

LBFS04

Basic model ● Motor-less Single Axis Actuator
● Low-profile type

Ordering method

LBFS04				
Model	Lead	Shape	Motor specification	Stroke
	12: 12 mm 6: 6 mm 2: 2 mm	S: Straight R: Right attachment L: Left attachment	Y: Y specification (see below) P: P specification (see below) A: A specification (see below) S: S specification (see below) N: N specification (see below)	50 to 500 (50 mm pitch)

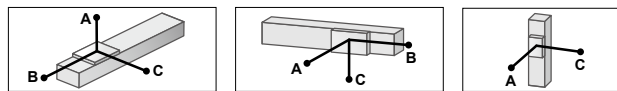
[Caution]
 This system is provided as mechanical actuator unit and not including any adapters or electric components. Motor, driver and other components required for installation are the user's responsibility. Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. 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.

Specifications

Applicable motor	50 W		
Repeatability <small>Note 1</small>	±0.005 mm		
Deceleration mechanism	Rolled ball screw φ 10 (C7 class)		
Stroke	50 mm to 500 mm (50 mm pitch)		
Maximum speed <small>Note 2</small>	720 mm/sec	360 mm/sec	120 mm/sec
Ball screw lead	12 mm	6 mm	2 mm
Maximum payload <small>Note 3</small>	Horizontal	12 kg	20 kg
	Vertical	3 kg	5 kg
Rated Thrust <small>Note 3</small>	Horizontal	71 N	141 N
	Vertical	141 N	424 N
Dinamic loading moment (MY,MP,MR)	17.2 / 17.2 / 23.3		
Maximum dimensions of cross section of main unit	W 49.7 mm × H 40 mm		
Overall length	Straight	ST + 220.5 mm	
	Bending	ST + 204 mm	
Degree of Cleanliness <small>Note 4</small>	Equivalent to ISO Class 4 (ISO 14644-1)		
Intake air <small>Note 5</small>	80 Nℓ// min~		
Using ambient temperature and humidity	0 to 40 °C, 35 to 80 %RH (no condensation)		

Note 1. Positioning repeatability in one direction. ±0.01 for the Bending configuration.
 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.

Allowable overhang Note



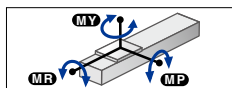
LBFS04-12			
Horizontal installation (Unit: mm)	Wall installation (Unit: mm)	Vertical installation (Unit: mm)	
4kg	896 228 259	4kg	256 228 864
8kg	596 107 125	8kg	130 107 691
12kg	465 67 78	12kg	84 67 619

LBFS04-6			
Horizontal installation (Unit: mm)	Wall installation (Unit: mm)	Vertical installation (Unit: mm)	
5kg	1867 209 272	5kg	272 209 1867
10kg	1181 98 127	10kg	127 98 1181
20kg	748 42 55	20kg	55 42 748

LBFS04-2			
Horizontal installation (Unit: mm)	Wall installation (Unit: mm)	Vertical installation (Unit: mm)	
10kg	4004 128 172	10kg	172 128 4004
18kg	2635 65 87	18kg	87 65 2635
25kg	2088 43 58	25kg	58 43 2088

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 500 mm stroke models.

Static loading moment



(Unit: N·m)		
MY	MP	MR
47	47	64

Applicable motor

Applicable servo motor

Specification	Flange size	<input type="checkbox"/> 40
	Wattage	50 W

Note. Motor models marked with * may not be 50W, but can be installed.

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-A5
		SGM7J-A5
		SGMXJ-A5
Keyence Corp.		SV-□ 005
		SV2-□ 005
		SV3-□ 005
Mitsubishi Electric Corp.		HG-KR053
		HK-KT053
		HK-MT033
Omron Electronics		R88M-K05030
		R88M-1M05030
Panasonic Corp.		MHMF5A
		MHMG5A
Sanyo Denki		R2 □ A04005
		TSM3102
Tamagawa Seiki		TSM4152
		TSM4162

Motor specification	Manufacturer	Model
Y	Delta Electronics	ECM-A3L-C □ 2040F
	Fanuc Corp.	βiS0.2/5000
	Siemens	1FK2102-0AG
		1FL6022-2AF
P	Schneider	BCH2MBA53
	Beckhoff	AM3011B*
	Allen-Bradley	TLY-A120*
	Panasonic Corp.	MSMF5A

Applicable stepping motor

Specification	Flange size	<input type="checkbox"/> 42
Motor specification	Manufacturer	Model
A	Oriental Motor	AZM46
S		ARM46
N	NEMA standard	RKS54
		AZM48
		NEMA17

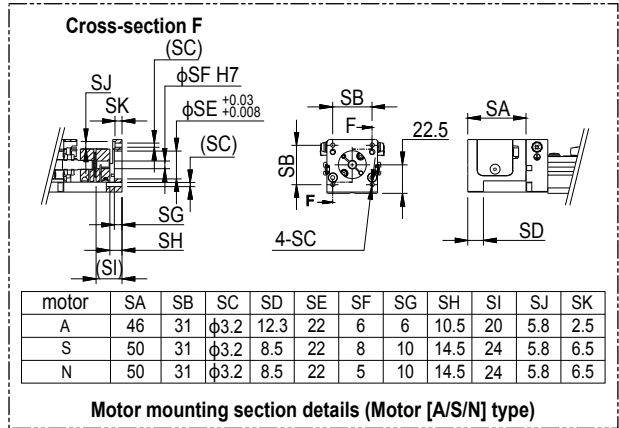
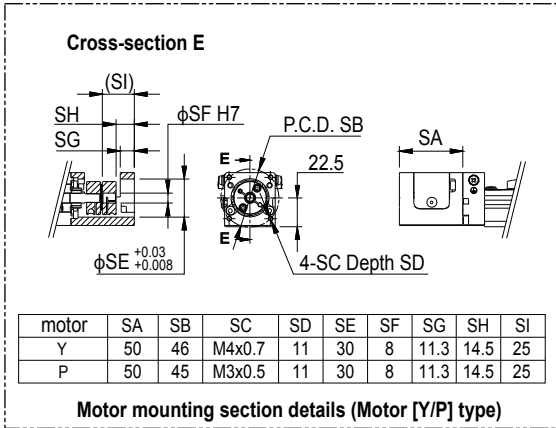
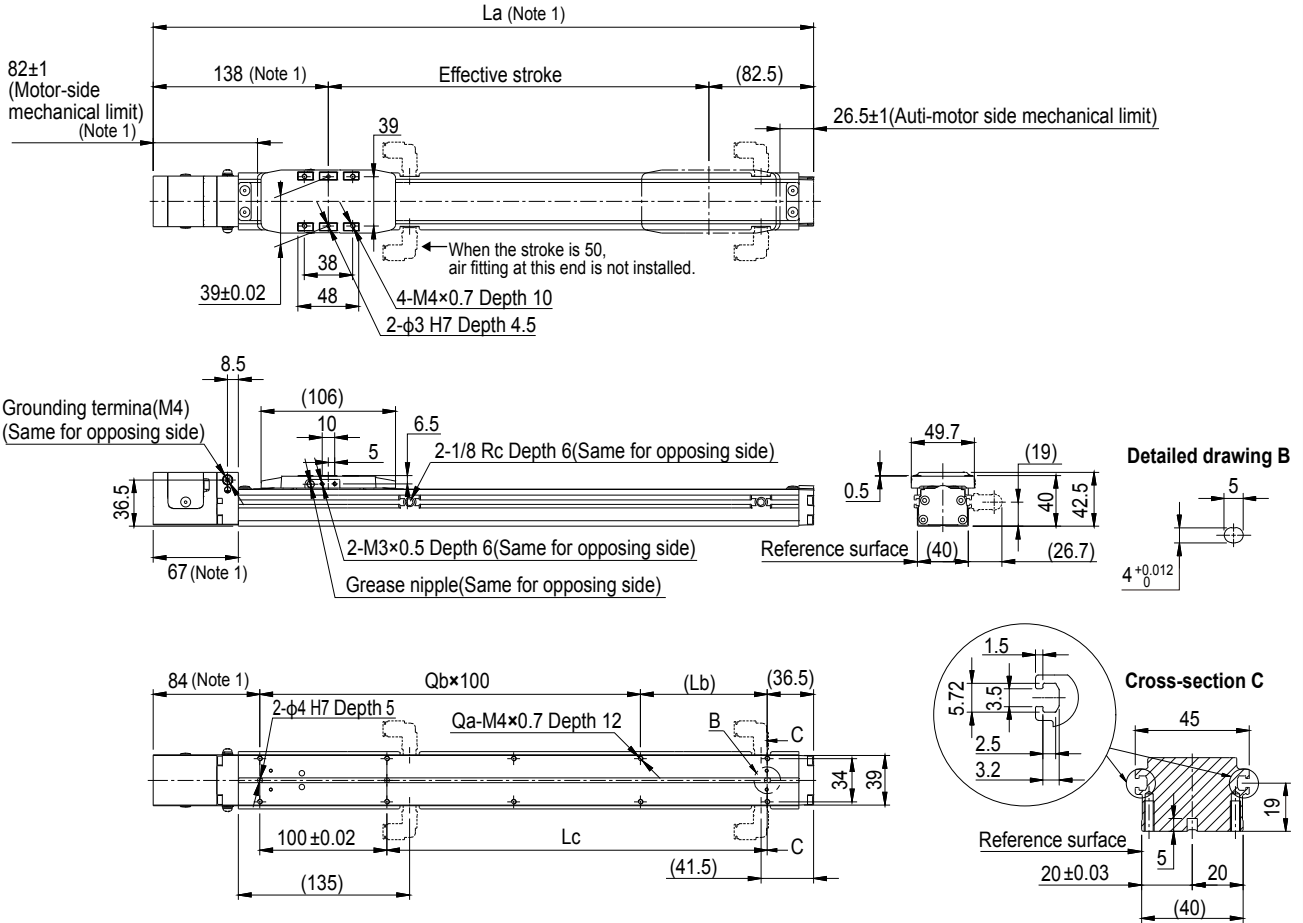
Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
 Note. For the motor specifications A, S, and N, the parts dedicated for bending cannot be used.



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

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 Option

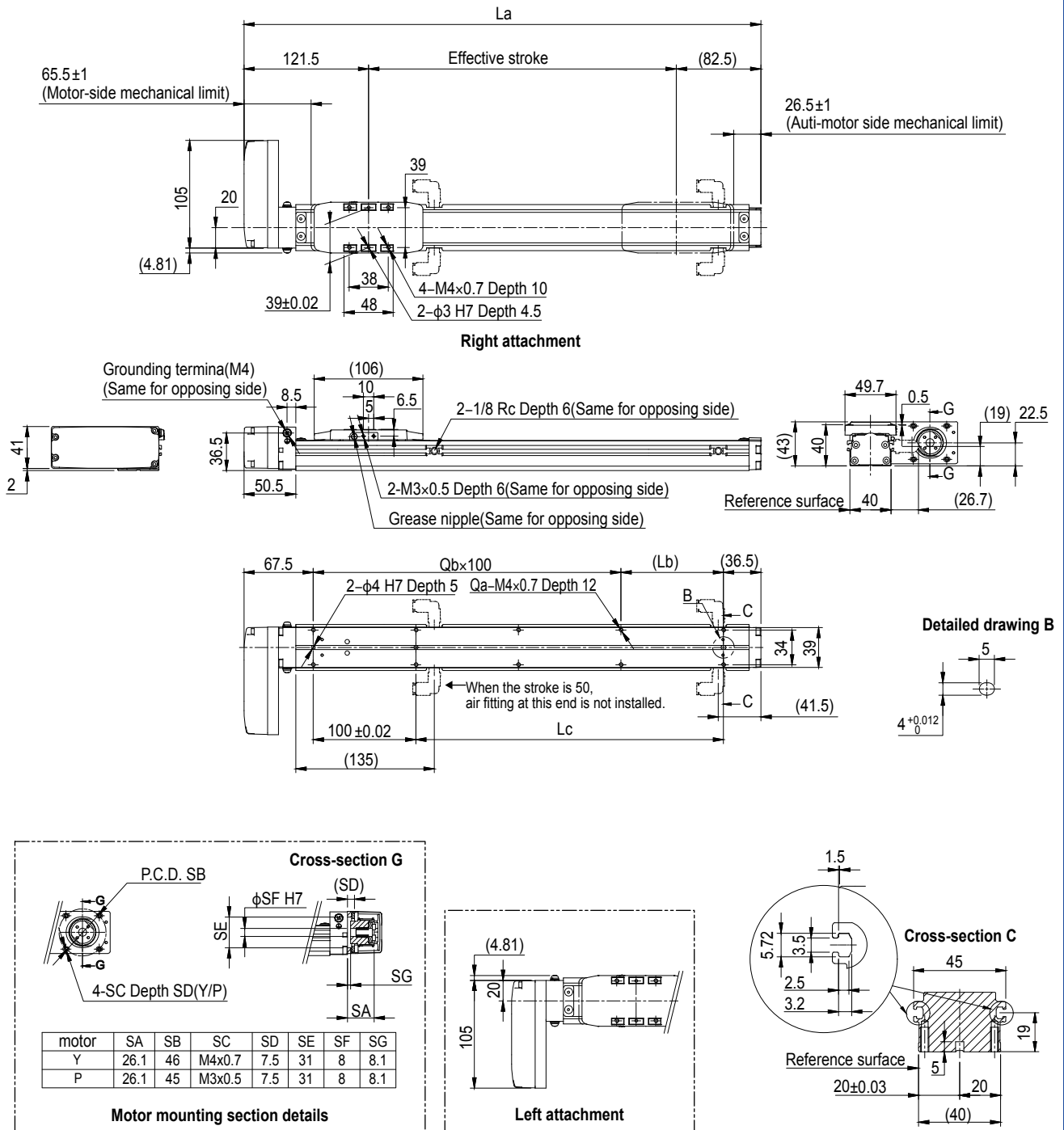
LBFS04 Straight type (S)



Note 1. Motor specifications: For A, the stated dimensions will be -4mm. Please refer to the specifications table for details.
 Note. In the installation tap hole, the length under head <<thickness of stand +12mm or less>> is recommended for the hex socket head bolts <M4×0.7> used to install the main unit.
 Note. Grease gun nozzle (recommended) Part number: KFU-M3861-00

Effective stroke	50	100	150	200	250	300	350	400	450	500	
La	270.5	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	
Lb	50	100	50	100	50	100	50	100	50	100	
Lc	50	100	150	200	250	300	350	400	450	500	
Qa	6	6	8	8	10	10	12	12	14	14	
Qb	1	1	2	2	3	3	4	4	5	5	
Weight (kg)	0.99	1.10	1.22	1.34	1.46	1.58	1.69	1.81	1.93	2.05	
Maximum speed (mm/sec)	Lead 12	720									
	Speed setting	-									
	Lead 6	360									
	Speed setting	-									
Maximum speed (mm/sec)	Lead 2	120									
	Speed setting	-									

LBFS04 Bending type (R/L)



Note. For special parts for motor installation, install and adjust on your side. Refer to your motor manual for tuning or adjustment.
 Note. In the installation tap hole, the length under head <<thickness of stand +12mm or less>> is recommended for the hex socket head bolts <M4×0.7> used to install the main unit.
 Note. Grease gun nozzle (recommended) Part number: KFU-M3861-00

Effective stroke	50	100	150	200	250	300	350	400	450	500
La	254	304	354	404	454	504	554	604	654	704
Lb	50	100	50	100	50	100	50	100	50	100
Lc	50	100	150	200	250	300	350	400	450	500
Qa	6	6	8	8	10	10	12	12	14	14
Qb	1	1	2	2	3	3	4	4	5	5
Weight (kg)	1.12	1.23	1.34	1.45	1.56	1.67	1.78	1.89	2.00	2.12
Maximum speed (mm/sec)	Lead 12	720								
	Speed setting	-								
	Lead 6	360								
	Speed setting	-								
Maximum speed (mm/sec)	Lead 2	120								
	Speed setting	-								