

LGXS10

Advanced model

Motor-less Single Axis Actuator

Slider type



Ordering method

LGXS10

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 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	200 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	25 kg	40 kg	80 kg
	Vertical	4 kg	8 kg	20 kg
Rated thrust ^{Note 3} (or equivalent)	113 N	170 N	341 N	683 N
Maximum dimensions of cross section of main unit	W 100 mm × H 99.5 mm			
Overall length	ST + 175.5 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.122 for acceleration/deceleration and inertia moment.

Allowable overhang ^{Note}

LGXS10-30	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
Horizontal installation (Unit: mm)	A B C	A C
10kg 878 537 292	10kg 271 473 803	1kg 4135 4135
20kg 609 256 146	20kg 118 192 481	4kg 985 985
25kg 608 211 124	25kg 93 147 454	
LGXS10-20	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
Horizontal installation (Unit: mm)	A B C	A C
15kg 1269 451 282	15kg 252 387 1159	3kg 2062 2062
25kg 754 253 158	25kg 123 189 629	6kg 1012 1012
40kg 466 142 88	40kg 51 78 311	8kg 750 750
LGXS10-10	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
Horizontal installation (Unit: mm)	A B C	A C
30kg 1794 298 203	30kg 162 234 1623	5kg 1926 1926
50kg 1358 162 111	50kg 68 98 1060	10kg 931 931
80kg 1266 86 59	80kg 16 22 552	20kg 434 434
LGXS10-5	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
Horizontal installation (Unit: mm)	A B C	A C
30kg 5605 321 225	30kg 181 258 5195	10kg 1018 1018
50kg 3694 177 124	50kg 79 113 3111	20kg 477 477
80kg 2619 95 67	80kg 22 31 1557	30kg 296 296
100kg 2224 68 48	100kg 0 0 0	

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	
274	274	241	

Adaptable Servo Motor

Specification	Flange size	60
	Wattage	200 W
Motor specification	Manufacturer	Model
No entry	Yaskawa Electric Corp.	SGMJV-02 SGMJ-02
	Keyence Corp.	SV-□020 SV2-□020
	Mitsubishi Electric Corp.	HF-KP23 HG-KR23 ^{Note 1} HK-KT23 ^{Note 1}
	Omron Electronics	R88M-K20030 R88M-1M20030
	Panasonic Corp.	MSMD02 MSMF02 MHMF02
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

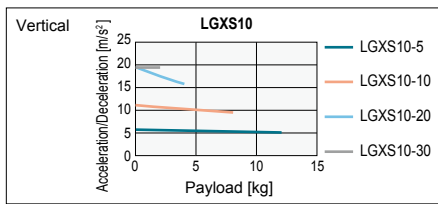
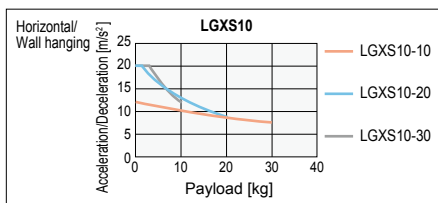
Stroke	100 mm to 650 mm (50 mm pitch)			
Ball screw lead	30 mm	20 mm	10 mm	5 mm
Maximum payload	Horizontal	10 kg	20 kg	30 kg
	Vertical	2 kg	4 kg	8 kg
Maximum acceleration	Horizontal	19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	11.71 m/s ² (1.2 G)
	Vertical	19.62 m/s ² (2 G)	19.62 m/s ² (2 G)	10.84 m/s ² (1.1 G)

Allowable overhang ^{Note}

LGXS10-30	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
Horizontal installation (Unit: mm)	A B C	A C
3kg 1041 1117 541	3kg 521 1046 1009	1kg 2054 2054
6kg 581 534 266	6kg 241 466 539	2kg 994 994
10kg 384 300 153	10kg 125 235 327	
LGXS10-20	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
Horizontal installation (Unit: mm)	A B C	A C
5kg 1218 844 493	5kg 464 778 1177	2kg 1602 1602
12kg 575 326 193	12kg 159 261 516	4kg 788 788
20kg 375 177 106	20kg 70 113 290	
LGXS10-10	Wall installation (Unit: mm)	Vertical installation (Unit: mm)
Horizontal installation (Unit: mm)	A B C	A C
10kg 1851 568 383	10kg 343 504 1784	3kg 1849 1849
20kg 973 263 177	20kg 136 199 885	5kg 1086 1086
30kg 671 162 109	30kg 67 98 552	8kg 656 656

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

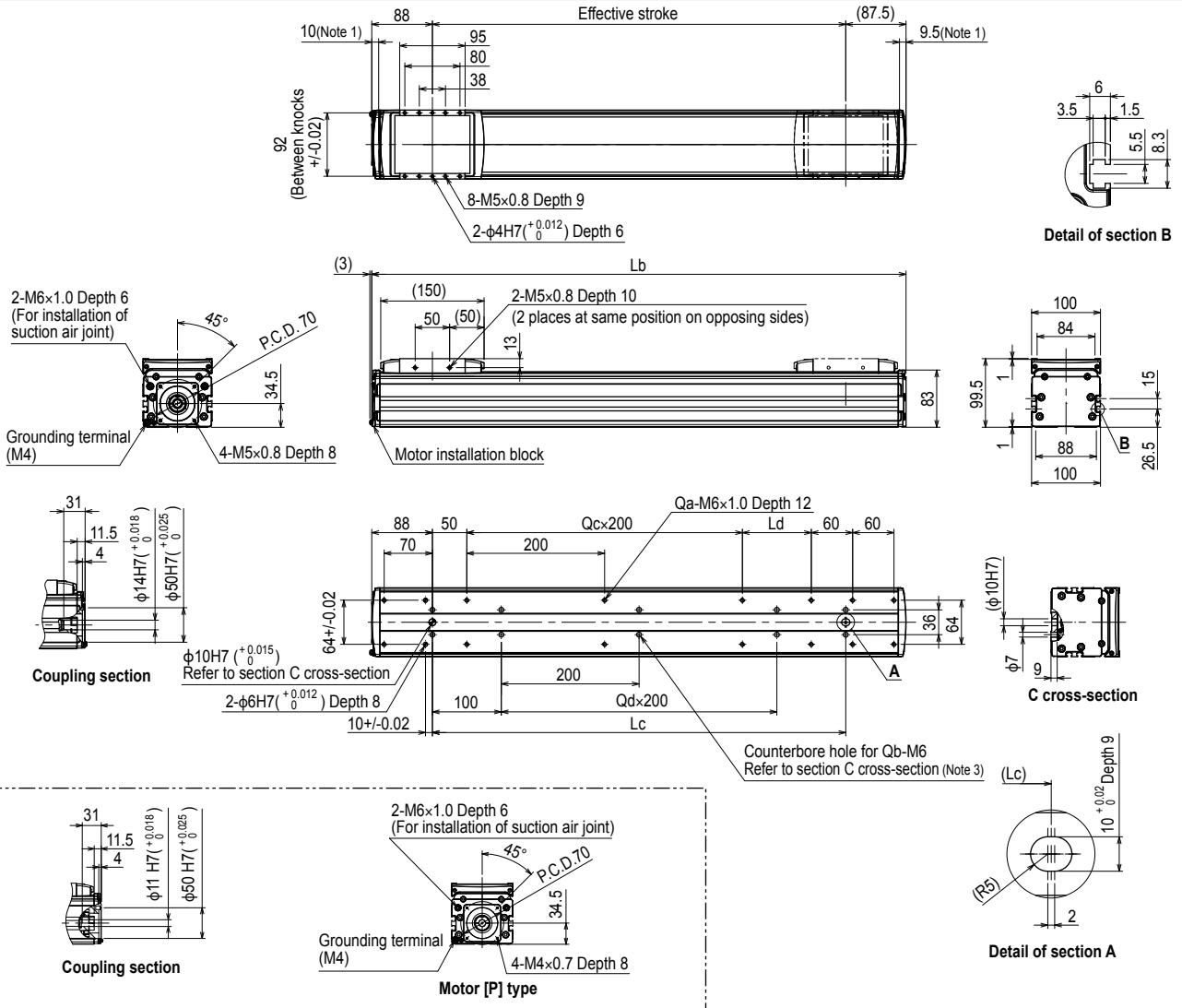
Note. The bending unit cannot be used for the high agility mode.
 Note. The high agility mode is used in an effective stroke range of 100 to 650 (50 mm pitch).
 Note. There is no critical speed setting. The maximum speed can be set for a selectable stroke.
 The speed may not reach the maximum speed if the movement distance is short or depending on the operating conditions.
 Note. See P.124 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.

LGXS10



- 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	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5	1325.5	1375.5	1425.5	
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)	4.6	5.1	5.6	6.1	6.6	7.1	7.6	8.1	8.6	9.1	9.6	10.1	10.6	11.1	11.6	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.1	
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

Motor class
Basic model

Motor class
Advanced model

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Option

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