



Standard cylinder—SGC Series

In accordance with ISO15552 standard

Compendium of SGC Series

ISO15552(Original ISO6431) Standard cylinder

Bore size:125, 160, 200, 250

Adjustable air buffer

With adjustable air buffer on the front and back cover

Multi-kinds of Seals Material

Tie rod cylinder

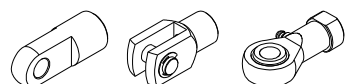
The cylinder barrel and front/rear cap is jointed by tie rods with high reliability.

Three kinds of cylinder joints

Convenient and fast fix sensor switch

Sensor switch can be directly fixed onto the cylinder, which is convenient and fast.

the counterpart sensor switch type is: CMSG、DMSG(S)



I Knuckle Y Knuckle Universal Joint

Multi-type cylinder

Multi-mounting accessories



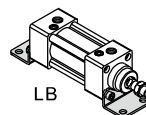
SGC: Double acting type



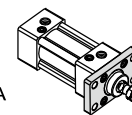
SGCD: Double rod type



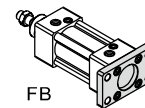
SGCJ: Adjustable stroke type



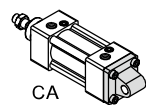
LB



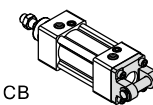
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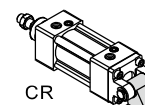
FB



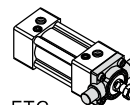
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CB



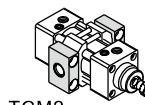
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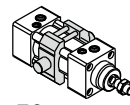
FTC



TCM1



TCM2



TC

Criteria for selection: Cylinder thrust

Unit: Newton(N)

Bore size	Rod size	Acting type	Pressure area(mm ²)	Operating pressure(MPa)									
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
125	32	Double acting Push side	12272	1227.2	2454.4	3681.6	4908.8	6136.0	7363.2	8590.4	9817.6	11044.8	
		Double acting Pull side	11468	1146.8	2293.6	3440.4	4587.2	5734.0	6880.8	8027.6	9174.4	10321.2	
160	40	Double acting Push side	20106	2010.6	4021.2	6031.8	8042.4	10053.0	12063.6	14074.2	16084.8	18095.4	
		Double acting Pull side	18849	1884.9	3769.8	5654.7	7539.6	9424.5	11309.4	13194.3	15079.2	16964.1	
200	40	Double acting Push side	31416	3141.6	6283.2	9424.8	12566.4	15708.0	18849.6	21991.2	25132.8	28274.4	
		Double acting Pull side	30157	3015.7	6031.4	9047.1	12062.8	15078.5	18094.2	21109.9	24125.6	27141.3	
250	50	Double acting Push side	49086	4908.6	9817.2	14725.8	19634.4	24543.0	29451.6	34360.2	39268.8	44177.4	
		Double acting Pull side	47123	4712.3	9424.6	14136.9	18949.5	23767.8	28470.1	33182.4	37894.7	42607.0	

Installation and application



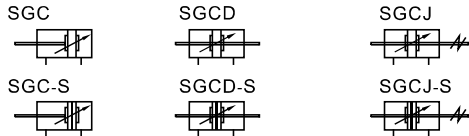
- When load changes in the work, the cylinder with abundant output capacity shall be selected.
- Relative cylinder with high temperature resistance or corrosion resistance shall be chosen under the condition of high temperature or corrosion.
- Necessary protection measure shall be taken in the environment with higher humidity, much dust or water drops, oil dust and welding dregs.
- Dirty substances in the pipe must be eliminated before cylinder is connected with pipeline to prevent the entrance of particles into the cylinder.
- The medium used by cylinder shall be filtered to 40μm or below.
- Anti-freezing measure shall be adopted under low temperature environment to prevent moisture freezing.
- The cylinder shall be carried out test run without load before application. Prior to run, buffer shall be turned to the minimum and gradually released to avoid the damage on cylinder caused by excessive impact.
- The cylinder shall avoid the influence of side load in operation to maintain the normal work of cylinder and extend the service life.
- If the cylinder is dismantled and stored for a long time, please conduct anti-rust treatment to the surface. Anti-dust caps shall be added in air inlet and outlet ports.



SGC Series



Symbol



Product feature

1. ISO15552 (original ISO6431) standard cylinder.
2. The piston seal is composed of two Y-shape seals of single-direction structure, which has compensation function, long service life and low start-up pressure.
3. SGC series cylinders are made of aluminum pipe.
4. The buffer adjustment of cylinder is smooth and steady.
5. Cylinders and accessories for installation with several specifications are optional.
6. The seal material with high temperature resistance is adopted to guarantee the normal operation of cylinder at 150°C.

Specification

Bore size(mm)	125	160	200	250
Acting type	Double acting			
Fluid	Air(to be filtered by 40µm filter element)			
Mounting type	Basic FA FB CA CB CR LB TC FTC TCM1 TCM2			
	Basic FA LB TC FTC TCM1 TCM2			
Operating pressure	0.15~1.0MPa(22~145psi)(1.5~10.0bar)			
Proof pressure	1.5MPa(215psi)(15bar)			
Temperature °C	-20~70			
Speed range mm/s	30~500			
Stroke tolerance	0~250 ^{+1.0} ₀ 251~1000 ^{+1.5} ₀ 1001~1500 ^{+2.0} ₀			
Cushion type	Variable cushion			
Adjustable cushion stroke	40	50		60
Port size [Note1]	1/2"		3/4"	

[Note1] G thread is available.

Add) Refer to P519 for detail of sensor switch.

Stroke

Bore size (mm)	Standard stroke (mm)										Max.std stroke	Max. stroke											
125	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	600	700	800	900	1000	1500	1800
160	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	600	700	800	900	1000	1500	2000
200	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	600	700	800	900	1000	1500	2000
250	25	50	75	80	100	125	150	160	175	200	250	300	350	400	450	500	600	700	800	900	1000	1500	2000

[Note] Consult us for non-standard stroke.

Ordering code

SGC 125 × 50 S G

SGCD 125 × 50 S G

SGCJ 125 × 50-20 S G

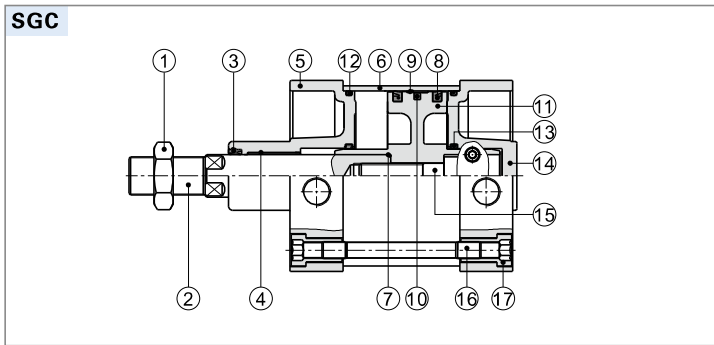
① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Model	② Bore size	③ Stroke	④ Adjustable stroke	⑤ Magnet	⑥ Mounting type[Note1]	⑦ Seals Material	⑧ Thread type
SGC: Double acting type (Aluminum barrel)	125 160 200 250	Refer to stroke table for details	No this code	Blank: Without magnet S: With magnet	Blank	Blank: TPU [Note2] H: Viton N: NBR	G: G
SGCD: Double rod type (Aluminum barrel)					LB		
SGCJ: Adjustable stroke type (Aluminum barrel)					FA		
			10 20 30 40 50 75 100		FB		
					CA		
					CB		
					CR		
					FTC		
					TC		
					Blank		
					LB		
					FA		
					FTC		
					TC		

[Note1] CR is used with CB. FTC, TC are used with TCM1, TCM2. [Note2] TPU seals are not available for SGC250.

SGC Series

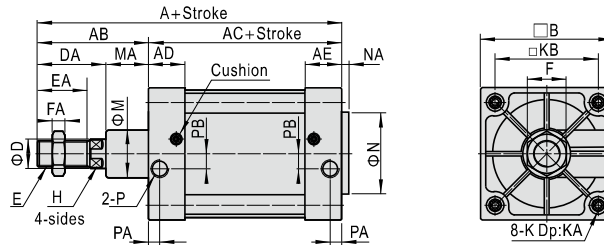
Inner structure and material of major parts



NO.	Item	Material
1	Rod nut	Carbon steel
2	Piston rod	Carbon steel with 20μm chrome plated
3	Front cover packing	NBR(SGC250)\TPU(Other)
4	Bushing	Wear resistant material
5	Front cover	Aluminum alloy
6	Aluminum pipe	Aluminum alloy
7	O-ring	NBR
8	Piston Seal	NBR
9	Wear ring	Wear resistant material
10	Magnet	Rubber
11	Piston	Aluminum alloy
12	O-ring	NBR
13	Buffer gasket	NBR(SGC250)\TPU(Other)
14	Back cover	Aluminum alloy
15	Screw	Carbon steel
16	Tie-rod	Carbon steel
17	Tie-rod nut	Carbon steel

Dimensions

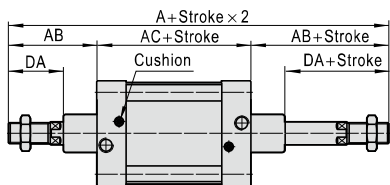
SGC



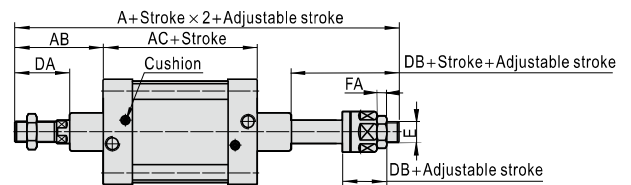
Bore size\Item	A	AB	AC	AD	AE	B	D	DA	E	EA	F	FA	H	K	KA	KB	M	MA	N	NA	P	PA	PB
125	279	119	160	46	46	140	32	74	M27×2.0	54	41	13.5	27	M12	20	110	60	45	60	4	1/2"	23	14
160	332	152	180	50	50	180	40	94	M36×2.0	72	55	18	36	M16	24	140	65	58	65	4	3/4"	25	15
200	347	167	180	50	50	220	40	100	M36×2.0	72	55	18	36	M16	24	175	75	67	75	5	3/4"	25	15
250	389	189	200	58	58	282	50	111	M42×2.0	84	65	21	46	M20	25	220	90	78	90	8	1"	31	22

Remark: The dimensions of magnet type cylinder are the same as non-magnet type cylinder.

SGCD



SGCJ



Bore size\Item	A		AB	AC	DA	DB	E	FA
	SGCD	SGCJ						
125	398	366.5	119	160	74	42.5	M27X2.0	13.5
160	484	458	152	180	94	68	M36X2.0	18
200	514	482	167	180	100	68	M36X2.0	18
250	578	547	189	200	111	80	M42X2.0	21

Remark:

1. The dimensions of magnet type cylinder are the same as non-magnet type cylinder.
2. The unmarked dimension is the same as SGC standard type.