LGFS17L

Advanced model | **Motor-less Single Axis Actuator** | **Long-stroke type**

Ordering method

LGFS17L – [ ] – [ ] – [ ] – [ ]

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	850 to 3000 (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.

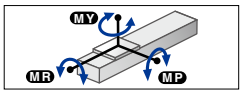
LGFS17L (400W)

Specifications

Applicable motor		400 W			
Repeatability Note 1		±0.01 mm			
Deceleration mechanism		Rolled ball screw ϕ20 (C7 class)			
Stroke		850 mm to 3000 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 105.5 mm			
Overall length Straight		ST + 570 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 2000 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.

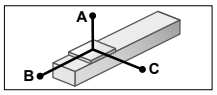
Static loading moment

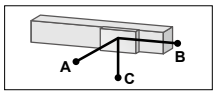


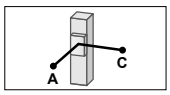
(Unit: N·m)

MY	MP	MR
1062	1063	934

Allowable overhang Note







LGFS17L-40(400W)

Horizontal installation (Unit: mm)

	A	B	C
10kg	4552	2660	2334
20kg	2637	1307	1198
40kg	1790	631	648

Wall installation (Unit: mm)

	A	B	C
10kg	2364	2610	4491
20kg	1211	1257	2557
40kg	644	580	1676

Vertical installation (Unit: mm)

	A	C
2kg	10270	10270
4kg	5285	5285
6kg	3719	3719

LGFS17L-20(400W)

Horizontal installation (Unit: mm)

	A	B	C
30kg	4027	1182	1432
50kg	2687	691	849
90kg	1743	364	454

Wall installation (Unit: mm)

	A	B	C
30kg	1412	1131	3942
50kg	817	641	2583
90kg	412	313	1600

Vertical installation (Unit: mm)

	A	C
4kg	8417	8417
8kg	4231	4231
12kg	2834	2834

LGFS17L-10(400W)

Horizontal installation (Unit: mm)

	A	B	C
50kg	6851	966	1332
100kg	3730	461	637
140kg	2817	316	438

Wall installation (Unit: mm)

	A	B	C
50kg	1280	916	6725
100kg	576	410	3577
140kg	374	266	2638

Vertical installation (Unit: mm)

	A	C
15kg	3284	3284
25kg	1957	1957
35kg	1388	1388

LGFS17L-5(400W)

Horizontal installation (Unit: mm): No settings

Wall installation (Unit: mm): No settings

Vertical installation (Unit: mm)

	A	C
10kg	5357	5357
30kg	1758	1758
50kg	1038	1038

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 1000 mm stroke models.
Note. When using it suspended from the ceiling, the overhang will be the same as when used horizontally.

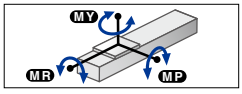
LGFS17L (750W)

Specifications

Applicable motor		750 W			
Repeatability Note 1		±0.01 mm			
Deceleration mechanism		Rolled ball screw ϕ20 (C7 class)			
Stroke		850 mm to 3000 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 105.5 mm			
Overall length Straight		ST + 573.5 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 2000 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.

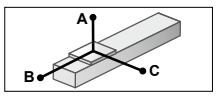
Static loading moment

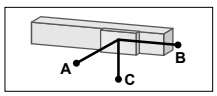


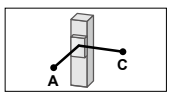
(Unit: N·m)

MY	MP	MR
1062	1063	934

Allowable overhang Note







LGFS17L-40(750W)

Horizontal installation (Unit: mm)

	A	B	C
20kg	2128	1307	1125
50kg	1250	495	488
80kg	1142	312	344

Wall installation (Unit: mm)

	A	B	C
20kg	1117	1257	2070
50kg	473	445	1148
80kg	317	262	995

Vertical installation (Unit: mm)

	A	C
4kg	4739	4739
8kg	2414	2414
12kg	1633	1633

LGFS17L-20(750W)

Horizontal installation (Unit: mm)

	A	B	C
50kg	2930	691	856
100kg	2040	323	410
150kg	1619	200	257

Wall installation (Unit: mm)

	A	B	C
50kg	828	641	2812
100kg	369	272	1826
150kg	207	150	1311

Vertical installation (Unit: mm)

	A	C
15kg	2314	2314
25kg	1390	1390
35kg	987	987

LGFS17L-10(750W)

Horizontal installation (Unit: mm)

	A	B	C
100kg	2456	461	627
150kg	1756	292	399
200kg	1395	208	285

Wall installation (Unit: mm)

	A	B	C
100kg	565	410	2373
150kg	335	242	1654
200kg	219	157	1270

Vertical installation (Unit: mm)

	A	C
30kg	1604	1604
50kg	949	949
70kg	668	668

LGFS17L-5(750W)

Horizontal installation (Unit: mm): No settings

Wall installation (Unit: mm): No settings

Vertical installation (Unit: mm)

	A	C
40kg	1305	1305
70kg	728	728
100kg	497	497

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 1000 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.

LGFS17L

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

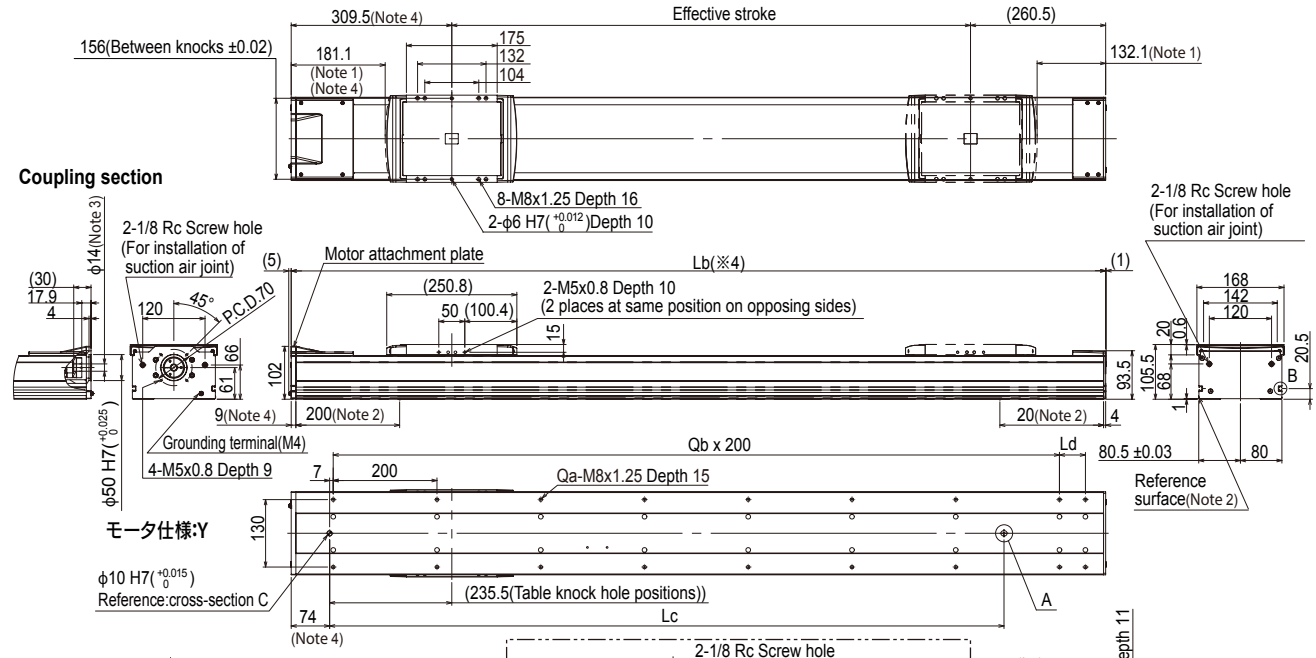
Note 1. A special shim plate is required when combining with the bending unit.

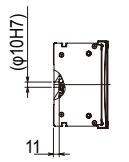
Part number of shim plate
KEX-M2295-00

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

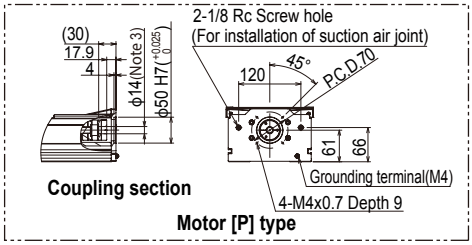
Part number of bending unit
KEX-M221M-01 Note 2

LGFS17L



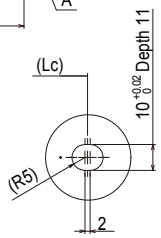


Cross-section C

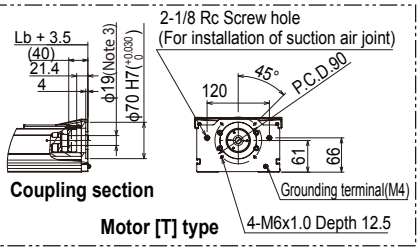


Coupling section

Motor [P] type

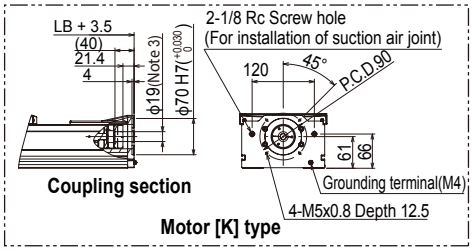


Detailed drawing A



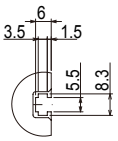
Coupling section

Motor [T] type

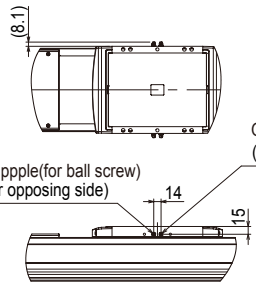


Coupling section

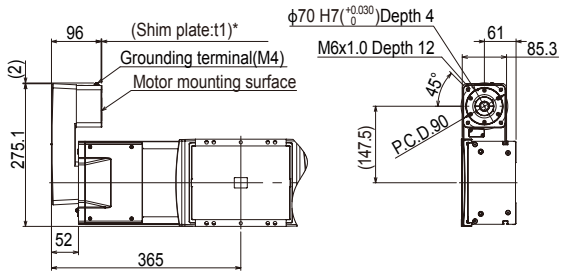
Motor [K] type



Detailed drawing B



Centralized refueling specification



Bending unit installation reference drawing(ex. Bending type Right)

*Refer to the compatible motor cable

Note 1.Stop positions are determined by the mechanical stoppers at both ends.
Note 2.When the effective stroke is 2050 mm or more, the reference plane is within 200 mm of the frame end face.
Note 3.The recommended dimensional tolerances for the applicable shaft diameter are h6 and h7.
Note 4.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		850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000
Lb		1420	1470	1520	1570	1620	1670	1720	1770	1820	1870	1920	1970	2020	2070	2120	2170	2220	2270	2320	2370	2420	2470	2520	2570	2620	2670	2720	2770	2820	2870	2920	2970	3020	3070	3120	3170	3220	3270	3320	3370	3420	3470	3520	3570
Lc		1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3000	3050	3100	3150	3200	3250	3300
Ld		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	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
Qa		16	16	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38
Qb		6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17
Weight (kg)		32.1	33	33.8	34.7	35.5	36.4	37.2	38.1	38.9	39.8	40.6	41.5	42.3	43.2	44	44.9	45.7	46.6	47.4	48.3	49.1	50	50.8	51.6	52.5	53.3	54.2	55	55.9	56.7	57.6	58.4	59.3	60.1	61	61.8	62.7	63.5	64.4	65.2	66.1	66.9	67.8	68.6
Maximum speed (mm/sec)	Lead 40	2400																																		2280	2280	2160	2160	2040	2040	1920	1920	1800	1800
	Speed setting	-																																		95%	95%	90%	90%	85%	85%	80%	80%	75%	75%
	Lead 20	1200																											1140	1140	1080	1080	1020	1020	960	960	900	900	840	840	780	780	780	780
	Speed setting	-																											95%	95%	90%	90%	85%	85%	80%	80%	75%	75%	70%	70%	65%	65%	65%	65%
	Lead 10	600																							540	510	510	480	480	480	480	450	450	450	420	420	420	390	390	390	360	360	360	360
	Speed setting	-																							90%	85%	85%	80%	80%	80%	80%	75%	75%	75%	70%	70%	70%	65%	65%	65%	60%	60%	60%	60%
	Lead 5	300																							255	255	240	240	225	225	210	210	180	180	165	165	165	165	165	165	165	165	165	165
	Speed setting	-																							85%	85%	80%	80%	75%	75%	70%	70%	60%	60%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%
Stroke restriction	Horizontal・Vertical	No stroke restrictions																																										
	Wall hanging	To 1500st																																										
	Ceiling-mounted	To 1200st																																									