LBFS07

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

Low-profile type

Ordering method

LBFS07 – [ ] [ ] [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 10: 10mm 5: 5 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 1050 (50 mm pitch)

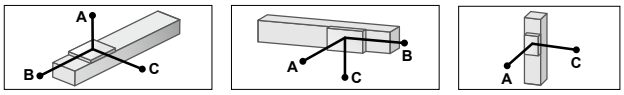
[Caution]
This system is provided as mechanical actuator unit and not including any adopters or electric components. Motor, driver and other components required for installation are the user's responsibility.
Refer to user's manual for installation details. Refer to your motor manual for tuning or adjustment. 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 12 (C7 class)		
Stroke		50 mm to 1050 mm (50 mm pitch)		
Maximum speed Note 2		1333 mm/sec	666 mm/sec	333 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload Note 3	Horizontal	25 kg	45 kg	85 kg
	Vertical	4 kg	10 kg	16 kg
Rated Thrust Note 3		84 N	169 N	339 N
Dinamic loading moment (MY,MP,MR)		50.4 / 50.4 / 79.4		
Maximum dimensions of cross section of main unit		W 75 mm × H 48 mm		
Overall length	Straight	ST + 241 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 (A) mm, the ball screw may resonate. (Critical speed) (A):650 mm for lead 20; 550 mm for lead 6, and 12.
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



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Horizontal installation (Unit: mm)

	A	B	C
10kg	1330	239	290
18kg	955	129	166
25kg	800	89	118

Wall installation (Unit: mm)

	A	B	C
10kg	290	239	1330
18kg	166	129	955
25kg	118	89	800

Vertical installation (Unit: mm)

	A	C
2kg	1275	1275
4kg	653	653

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Horizontal installation (Unit: mm)

	A	B	C
15kg	1199	169	228
30kg	561	73	98
45kg	339	41	55

Wall installation (Unit: mm)

	A	B	C
15kg	228	169	1199
30kg	98	73	561
45kg	55	41	339

Vertical installation (Unit: mm)

	A	C
5kg	571	571
10kg	287	287

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Horizontal installation (Unit: mm)

	A	B	C
30kg	1187	86	129
60kg	565	31	47
85kg	344	15	23

Wall installation (Unit: mm)

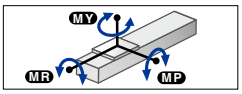
	A	B	C
30kg	129	86	1187
60kg	47	31	565
85kg	35	23	485

Vertical installation (Unit: mm)

	A	C
8kg	412	412
16kg	206	206

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
130	130	278

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

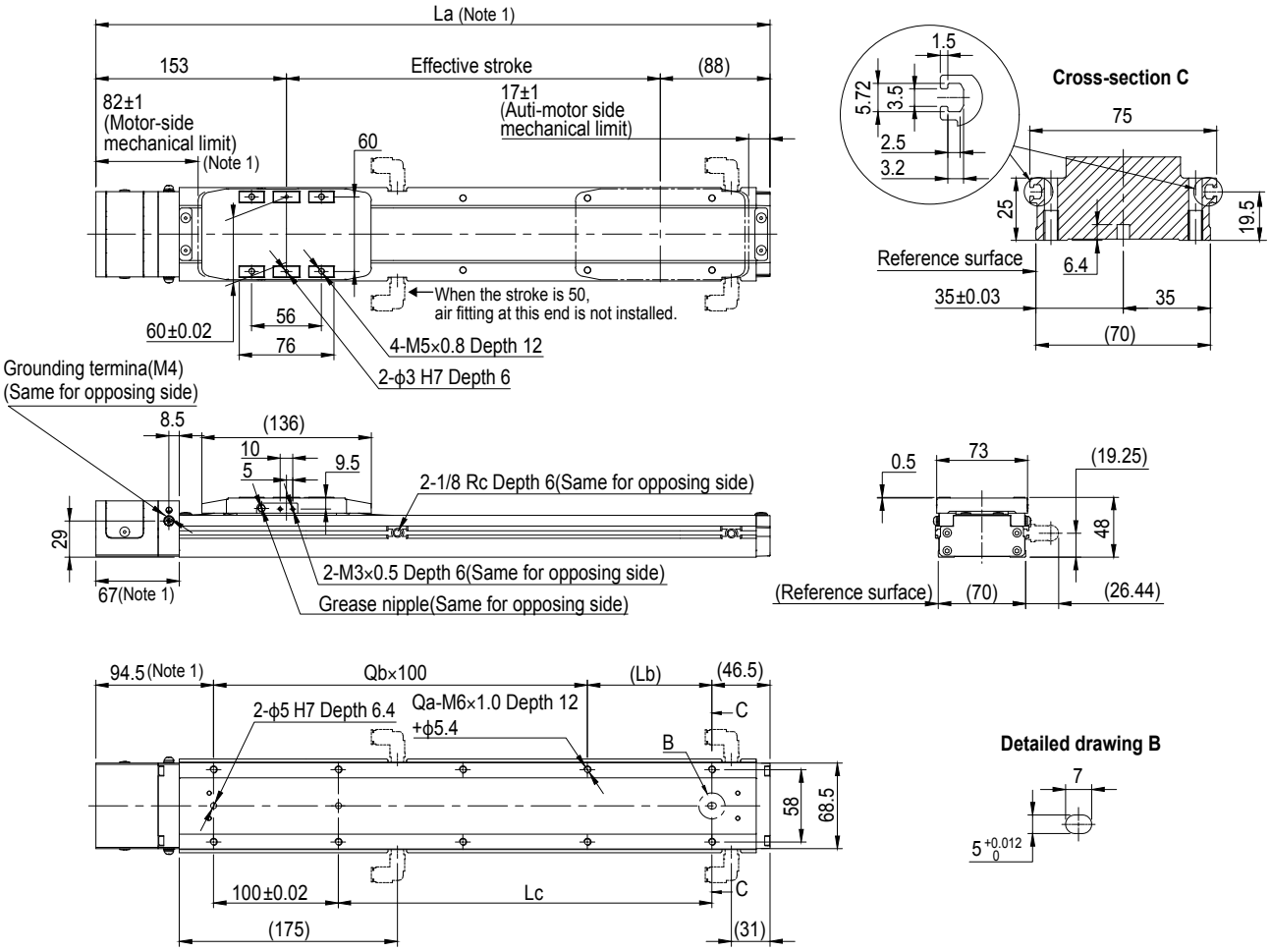
Specification		
	Flange size	□ 42

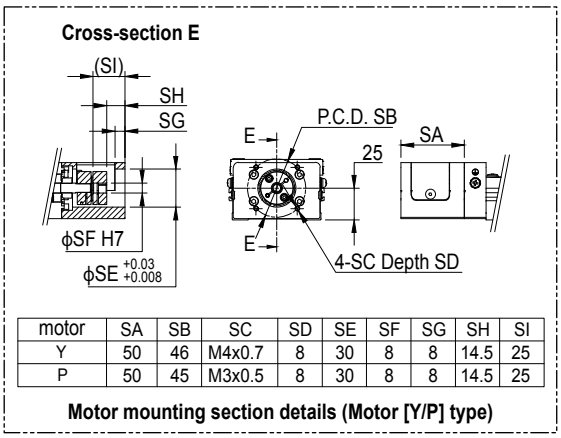
Motor specification	Manufacturer	Model
A	Oriental Motor	AZM46
		ARM46
		RKS54
S	Oriental Motor	AZM48
N	NEMA standard	NEMA17

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.**

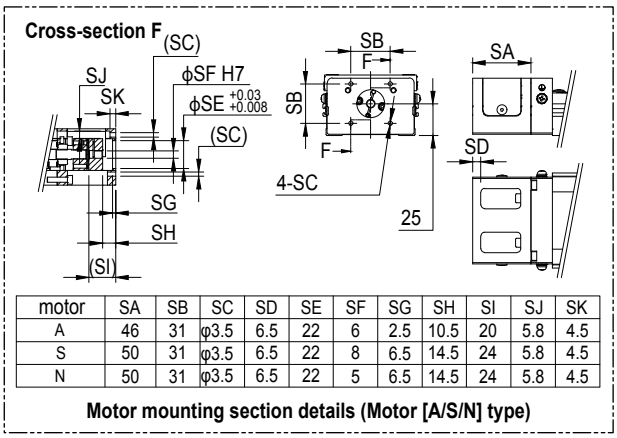
LBFS07 Straight type (S)





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

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



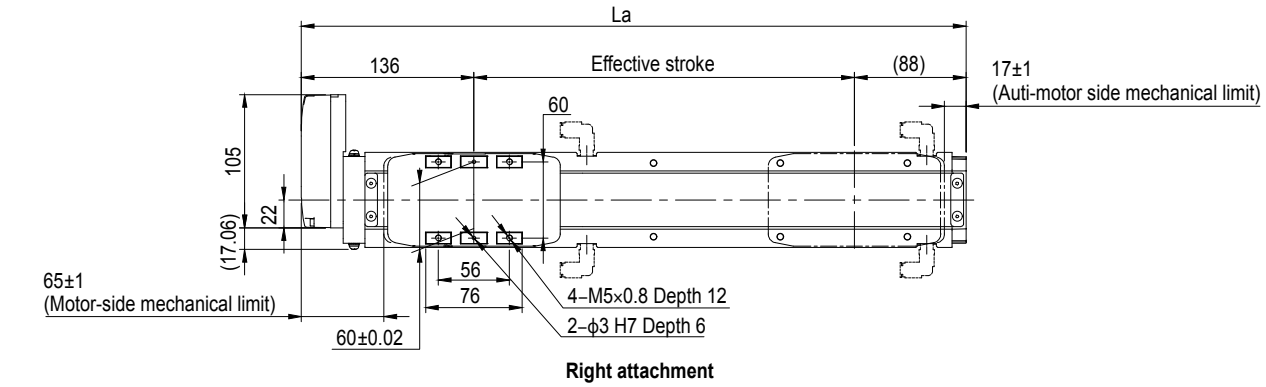
motor	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK
A	46	31	ϕ3.5	6.5	22	6	2.5	10.5	20	5.8	4.5
S	50	31	ϕ3.5	6.5	22	8	6.5	14.5	24	5.8	4.5
N	50	31	ϕ3.5	6.5	22	5	6.5	14.5	24	5.8	4.5

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

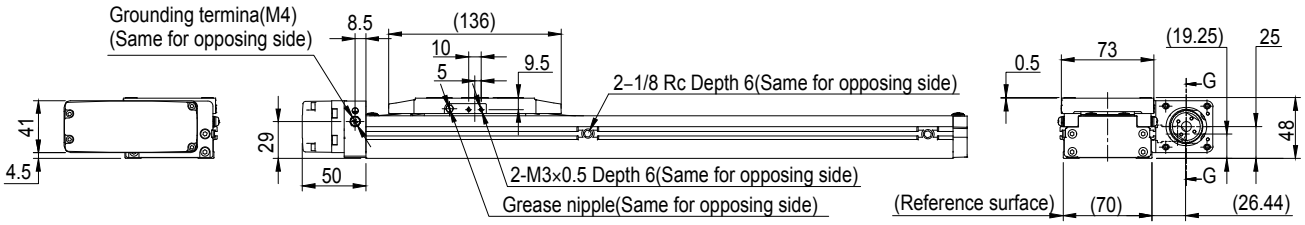
Note 1. Motor specifications: For A, the stated dimensions will be -4mm. Please refer to the specifications table for details.
Note. For the installation through hole,the length under head <<35mm or more >> is recommended for the hex socket head bolts <M5×0.8>. In the installation tap hole, the length under head <<thickness of stand +12mm or less>> is recommended for the hex socket head bolts <M6×1.0> used to install the main unit.
Note. Grease gun nozzle (recommended) Part number: KFU-M3861-00

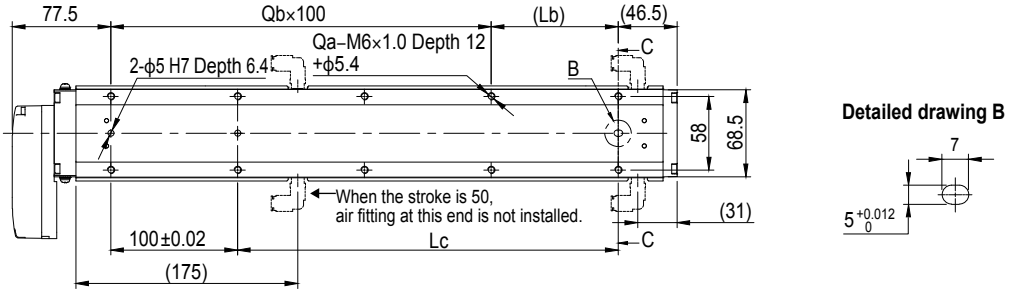
Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
La		291	341	391	441	491	541	591	641	691	741	791	841	891	941	991	1041	1091	1141	1191	1241	1291
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
Weight (kg)		2.26	2.44	2.62	2.80	2.98	3.16	3.34	3.52	3.70	3.88	4.06	4.24	4.42	4.60	4.78	4.96	5.14	5.32	5.50	5.68	5.86
Maximum speed (mm/sec)	Lead 20	1333										1262	1064	932	800	664	600	532	466	400	400	332
	Speed setting	-										95%	80%	70%	60%	50%	45%	40%	35%	30%	30%	25%
	Lead 10	666										632	532	466	400	332	300	266	232	200	200	166
	Speed setting	-										95%	80%	70%	60%	50%	45%	40%	35%	30%	30%	25%
	Lead 5	333										316	266	233	200	166	150	133	116	100	100	83
	Speed setting	-										95%	80%	70%	60%	50%	45%	40%	35%	30%	30%	25%

LBFS07 Bending type (R/L)

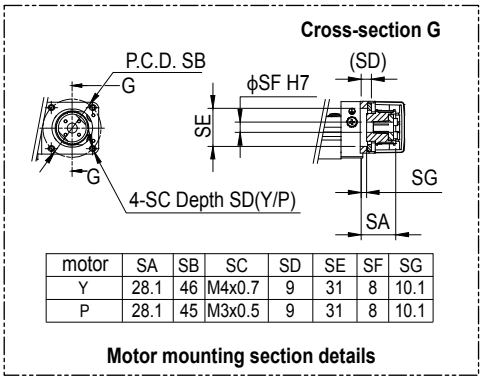


Right attachment



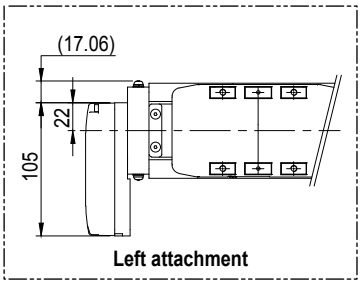


Detailed drawing B

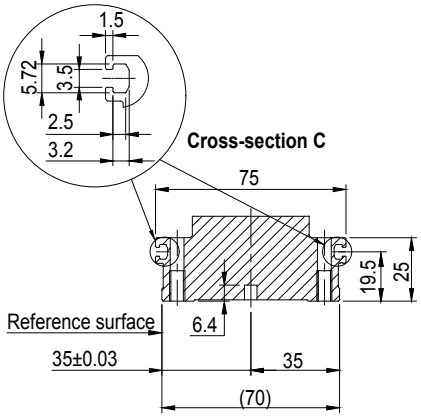


motor	SA	SB	SC	SD	SE	SF	SG
Y	28.1	46	M4x0.7	9	31	8	10.1
P	28.1	45	M3x0.5	9	31	8	10.1

Motor mounting section details



Left attachment



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Effective stroke		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
La		274	324	374	424	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174	1224	1274
Lb		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
Lc		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
Qa		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
Qb		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11
Weight (kg)		2.03	2.22	2.41	2.60	2.79	2.98	3.17	3.36	3.55	3.74	3.93	4.12	4.31	4.50	4.69	4.88	5.07	5.26	5.45	5.64	5.83
Maximum speed (mm/sec)	Lead 20	1333										1262	1064	932	800	664	600	532	466	400	400	332
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