LGXS16

Advanced model **Motor-less Single Axis Actuator**

Slider type

Ordering method

LGXS16 – [ ] [ ] – [ ]

Model	Lead	Motor specification	Stroke
	40: 40 mm 20: 20 mm 10: 10 mm	No entry: Standard P: P specification (see below)	100 to 1450 (50 mm pitch)

[Caution]

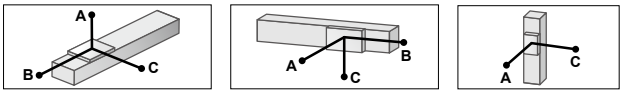
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. 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		750 W		
Repeatability Note 1		+/-0.005 mm		
Deceleration mechanism		Ground ball screw ϕ 20 (C5 class)		
Stroke		100 mm to 1450 mm (50 mm pitch)		
Maximum speed (or equivalent) Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload (or equivalent) Note 3	Horizontal	45 kg	95 kg	130 kg
	Vertical	12 kg	28 kg	55 kg
Rated thrust (or equivalent) Note 3		320 N	640 N	1280 N
Maximum dimensions of cross section of main unit		W 160 mm × H 130 mm		
Overall length		ST + 242.5 mm		
Degree of cleanliness Note 4		ISO CLASS 3 (ISO14644-1) or equivalent		
Intake air Note 5		30 Nℓ/min to 90 Nℓ/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 800 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.130 for acceleration/deceleration and inertia moment.

Allowable overhang Note



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Horizontal installation (Unit: mm)

	A	B	C
15kg	2876	1866	1253
30kg	2385	997	776
45kg	2339	720	604

Wall installation (Unit: mm)

	A	B	C
15kg	1273	1802	2797
30kg	782	935	2263
45kg	598	658	2174

Vertical installation (Unit: mm)

	A	C
3kg	6605	6605
6kg	3699	3699
12kg	2827	2827

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Horizontal installation (Unit: mm)

	A	B	C
30kg	3862	1255	1106
50kg	2568	733	652
80kg	1798	440	394
95kg	1579	362	325

Wall installation (Unit: mm)

	A	B	C
30kg	1102	1192	3742
50kg	630	671	2422
80kg	360	377	1612
95kg	288	300	1373

Vertical installation (Unit: mm)

	A	C
10kg	3404	3404
20kg	1740	1740
28kg	1504	1504

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Horizontal installation (Unit: mm)

	A	B	C
50kg	6253	1026	1024
80kg	4447	623	624
100kg	3957	489	490
130kg	3786	365	367

Wall installation (Unit: mm)

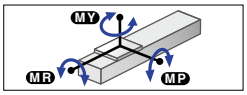
	A	B	C
50kg	980	964	6089
80kg	573	561	4240
100kg	437	426	3706
130kg	312	302	3422

Vertical installation (Unit: mm)

	A	C
15kg	3434	3434
30kg	1684	1684
55kg	889	889

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
706	706	620

Adaptable Servo Motor

Specification		
Flange size		□80
Wattage		750 W

Motor specification	Manufacturer	Model
No entry	Yaskawa Electric Corp.	SGMJV-08
		SGM7J-08
	Keyence Corp.	SV-□075
		SV2-□075
	Mitsubishi Electric Corp.	HF-KP73
		HG-KR73 Note 1
		HK-KT7M3 Note 1
P	Omron Electronics	R88M-K75030
		R88M-1M75030
	Panasonic Corp.	MSMD08
		MSMF08
		MHMF08

Conversion adapter product model	Shim plate part number
GX-BEND-80 Note 2	KEX-M2295-00

Note 1.To combine with the conversion adapter <GX-BEND-80>, 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 800 mm (50 mm pitch)		
Ball screw lead		40 mm	20 mm	10 mm
Maximum payload	Horizontal	30 kg	60 kg	-
Maximum acceleration	Horizontal	19.62 m/s² (2 G)	19.84 m/s² (2 G)	-
Maximum payload	Vertical	8 kg	16 kg	32 kg
Maximum acceleration	Vertical	19.62 m/s² (2 G)	18.43 m/s² (1.9 G)	11.17 m/s² (1.1 G)

Allowable overhang Note

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Horizontal installation (Unit: mm)

	A	B	C
10kg	1271	1669	836
20kg	725	803	429
30kg	534	514	287

Wall installation (Unit: mm)

	A	B	C
10kg	816	1585	1240
20kg	404	725	683
30kg	259	441	480

Vertical installation (Unit: mm)

	A	C
3kg	2904	2904
5kg	1710	1710
8kg	1038	1038

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Horizontal installation (Unit: mm)

	A	B	C
20kg	1722	1123	875
40kg	952	535	428
60kg	682	339	276

Wall installation (Unit: mm)

	A	B	C
20kg	842	1056	1679
40kg	388	470	895
60kg	232	275	611

Vertical installation (Unit: mm)

	A	C
5kg	3473	3473
10kg	1723	1723
16kg	1064	1064

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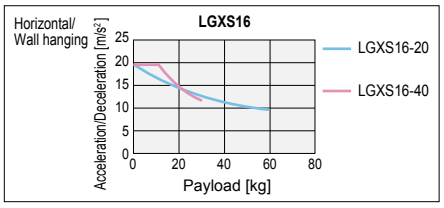
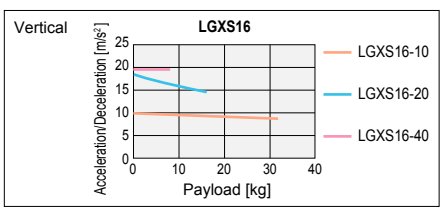
Vertical installation (Unit: mm)

	A	C
10kg	2951	2951
20kg	1438	1438
32kg	870	870

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	700	750	800
Maximum speed (mm/sec)	Lead 40	2400														
	Lead 20	1200														
	Lead 10	600														

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 800 (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.132 for acceleration/deceleration and inertia moment.

Access the website below.

YAMAHA

▶ 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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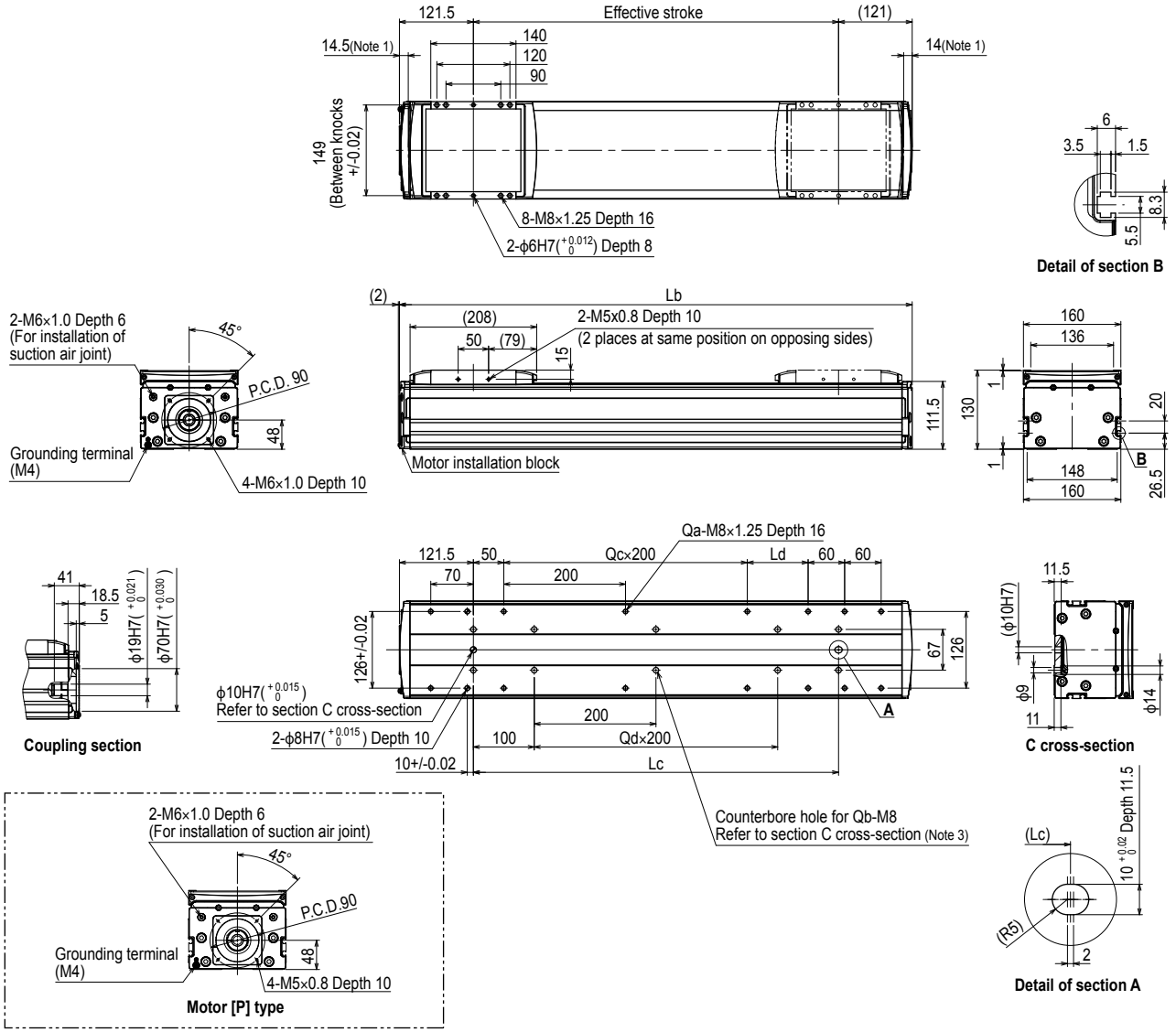

Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. The length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting counterbore holes (section C cross-section) must be <<25 mm or more>>.
The recommended length under head of the hex socket head bolts <M8 × 1.25> used to mount the body with the mounting tap hole specifications is <<frame thickness + 15 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	1300	1350	1400	1450
Lb		342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5	1092.5	1142.5	1192.5	1242.5	1292.5	1342.5	1392.5	1442.5	1492.5	1542.5	1592.5	1642.5	1692.5
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	1300	1350	1400	1450
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	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	20	22	22	22
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	16	18	18	18
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	5	6	6	6
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	5	6	6	6
Weight (kg)		11.7	12.7	13.7	14.7	15.7	16.6	17.6	18.6	19.6	20.6	21.5	22.5	23.5	24.5	25.5	26.5	27.4	28.4	29.4	30.4	31.4	32.4	33.3	34.3	35.3	36.3	37.3	38.2
Maximum speed (mm/sec)	Lead 40	2400															2160	1920	1680	1440	1320	1200	1080	960		840	720		600
	Lead 20	1200															1080	960	840	720	660	600	540	480		420	360		300
	Lead 10	600															540	480	420	360	330	300	270	240		210	180		150
	Speed setting	–															90%	80%	70%	60%	55%	50%	45%	40%		35%	30%		25%