

LGFS14L

Advanced model

Motor-less Single Axis Actuator

Long-stroke type

Ordering method

LGFS14L				
Model	Lead	Motor specification	OP1	Stroke
	30: 30 mm 20: 20 mm 10: 10 mm 5: 5 mm	Y: Y specification (see below) P: P specification (see below) K: K specification (see below)	No entry: Standard M: Centralized lubrication	750 to 2000 (50 mm pitch)

[Caution]

This system is provided as mechanical actuator unit and not including any adaptors 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.

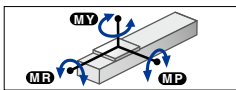
LGFS14L (200W)

Specifications

Applicable motor	200 W			
Repeatability ^{Note 1}	±0.01 mm			
Deceleration mechanism	Rolled ball screw ϕ 15 (C7 class)			
Stroke	750 mm to 2000 mm (50 mm pitch)			
Maximum speed ^{Note 2}	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}	Horizontal	30 kg	45 kg	120 kg
	Vertical	3 kg	6 kg	30 kg
Rated Thrust ^{Note 3}		113 N	170 N	683 N
Maximum dimensions of cross section of main unit	W 140 mm × H 91.5 mm			
Overall length Straight	ST + 462.5 mm			
Degree of Cleanliness ^{Note 4}	Equivalent to ISO Class 3 (ISO 14644-1)			
Intake air ^{Note 5}	90 N ℓ /min to 100 N ℓ /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.
 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.

Static loading moment



	(Unit: N·m)		
	MY	MP	MR
	441	543	478

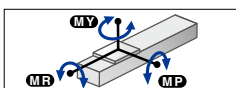
LGFS14L (400W)

Specifications

Applicable motor	400 W			
Repeatability ^{Note 1}	±0.01 mm			
Deceleration mechanism	Rolled ball screw ϕ 15 (C7 class)			
Stroke	750 mm to 2000 mm (50 mm pitch)			
Maximum speed ^{Note 2}	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}	Horizontal	50 kg	70 kg	140 kg
	Vertical	10 kg	15 kg	45 kg
Rated Thrust ^{Note 3}		225 N	339 N	1360 N
Maximum dimensions of cross section of main unit	W 140 mm × H 91.5 mm			
Overall length Straight	ST + 462.5 mm			
Degree of Cleanliness ^{Note 4}	Equivalent to ISO Class 3 (ISO 14644-1)			
Intake air ^{Note 5}	90 N ℓ /min to 100 N ℓ /min			
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (no condensation)			

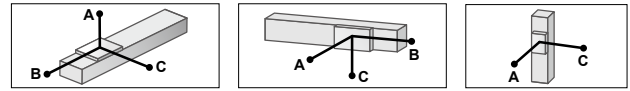
- Note 1. Positioning repeatability in one direction.
 Note 2. When a moving distance is short and depending on an operation condition, it may not reach the maximum speed.
 Note 3. The rated thrust and maximum transferable weight are values assuming the attached motor outputs the rated torque.
 Note 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.

Static loading moment



	(Unit: N·m)		
	MY	MP	MR
	441	543	478

Allowable overhang ^{Note}



LGFS14L-30(200W)

Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	5kg	5829	3006		3007	5kg	3034		2966	5786	1kg	12226	12226
	15kg	2669	983	1061		15kg	1069	943	2597		3kg	4291	4291
	30kg	1764	477	538		30kg	536	438	1649				

LGFS14L-20(200W)

Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	15kg	3873	1258		1526	15kg	1514		1219	3816	2kg	8582	8582
	30kg	2484	615	770		30kg	750	575	2398		4kg	4381	4381
	45kg	1964	400	509		45kg	483	361	1848		6kg	2980	2980

LGFS14L-10(200W)

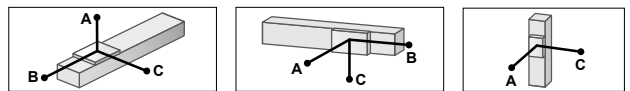
Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	30kg	4980	855		1193	30kg	1151		816	4906	5kg	5126	5126
	60kg	3127	413	581		60kg	534	374	3018		10kg	2555	2555
	90kg	2446	266	375		90kg	326	227	2300		16kg	1590	1590

LGFS14L-5(200W)

Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	40kg	9198	681		988	40kg	936		641	9069	10kg	2788	2788
	80kg	5743	326	474		80kg	419	287	5550		20kg	1377	1377
	120kg	4484	208	302		120kg	247	169	4216		30kg	906	906

- 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.

Allowable overhang ^{Note}



LGFS14L-30(400W)

Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	15kg	2295	982		1028	15kg	1024		943	2238	3kg	4023	4023
	30kg	1570	477	529		30kg	522	438	1473		5kg	2450	2450
	50kg	1409	297	353		50kg	335	258	1260		10kg	1255	1255

LGFS14L-20(400W)

Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	15kg	3281	1258		1481	15kg	1461		1219	3236	5kg	3404	3404
	30kg	2126	615	756		30kg	731	575	2058		10kg	1715	1715
	70kg	1328	247	316		70kg	281	208	1195		15kg	1146	1146

LGFS14L-10(400W)

Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	30kg	4441	855		1186	30kg	1143		816	4379	10kg	2542	2542
	50kg	3270	502	702		50kg	656	462	3182		15kg	1689	1689
	110kg	2140	212	300		110kg	250	173	1971		30kg	832	832

LGFS14L-5(400W)

Horizontal installation (Unit: mm)	A	B	C	Wall installation (Unit: mm)	A	B	C	Vertical installation (Unit: mm)	A	C			
	50kg	6053	539		781	50kg	727		500	5955	15kg	1841	1841
	100kg	4089	255	371		100kg	315	216	3918		30kg	903	903
	140kg	3429	174	253		140kg	197	135	3188		45kg	590	590

- 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.

■ Applicable motor

● Applicable servo motor

Motor specification	Flange size	Wattage	Manufacturer	Model
Y	□ 60	200W	Tamagawa Seiki	TSM4252N □ □ 00E200
			Yaskawa Electric Corp.	SGM7J-02
				SGMJJ-02
			Keyence Corp.	SV- □ 020
				SV2- □ 020
				SV3- □ 020
		Mitsubishi Electric Corp.	HG-KR23 ^{Note1}	
			HK-KT23 ^{Note1}	
			HK-MT23 ^{Note1}	
		400W	Tamagawa Seiki	TSM4254N □ □ 00E200
			Yaskawa Electric Corp.	SGM7J-04
				SGMJJ-04
Keyence Corp.	SV- □ 040			
	SV2- □ 040			
Mitsubishi Electric Corp.	SV3- □ 040			
	HG-KR43 ^{Note1}			
HK-KT43 ^{Note1}	HK-KT43 ^{Note1}			
	HK-MT43 ^{Note1}			
500W	Fanuc Corp.	βiS1/6000-B ^{Note1}		
	P	□ 60	200W	Omron Electronics
Panasonic Corp.				R88M-K20030
				R88M-1M20030
K	□ 60	400W	Omron Electronics	MSMF022
				MHMF022
			Panasonic Corp.	MHMG022
Omron Electronics	R88M-K40030			
	R88M-1M40030			
Panasonic Corp.	MSMF042			
	MHMF042			
MHMG042	MHMG042			

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

Part number of shim plate
KEV-M2295-00

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

Part number of bending unit
KEV-M221M-01 ^{Note2}

Linear conveyor modules
LCMR200

Single-axis robots
GX

Linear conveyor modules
LCM100

SCARA robots
YK-X

Single-axis robots
Robonity

Linear motor single-axis robots
PHASER

Single-axis robots
FLIP-X

Compact single-axis robots
TRANSERO

Cartesian robots
XY-X

Pick & place robots
YP-X

CLEAN

CONTROLLER

INFORMATION

LBAS

LBAR

LGXS

LGBS

ABAS

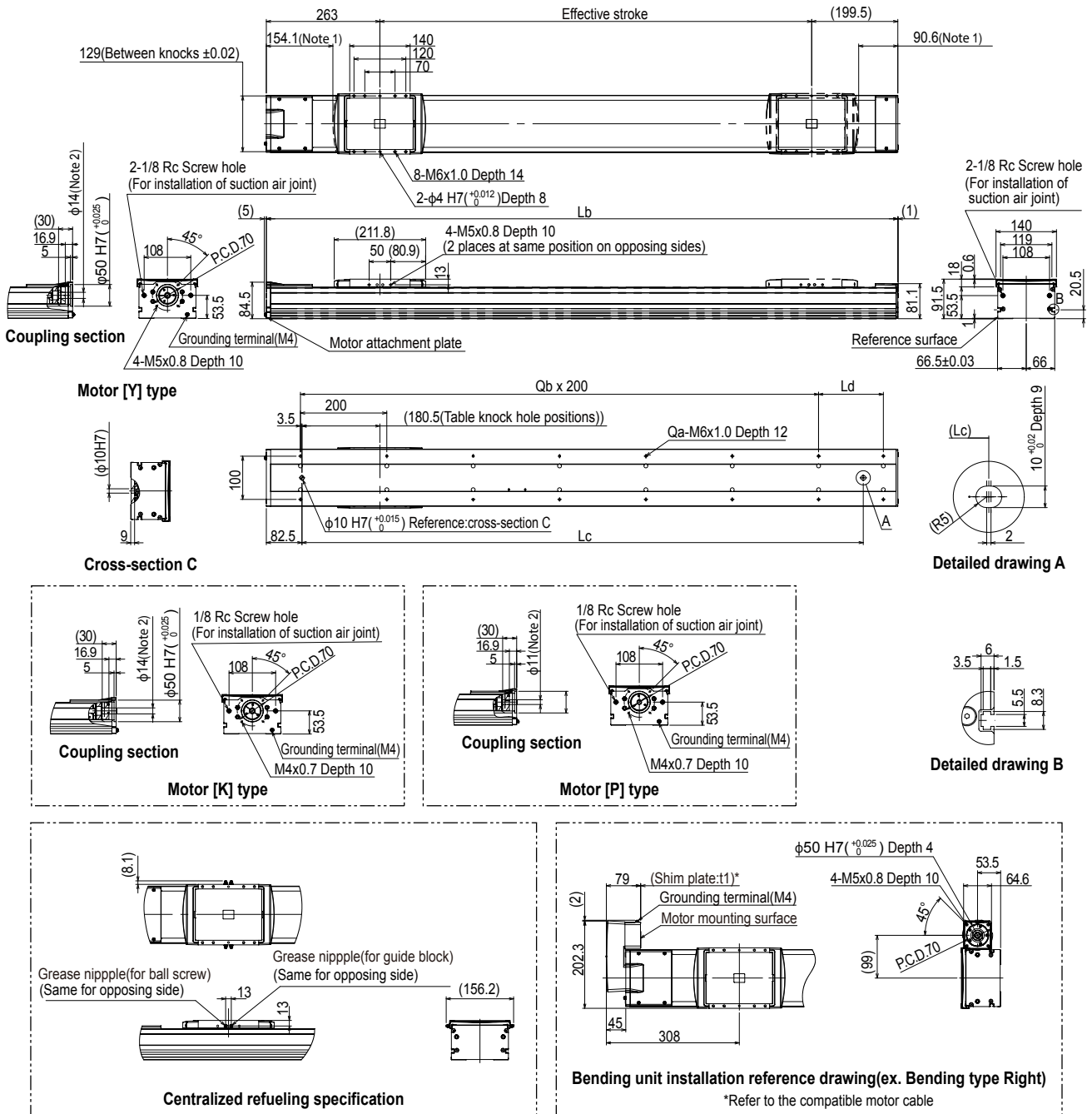
ABAR

AGXS

AGBS

Option

LGFS14L



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. In the installation tap hole, the length under head <<thickness of stand +10mm or less>> is recommended for the hex socket head bolts <M6x1.0> used to install the main unit.

Effective stroke	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000
Lb	1212.5	1262.5	1312.5	1362.5	1412.5	1462.5	1512.5	1562.5	1612.5	1662.5	1712.5	1762.5	1812.5	1862.5	1912.5	1962.5	2012.5	2062.5	2112.5	2162.5	2212.5	2262.5	2312.5	2362.5	2412.5	2462.5
Lc	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
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
Qa	14	14	14	16	16	16	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26
Qb	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11
Weight (kg)	18.6	19.2	19.8	20.3	20.9	21.5	22.1	22.6	23.2	23.8	24.3	24.9	25.5	26.1	26.6	27.2	27.8	28.4	28.9	29.5	30.1	30.6	31.2	31.8	32.4	32.9
Maximum speed (mm/sec)	Lead 30																									
	Lead 20																									
	Lead 10																									
	Lead 5																									
Stroke restriction	Speed setting																									
	Horizontal - Vertical	No stroke restrictions																								
Wall hanging	Horizontal	To 1800st																								
	Vertical	To 1200st																								
Ceiling-mounted	Horizontal	To 1800st																								
	Vertical	To 1200st																								

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