

SC Series: High Rigidity FULL COVER

Ball Screw Actuator



● Remarkably improved dust prevention

Particle preventative performance is remarkably improved with the Full-Cover SC Series actuators. This full cover model prevents penetration of external contaminants, making this an ideal choice in applications such as medical equipment and electronics manufacturing.

● Slimmer body to meet space-saving needs

The SC series has exactly the same dimensions as the SE series models but fully covered. This allows for direct replacement of a SE series actuator with a full-cover type SC type in the same mounting space. (However, the mounting height is different.)

● Easy maintenance

To make lubrication more efficient, a central grease filler hole is provided on the side of the table as standard in the SC series. Grease to ball screws and guide parts can be supplied at once from the central grease filler hole. (The standard model is provided with a plug) Grease nipple is available as an option for the grease filler hole.

● High Rigidity

With steel U-guide rails similar to those of the SG/SE series, the SC series exhibits high rigidity despite of its compactness, allowing for use in structures supported by one end.

VARIATIONS

Model No.		SC23	SC30	SC45
Performance grade		H: Repeated positioning accuracy $\pm 3\mu\text{m}^*$		
		U: Repeated positioning accuracy $\pm 5\mu\text{m}^{**}$		
		W: Repeated positioning accuracy $\pm 10\mu\text{m}^{**}$		
Screw shaft dia. (mm)		8	10	15
Lead (mm)	2	◎	●	
	4	●	◎	
	5	◎	◎	◎
	6		◎	
	8	●		
	10		◎	◎
	20		◎	◎

◎ Stocking item

● Manufactured to order

(*) There is no Performance Grade H in SC30 leads 6mm and 20mm

(**) Performance may be different from the values shown above, depending on applied options and usage

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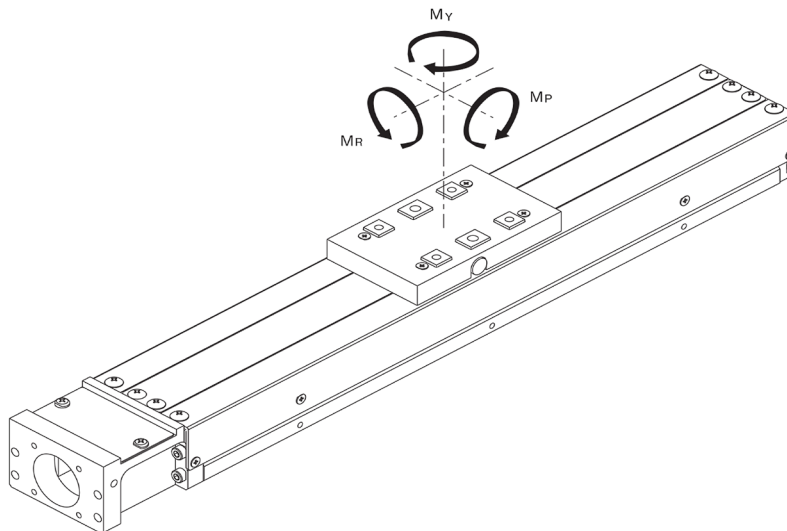
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SPECIFICATIONS

Model No.			SC2302	SC2305	SC3004	SC3005	SC3006	SC3010	SC3020	SC4505	SC4510	SC4520		
Performance grade			W	U	H	W	U	H	W	U	H	W	U	H
Guide	Long block	Radial clearance	μm	-3~0			-3~0			-5~0				
		Basic dynamic load	C	kN	4.30			7.0			27.0			
		Basic static load	C ₀	kN	7.00			11.8			45.0			
		Static permissible moment	M _P	N·m	46			101			572			
			M _{2P}		276			606			3,432			
			M _Y		51			120			681			
			M _{2Y}		306			720			4,086			
			M _R		134			260			1,410			
M _{2R}	268			520			2,820							
Ball screw	Shaft diameter	mm	8			10			15					
	Lead	mm	2	5	4	5	6	10	20	5	10	20		
	Basic dynamic load	C _a	kN	1.80	1.90	3.00	3.00	3.00	2.00	2.20	5.10	5.10	3.10	
	Basic static load	C _{0a}	kN	3.20	3.10	5.30	5.30	5.30	3.20	3.50	10.50	10.50	6.60	
	Model No. of bearing	AC6-16DF or equivalent			708ADFP5 or equivalent			5201A or equivalent						
Fixed side bearing	Basic dynamic load	C _b	kN	1.79			4.40			5.90				
	Basic static load	C _{0b}	kN	1.76			4.36			3.20				

*There is no Performance Grade H in model SE30, leads 6mm and 20mm.
 Static permissible moment shows rigidity value based on dimensions and material of table.

DIRECTION OF MOMENT



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ACCURACY

Model No.	Guide Rail Length (mm)	*Repeated Positioning Accuracy (μm)			Positioning Accuracy (μm)			Traveling Parallelism (μm)			Backlash (μm)			**Starting Torque (N·m)		
		W	U	H	W	U	H	W	U	H	W	U	H	W	U	H
SC23	150	±10	±5	±3	70	60	15	15	20	5	5	0.03	0.06	0.06		
	200				75											
	250				85											
	300				90											
SC30	150	±10	±5	±3 (±5)	70	60	15	15	20	5	5	0.07	0.15	0.15		
	200				80											
	300				90											
	400				95											
	500			100	100	25	20	5	5	0.07	0.15					
	600			110												
	700			120	-	-	25	5	5	0.07	0.15					
	750			130												
SC45	540	±10	±5	±3 (±5)	110	100	40	40	20	5	5	0.1	0.2	0.2		
	640				120											
	740				130	150	50	50	0.1	0.2	0.2					
	840				150											
	940				170											

*For repeated positioning accuracy, the value in parentheses is for parallel motor mounted configurations

** Above starting torque value is applied when the standard grease is used. The value may change depending on the properties of the grease. Measurement is to be performed with KURODA's specified motor mounted.

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HOW TO INTERPRET MODEL NO.

SG33	05	A	-	150	P	-	A1	N	N	-	N	N	-	PS
①	②	③		④	⑤		⑥	⑦	⑧		⑨	⑩		⑪

① Model ② Lead

① Model	② Lead
SG20	1, 5
SG26	2, 5
SG33	5, 10, 20
SG46	10, 20
SG55	20

③ Slide block

Model	Slide block
SG20	A: With 1 long block B: With 2 long blocks
SG26	A: With 1 long block B: With 2 long blocks
(NOTE 1) SG33	A: With 1 long block B: With 2 long blocks
SG46	C: With 1 short block D: With 2 short blocks
SG55	A: With 1 long block B: With 2 long blocks

④ Guide rail length (NOTE 2) (NOTE 3)

Model	Guide rail length (mm)
SG20	100, 150, 200
SG26	150, 200, 250, 300
SG33	150, 200, 300, 400, 500, 600*
SG46	340, 440, 540, 640, 740, 840*, 940*, 1040*, 1140*, 1240*
SG55	980, 1080, 1180, 1280*, 1380*

(Note 1) Short slide block type (Symbol: C, D) is not available in lead 20mm.

(Note 2) For specifications of guide rail with long rails or intermediate stroke with non-standard length, consult KURODA.

(Note 3) Asterisk (*) items in the table apply only to performance grade H.

(Note 4) With standard surface treatment (Symbol: N), guide rails of SG20 and SG26 are not treated with anti corrosive coating.

For SG33, SG46 and SG55, only guide rails are treated with black coating as the standard surface treatment.

(Note 5) With standard grease (Symbol: N), Multemp PS No.2 Grease (KYODO YUSHI CO., LTD.) is contained in slide block and ball screw components.

⑤ Performance grade

P	Repeated positioning accuracy $\pm 1\mu\text{m}$
H	Repeated positioning accuracy $\pm 3\mu\text{m}$

⑥ Motor bracket configuration

Model	Motor bracket configuration
SG20	A0, A1, A3, A5, A6, A8, A9, AA, R0
SG26	A0, A1, A3, A5, A6, A8, A9, AA, R0
SG33	A0, A1, A2, A3, A4, A5, A6, A7, B1, B2, R0, E□, F□
SG46	A0, A1, A2, A3, A4, B0, C0, D0, R0, E□, F□, G□
SG55	A0, A1, A2, A3, A4, R0

⑦ Type of cover

N	Without cover
C	With cover
L	Low housing

⑧ Sensor

Model	Sensor
SG20	N: Without sensor S: Photo-microsensor
SG26	K, E: Proximity sensor 1: For sensor rails only
SG33	Without sensor
SG46	M, Y, C, P, H, J: Photo-microsensor K, E: Proximity sensor
SG55	1, 2, 3: For sensor rails only

⑨ Surface treatment (NOTE 4)

N	Standard treatment
L	Anti corrosive black coating

⑩ Grease (NOTE 5)

Model	Grease
SG20	N: Standard grease S: Dust preventive KURODA S grease
SG26	
SG33	
SG46	
SG55	

⑪ Additional options

Blank	No dowel pin hole
PS	For slide block only
PR	For guide rail only
PSR	For both slide block and guide rail