

# LBAR04

Basic model

Motor-less Single Axis Actuator

Rod type



## Ordering method

### LBAR04

<b>Model</b>	<b>Lead</b>	<b>Shape</b>	<b>Motor specification</b>	<b>Stroke</b>
	12: 12 mm 6: 6 mm	S: Straight A: Bending	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 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

<b>Applicable motor</b>	50 W	
<b>Repeatability</b> <sup>Note 1</sup>	+/-0.01 mm	
<b>Deceleration mechanism</b>	Shifting position ball screw φ 10 (C7 class)	
<b>Stroke</b>	50 mm to 500 mm (50 mm pitch)	
<b>Maximum speed</b> <sup>Note 2 Note 3</sup>	720 mm/sec	360 mm/sec
<b>Ball screw lead</b>	12 mm	6 mm
<b>Maximum payload</b> <sup>Note 3</sup>	<b>Horizontal</b>	15 kg
	<b>Vertical</b>	3 kg
<b>Max. pressing force</b> <sup>Note 3</sup>		83 N
		167 N
<b>Rotating backlash</b>	+/-0 °	
<b>Maximum dimensions of cross section of main unit</b>	W 44 mm × H 46 mm	
<b>Overall length</b>	<b>Straight</b>	ST + 263 mm
	<b>Bending</b>	ST + 245 mm
<b>Using ambient temperature and humidity</b>	0 to 40 °C, 35 to 80 %RH (non-condensing)	

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 300 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 described specifications may not be satisfied depending on the installed motor.

Note. See P.135 for acceleration/deceleration and inertia moment.

## Applicable motor

### Applicable servo motor

<b>Specification</b>	<b>Flange size</b>	□ 40
	<b>Wattage</b>	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
	Keyence Corp.	SV-□005
		SV2-□005
	Mitsubishi Electric Corp.	HF-KP053
		HG-KR053
		HK-KT053
	Omron Electronics	R88M-K05030
		R88M-1M05030
	Panasonic Corp.	MHMF5A
	Sanyo Denki	R2 □ A04005
	Tamagawa Seiki	TSM3102
	Delta Electronics	ECMA-C1040F
	Fanuc Corp.	βiS0.2/5000
Siemens	1FK2102-0AG	
Schneider	BCH2MBA53	
Beckhoff	AM3011B*	
Allen-Bradley	TLY-A120*	
P	Panasonic Corp.	MSMD5A MSMF5A

### Applicable stepping motor

<b>Specification</b>	<b>Flange size</b>	□ 42
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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.

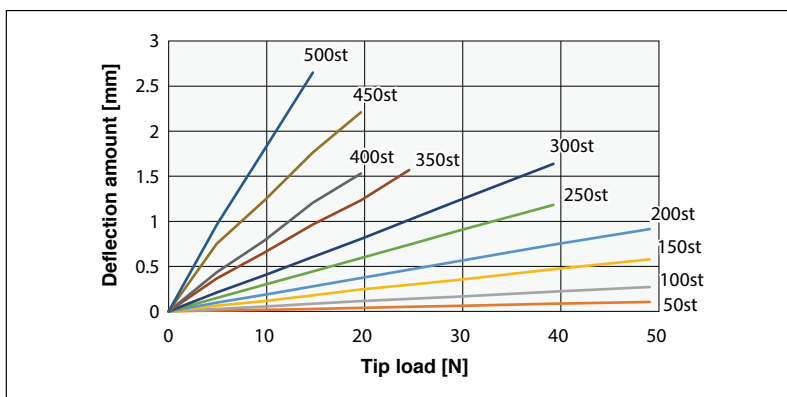
Access the website below.



▶ The cycle time simulation can be performed easily from our member site. For details, see P.16.

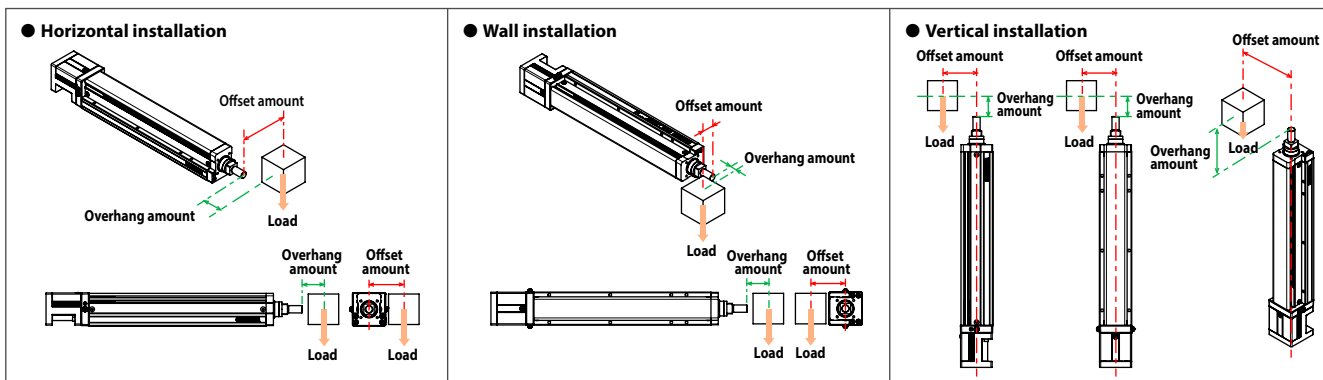
■ Rod deflection amount (reference value)

For the deflection amount per stroke, see the graph below.

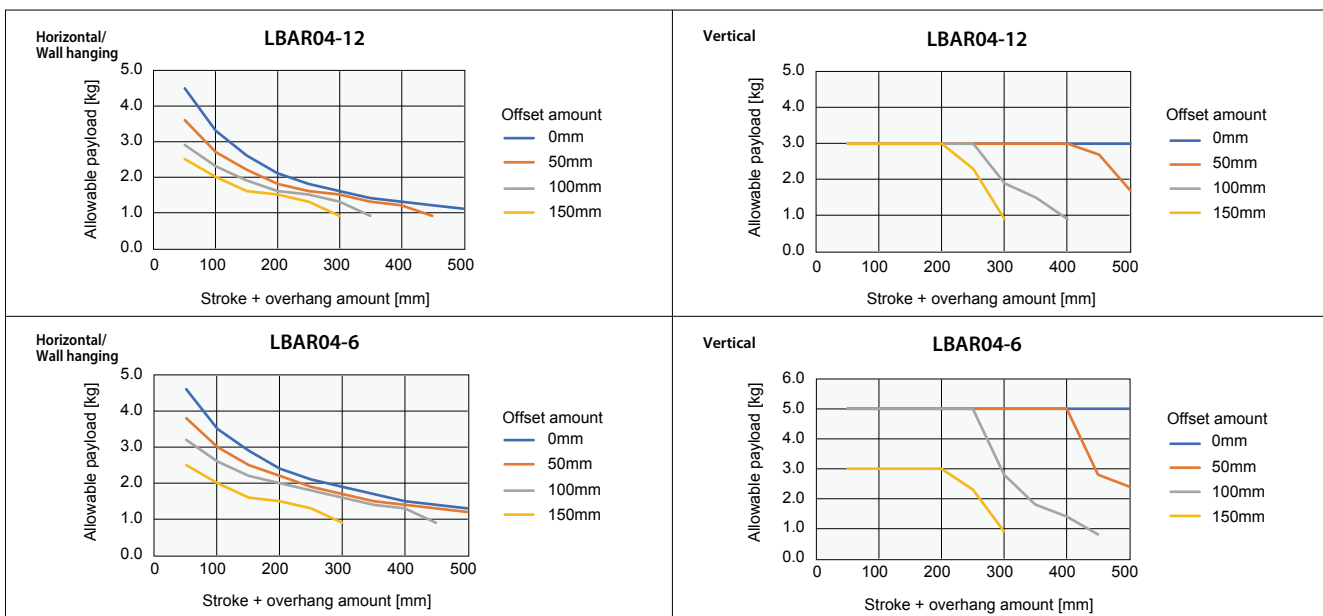


■ Allowable payload

For the allowable payload per offset amount, see the graph below.

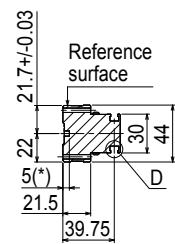
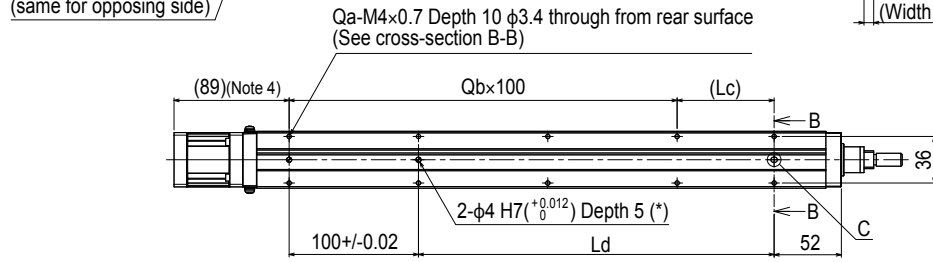
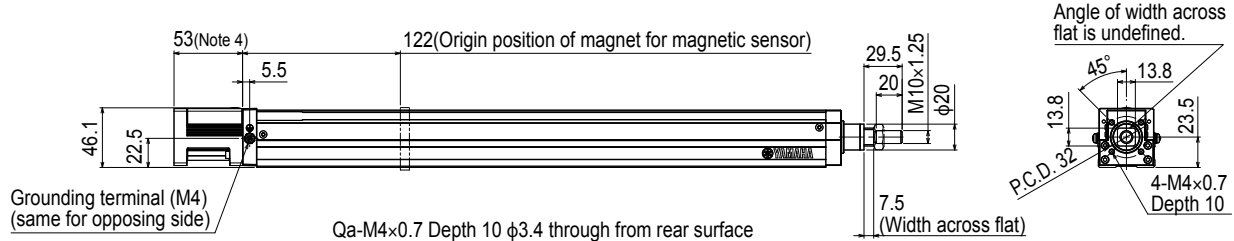
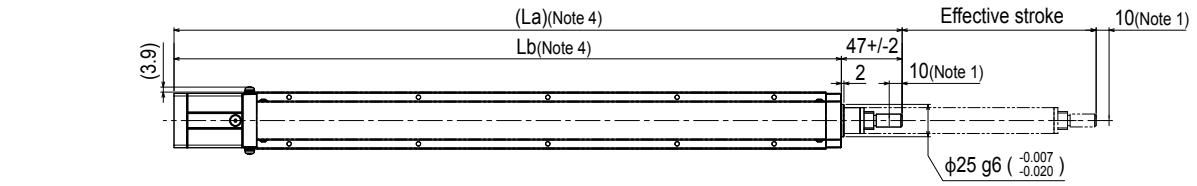


Note 1. When transferring an object with a weight exceeding the following, use an external support guide. Install the support guide flexibly so that no unnecessary load is applied to the rod.  
 Note 2. The values are when the service life of the guide is 5000 km.

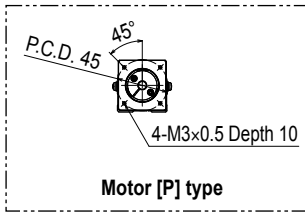


Features  
 Motorless  
 Side type  
 Basic model  
 LBAS  
 Motorless  
 Side type  
 Advanced model  
 LGXS  
 Motorless  
 Rod type  
 Basic model  
 LBAR  
 With motor  
 Side type  
 Basic model  
 ABAS  
 With motor  
 Side type  
 Advanced model  
 AGXS  
 With motor  
 Rod type  
 Basic model  
 ABAR  
 Acceleration/Deceleration  
 Inertia Moment  
 Option  
 Single  
 axis  
 positioner  
 EP-01

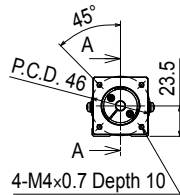
LBAR04 Straight type (S)



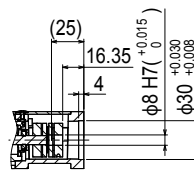
Cross-section B-B



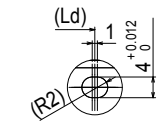
Motor [P] type



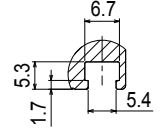
Motor [Y] type



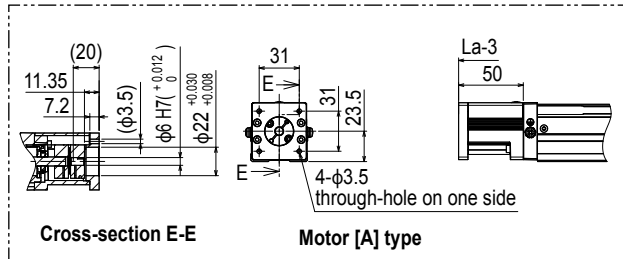
Cross-section A-A



Detailed drawing C

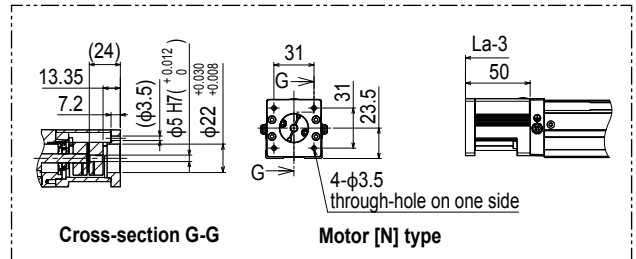


Detailed drawing D



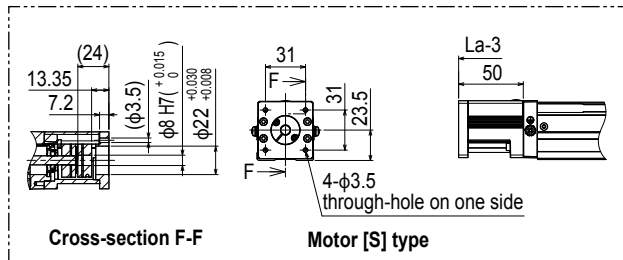
Cross-section E-E

Motor [A] type



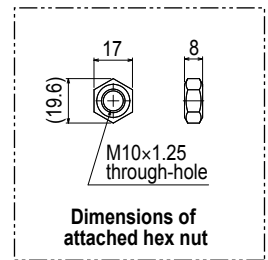
Cross-section G-G

Motor [N] type



Cross-section F-F

Motor [S] type



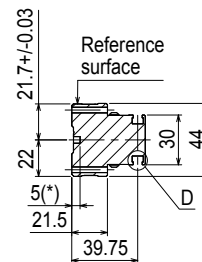
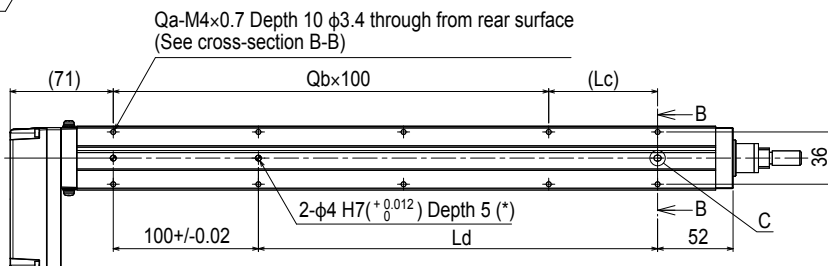
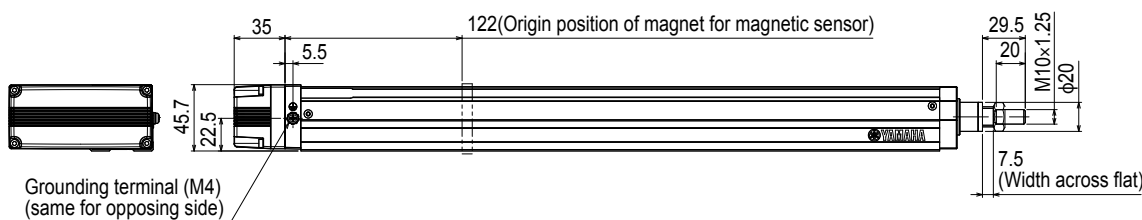
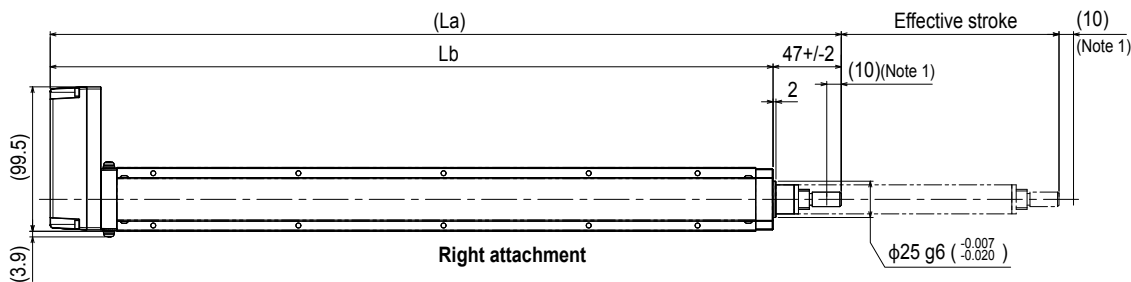
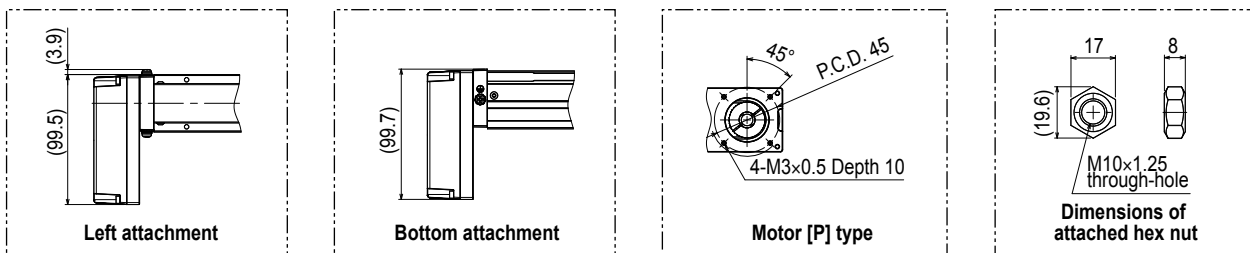
Dimensions of attached hex nut

- Note 1. Stop positions are determined by the mechanical stoppers at both ends.
- Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
- Note 3. For the installation through hole, the length under head << 30 mm or more >> is recommended for the hex socket head bolts <M3 × 0.5>. In the installation tap hole, the length under head << thickness of stand + 10 mm or less >> is recommended for the hex socket head bolts <M4 × 0.7> used to install the main unit.
- Note 4. For the motor specifications A, S, and N, the dimensions are that those stated in the table << 3 mm >>.
- Note 5. Grease gun nozzle (recommended) (see P.143 for detail)

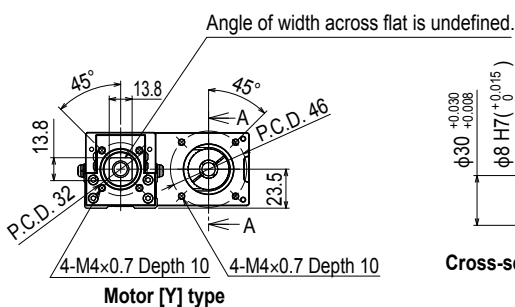
Part number: KFU-M3861-00

Effective stroke	50	100	150	200	250	300	350	400	450	500	
La	313	363	413	463	513	563	613	663	713	763	
Lb	266	316	366	416	466	516	566	616	666	716	
Lc	25	75	25	75	25	75	25	75	25	75	
Ld	25	75	125	175	225	275	325	375	425	475	
Qa	6	6	8	8	10	10	12	12	14	14	
Qb	1	1	2	2	3	3	4	4	5	5	
Weight (kg)	0.9	1	1.2	1.4	1.6	1.7	1.9	2.1	2.3	2.5	
Maximum speed (mm/sec)	Lead 12						648	504	396	324	
	Lead 6						324	252	198	162	
Speed setting						-	90%	70%	55%	45%	

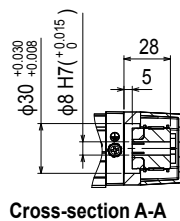
LBAR04 Bending type (A)



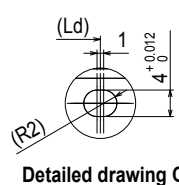
Cross-section B-B



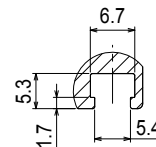
Motor [Y] type



Cross-section A-A



Detailed drawing C



Detailed drawing D

Note 1. Stop positions are determined by the mechanical stoppers at both ends.  
 Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.  
 Note 3. For the installation through hole, the length under head << 30 mm or more >> is recommended for the hex socket head bolts <M3 x 0.5>. In the installation tap hole, the length under head << thickness of stand +10 mm or less >> is recommended for the hex socket head bolts <M4 x 0.7> used to install the main unit.  
 Note 4. Grease gun nozzle (recommended) (see P.143 for detail)  
 Part number: KFU-M3861-00

Effective stroke	50	100	150	200	250	300	350	400	450	500	
La	295	345	395	445	495	545	595	645	695	745	
Lb	248	298	348	398	448	498	548	598	648	698	
Lc	25	75	25	75	25	75	25	75	25	75	
Ld	25	75	125	175	225	275	325	375	425	475	
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	1.1	1.3	1.5	1.7	1.9	2	2.2	2.4	2.6	
Maximum speed (mm/sec)	Lead 12	720					648				
	Lead 6	360					324				
	Speed setting	-					90%				

Features

LBAS

LGXS

LBAR

ABAS

AGXS

ABAR

Acceleration/Deceleration

Inertia Moment

Option

Single axis sensor pushdown

EP-01