	E	352	100	200	50	58	27	227
	A	356	108	203	50	58	41.5	223
	B	385	108	215	50	70	0	252
	C	385	108	215	50	58	43	252
	D	365	108	200	50	58	14	232
E	380	108	217	50	58	17	247	

EFFECTIVE STROKE : C+3mm WITH 75kgf

- Meets DIN 4550 CLASS III & IV
- Fulfills all requirements of ANSI / BIFMA
- CATAS ITALY is certified
- BS 5459 PART2 is certified

► F1 : 150N~450N



Available Sizes (in mm)

▶ Stroke 120~140

STROKE		L	C	V	D	X	Y	A
120	A	384	112	215	50	70	0	247
	B	384	112	215	50	58	17	247
	C	396	112	232	50	58	30	259
	D	384	112	215	50	58	48	247
	E	379	112	197	50	65	0	242
	F	384	112	228	50	58	43	247
125	A	394	117	217	50	58	17	252
	B	394	117	215	50	65	0	252
	C	394	117	217	50	58	43	252
	D	394	117	215	50	60	0	252
	E	394	117	215	50	58	17	252
	F	394	117	215	50	58	43	252
	G	394	117	215	50	65	0	252
128	A	397	120	230	50	70	0	252
133	A	433	125	245	50	58	14	283
	B	433	125	245	50	58	43	283
140	A	427	132	230	50	58	17	270
	B	416	132	235	50	58	22	259

EFFECTIVE STROKE : C+3mm WITH 75kgf

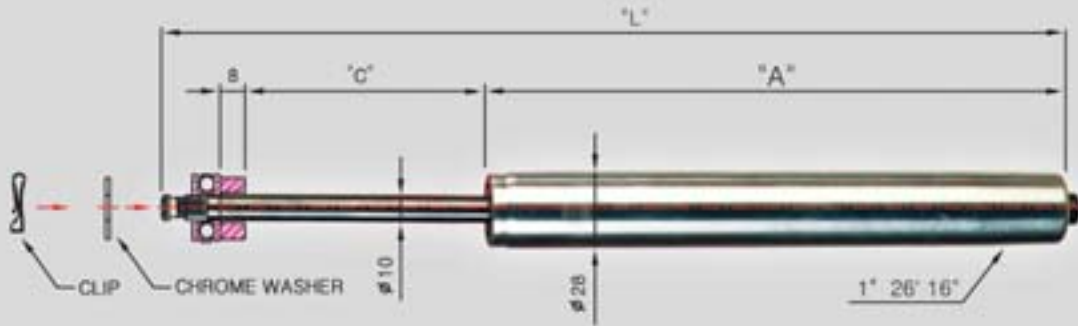
- ▶ Meets DIN 4550 CLASS III & IV
- ▶ Fulfills all requirements of ANSI / BIFMA
- ▶ CATAS ITALY is certified
- ▶ BS 5459 PART2 is certified

▶ Stroke 143~270

STROKE		L	C	V	D	X	Y	A
143	A	410	135	225	40	48	0	252
	B	443	135	235	40	65	0	283
	C	412	135	230	50	65	0	252
	D	412	135	230	50	65	0	252
	E	412	135	236	50	52	0	252
	F	412	135	230	50	49	0	252
160	A	471	152	250	50	60	0	294
	B	483	152	250	50	60	0	306
	C	469	152	255	40	50	0	292
170	A	491	162	280	50	44	0	304
200	A	574	192	313	50	58	17	357
	B	535	192	290	50	58	22	318
210	A	565	202	318	50	58	17	338
	B	565	202	318	50	65	0	338
	C	550	202	300	50	58	27	323
	D	612	202	340	40	48	0	387
270	A	693	262	375	50	58	0	406
	B	693	262	375	50	58	43	406

▶ F1 : 150N~450N

CYLINDER WITH COLUMN



CYLINDER WITHOUT COLUMN

Available Sizes (in mm)

▶ Stroke 60~108

▶ Stroke 108~140

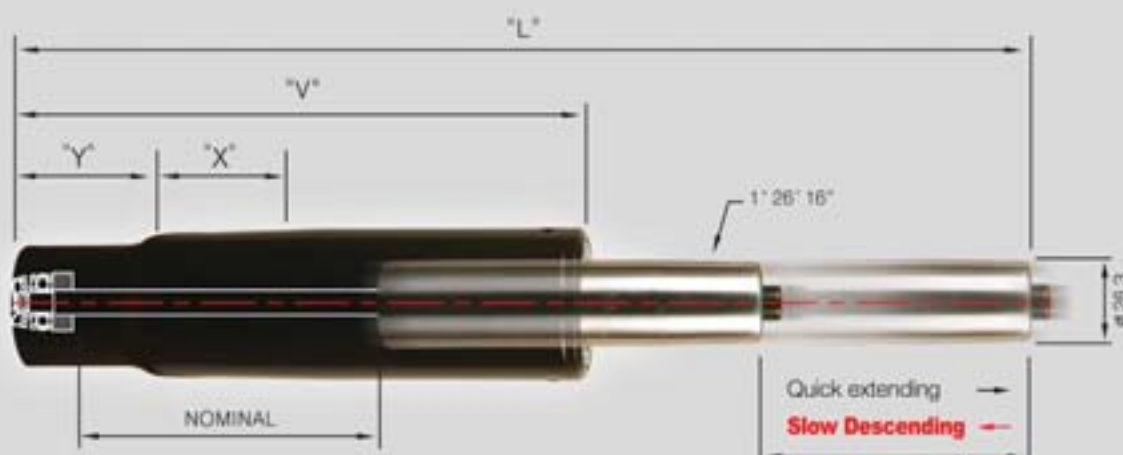
▶ Stroke 143~270

STROKE	L	A	C	STROKE	L	A	C	STROKE	L	A	C		
60	A	260.8	185	52	D	348.8	225	100	A	410.8	252	135	
73	A	273.8	185	65	E	350.8	227	100	B	441.2	283	135	
80	A	304.8	209	72	F	348.8	225	100	C	419.8	261	135	
	B	285.8	190	72	A	354.8	223	108	D	410.8	252	135	
	C	304.8	209	72	B	383.8	252	108	E	432.8	274	135	
	D	313.8	218	72	C	378.8	247	108	F	417.8	259	135	
93	A	323.8	215	85	A	382.8	247	112	A	469.8	294	152	
100	A	347.8	232	92	B	394.8	259	112	B	481.8	306	152	
	B	342.8	227	92	A	392.8	252	117	A	489.8	304	162	
	C	347.8	232	92	B	982.8	242	117	170	A	572.8	357	192
	D	328.8	213	92	C	392.8	252	117	200	B	533.8	318	192
	E	362.8	247	92	A	395.8	252	120	210	A	563.8	338	202
	F	362.8	247	92	B	388.8	245	120		B	488.8	323	202
	G	347.8	232	92	C	388.8	245	120		C	685.8	462	202
	H	324.8	209	92	A	431.8	283	125		D	610.8	387	202
108	A	348.8	225	100	B	431.8	283	125	A	691.8	406	262	
	B	355.8	232	100	A	425.8	270	132	270	B	491.8	406	262
	C	353.8	230	100	B	414.8	259	132	C	703.8	418	262	

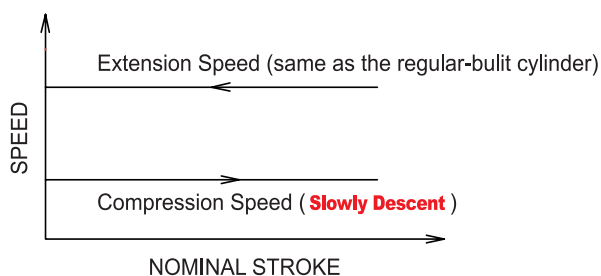
EFFECTIVE STROKE :
C+3mm WITH 75kgf

▶ F1 : 150N~450N

- ▶ Meets DIN 4550 CLASS III & IV
- ▶ Fulfills all requirements of ANSI / BIFMA
- ▶ CATAS ITALY is certified
- ▶ BS 5459 PART 2 is certified



SOFT DESCENT FORCE DIAGRAM



SOFT DESCENT CYLINDER

Feature

- ▶ Very slowly descending by speed control guide all the time, while the extension is the same speed as the regular-built cylinder.
- ▶ The height of chair is minutely adjustable.

Application

- ▶ Office chair
- ▶ Sensitive chair requiring slow descent
- ▶ Executive chair

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ No shock impact by special gas system during compression all the time, while quick extension.
- ▶ Very little noise during compression

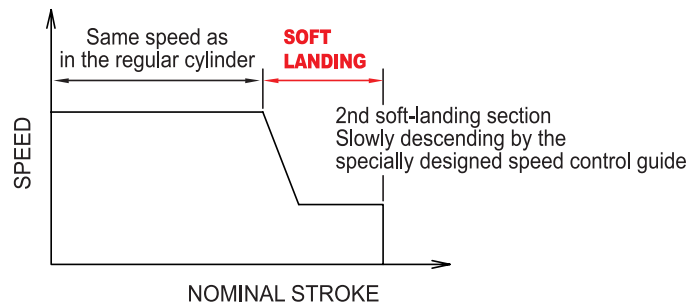
Available Sizes (in mm)

- ▶ Applicable for all the existing cylinders with the same sizes but soft descent provided all the time
- ▶ Dimensions and F1 force are changeable to comply with buyer's request
- ▶ F1 : 200N ~ 400N



SOFT LANDING CYLINDER

SOFT LANDING FORCE DIAGRAM



Feature

- ▶ Very soft landing by special speed control guide at the lowest position
- ▶ Comfortable cushion work provided by gas in itself instead of conventional rubber bumper

Application

- ▶ Office chair
- ▶ Sensitive chair at any shock impacts

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ No shock impact at the lowest position
- ▶ Very soft landing at the lowest position from about 20mm ~ 35mm at the bottom end

Available Sizes (in mm)

- ▶ Applicable for all the existing cylinders with the same sizes but soft-landing provided at the lowest position
- ▶ Dimensions and F1 forces are changeable to comply with customer's request
- ▶ F1 : 200N ~ 400N



Available Sizes (in mm)

MODEL NO.	L	C	V	XY	H
KGD□080-50□□1	297	72	165	155	10
KGD□100-50□□1	330	92	186	156	30
KGD□100-50□□2	349	92	195	176	19

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 200N ~ 400N
- ▶ H & V dimensions changeable as per the base design

Feature

- ▶ Unique design of high cone for the lofty spider bases.
- ▶ Taper to be extended up to the top bushing of the column.
- ▶ Duplicated columns for superior strength and back-pull forces.

Application

- ▶ Office Chair
- ▶ Executive office chair with lofty spider base
- ▶ Unique chair with the same height of the bushing and base top

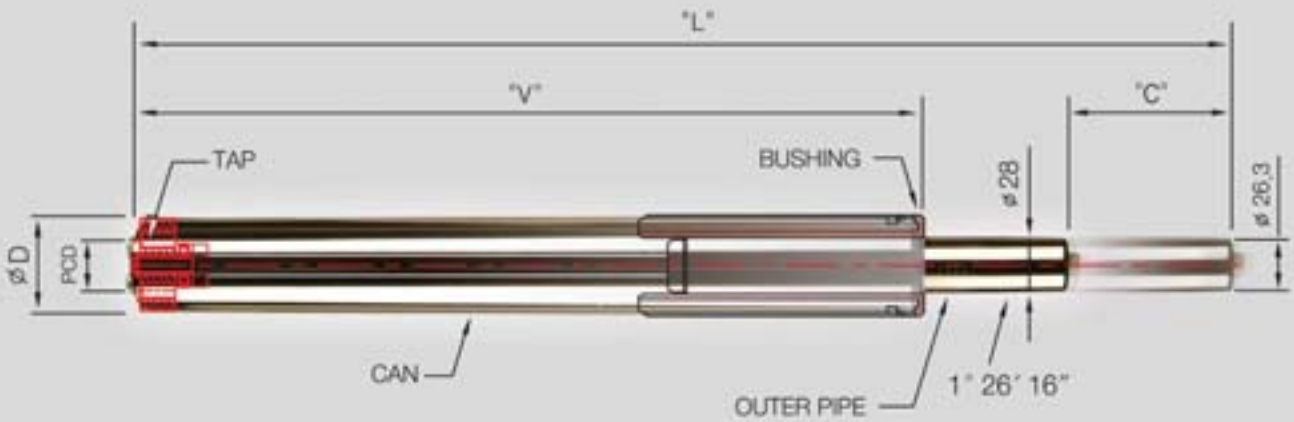
Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ Additionally tapered steel tube welded on the column provides a capability for superior back-pull durability
- ▶ The taper to be extended up to the top bushing but preventing the bushing from coming off.

HIGH- CONE CYLINDER



FIXED CYLINDER



Available Sizes (in mm)

MODEL NO.	L	C	V	φ D	PCD	TAP
KGFB210-50□□1	663	202	405	φ 50	26	4-M8
KGFB270-50□□1	719	262	405	φ 50	21	3-M8
KGFB270-40□□1	719	262	405	φ 40	21	3-M8

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 200N ~ 400N

Feature

- ▶ No tapers on the column
- ▶ The column with the threaded holes on its bottom to be fixed it to the base
- ▶ To be used for a high stroke chair by fixing it to the base

Application

- ▶ Conference chair
- ▶ Fixed bar chair
- ▶ Visitors' chair at bank or office

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ Very little noise when operating up and down
- ▶ The chair to be fixed on the base without movement
- ▶ Excellent reliability and strength guaranteed by intensified test procedures.



Available Sizes (in mm)

MODEL NO.	L	C	V	X	Y
KGT5128- □□□□1	358	124	177	58	43
KGT5147- □□□□1	390	143	191	58	43
KGT5165- □□□□1	436	161	218	58	37

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 150N ~ 450N

Feature

- ▶ Extensive range of strokes by using the same size of normal standpipe
- ▶ Available height adjustments in a wider range for normal and big chairs
- ▶ Excellent appearance and superior strength

Application

- ▶ Executive office chair and luxury chair
- ▶ Specially designed chair by increasing the strength

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ Smooth operating up and down without noise
- ▶ A special sleeve bushing with coating for long time use
- ▶ Very little wobble

TWO STAGE CYLINDER



CABLE CYLINDER

Available Sizes (in mm)

MODEL NO.	L	C	V	X	Y
KGC4104- □□□□1	335	96	180	58	32
KGC4120- □□□□1	369	112	203	58	36
KGC3143- □□□□1	412	135	230	65	0
KGC3210- □□□□1	565	202	318	58	17
KGC3270- □□□□1	693	262	375	58	0

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 150N ~ 450N

Feature

- ▶ Used for operation up and down by a cable module enabling actuation of the cylinder

Application

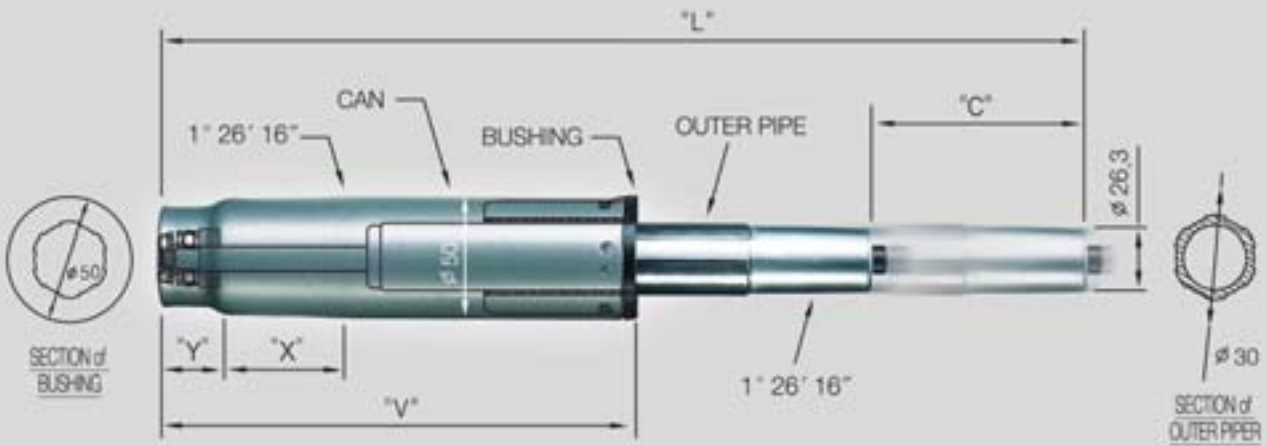
- ▶ Office Chair

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ Smooth operation up and down by rolling a ball bearing when the release arm opened
- ▶ Low button force required to actuate



Available Sizes (in mm)

MODEL NO.	L	C	V	X	Y
KGN3080- □□□□1	306	72	185	58	17
KGN3100- □□□□1	347	92	197	58	17
KGN3143- □□□□1	420	135	237	58	17
KGN3210- □□□□1	565	202	318	58	43
KGN3270- □□□□1	693	262	375	58	43

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 150N ~ 450N

Feature

- ▶ Type 1 : Not rotating along steel pipe with groove but operating vertically
- ▶ Type 2 : Not rotating but operating vertically and the height adjustable when seated and returning the seat automatically to the original height without operating the valve

Advantages

- ▶ Operating up and down very smoothly without noise
- ▶ Special steel tube with groove in a single structure

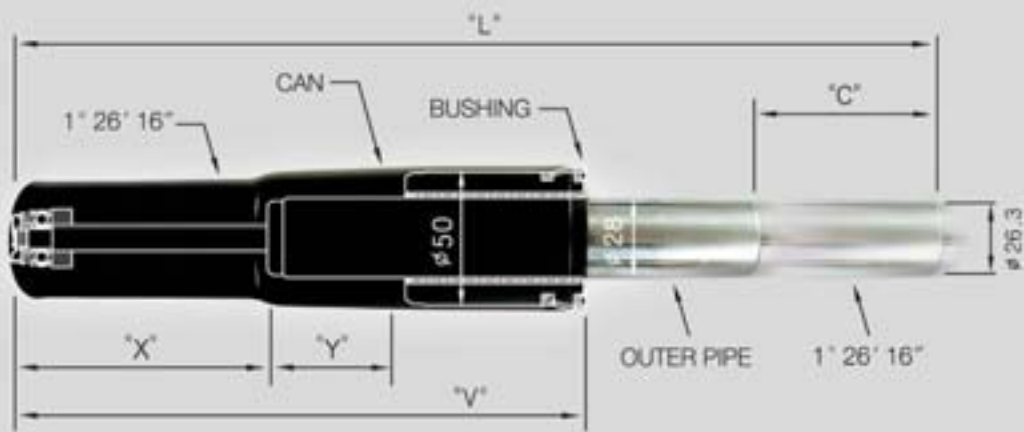
Application

- ▶ Table and chair

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

NON-ROTATIONAL CYLINDER



ALPHA CYLINDER

Available Sizes (in mm)

MODEL NO.	L	C	V	X	Y
KGT3100- □□□□1	305	96	167	58	17
KGT3146- □□□□1	400	142	215	58	43
KGT3160- □□□□1	421	156	220	58	17

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 150N ~ 450N

Feature

- ▶ The Alpha cylinder has the same size with any other regular cylinders but its strokes can be larger.
- ▶ Applicable to various types of chairs

Application

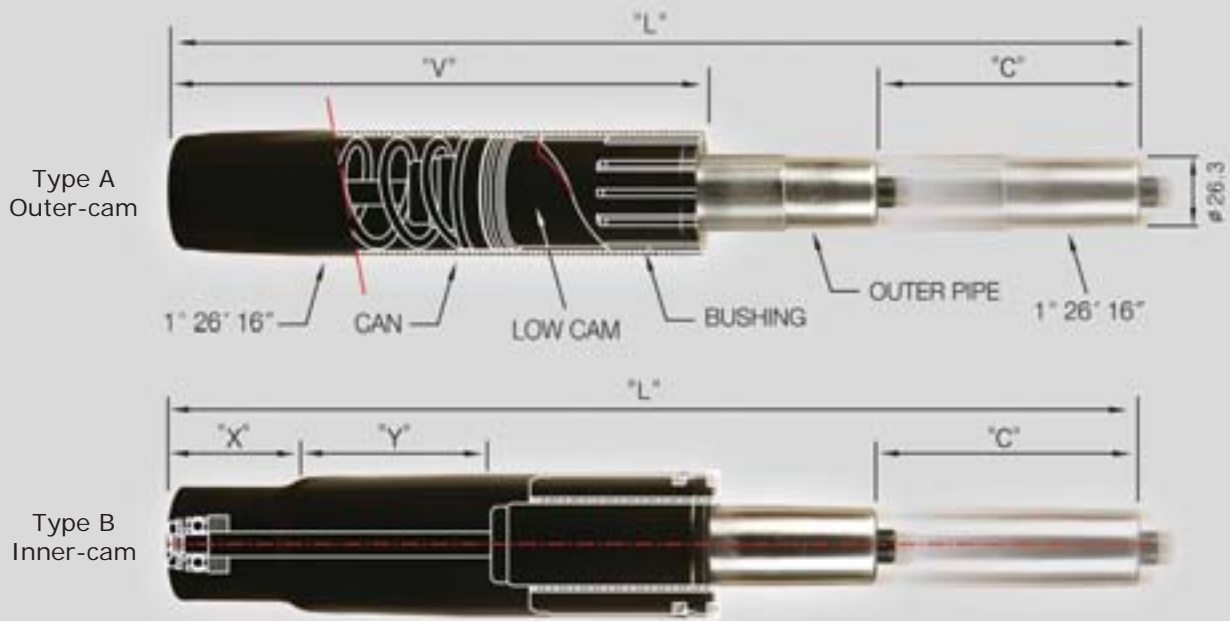
- ▶ Office and luxury chair
- ▶ Special chair expanding lower seat position

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ With the insert bushing optionally applied, the fully compressed height of the chair can be minimized in its structure and design. And, the Back-pull strength is high enough.
- ▶ Extensive adjustment range available at the lowest seat position



Available Sizes (in mm)

TYPE A	L	V	C
KGR3080- □□□□1	327	205	72
KGR3100- □□□□1	369	225	92
KGR3125- □□□□1	412	250	117
KGR3140- □□□□1	451	265	132
KGR3160- □□□□1	489	285	152

TYPE B	L	C	V	X	Y
KGR1077- □□□□1	351	69	220	58	22
KGR1105- □□□□1	399	97	250	58	22
KGR1145- □□□□1	511	137	300	58	22

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 200N~450N

Feature

- ▶ The auto-return, auto-lift cylinder swivels 360 degree in both directions, height adjustable when seated and returning the seat automatically to the original position when vacated.
- ▶ The direction and height of the chair are the same all the time when vacated.
- ▶ Type A: Outer Cam, Type B: Inner Cam

Application

- ▶ Type A & B in common
 - _ Bar stools
 - _ Gameroom chairs
 - _ Conference chairs
 - _ Any specific chairs requiring a line-up

- ▶ Type B : Light chair (weight less than 12 kgs)

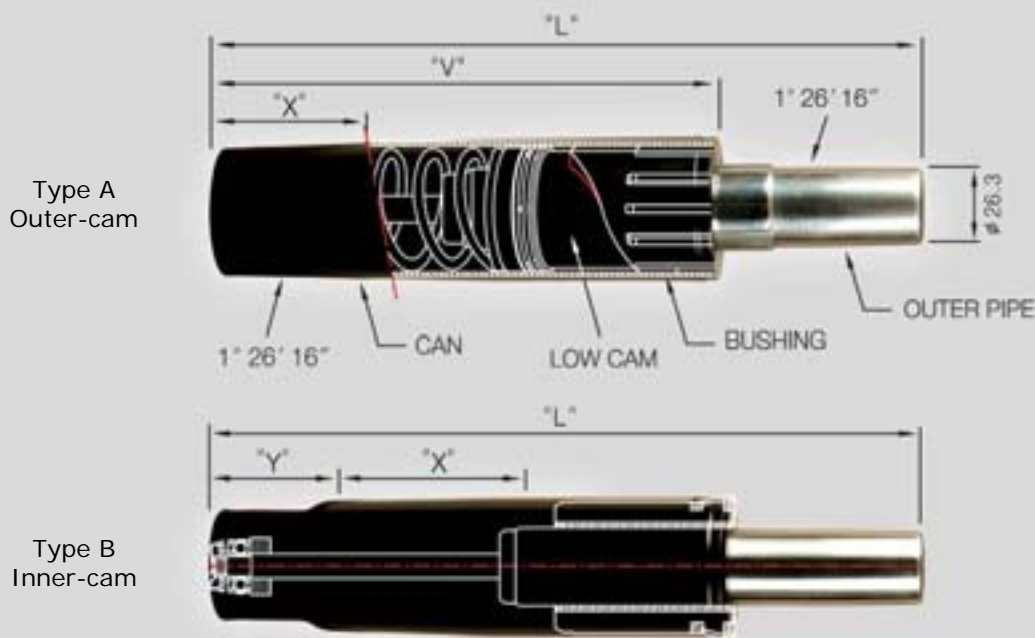
Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirement

Advantages

- ▶ Smooth rotation without noise
- ▶ Comfort and maximized efficiency of the chair
- ▶ No need of additional fixture for a joint as the single outer pipe with cylinder in solid steel material

AUTO-RETURN, AUTO-LIFT CYLINDER



RETURN SPINDLE

Available Sizes (in mm)

TYPE A	L	V	X	Y
KGR4047-□□□□1	254	182	65	0
KGR4047-□□□□2	302	225	65	0
KGR4047-□□□□3	327	250	65	0
KGR4047-□□□□4	350	285	65	0

TYPE B	L	C	V	X	Y
KGR0027-□□□□1	244	0	175	58	22
KGR0105-□□□□1	434	0	360	58	22

▶ Dimensions changeable to comply with buyer's request

Feature

- ▶ The return spindle is not a height-adjustable cylinder but swivels 360 degree in both directions when seated and returning the seat automatically to the original position when vacated.
- ▶ Type A: Outer Cam, Type B: Inner Cam

Application

- ▶ Type A & B in common
 - _ Bar stools
 - _ Gameroom chairs
 - _ Conference chairs

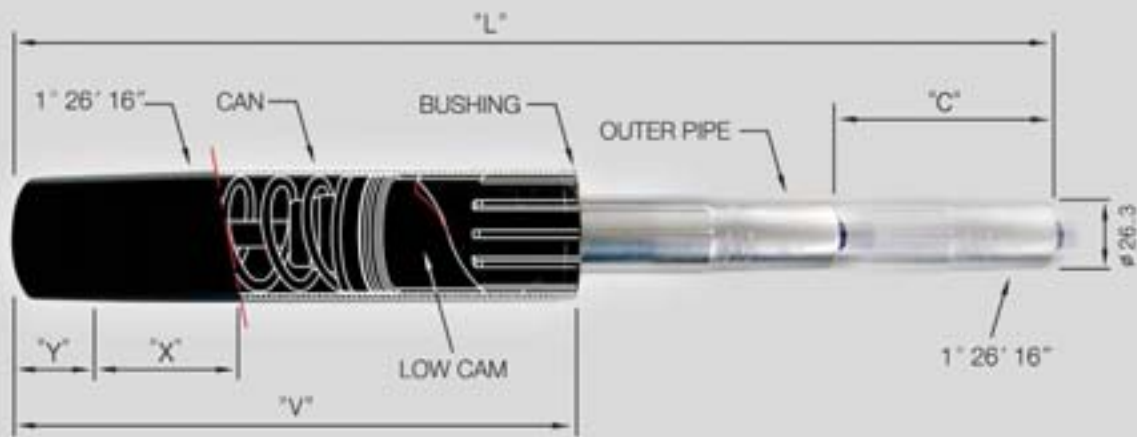
- ▶ Type B : Light chair (weight less than 12 kgs)

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ Smooth rotation without noise
- ▶ Comfort and maximized efficiency of the chair
- ▶ No need of additional fixture for a joint as the single outer pipe with cylinder in solid steel material



Available Sizes (in mm)

MODEL NO.	L	C	V	X	Y
KGR2080- □□□□1	329	72	205	65	0
KGR2100- □□□□1	369	92	225	65	0
KGR2125- □□□□1	412	117	250	65	0
KGR2140- □□□□1	451	132	265	65	0
KGR2160- □□□□1	489	152	285	65	0

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 200N ~ 450N

Feature

- ▶ The auto-return height adjustable cylinder swivels 360 degree in both directions, height adjustable when seated and returning the seat automatically to the original direction but height remains unchanged when vacated.

Application

- ▶ Bar stools
- ▶ Gameroom chairs
- ▶ Conference chairs
- ▶ Any specific chairs requiring a line-up

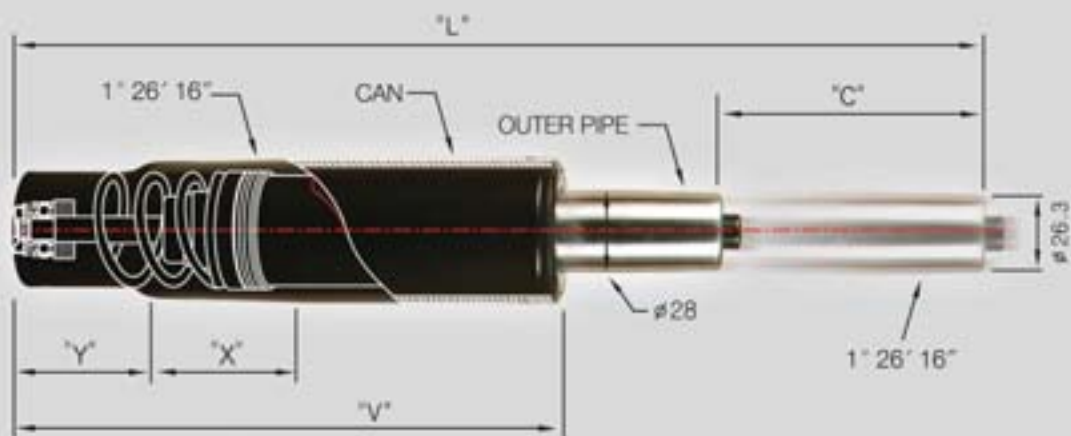
Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ Smooth rotation without noise
- ▶ Comfort and maximized efficiency of the chair
- ▶ No need of additional fixture for a joint as the single outer pipe with cylinder in solid steel material

AUTO RETURN HEIGHT ADJUSTABLE CYLINDER



SOFT CUSHION CYLINDER

Available Sizes (in mm)

MODEL NO.	L	C	V	X	Y
KGE3088-□□□□1	328	80	190	58	57
KGE3120-□□□□1	384	112	210	58	27

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 150N ~ 450N

Feature

- ▶ Soft cushion provided at lowest position
- ▶ Comfortable cushion provided all the time by using a special coil spring.
- ▶ Excellent appearance

Application

- ▶ Sensitive chair at shock impact
- ▶ Specially designed comfortable soft chair at any position

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

Advantages

- ▶ Soft and comfortable cushion provided all the time when seated by a specially designed coil spring



Available Sizes (in mm)

MODEL NO.	L	C	V	X	Y
KGH5114- □□□□2	356	106	205	58	36
KGH5124- □□□□1	393	116	225	58	36
KGH5143- □□□□1	420	135	232	58	30
KGH5150- □□□□1	437	142	240	58	57

- ▶ Dimensions and F1 changeable to comply with buyer's request
- ▶ F1 : 150N~500N

Feature

- ▶ Specially designed chair with intensified sealing system and steel pipe
- ▶ Two optional button operation forces available with 12Kgf and 4Kgf

Application

- ▶ Heavy duty chair for high intensive use for 24 hours a day, 7 days a week

Test Methods

- ▶ International test standards required
- ▶ Any customer's test requirements

- ▶ Heavy Duty Test standards(double-intensified tests required rather than those of ANSI/BIFMA test standards)

Advantages

- ▶ Superior strength for high impact by using a double-sealing system and thick steel pipe
- ▶ Specially designed chair for heavy duty or multi-shift

HEAVY DUTY CYLINDER

TEST CERTIFICATES

- ANSI/BIFMA X5.1-1993 ENTELA
- ANSI/BIFMA X5.1-2002 SGS
- UNI8586/84, UNI8591/84, UNI9084/86,
EN1335-3/2000- CLAUSE 7 CATAS
- DIN 4550 : 2004 CLASS IV TUV
- DIN 4550 : 2004 CLASS III TUV
- ISO 9001:2000/KS A9001:2007 KTL
- DIN 4550 : 2004-12, CLASS III LGA
- DIN 4550 : 2004-12, CLASS IV LGA
- BS 5459 PART 2 2000 SATRA



HEAD OFFICE

KOREA GAS SPRING CO., LTD.

Zip Code : 402-060

Address : 765-2 DOHWA-DONG, NAM-KU, INCHEON, KOREA

TEL : 82-32-868-8450 FAX : 82-32-868-8451

E-mail : jhcho@korgs.com; sknoh@korgs.com

[http:// www.korgs.com](http://www.korgs.com)

FACTORY

QINGDAO K.G.S. PRECISION INSTRUMENT CO., LTD.

Zip Code : 266-300

Address : BAOJIA TOWN, MADIAN, JIAOZHOU, SHANDONG, CHINA

TEL : 86-532-8322-8560 FAX : 86-532-8322-8568

GUANGZHOU OFFICE

06D 4F, 6TH STREET, HAIQINGJU, CLIFFORD ESTATES,

PANYU, GUANGZHOU, GUANGDONG, CHINA

TEL : 86-20-8451-4677 FAX : 86-20-8451-4022