

LGXS07

Advanced model

Motor-less Single Axis Actuator

Slider type



Ordering method

LGXS07

Model	Lead	Side cover	Stroke
	30: 30 mm 20: 20 mm 10: 10 mm 5: 5 mm	No entry: Standard W: With T-groove (both sides) R: With T-groove (right side) L: With T-groove (left side)	50 to 1100 (50 mm pitch)

[Caution]

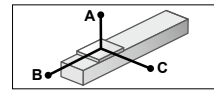
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment.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

Specifications

Applicable 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)	Horizontal	56 N 84 N 169 N 339 N
	Vertical	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)	

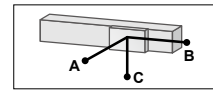
- Note 1. Positioning repeatability in one direction.
 Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.
 If the effective stroke exceeds 700 mm, the ball screw may resonate. (Critical speed)
 At this time, make the adjustment to decrease the speed while referring to the maximum speed shown in the table.
 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 P.119 for acceleration/deceleration and inertia moment.

Allowable overhang ^{Note}



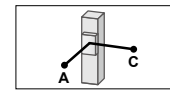
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Horizontal installation (Unit: mm)	A B C		
	A	B	C
2kg	3078	1509	1221
6kg	1191	501	418
10kg	957	317	282



Wall installation (Unit: mm)

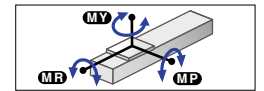
A B C	A B C		
	A	B	C
2kg	1237	1442	2975
6kg	393	435	1062
10kg	244	251	793



Vertical installation (Unit: mm)

A C	A C	
	A	C
1kg	2335	2335
2kg	1158	1158

Static loading moment



(Unit: N·m)

MY	MP	MR
138	121	121

Adaptable Servo Motor

Specification	Flange size <input type="checkbox"/> 40
	Wattage 100 W
Manufacturer	Model
Yaskawa Electric Corp.	SGMJV-01 SGM7J-01
Keyence Corp.	SV- <input type="checkbox"/> 010 SV2- <input type="checkbox"/> 010
Mitsubishi Electric Corp.	HF-KP13 ^{Note} HG-KR13 ^{Note} HK-KT13 ^{Note}
Omron Electronics	R88M-K10030 R88M-1M10030 ^{Note}
Panasonic Corp.	MHMF01
Conversion adapter product model	Shim plate part number
GX-BEND-40	KES-M2295-00

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

When used with high acceleration or deceleration (High agility mode)

Specifications

Stroke	50 mm to 650 mm (50 mm pitch)			
Ball screw lead	30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	5 kg	10 kg	20 kg
	Vertical	1 kg	2 kg	4 kg
Maximum acceleration	Horizontal	14.72 m/s ² (1.5 G)	14.72 m/s ² (1.5 G)	9.64 m/s ² (1 G)
	Vertical	14.72 m/s ² (1.5 G)	14.72 m/s ² (1.5 G)	8.44 m/s ² (0.9 G)

Allowable overhang ^{Note}

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Horizontal installation (Unit: mm)	A B C		
	A	B	C
2kg	1020	897	608
5kg	461	346	245

Wall installation (Unit: mm)

A B C	A B C		
	A	B	C
2kg	579	830	976
5kg	208	279	401

Vertical installation (Unit: mm)

A C	A C	
	A	C
1kg	1165	1165

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Vertical installation (Unit: mm)	A C	
	A	C
3kg	1093	1093
5kg	639	639
8kg	384	384

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Horizontal installation (Unit: mm)	A B C		
	A	B	C
3kg	1224	758	640
6kg	684	369	321
10kg	459	214	190

Wall installation (Unit: mm)

A B C	A B C		
	A	B	C
3kg	600	692	1175
6kg	274	303	621
10kg	138	147	376

Vertical installation (Unit: mm)

A C	A C	
	A	C
1kg	1793	1793
2kg	891	891

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Horizontal installation (Unit: mm)	A B C		
	A	B	C
5kg	2208	622	665
12kg	991	249	266
20kg	637	142	152

Wall installation (Unit: mm)

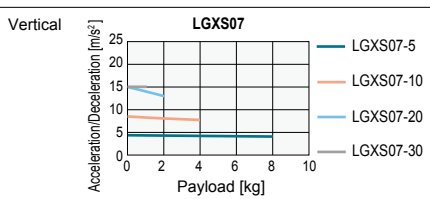
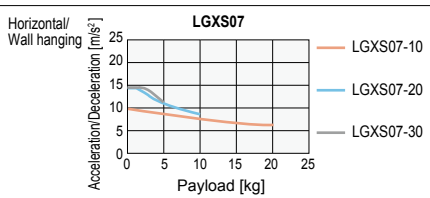
A B C	A B C		
	A	B	C
5kg	603	556	2129
12kg	200	182	890
20kg	83	75	497

Vertical installation (Unit: mm)

A C	A C	
	A	C
1kg	3012	3012
2kg	1487	1487
4kg	725	725

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.

Payload - Acceleration / Deceleration Graph (Estimate)



Effective stroke and maximum speed during high acceleration or deceleration

Effective stroke	50 100 150 200 250 300 350 400 450 500 550 600 650											
	Lead 30	1800										
Maximum speed (mm/sec)	Lead 20	1200										
	Lead 10	600										
	Lead 5	300										

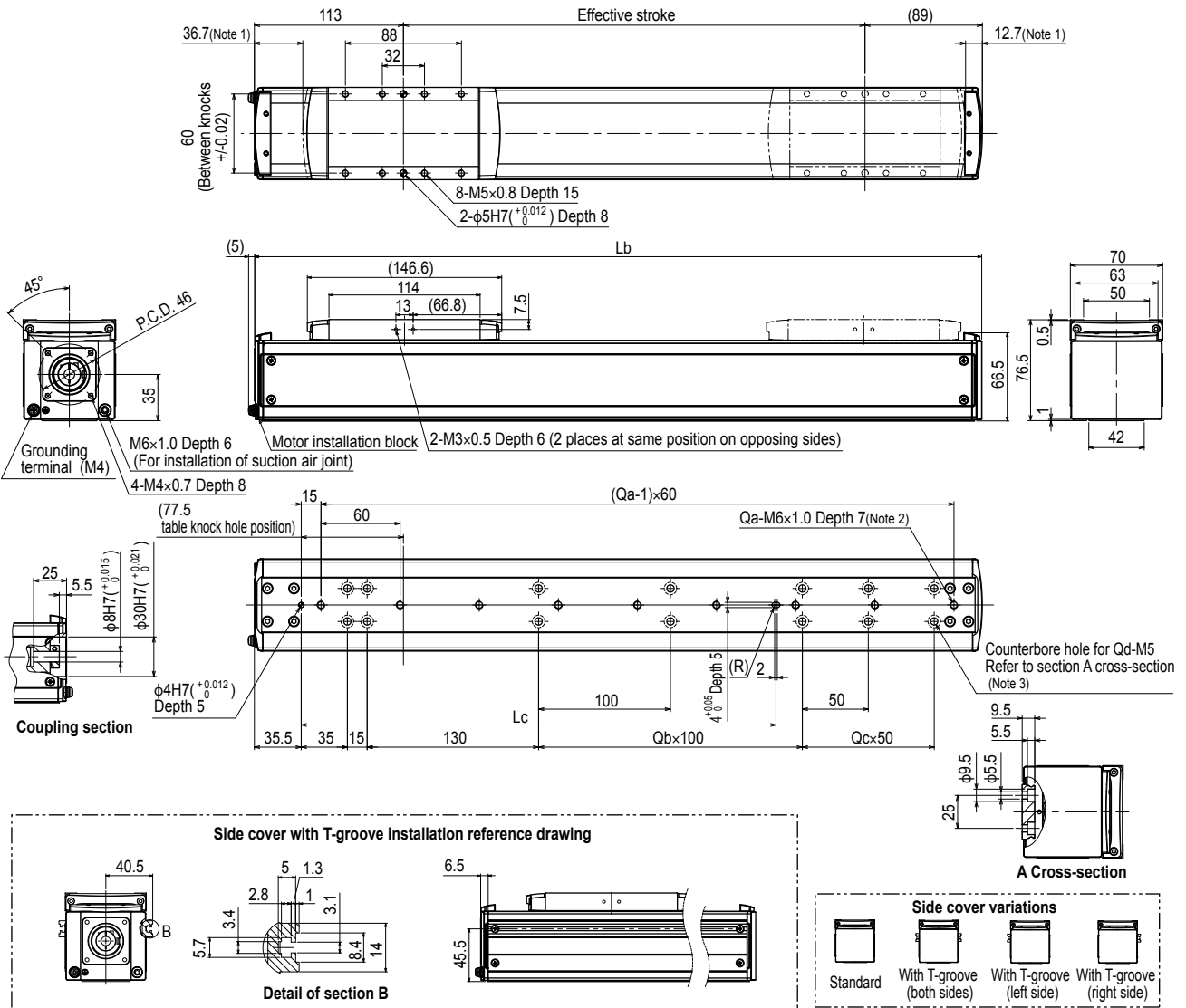
Note. The bending unit cannot be used for the high agility mode.
 Note. The high agility mode is used in an effective stroke range of 50 to 650 (50 mm pitch).
 Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
 The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
 Note. See P.121 for acceleration/deceleration and inertia moment.

Access the website below.



▶ The cycle time simulation and service life calculation can be performed easily from our member site. For details, see P.16.

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- 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 counterbore holes (section A cross section) to mount the body, remove the cap from the inner side and then fix.
- Note 4. Side cover with T-groove is used to install the sensor.
- Note 5. Grease gun nozzle (recommended) (see P.143 for detail)

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	760	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	6	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														1530	1350	1170	990	900	810	720	630				
	Lead 20														1020	900	780	660	600	540	480	420				
	Lead 10														510	450	390	330	300	270	240	210				
	Lead 5														255	225	195	165	150	135	120	105				
Speed setting														85%	75%	65%	55%	50%	45%	40%	35%					

Features

Basic model

Advanced model

Basic model

Advanced model

Basic model

Advanced model

Basic model

Advanced model

Basic model

Advanced model

Acceleration/Deceleration

Inertia Moment

Option

Single axis force positioner

EP-01