LBFS06

Basic model | **Motor-less Single Axis Actuator**

Low-profile type

Ordering method

LBFS06 - [ ] - [ ] - [ ] - [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 12: 12 mm 6: 6 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 800 (50 mm pitch)

[Caution]

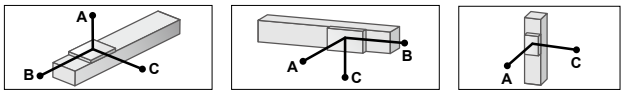
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment.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

Specifications

Applicable motor		100 W		
Repeatability Note 1		±0.005 mm		
Deceleration mechanism		Rolled ball screw ϕ 10 (C7 class)		
Stroke		50 mm to 800 mm (50 mm pitch)		
Maximum speed Note 2		1333 mm/sec	800 mm/sec	400 mm/sec
Ball screw lead		20 mm	12 mm	6 mm
Maximum payload Note 3	Horizontal	18 kg	30 kg	45 kg
	Vertical	6 kg	9 kg	12 kg
Rated Thrust Note 3		85 N	142 N	285 N
Dinamic loading moment (MY,MP,MR)		40.6 / 40.6 / 60.2		
Maximum dimensions of cross section of main unit		W 65 mm × H 44 mm		
Overall length	Straight	ST + 240.5 mm		
	Bending	ST + 224 mm		
Degree of Cleanliness Note 4		Equivalent to ISO Class 4 (ISO 14644-1)		
Intake air Note 5		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. If the effective stroke exceeds 550 mm, the ball screw may resonate. (Critical 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



LBFS06-20

Horizontal installation (Unit: mm)	A	B	C
6kg	471	255	226
12kg	299	117	112
18kg	267	79	81

Wall installation (Unit: mm)	A	B	C
6kg	226	255	471
12kg	112	117	299
18kg	81	79	267

Vertical installation (Unit: mm)	A	C
3kg	477	477
6kg	255	255

LBFS06-12

Horizontal installation (Unit: mm)	A	B	C
10kg	1055	201	245
20kg	618	90	111
30kg	457	54	68

Wall installation (Unit: mm)	A	B	C
10kg	245	201	1055
20kg	111	90	618
30kg	68	54	457

Vertical installation (Unit: mm)	A	C
5kg	429	429
9kg	218	218

LBFS06-6

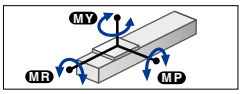
Horizontal installation (Unit: mm)	A	B	C
15kg	1830	152	213
30kg	1016	65	92
45kg	691	37	52

Wall installation (Unit: mm)	A	B	C
15kg	213	152	1830
30kg	92	65	1016
45kg	52	37	691

Vertical installation (Unit: mm)	A	C
6kg	429	429
12kg	215	215

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
99	99	176

Applicable motor

• Applicable servo motor

Specification		
	Flange size	□ 40
	Wattage	100 W

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

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-01
		SGM7J-01
		SGMXJ-01
	Keyence Corp.	SV- □ 010
		SV2- □ 010
		SV3- □ 010
	Mitsubishi Electric Corp.	HG-KR13
		HK-KT13
		HK-MT13
	Omron Electronics	R88M-K10030
		R88M-1M10030
	Panasonic Corp.	MHMF01
		MHMG01
	Sanyo Denki	R2 □ A04010
	Tamagawa Seiki	TSM3104
		TSM4154
		TSM4164
Y	Delta Electronics	ECM-A3L-C □ 20401
	Fanuc Corp.	βiS0.3/5000
	Siemens	1FK2102-1AG
		1FL6024-2AF
	Schneider	BCH2MB013
	Beckhoff	AM3012C*
	Allen-Bradley	TLY-A130*
	Kingservo	KSMA01LI □ S
		KSMA01LG
P	Panasonic Corp.	MSMF01

• Applicable stepping motor

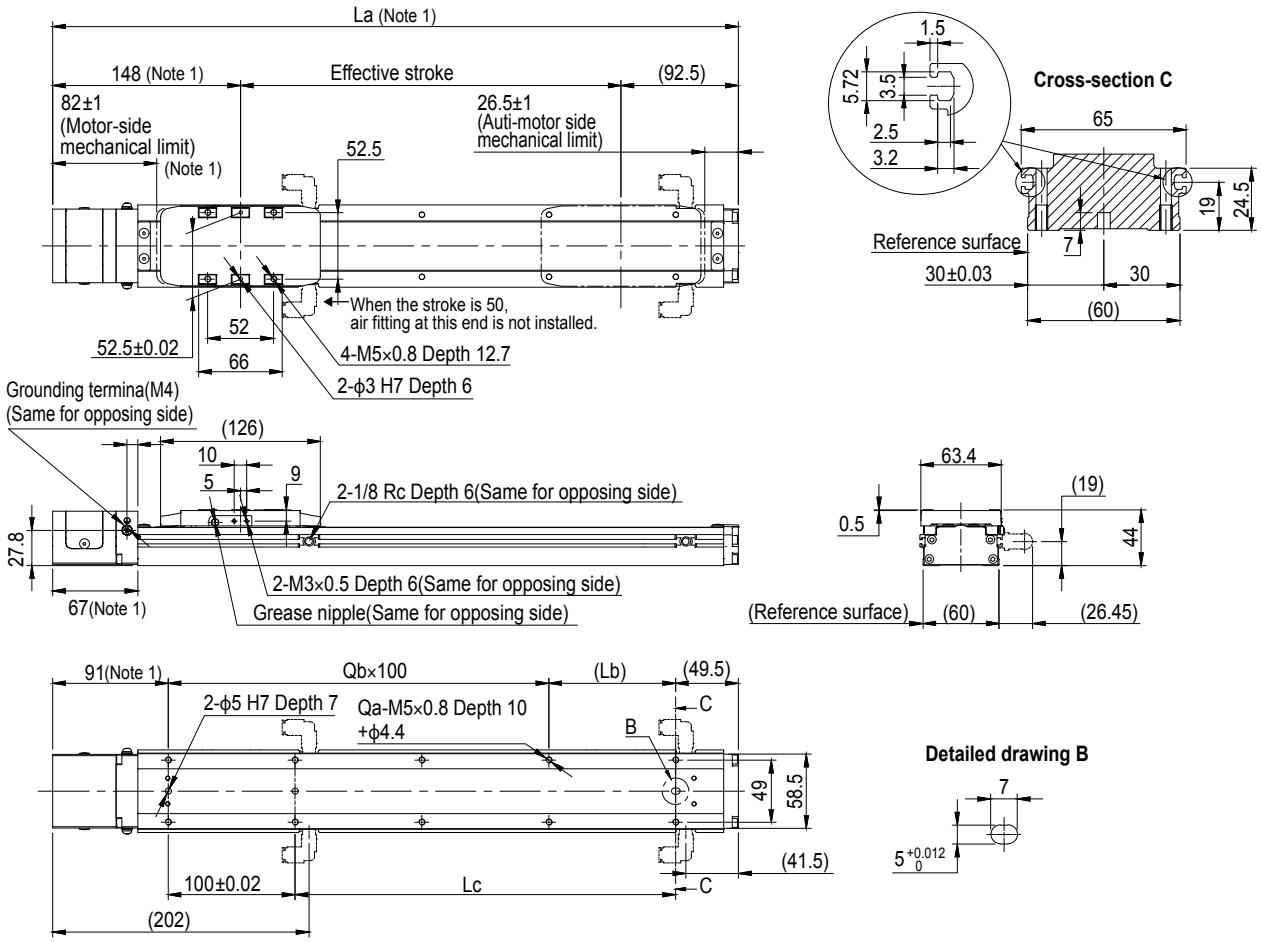
Specification	Flange size	□ 42

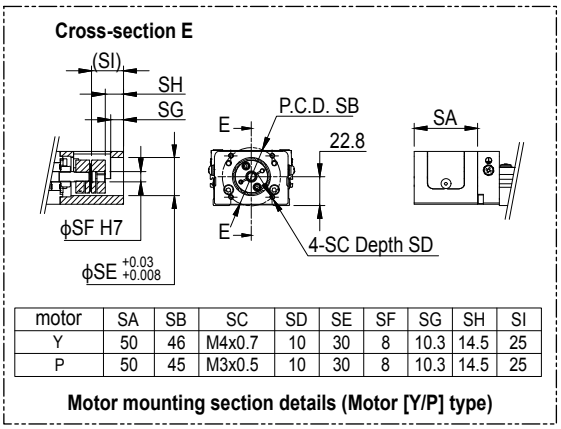
Motor specification	Manufacturer	Model
A	Oriental Motor	AZM46
		ARM46
		RKS54
S	Oriental Motor	AZM48
N	NEMA standard	NEMA17

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.**

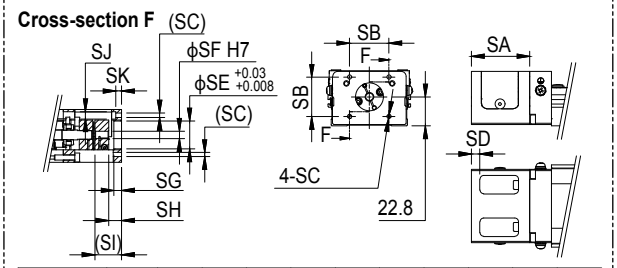
LBFS06 Straight type (S)





motor	SA	SB	SC	SD	SE	SF	SG	SH	SI
Y	50	46	M4x0.7	10	30	8	10.3	14.5	25
P	50	45	M3x0.5	10	30	8	10.3	14.5	25

Motor mounting section details (Motor [Y/P] type)



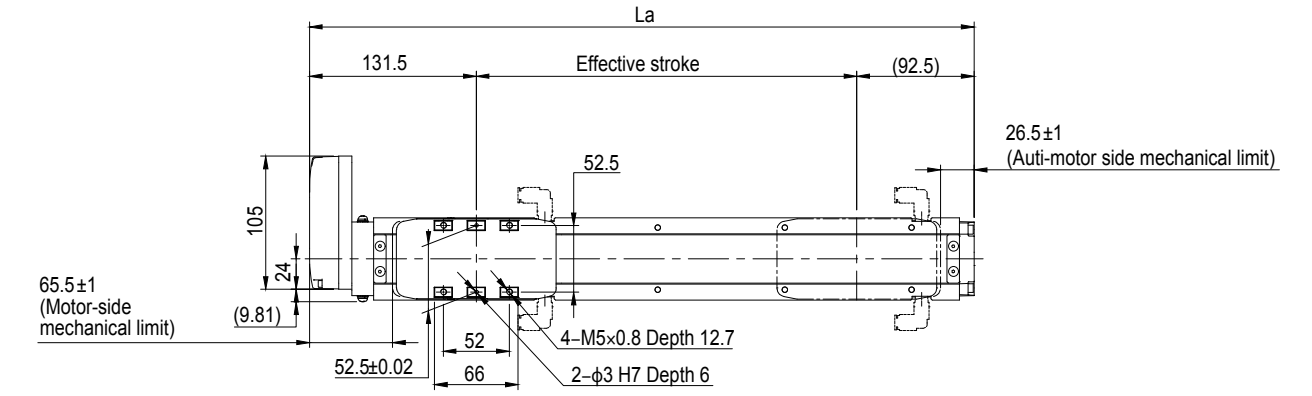
motor	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK
A	46	31	φ3.5	6.5	22	6	6	10.5	20	5.8	4.5
S	50	31	φ3.5	6.5	22	8	6	14.5	24	5.8	6.5
N	50	31	φ3.5	6.5	22	5	6	14.5	24	5.8	6.5

Motor mounting section details (Motor [A/S/N] type)

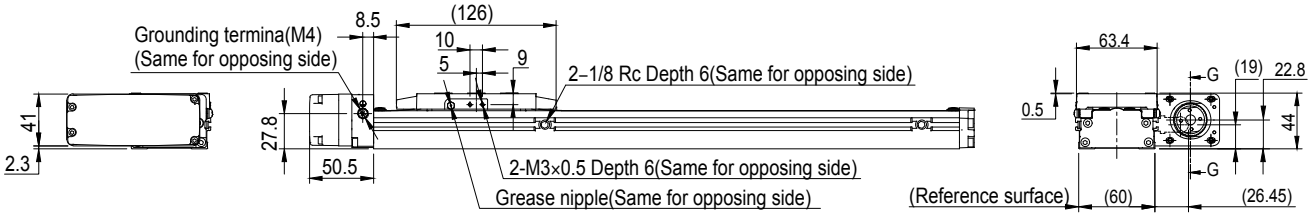
Note 1. Motor specifications: For A, the stated dimensions will be -4mm. Please refer to the specifications table for details.
Note. For the installation through hole,the length under head <<35mm or more >> is recommended for the hex socket head bolts <M4×0.7>.In the installation tap hole, the length under head <<thickness of stand +10mm or less>> is recommended for the hex socket head bolts <M5×0.8> used to install the main unit.
Note. Grease gun nozzle (recommended) Part number: KFU-M3861-00

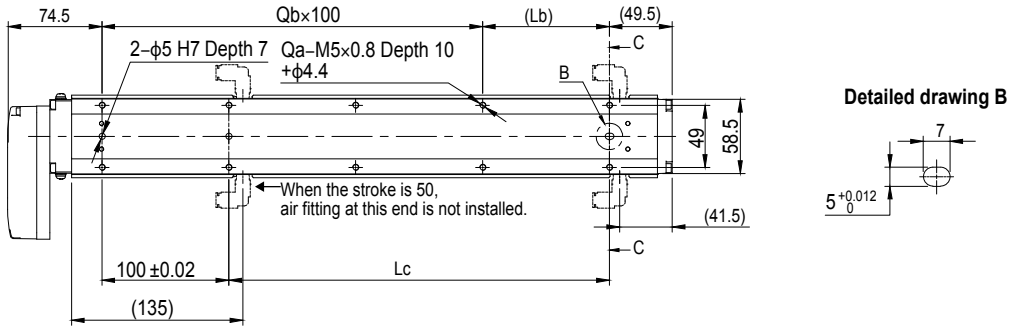
Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
La		290.5	340.5	390.5	440.5	490.5	540.5	590.5	640.5	690.5	740.5	790.5	840.5	890.5	940.5	990.5	1040.5
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		1.61	1.77	1.92	2.08	2.24	2.39	2.55	2.70	2.86	3.02	3.17	3.33	3.48	3.64	3.80	3.96
Maximum speed (mm/sec)	Lead 20	1333												933	733	667	533
	Speed setting	-												70%	55%	50%	40%
	Lead 12	800										680	560	480	400	360	320
	Speed setting	-										85%	70%	60%	50%	45%	40%
	Lead 6	400										340	280	240	200	180	160
	Speed setting	-										85%	70%	60%	50%	45%	40%

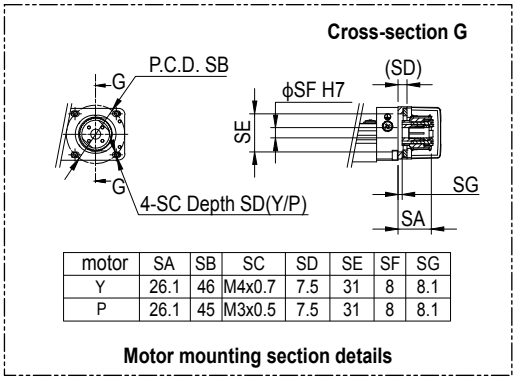
LBFS06 Bending type (R/L)



Right attachment

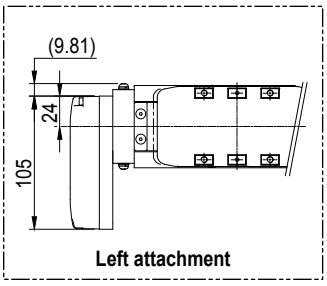




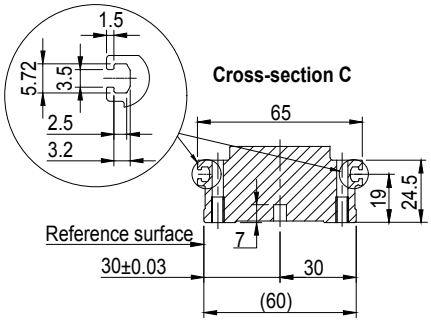


motor	SA	SB	SC	SD	SE	SF	SG
Y	26.1	46	M4x0.7	7.5	31	8	8.1
P	26.1	45	M3x0.5	7.5	31	8	8.1

Motor mounting section details



Left attachment



Note. For special parts for motor installation, install and adjust on your side.Refer to your motor manual for tuning or adjustment.
Note. For the installation through hole,the length under head <<35mm or more >> is recommended for the hex socket head bolts <M4×0.7>. In the installation tap hole, the length under head <<thickness of stand +10mm or less>> is recommended for the hex socket head bolts <M5×0.8> 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	550	600	650	700	750	800
La		274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
Weight (kg)		1.90	2.04	2.18	2.32	2.46	2.60	2.74	2.88	3.02	3.16	3.30	3.44	3.58	3.72	3.86	4.00
Maximum speed (mm/sec)	Lead 20	1333												933	733	667	533
	Speed setting	-												70%	55%	50%	40%
	Lead 12	800										680	560	480	400	360	320
	Speed setting	-										85%	70%	60%	50%	45%	40%
	Lead 6	400										340	280	240	200	180	160
	Speed setting	-										85%	70%	60%	50%	45%	40%