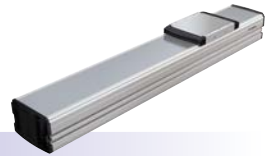


LGXS12

Advanced model

Motor-less Single Axis Actuator

Slider type



Ordering method

LGXS12

Model	Lead	Motor specification	Stroke
	30: 30 mm 20: 20 mm 10: 10 mm 5: 5 mm	No entry: Standard P: P specification (see below)	100 to 1250 (50 mm pitch)

[Caution]

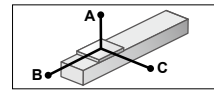
This system is provided as mechanical actuator unit and not including any adapters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. 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	400 W
Repeatability ^{Note 1}	+/-0.005 mm
Deceleration mechanism	Ground ball screw ϕ 15 (C5 class)
Stroke	100 mm to 1250 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 35 kg 50 kg 95 kg 115 kg Vertical 8 kg 15 kg 25 kg 45 kg
Rated thrust ^{Note 3} (or equivalent)	225 N 339 N 678 N 1360 N
Maximum dimensions of cross section of main unit	W 125 mm x H 101 mm
Overall length	ST + 211.5 mm
Degree of cleanliness ^{Note 4}	ISO CLASS 3 (ISO14644-1) or equivalent
Intake air ^{Note 5}	30 N ℓ /min to 90 N ℓ /min
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (non-condensing)

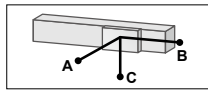
- Note 1. Positioning repeatability in one direction.
 Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.
 If the effective stroke exceeds 700 mm, the ball screw may resonate. (Critical speed)
 At this time, make the adjustment to decrease 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.126 for acceleration/deceleration and inertia moment.

Allowable overhang ^{Note}



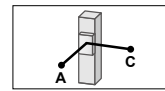
LGXS12-30

Horizontal installation (Unit: mm)			
	A	B	C
10kg	1796	1074	637
20kg	1300	531	332
35kg	1341	334	227



Wall installation (Unit: mm)

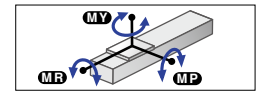
	A	B	C
10kg	631	1009	1720
20kg	316	466	1171
35kg	197	269	1130



Vertical installation (Unit: mm)

	A	C
3kg	2642	2642
6kg	1289	1289
8kg	951	951

Static loading moment



(Unit: N·m)

	MY	MP	MR
	334	334	294

Adaptable Servo Motor

Specification	Flange size	<input type="checkbox"/> 60
	Wattage	400 W
Motor specification	Manufacturer	Model
	No entry	Yaskawa Electric Corp. Keyence Corp. Mitsubishi Electric Corp.
P	Omron Electronics Panasonic Corp.	R88M-K40030 R88M-1M40030 MSMD04 MSMS04 MHMF04
Conversion adapter product model	Shim plate part number	
GX-BEND-60 ^{Note 2}	KEV-M2295-00	

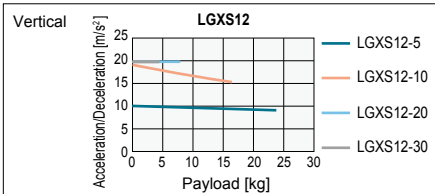
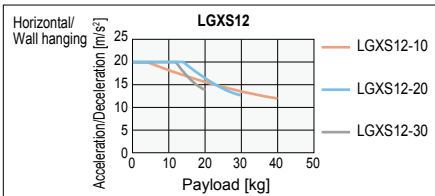
- Note 1. To combine with the conversion adapter <GX-BEND-60>, the shim plate (t1) is necessary.
 Note 2. For the specifications P, the bending unit cannot be used.

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

Specifications

Stroke	100 mm to 650 mm (50 mm pitch)			
Ball screw lead	30 mm	20 mm	10 mm	5 mm
Maximum payload	20 kg	30 kg	40 kg	-
Maximum acceleration	Horizontal 19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	-
Maximum payload	4 kg	8 kg	16 kg	24 kg
Maximum acceleration	Vertical 19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	9.85 m/s ² (1 G)

Payload - Acceleration / Deceleration Graph (Estimate)



Allowable overhang ^{Note}

LGXS12-30

Horizontal installation (Unit: mm)			
	A	B	C
5kg	1216	1297	669
12kg	461	506	252
20kg	316	280	147

Wall installation (Unit: mm)

	A	B	C
5kg	648	1224	1183
12kg	226	436	427
20kg	117	213	266

Vertical installation (Unit: mm)

	A	C
2kg	1984	1984
4kg	960	960

LGXS12-5

Vertical installation (Unit: mm)		
	A	C
8kg	1487	1487
16kg	712	712
24kg	454	454

LGXS12-20

Horizontal installation (Unit: mm)			
	A	B	C
10kg	999	807	489
20kg	521	378	231
30kg	382	234	146

Wall installation (Unit: mm)

	A	B	C
10kg	458	740	966
20kg	196	311	479
30kg	109	168	325

Vertical installation (Unit: mm)

	A	C
3kg	2031	2031
5kg	1193	1193
8kg	722	722

LGXS12-10

Horizontal installation (Unit: mm)			
	A	B	C
15kg	1668	737	535
25kg	1060	423	308
40kg	709	246	180

Wall installation (Unit: mm)

	A	B	C
15kg	491	672	1628
25kg	263	358	1012
40kg	134	181	644

Vertical installation (Unit: mm)

	A	C
5kg	2071	2071
10kg	1011	1011
16kg	612	612

- 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.

Effective stroke and maximum speed during high acceleration or deceleration

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

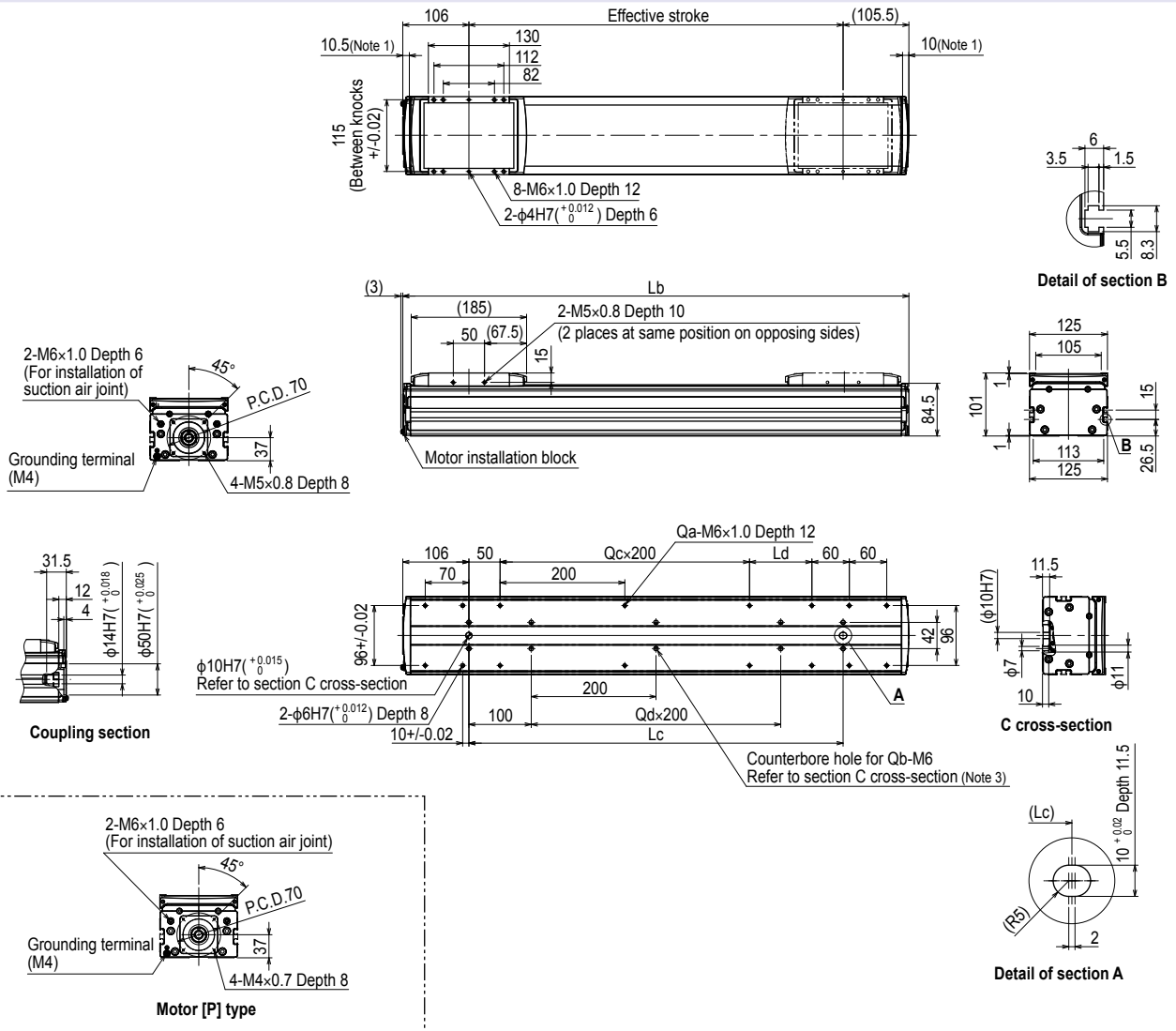
- Note. The bending unit cannot be used for the high agility mode.
 Note. The high agility mode is used in an effective stroke range of 100 to 650 (50 mm pitch).
 Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
 The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
 Note. See P.128 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.

LGXS12



- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. The length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<20 mm or more>>. The recommended length under head of the hex socket head bolts <M6 × 1.0> used to mount the body with the mounting tap hole specifications is <<frame thickness + 10 mm or less>>.
- Note 3. When using the mounting counterbore holes (section C cross-section) to mount the body, remove the seal, and then fix.
- Note 4. Grease gun nozzle (recommended) (see P.143 for detail)

Effective stroke	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
Lb	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	1011.5	1061.5	1111.5	1161.5	1211.5	1261.5	1311.5	1361.5	1411.5	1461.5	
Lc	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	
Ld	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	
Qa	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20	20	
Qb	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	
Qc	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	
Qd	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	
Weight (kg)	6.5	7.1	7.8	8.5	9.1	9.8	10.5	11.2	11.8	12.5	13.2	13.9	14.5	15.2	15.9	16.5	17.2	17.9	18.6	19.2	19.9	20.6	21.3	21.9	
Maximum speed (mm/sec)	Lead 30	1800											1530	1350	1170	990	900	810	720	630	540	450			
	Lead 20	1200											1020	900	780	660	600	540	480	420	360	300			
	Lead 10	600											510	450	390	330	300	270	240	210	180	150			
	Lead 5	300											255	225	195	165	150	135	120	105	90	75			
Speed setting	-											85%	75%	65%	55%	50%	45%	40%	35%	30%	25%				

Features

Basic model

Advanced model

Basic model

Advanced model

Basic model

Advanced model

Basic model

Advanced model

Acceleration/Deceleration

Inertia Moment

Option

Single axis robot positioner

EP-01