

LGXS05L

Advanced model

Motor-less Single Axis Actuator

Slider type



Ordering method

LGXS05L

Model	Lead	Side cover	Stroke
	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 800 (50 mm pitch)

[Caution]

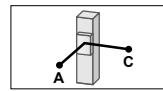
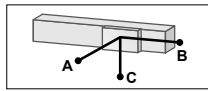
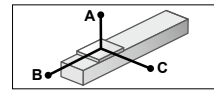
This system is provided as mechanical actuator unit and not including any adapters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. 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 12 (C5 class)	
Stroke	50 mm to 800 mm (50 mm pitch)	
Maximum speed ^{Note 2} (or equivalent)	1333 mm/sec 666 mm/sec 333 mm/sec	
Ball screw lead	20 mm 10 mm 5 mm	
Maximum payload ^{Note 3} (or equivalent)	Horizontal	12 kg 24 kg 32 kg
	Vertical	3 kg 6 kg 12 kg
Rated thrust ^{Note 3} (or equivalent)	Horizontal	84 N 169 N 339 N
	Vertical	3 kg 6 kg 12 kg
Maximum dimensions of cross section of main unit	W 48 mm x H 65 mm	
Overall length	ST + 161.5 mm	
Degree of cleanliness ^{Note 4}	ISO CLASS 3 (ISO14644-1) or equivalent	
Intake air ^{Note 5}	30 N ℓ /min to 100 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 600 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.117 for acceleration/deceleration and inertia moment.

Allowable overhang ^{Note}



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Horizontal installation (Unit: mm)	A B C		
3kg	1755	559	426
8kg	737	200	153
12kg	608	133	104

Wall installation (Unit: mm)	A B C		
3kg	396	486	1594
8kg	106	128	525
12kg	52	61	329

Vertical installation (Unit: mm)	A C	
1kg	1486	1486
2kg	730	730
3kg	478	478

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Horizontal installation (Unit: mm)	A B C		
6kg	2416	389	333
12kg	1397	187	161
24kg	875	87	74

Wall installation (Unit: mm)	A B C		
6kg	277	316	2192
12kg	101	115	1084
24kg	12	14	276

Vertical installation (Unit: mm)	A C	
4kg	555	555
6kg	360	360

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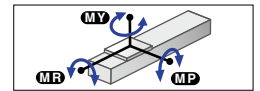
Horizontal installation (Unit: mm)	A B C		
10kg	3127	254	225
20kg	1841	120	106
32kg	1554	70	62

Wall installation (Unit: mm)	A B C		
10kg	162	181	2800
20kg	42	47	1273
32kg	0	0	0

Vertical installation (Unit: mm)	A C	
5kg	501	501
10kg	235	235
12kg	190	190

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
72	72	64

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 550 mm (50 mm pitch)		
Ball screw lead	20 mm	10 mm	5 mm
Maximum payload	Horizontal	5 kg	10 kg
	Vertical	1 kg	2 kg
Maximum acceleration	Horizontal	14.72 m/s ² (1.5 G)	14.72 m/s ² (1.5 G)
	Vertical	14.72 m/s ² (1.5 G)	12.68 m/s ² (1.3 G)
Maximum acceleration	Horizontal	6.65 m/s ² (0.7 G)	6.65 m/s ² (0.7 G)
	Vertical	14.72 m/s ² (1.5 G)	6.65 m/s ² (0.7 G)

Allowable overhang ^{Note}

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Horizontal installation (Unit: mm)	A B C		
2kg	675	501	332
5kg	330	191	131

Wall installation (Unit: mm)	A B C		
2kg	294	428	626
5kg	87	118	251

Vertical installation (Unit: mm)	A C	
1kg	728	728

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Horizontal installation (Unit: mm)	A B C		
3kg	1208	469	385
6kg	665	227	188
10kg	441	130	108

Wall installation (Unit: mm)	A B C		
3kg	331	396	1144
6kg	131	155	580
10kg	49	58	315

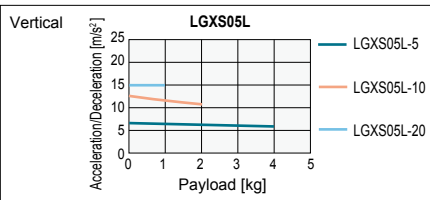
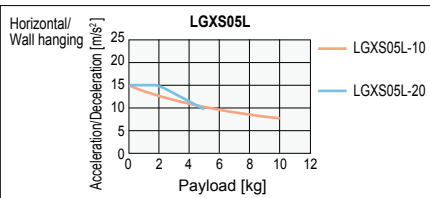
Vertical installation (Unit: mm)	A C	
1kg	1298	1298
2kg	636	636

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Vertical installation (Unit: mm)	A C	
1kg	1555	1555
2kg	762	762
4kg	365	365

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 550 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
Maximum speed (mm/sec)	Lead 20	1333									
	Lead 10	666									
	Lead 5	333									

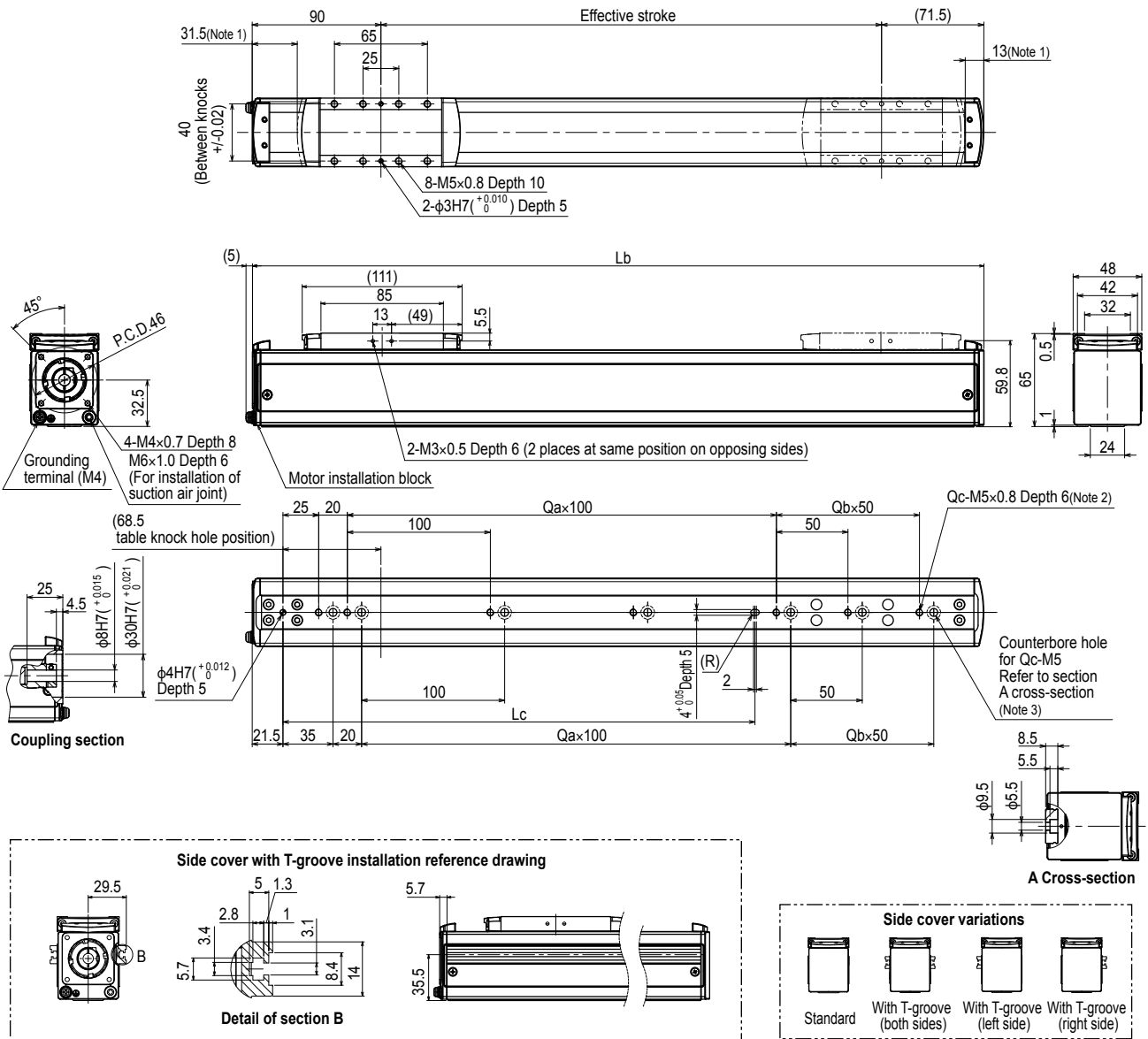
Note. The bending unit cannot be used for the high agility mode.
 Note. The high agility mode is used in an effective stroke range of 50 to 550 (50 mm pitch).
 Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
 The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
 Note. See P.118 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. The length under head of the hex socket head bolts (M5 x 0.8) used must be 15 mm or less.
- 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	
Lb	211.5	261.5	311.5	361.5	411.5	461.5	511.5	561.5	611.5	661.5	711.5	761.5	811.5	861.5	911.5	961.5	
Lc	130	130	130	130	330	330	330	330	330	330	630	630	630	630	630	630	
Qa	1	1	1	1	3	3	3	3	3	3	6	6	6	6	6	6	
Qb	0	1	2	3	0	1	2	3	4	5	0	1	2	3	4	5	
Qc	3	4	5	6	5	6	7	8	9	10	8	9	10	11	12	13	
Weight (kg)	1.4	1.5	1.7	1.8	2.0	2.2	2.3	2.5	2.6	2.8	2.9	3.1	3.2	3.4	3.5	3.7	
Maximum speed (mm/sec)	Lead 20												1333	1066	933	800	666
	Lead 10												666	532	466	400	333
	Lead 5												333	266	233	200	166
	Speed setting												-	80%	70%	60%	50%

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