

LGXS07 Advanced model



Motor-less Single Axis Actuator

Ordering method

LGXS07 - [] - []

Model	Lead designation	Stroke
	30_30 mm	50 to 1100
	20_20 mm	(50 mm pitch)
	10_10 mm	
	5_5 mm	

[Caution]

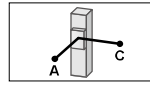
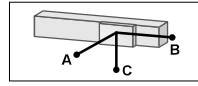
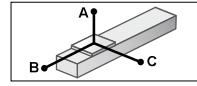
This system is provided as mechanical actuator unit and not including any adapters or electric components. Motor, driver and other components required for installation are user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. Vibration or resonance from actuator will affect service life of actuator. The product performance may not be satisfied depending on the compatible motor.

Specifications

Adaptable motor	100 W
Repeatability ^{Note 1}	+/-0.005 mm
Deceleration mechanism	Ground ball screw ϕ 15 (C5 class)
Stroke	50 mm to 1100 mm (50 mm pitch)
Maximum speed ^{Note 2} (or equivalent)	1800 mm/sec 1200 mm/sec 600 mm/sec 300 mm/sec
Ball screw lead	30 mm 20 mm 10 mm 5 mm
Maximum payload ^{Note 3} (or equivalent)	Horizontal: 10 kg 25 kg 45 kg 85 kg Vertical: 2 kg 4 kg 8 kg 16 kg
Rated thrust ^{Note 3} (or equivalent)	56 N 84 N 169 N 339 N
Maximum dimensions of cross section of main unit	W 70 mm x H 76.5 mm
Overall length	ST + 202 mm
Degree of cleanliness ^{Note 4}	ISO CLASS 3 (ISO14644-1) or equivalent
Intake air ^{Note 5}	30 N ℓ /min to 115 N ℓ /min
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (non-condensing)

- Note 1. Positioning repeatability in one direction.
 Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.
 Note 3. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
 Note 4. When using in a clean environment, attach a suction air joint. The degree of cleanliness is the cleanliness level achieved when using at 1000 mm/sec or less.
 Note 5. The required suction amount will vary according to the operating conditions and operating environment.
 Note. See P24 for acceleration/deceleration and inertia moment.

Allowable overhang ^{Note}



LGXS07-30

	Horizontal installation (Unit: mm)		
	A	B	C
2kg	3084	1512	1223
6kg	1191	502	418
10kg	957	318	282

	Wall installation (Unit: mm)		
	A	B	C
2kg	1240	1445	2981
6kg	393	435	1063
10kg	245	251	794

	Vertical installation (Unit: mm)	
	A	C
1kg	2340	2340
2kg	1160	1160

LGXS07-20

	Horizontal installation (Unit: mm)		
	A	B	C
10kg	1331	371	358
20kg	1144	187	189
25kg	1829	169	182

	Wall installation (Unit: mm)		
	A	B	C
10kg	314	305	1168
20kg	132	120	812
25kg	117	103	1249

	Vertical installation (Unit: mm)	
	A	C
1kg	3425	3425
2kg	1705	1705
4kg	843	843

LGXS07-10

	Horizontal installation (Unit: mm)		
	A	B	C
15kg	2431	339	373
30kg	1536	160	177
45kg	1188	101	112

	Wall installation (Unit: mm)		
	A	B	C
15kg	307	273	2203
30kg	107	94	1161
45kg	39	35	629

	Vertical installation (Unit: mm)	
	A	C
3kg	1693	1693
6kg	830	830
8kg	614	614

LGXS07-5

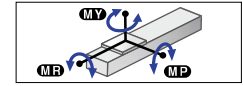
	Horizontal installation (Unit: mm)		
	A	B	C
30kg	2918	172	197
50kg	2543	96	110
85kg	2031	49	56

	Wall installation (Unit: mm)		
	A	B	C
30kg	122	106	2461
50kg	34	30	1480
85kg	0	0	0

	Vertical installation (Unit: mm)	
	A	C
6kg	907	907
9kg	591	591
16kg	315	315

Note. Distance from center of slider top to center of gravity of object being carried at a guide service life of 10,000 km.
 Note. Service life is calculated for 600 mm stroke models.

Static loading moment



(Unit: N·m)		
MY	MP	MR
138	121	121

Adaptable Servo Motor

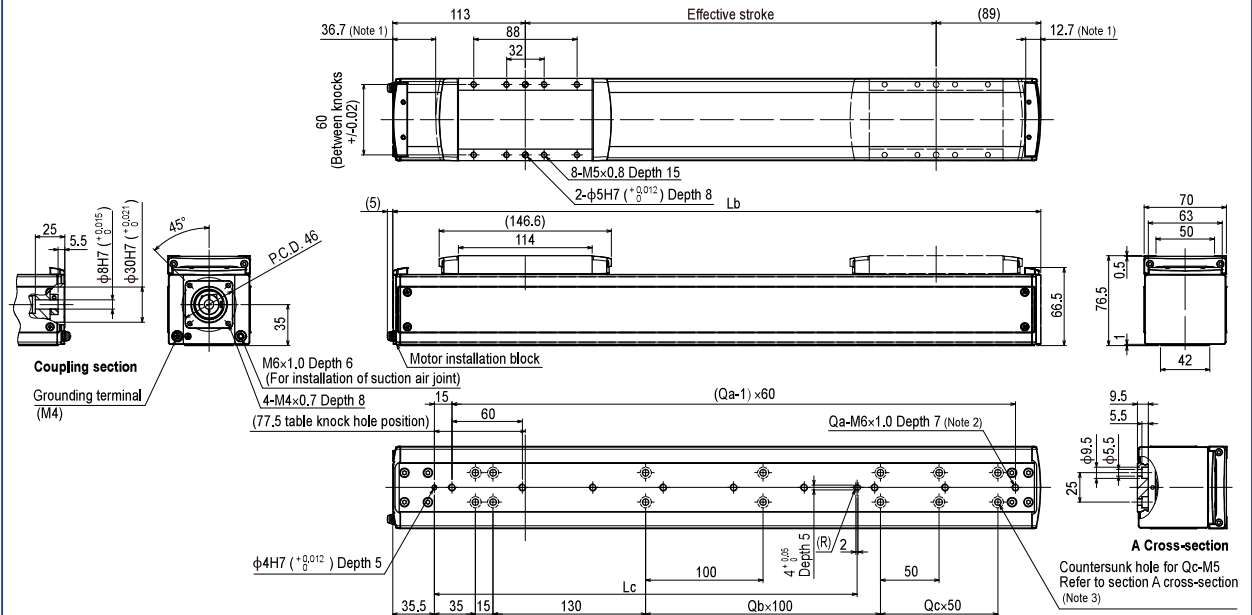
Specification	Flange size	Wattage
	<input type="checkbox"/> 40	100 W

Manufacturer	Model
Yasukawa Electric Corp.	SGMJV-01 SGM7J-01
Keyence Corp.	SV- <input type="checkbox"/> 010
Mitsubishi Electric Corp.	HF-KP13 ^{Note} HG-KR13

Note. To combine with the conversion adapter <GX-BEND-40>, the shim plate (t1) is necessary.

Conversion adapter product model	Shim plate part number
GX-BEND-40	KES-M2295-00

LGXS07



Effective stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	
Lb	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952	1002	1052	1102	1152	1202	1252	1302	
Lc	160	160	160	160	360	360	360	360	360	360	360	360	360	760	760	760	760	760	760	760	760	760	
Qa	4	5	5	6	7	8	9	10	10	11	12	13	14	15	15	16	17	18	19	20	20	21	
Qb	0	0	0	0	2	2	2	2	2	2	2	2	2	6	6	6	6	6	6	6	6	6	
Qc	0	1	2	3	0	1	2	3	4	5	6	7	0	1	2	3	4	5	6	7	8	9	
Qd	6	8	10	12	10	12	14	16	18	20	22	24	18	20	22	24	26	28	30	32	34	36	
Weight (kg)	3.2	3.4	3.7	4.0	4.3	4.5	4.8	5.1	5.3	5.6	5.9	6.2	6.4	6.7	7.0	7.2	7.5	7.8	8.1	8.3	8.6	8.9	
Maximum speed (mm/sec)	Lead 30	1800																					
	Lead 20	1200																					
	Lead 10	600																					
	Lead 5	300																					
Speed setting		-																					
		85%																					
		75%																					

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
 Note 2. When using the tap holes to mount the body, remove the set screws first.
 Note 3. When using the countersunk holes (section A cross section) to mount the body, remove the cap from the inner side and then fix.

Features

Basic model LBAS

LBAS Acceleration/Deceleration Inertia Moment

Advanced model LGXS

LGXS Acceleration/Deceleration Inertia Moment

Option

Acceleration/Deceleration

LGXS07

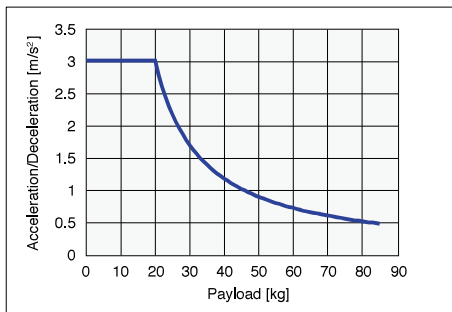
Model	LGXS07 -5 Horizontal/ Wall hanging	LGXS07 -5 Vertical	LGXS07 -10 Horizontal/ Wall hanging	LGXS07 -10 Vertical	LGXS07 -20 Horizontal/ Wall hanging	LGXS07 -20 Vertical	LGXS07 -30 Horizontal/ Wall hanging	LGXS07 -30 Vertical
Payload [kg]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]
0	3.04	2.53	6.08	5.57	7.09	6.08	6.99	6.99
1	3.04	2.47	5.68	5.29	6.74	5.57	6.64	6.64
2	3.04	2.42	5.33	5.02	6.4	5.15	6.31	6.31
3	3.04	2.37	5.02	4.75	6.07	4.78	5.98	
4	3.04	2.32	4.75	4.5	5.75	4.47	5.67	
5	3.04	2.27	4.5	4.24	5.44		5.36	
6	3.04	2.22	4.28	3.99	5.14		5.06	
7	3.04	2.17	4.08	3.75	4.85		4.78	
8	3.04	2.12	3.89	3.52	4.57		4.5	
9	3.04	2.07	3.73		4.3		4.24	
10	3.04	2.02	3.57		4.04		3.98	
11	3.04	1.97	3.43		3.79			
12	3.04	1.92	3.3		3.55			
13	3.04	1.87	3.18		3.32			
14	3.04	1.82	3.07		3.09			
15	3.04	1.77	2.96		2.88			
16	3.04	1.72	2.86		2.68			
17	3.04		2.77		2.49			
18	3.04		2.69		2.31			
19	3.04		2.6		2.14			
20	3.04		2.53		1.98			
21	2.82		2.46		1.83			
22	2.64		2.39		1.69			
23	2.48		2.32		1.56			
24	2.33		2.26		1.44			
25	2.21		2.21		1.32			
26	2.09		2.15					
27	1.99		2.1					
28	1.9		2.05					
29	1.81		2					
30	1.73		1.96					
31	1.66		1.91					
32	1.6		1.87					
33	1.53		1.83					
34	1.48		1.79					
35	1.43		1.76					
36	1.38		1.72					
37	1.33		1.69					
38	1.29		1.66					
39	1.25		1.63					
40	1.21		1.6					
41	1.18		1.57					
42	1.14		1.54					
43	1.11		1.51					
44	1.08		1.49					
45	1.05		1.46					

Model	LGXS07 -5 Horizontal/ Wall hanging	LGXS07 -5 Vertical	LGXS07 -10 Horizontal/ Wall hanging	LGXS07 -10 Vertical	LGXS07 -20 Horizontal/ Wall hanging	LGXS07 -20 Vertical	LGXS07 -30 Horizontal/ Wall hanging	LGXS07 -30 Vertical
Payload [kg]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]	Acceleration/Deceleration [m/s ²]
46	1.03							
47	1							
48	0.98							
49	0.95							
50	0.93							
51	0.91							
52	0.89							
53	0.87							
54	0.85							
55	0.83							
56	0.82							
57	0.8							
58	0.78							
59	0.77							
60	0.76							
61	0.74							
62	0.73							
63	0.71							
64	0.7							
65	0.69							
66	0.68							
67	0.67							
68	0.66							
69	0.65							
70	0.64							
71	0.63							
72	0.62							
73	0.61							
74	0.6							
75	0.59							
76	0.58							
77	0.57							
78	0.56							
79	0.56							
80	0.55							
81	0.54							
82	0.53							
83	0.53							
84	0.52							
85	0.51							

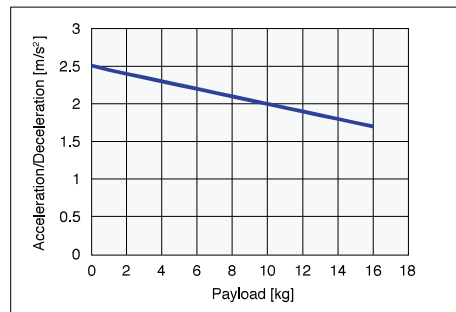
Payload – Acceleration/Deceleration Graph (Estimate)

LGXS07-5

Horizontal/
Wall hanging

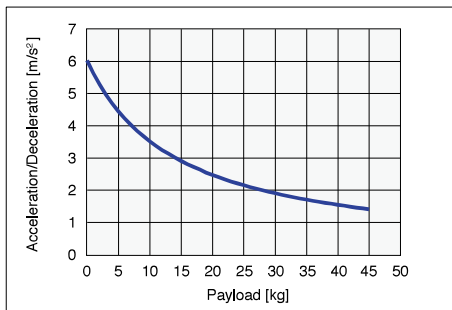


Vertical

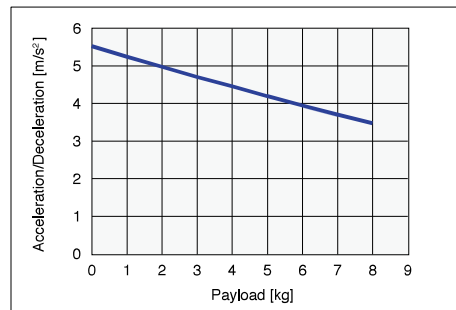


LGXS07-10

Horizontal/
Wall hanging



Vertical



Features

Basic model
LBAS

LBAS
Acceleration/Deceleration
Inertia Moment

Advanced model
LGXS

LGXS
Acceleration/Deceleration
Inertia Moment

Option

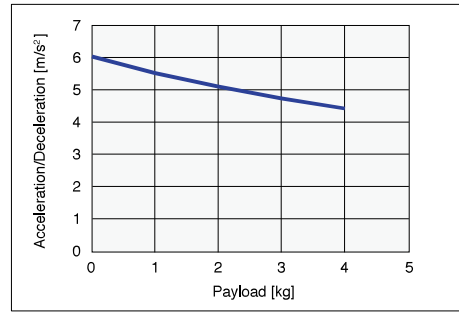
■ Payload – Acceleration/Deceleration Graph (Estimate)

LGXS07-20

Horizontal/
Wall hanging



Vertical

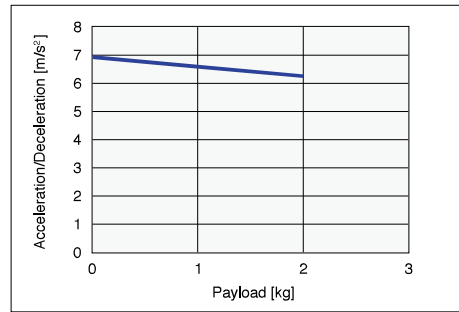


LGXS07-30

Horizontal/
Wall hanging



Vertical



■ Inertia Moment

LGXS07

[kg·m ² ·10 ⁻⁴]	Effective stroke [mm]																					
	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
LGXS07-5	0.623	0.643	0.662	0.682	0.701	0.721	0.740	0.760	0.779	0.799	0.818	0.838	0.857	0.877	0.896	0.916	0.935	0.955	0.974	0.994	1.013	1.033
LGXS07-10	0.644	0.663	0.683	0.702	0.722	0.741	0.761	0.780	0.800	0.819	0.839	0.858	0.878	0.897	0.917	0.936	0.956	0.975	0.995	1.014	1.034	1.053
LGXS07-20	0.728	0.747	0.767	0.787	0.806	0.826	0.845	0.865	0.884	0.904	0.923	0.943	0.962	0.982	1.001	1.021	1.040	1.060	1.079	1.099	1.118	1.138
LGXS07-30	0.885	0.905	0.924	0.944	0.963	0.983	1.002	1.022	1.041	1.061	1.080	1.100	1.119	1.139	1.158	1.178	1.197	1.217	1.236	1.256	1.275	1.295

Features

Basic model LBAS

LBAS Acceleration/Deceleration Inertia Moment

Advanced model LGXS

LGXS Acceleration/Deceleration Inertia Moment

Option