

LGXS05

Advanced model

Motor-less Single Axis Actuator

Slider type



Ordering method

LGXS05

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]

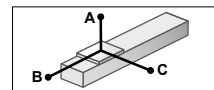
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. 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	50 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 (or equivalent)	1333 mm/sec	666 mm/sec	333 mm/sec
	20 mm	10 mm	5 mm
	5 mm		
Ball screw lead	20 mm	10 mm	5 mm
	5 mm		
Maximum payload (or equivalent)	Horizontal	5 kg	8 kg
	Vertical	2 kg	4 kg
Rated thrust (or equivalent)	41 N	69 N	138 N
Maximum dimensions of cross section of main unit	W 48 mm x H 65 mm		
Overall length	ST + 131.5 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)		

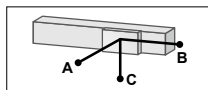
- Note 1. Positioning repeatability in one direction.
 Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed. If the effective stroke exceeds 600 mm, the ball screw may resonate. (Critical speed)
 At this time, make the adjustment to decrease 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.115 for acceleration/deceleration and inertia moment.

Allowable overhang ^{Note}



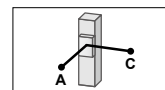
LGXS05-20

Horizontal installation (Unit: mm)	A			B			C		
2kg	898	269	350						
5kg	583	112	159						



LGXS05-10

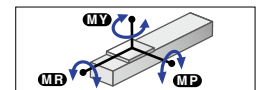
Horizontal installation (Unit: mm)	A			B			C		
2kg	2505	382	625						
5kg	1366	149	246						
8kg	1036	90	150						



LGXS05-5

Horizontal installation (Unit: mm)	A			B			C		
2kg	4604	281	497						
8kg	2197	101	179						
13kg	1593	59	105						

Static loading moment



(Unit: N·m)		
MY	MP	MR
24	27	23

Adaptable Servo Motor

Specification	Flange size	<input type="checkbox"/> 40
	Wattage	50 W

Manufacturer	Model
Yaskawa Electric Corp.	SGMJV-A5 SGM7J-A5
Keyence Corp.	SV- <input type="checkbox"/> 005 SV2- <input type="checkbox"/> 005
Mitsubishi Electric Corp.	HF-KP053 ^{Note} HG-KR053 ^{Note} HK-KT053 ^{Note}
Omron Electronics	R88M-K05030 R88M-1M05030 ^{Note}
Panasonic Corp.	MHMF5A

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	2 kg	3 kg
	Vertical	1 kg	2 kg
Maximum acceleration	Horizontal	11.77 m/s ² (1.2 G)	11.77 m/s ² (1.2 G)
	Vertical	11.77 m/s ² (1.2 G)	7.17 m/s ² (0.7 G)

Allowable overhang ^{Note}

LGXS05-20

Horizontal installation (Unit: mm)	A			B			C		
1kg	498	324	323						
2kg	230	157	150						

LGXS05-10

Horizontal installation (Unit: mm)	A			B			C		
1kg	498	324	323						
2kg	230	157	150						

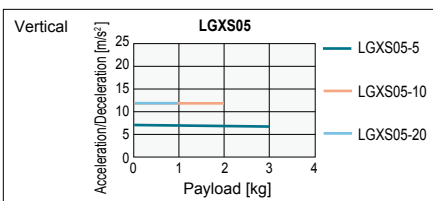
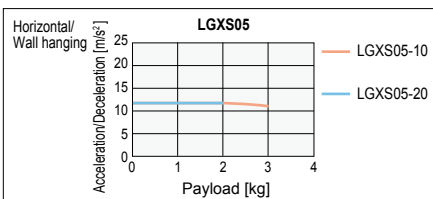
LGXS05-5

Horizontal installation (Unit: mm)	A			B			C		
1kg	1159	460	645						
3kg	381	148	206						

Vertical installation (Unit: mm)

Vertical installation (Unit: mm)	A		C	
1kg	478	478	478	478
3kg	138	138	138	138

Payload - Acceleration / Deceleration Graph (Estimate)



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.

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									

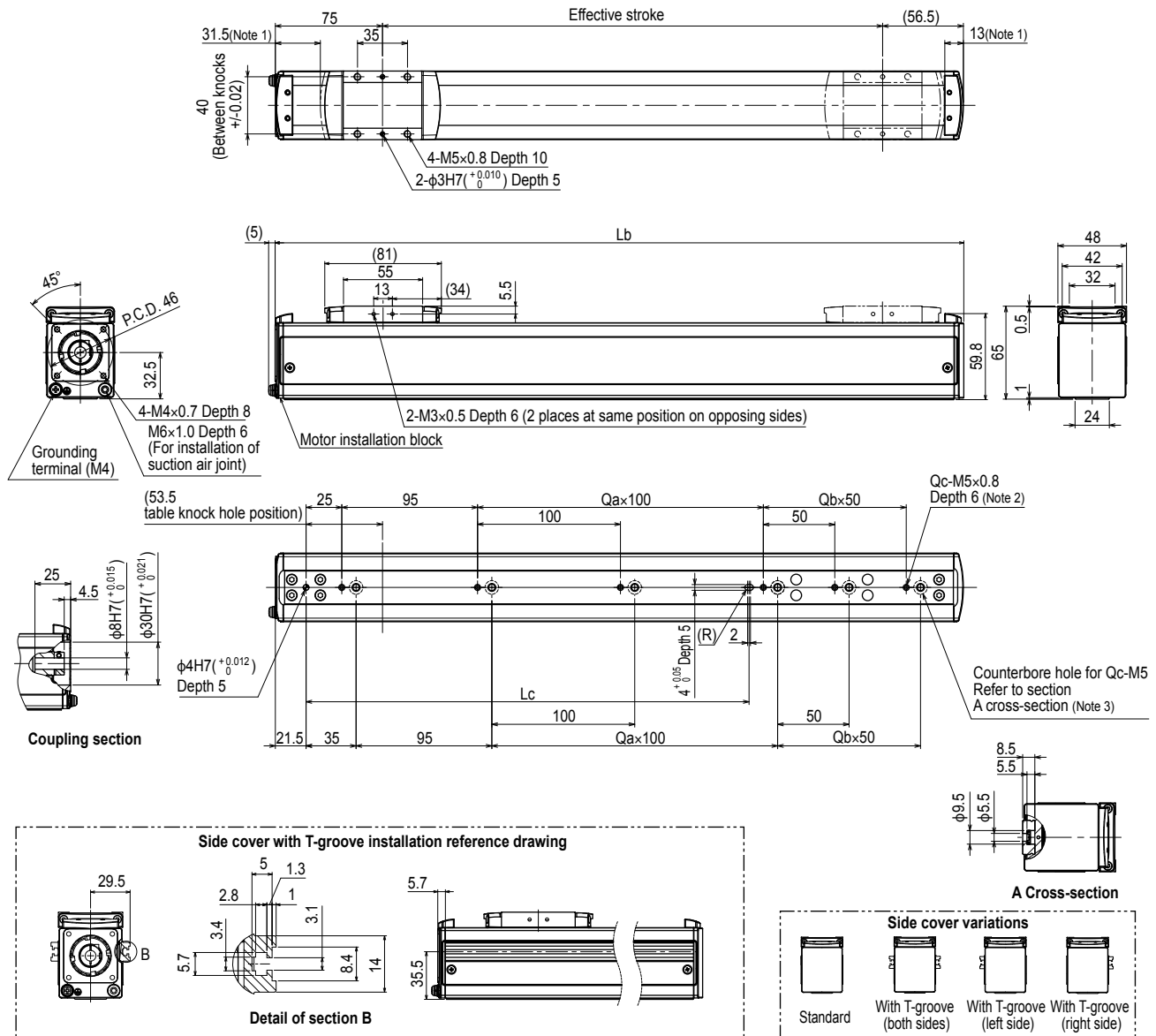
Note. The bending unit cannot be used for the high agility mode.
 Note. The high agility mode is used in an effective stroke range of 50 to 550 (50 mm pitch).
 Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
 The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
 Note. See P.116 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.

LGXS05



- 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 × 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	181.5	231.5	281.5	331.5	381.5	431.5	481.5	531.5	581.5	631.5	681.5	731.5	781.5	831.5	881.5	931.5		
Lc	110	110	110	110	310	310	310	310	310	310	610	610	610	610	610	610		
Qa	0	0	0	0	2	2	2	2	2	2	5	5	5	5	5	5		
Qb	0	1	2	3	0	1	2	3	4	5	0	1	2	3	4	5		
Qc	2	3	4	5	4	5	6	7	8	9	7	8	9	10	11	12		
Weight (kg)	1.2	1.4	1.5	1.7	1.9	2.0	2.2	2.3	2.5	2.6	2.8	2.9	3.1	3.2	3.4	3.5		
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 sensor positioner

EP-01