LGFS17

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

Long-stroke type

Ordering method

LGFS17 – [ ] – [ ] – [ ] – [ ]

Model	Lead	Motor specification	OP.1	Stroke
	40: 40 mm 20: 20 mm 10: 10 mm 5: 5 mm	Y: Y specification (see below) P: P specification (see below) T: T specification (see below) K: K specification (see below)	No entry: Standard M: Centeraized lubrication	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.
For special parts for motor installation, install and adjust on your side.

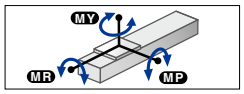
LGFS17 (400W)

Specifications

Applicable motor		400 W			
Repeatability Note 1		±0.01 mm			
Deceleration mechanism		Rolled ball screw ϕ20 (C7 class)			
Stroke		100 mm to 1250 mm (50 mm pitch)			
Maximum speed Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		40 mm	20 mm	10 mm	5 mm
Maximum payload Note 3	Horizontal	40 kg	90 kg	140 kg	-
	Vertical	6 kg	12 kg	35 kg	50 kg
Rated Thrust Note 3		169 N	339 N	678 N	1356 N
Maximum dimensions of cross section of main unit		W 168 mm × H 100 mm			
Overall length Straight		ST + 456 mm			
Degree of Cleanliness Note 4		Equivalent to ISO Class 3 (ISO 14644-1)			
Intake air Note 5		115 Nℓ/min			
Using ambient temperature and humidity		0 to 40 °C, 35 to 80 %RH (no condensation)			

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 800 mm/sec or less.
Note 5. The required suction amount will vary according to the operating conditions and operating environment.

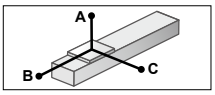
Static loading moment

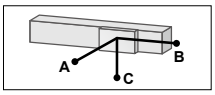


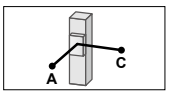
(Unit: N·m)

MY	MP	MR
1062	1063	934

Allowable overhang Note







LGFS17-40(400W)

Horizontal installation (Unit: mm)

	A	B	C
10kg	4066	2660	2134
20kg	2619	1335	1199
40kg	2079	732	752

Wall installation (Unit: mm)

	A	B	C
10kg	2165	2610	4005
20kg	1214	1284	2540
40kg	756	682	1965

Vertical installation (Unit: mm)

	A	C
2kg	9892	9892
4kg	5527	5527
6kg	4137	4137

LGFS17-20(400W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	3378	1182	1321
50kg	2245	691	786
90kg	1444	364	423

Wall installation (Unit: mm)

	A	B	C
30kg	1316	1131	3293
50kg	768	640	2142
90kg	392	313	1304

Vertical installation (Unit: mm)

	A	C
4kg	8034	8034
8kg	4058	4058
12kg	2730	2730

LGFS17-10(400W)

Horizontal installation (Unit: mm)

	A	B	C
50kg	5754	966	1299
100kg	3119	461	621
140kg	2347	316	427

Wall installation (Unit: mm)

	A	B	C
50kg	1258	916	5628
100kg	568	410	2967
140kg	370	266	2171

Vertical installation (Unit: mm)

	A	C
15kg	3255	3255
25kg	1942	1942
35kg	1379	1379

LGFS17-5(400W)

Horizontal installation (Unit: mm)
No settings

Wall installation (Unit: mm)
No settings

Vertical installation (Unit: mm)

	A	C
10kg	5349	5349
30kg	1755	1755
50kg	1037	1037

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.
Note. When using it suspended from the ceiling, the overhang will be the same as when used horizontally.

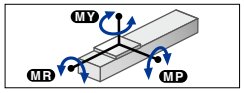
LGFS17 (750W)

Specifications

Applicable motor		750 W			
Repeatability Note 1		±0.01 mm			
Deceleration mechanism		Rolled ball screw ϕ20 (C7 class)			
Stroke		100 mm to 1250 mm (50 mm pitch)			
Maximum speed Note 2		2400 mm/sec	1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		40 mm	20 mm	10 mm	5 mm
Maximum payload Note 3	Horizontal	80 kg	150 kg	200 kg	-
	Vertical	12 kg	35 kg	70 kg	100 kg
Rated Thrust Note 3		320 N	640 N	1280 N	2560 N
Maximum dimensions of cross section of main unit		W 168 mm × H 100 mm			
Overall length Straight		ST + 459.5 mm			
Degree of Cleanliness Note 4		Equivalent to ISO Class 3 (ISO 14644-1)			
Intake air Note 5		115 Nℓ/min			
Using ambient temperature and humidity		0 to 40 °C, 35 to 80 %RH (no condensation)			

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 800 mm/sec or less.
Note 5. The required suction amount will vary according to the operating conditions and operating environment.

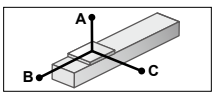
Static loading moment

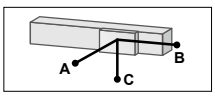


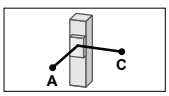
(Unit: N·m)

MY	MP	MR
1062	1063	934

Allowable overhang Note







LGFS17-40(750W)

Horizontal installation (Unit: mm)

	A	B	C
20kg	1851	1307	1006
50kg	1404	555	548
80kg	1371	375	413

Wall installation (Unit: mm)

	A	B	C
20kg	1000	1256	1793
50kg	537	505	1302
80kg	392	324	1224

Vertical installation (Unit: mm)

	A	C
4kg	4200	4200
8kg	2186	2186
12kg	1523	1523

LGFS17-20(750W)

Horizontal installation (Unit: mm)

	A	B	C
50kg	2449	691	796
100kg	1708	325	388
150kg	1733	226	286

Wall installation (Unit: mm)

	A	B	C
50kg	782	640	2331
100kg	359	275	1499
150kg	241	176	1430

Vertical installation (Unit: mm)

	A	C
15kg	2256	2256
25kg	1470	1470
35kg	1131	1131

LGFS17-10(750W)

Horizontal installation (Unit: mm)

	A	B	C
100kg	3786	966	1263
150kg	2054	461	607
200kg	1548	316	419

Wall installation (Unit: mm)

	A	B	C
100kg	1213	916	3718
150kg	551	410	1972
200kg	360	266	1452

Vertical installation (Unit: mm)

	A	C
30kg	1579	1579
50kg	937	937
70kg	661	661

LGFS17-5(750W)

Horizontal installation (Unit: mm)
No settings

Wall installation (Unit: mm)
No settings

Vertical installation (Unit: mm)

	A	C
40kg	1750	1750
70kg	1033	1033
100kg	726	726

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.
Note. When using it suspended from the ceiling, the overhang will be the same as when used horizontally.

▶ The cycle time simulation and service life calculation can be performed easily from our member site.

Applicable motor

• Applicable servo motor

Motor specification	Flange size	Wattage	Manufacturer	Model
Y	□60	400W	Tamagawa Seiki	TSM4254N □□00E200
			Yaskawa Electric Corp.	SGM7J-04
				SGMXJ-04
			Keyence Corp.	SV-□040
				SV2-□040
				SV3-□040
			Mitsubishi Electric Corp.	HG-KR43
				HK-KT43
				HK-MT43
		500W	Fanuc Corp.	βiS1/6000-B
P	□60	400W	Omron Electronics	R88M-K40030
				R88M-1M40030
			Panasonic Corp.	MSMF042
				MHMF042
				MHMG042
T	□80	750W	Tamagawa Seiki	TSM4354N □□00E200
			Yaskawa Electric Corp.	SGM7J-08
				SGMXJ-08
			Keyence Corp.	SV□075[Note1]
				SV2□075
				SV3□075
			Mitsubishi Electric Corp.	HG-KR73[Note1]
				HK-KT7M3[Note1]
				HK-MT7M3[Note1]
K	□80	750W	Omron Electronics	R88M-K75030
				R88M-1M75030
			Panasonic Corp.	MSMF082
				MHMF082
				MHMG082

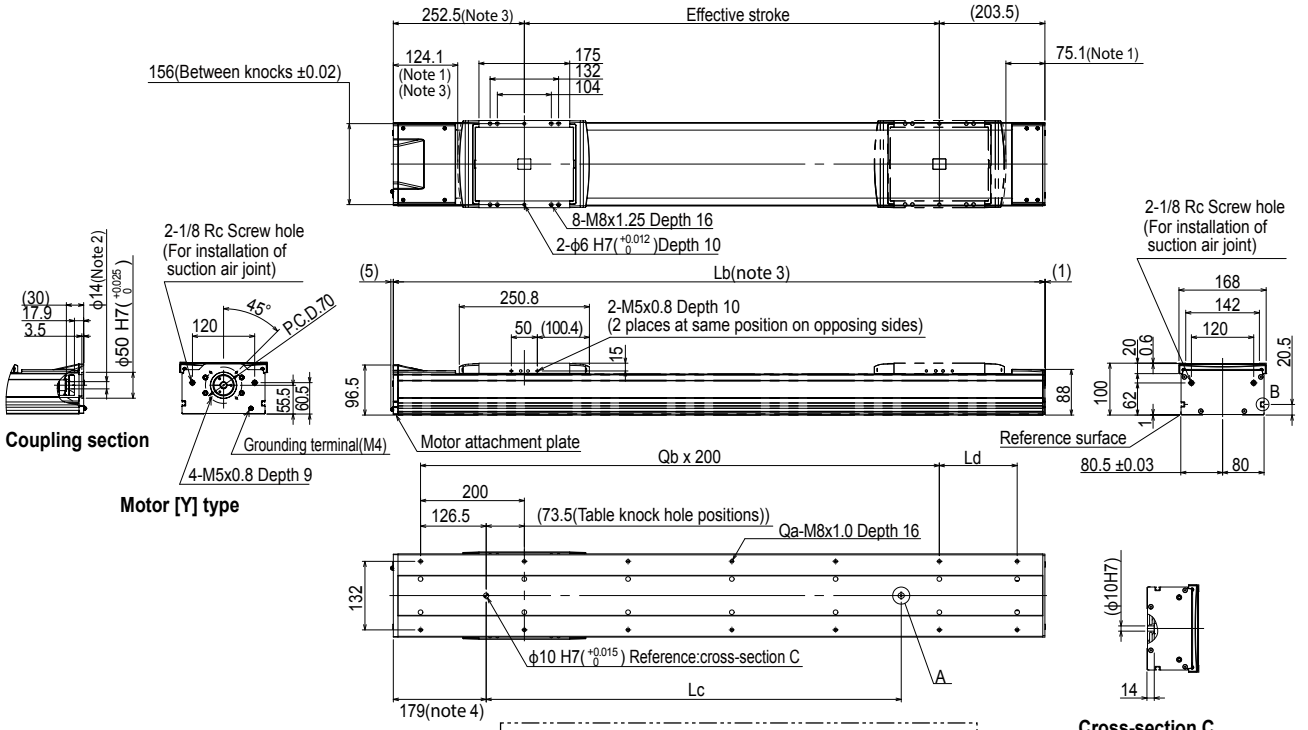
Note 1. A special shim plate is required when combining with the bending unit.

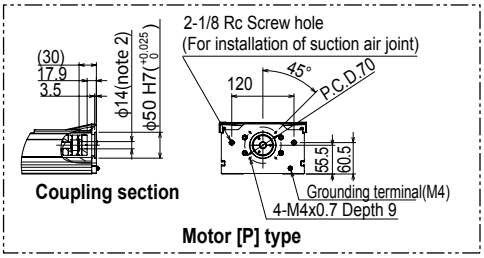
Part number of shim plate
KEX-M2295-00

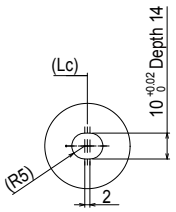
Note 2. The bending unit can only be installed on the T specification.

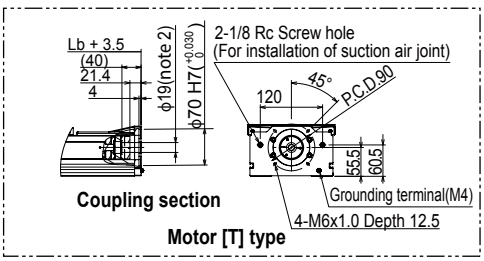
Part number of bending unit
KEX-M221M-01[Note 2]

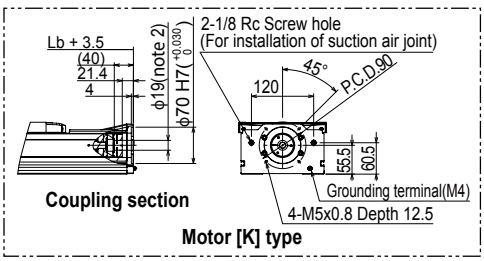
LGFS17

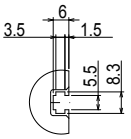


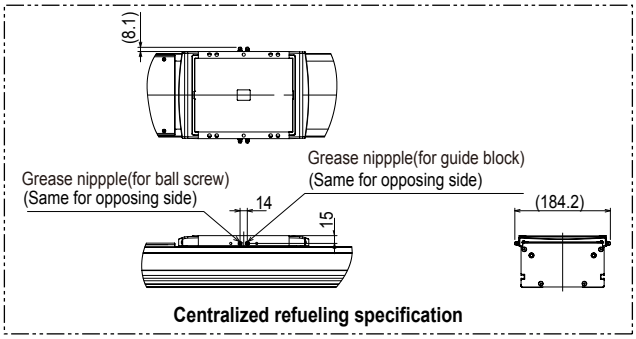


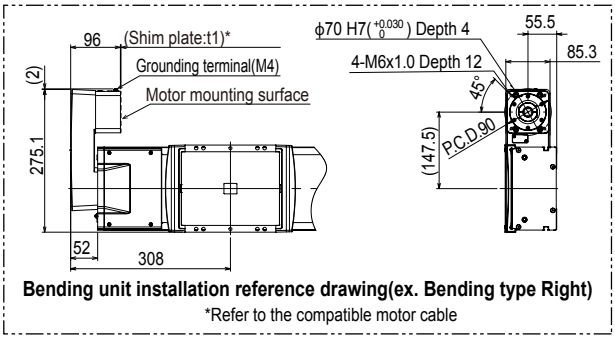












Note 1.Stop positions are determined by the mechanical stoppers at both ends.
Note 2.The recommended dimensional tolerances for the applicable shaft diameter are h6 and h7.
Note 3.For T and K specifications, add《+3.5 mm》to the dimensions listed.
Note. In the installation tap hole, the length under head <<thickness of stand +15mm or less>> is recommended for the hex socket head bolts <M8×1.25> used to install the main unit.

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		556	606	656	706	756	806	856	906	956	1006	1056	1106	1156	1206	1256	1306	1356	1406	1456	1506	1556	1606	1656	1706
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		50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
Qa		8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18
Qb		2	2	2	2	4	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7
Weight (kg)		14.8	15.6	16.4	17.2	17.9	18.7	19.5	20.3	21.1	21.8	22.6	23.4	24.2	24.9	25.7	26.5	27.3	28.1	28.8	29.6	30.4	31.2	32	32.7
Maximum speed (mm/sec)	Lead 40	2400															2280	2160	2040	1800	1560	1320	1200	1080	960
	Speed setting	-															95%	90%	85%	75%	65%	55%	50%	45%	40%
	Lead 20	1200														1140	1020	900	780	720	660	600	540	480	420
	Speed setting	-														95%	85%	75%	65%	60%	55%	50%	45%	40%	35%
	Lead 10	600													570	510	450	390	360	330	300	270	240	210	210
	Speed setting	-													95%	85%	75%	65%	60%	55%	50%	45%	40%	35%	35%
	Lead 5	300													270	240	225	195	180	165	150	135	135	120	105
	Speed setting	-													90%	80%	75%	65%	60%	55%	50%	45%	45%	40%	35%
Stroke restriction	Horizontal・Vertical	No stroke restrictions																							
	Wall hanging	No stroke restrictions																							
	Ceiling-mounted	No stroke restrictions																							