LBAR04

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

Rod type



Ordering method

LBAR04 -				-	
Model	Lead	Shape	Motor specification		Stroke
	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

Applicable motor		50 W	
Repeatability Note 1		+/-0.01 mm	
Deceleration mechanism		Shifting position ball screw ϕ 10 (C7 class)	
Stroke		50 mm to 500 mm (50 mm pitch)	
Maximum speed Note 2 Note 3		720 mm/sec	360 mm/sec
Ball screw lead		12 mm	6 mm
Maximum payload Note 3	**Horizontal**	15 kg	25 kg
	Vertical	3 kg	5 kg
Max. pressing force Note 3		83 N	167 N
Rotating backlash		+/-0 °	
Maximum dimensions of cross section of main unit		W 44 mm × H 46 mm	
Overall length	**Straight**	ST + 263 mm	
	Bending	ST + 245 mm	
Using ambient temperature and humidity		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

Specification		
	Flange size	□ 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
	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
		1FL6022-2AF
	Schneider	BCH2MBA53
	Beckhoff	AM3011B*
	Allen-Bradley	TLY-A120*
P	Panasonic Corp.	MSMD5A
		MSMF5A

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

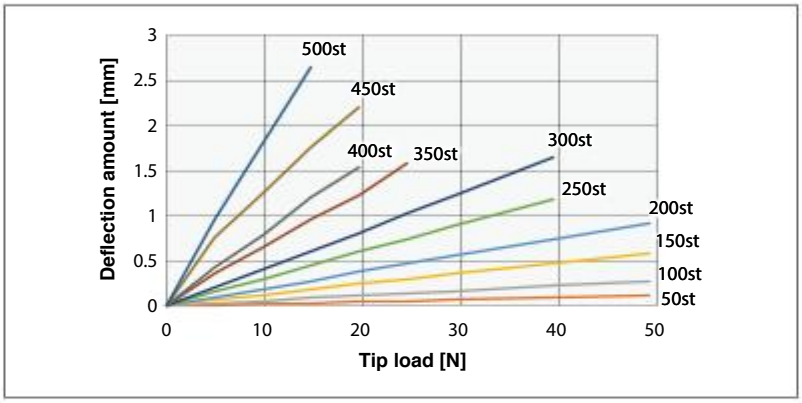
Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A, S, and N, the parts dedicated for bending cannot be used.

Access the website below.

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

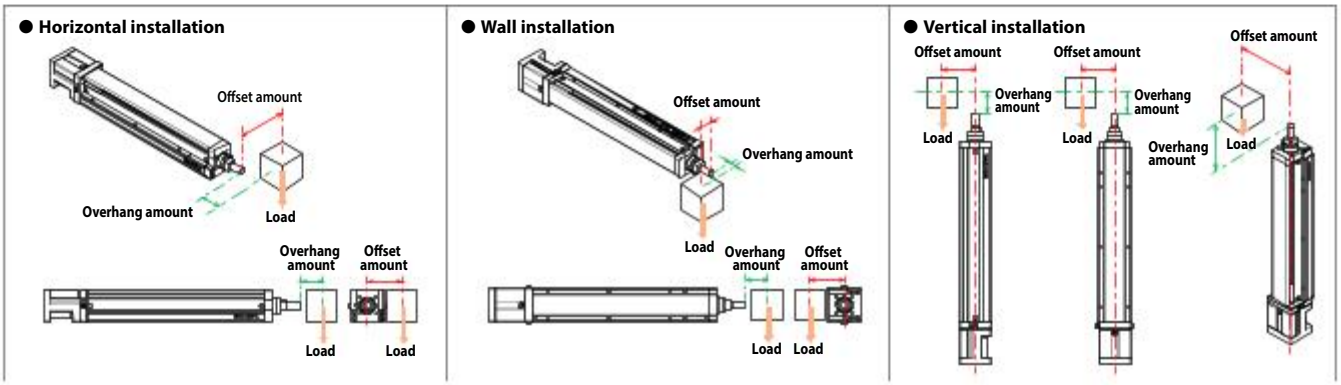
Rod deflection amount (reference value)

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

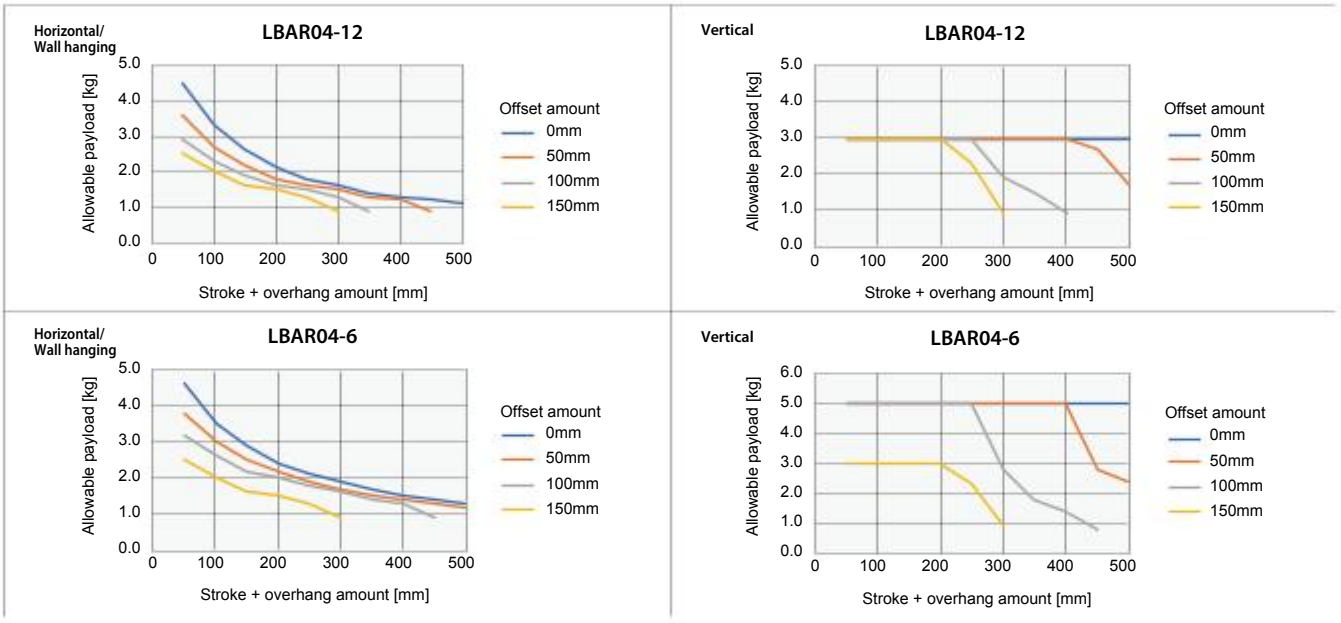


Allowable payload

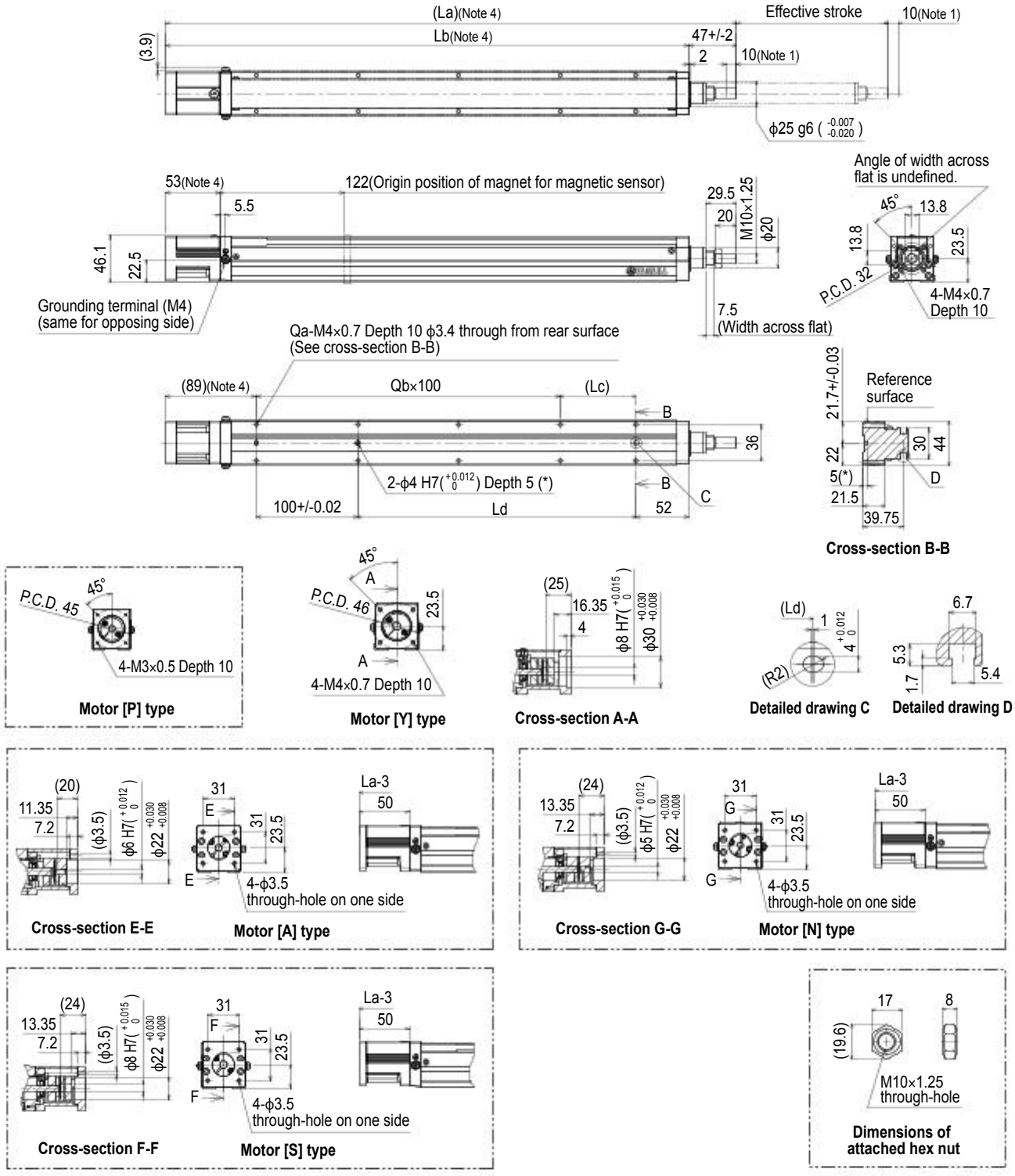
For the allowable payload per offset amount, see the graph below.



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.



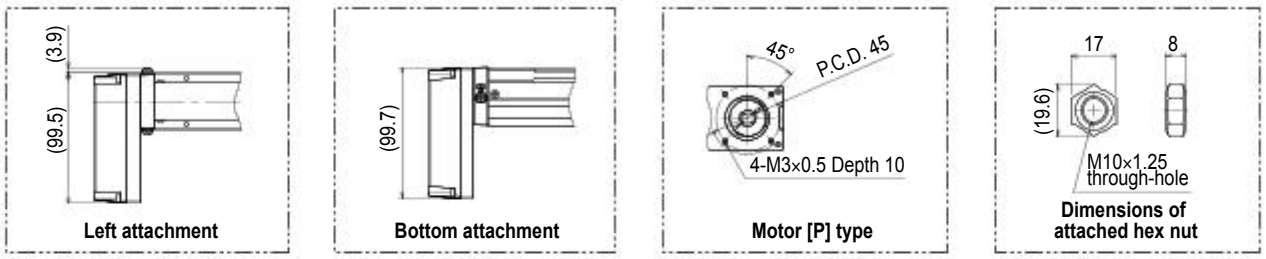
LBAR04 Straight type (S)

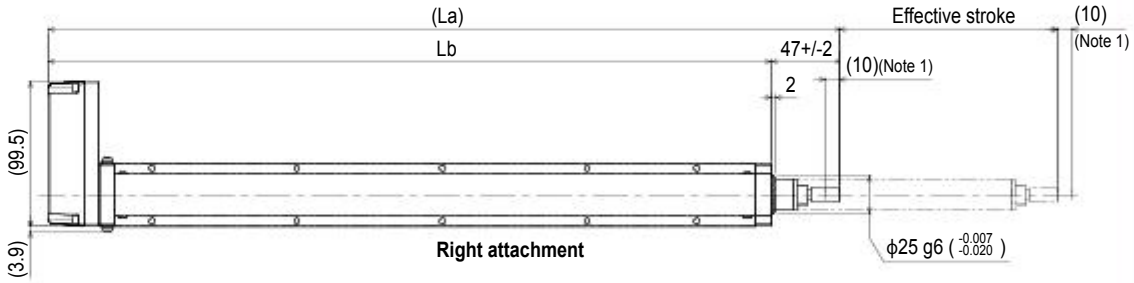


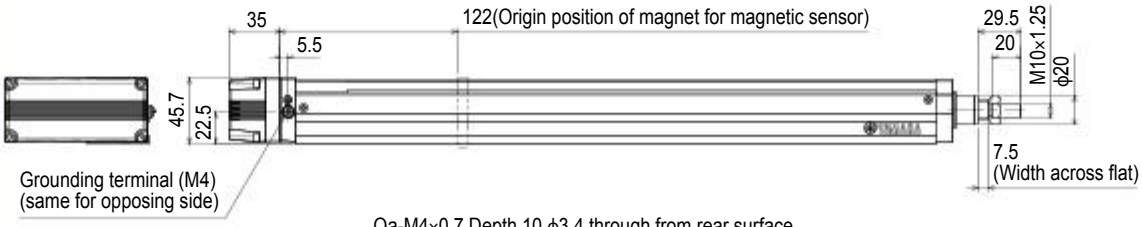
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or 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

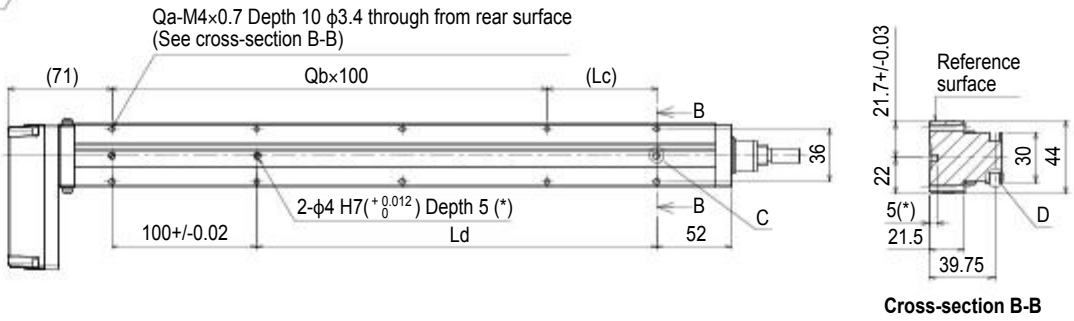
Effective stroke		50	100	150	200	250	300	350	400	450	500
La		313	363	413	463	513	563	613	663	713	763
Lb		266	316	366	416	466	516	566	616	666	716
Lc		25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475
Qa		6	6	8	8	10	10	12	12	14	14
Qb		1	1	2	2	3	3	4	4	5	5
Weight (kg)		0.9	1	1.2	1.4	1.6	1.7	1.9	2.1	2.3	2.5
Maximum speed (mm/sec)	Lead 12	720						648	504	396	324
	Lead 6	360						324	252	198	162
	Speed setting	–						90%	70%	55%	45%

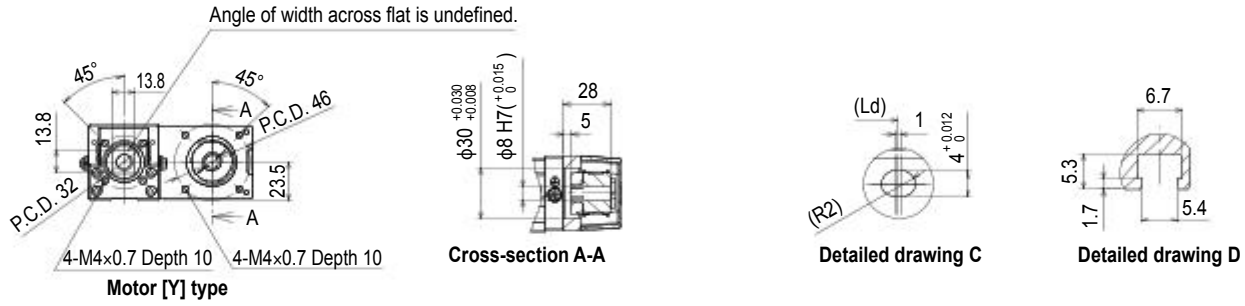
LBAR04 Bending type (A)









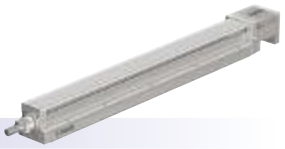


Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or 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. 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	504	396	324
	Lead 6	360						324	252	198	162
	Speed setting	–						90%	70%	55%	45%

LBAR05

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



Ordering method

LBAR05 – [ ] – [ ] – [ ] – [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 10: 10 mm 5: 5 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 600 (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		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 12 (C7 class)		
Stroke		50 mm to 600 mm (50 mm pitch)		
Maximum speed Note 2 Note 3		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload Note 3	**Horizontal**	15 kg	25 kg	50 kg
	Vertical	4 kg	8 kg	16 kg
Max. pressing force Note 3		100 N	200 N	400 N
Rotating backlash		+/-0 °		
Maximum dimensions of cross section of main unit		W 54 mm × H 54.7 mm		
Overall length	**Straight**	ST + 269.5 mm		
	Bending	ST + 249 mm		
Using ambient temperature and humidity		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 350 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.136 for acceleration/deceleration and inertia moment.

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
	Keyence Corp.	SV- □ 010
		SV2- □ 010
	Mitsubishi Electric Corp.	HF-KP13
		HG-KR13
		HK-KT13
	Omron Electronics	R88M-K10030
		R88M-1M10030
	Panasonic Corp.	MHMF01
	Sanyo Denki	R2 □ A04010
	Tamagawa Seiki	TSM3104
	Delta Electronics	ECMA-C10401
	Fanuc Corp.	βiS0.3/5000
	Kingservo	KSMA01LI □ S
		KSMA01LG
	Siemens	1FK2102-1AG
		1FL6024-2AF
	Schneider	BCH2MB013
	Beckhoff	AM3012C*
	Allen-Bradley	TLY-A130*
P	Panasonic Corp.	MSMD01
		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

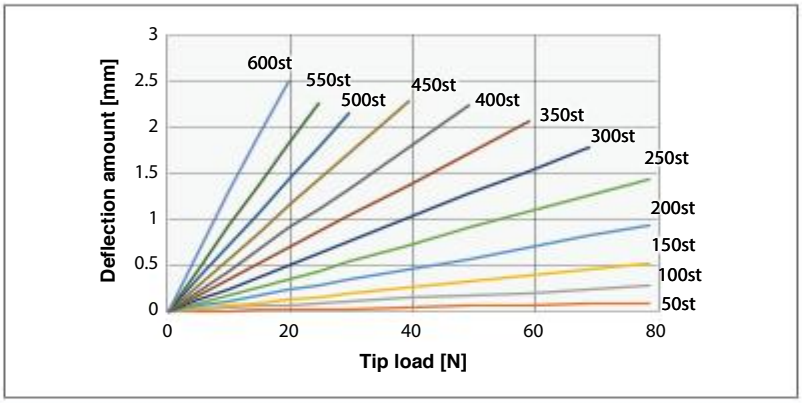
Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A, S, and N, the parts dedicated for bending cannot be used.

Access the website below.

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

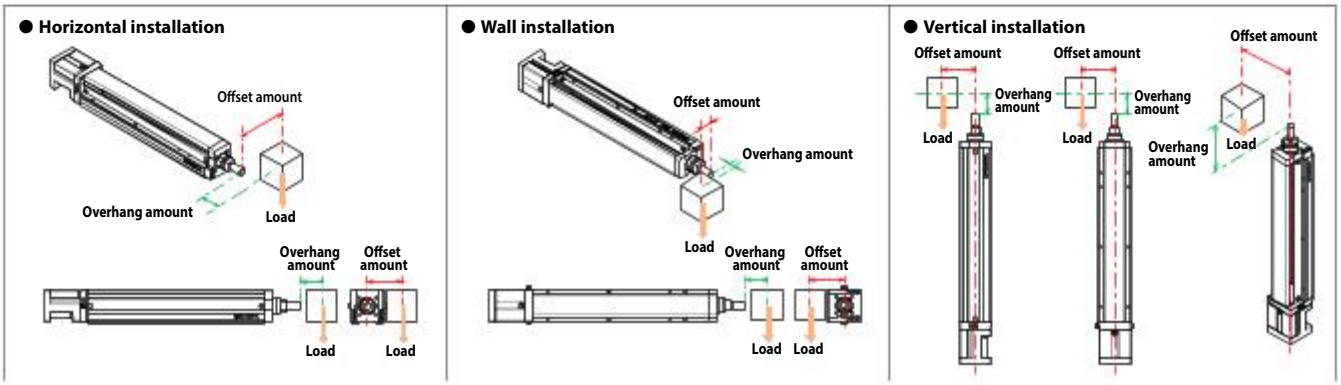
Rod deflection amount (reference value)

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



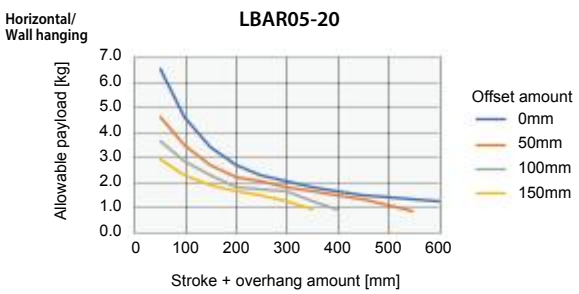
Allowable payload

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

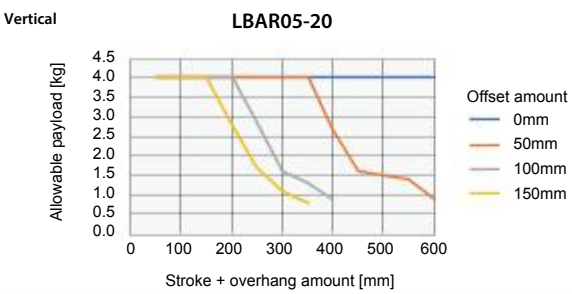


Note 1. When transferring an object with a weight exceeding the following, use an external support guide.
Install the support guide flexibly so that no unnecessary load is applied to the rod.
Note 2. The values are when the service life of the guide is 5000 km.

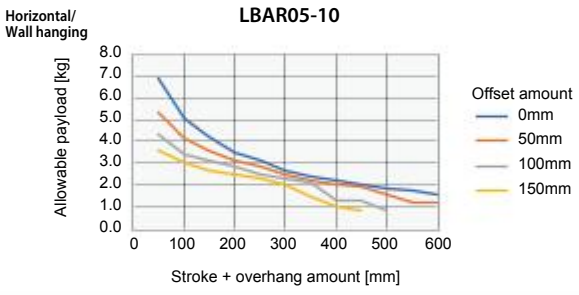
Horizontal/ Wall hanging



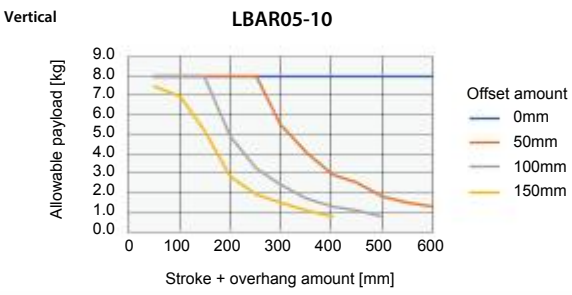
Vertical



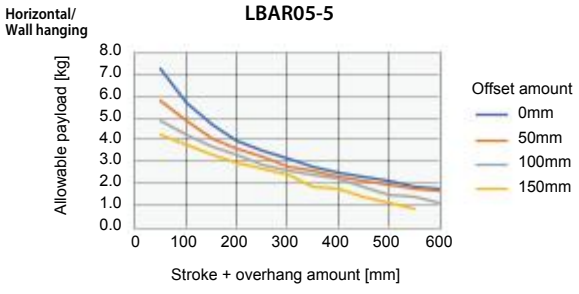
Horizontal/ Wall hanging



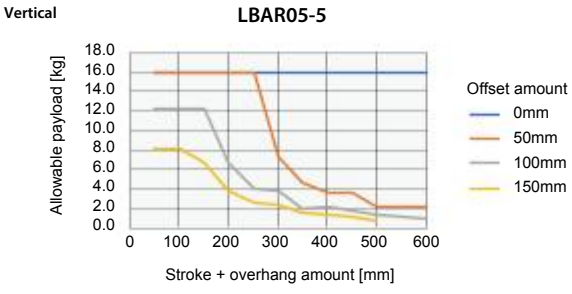
Vertical



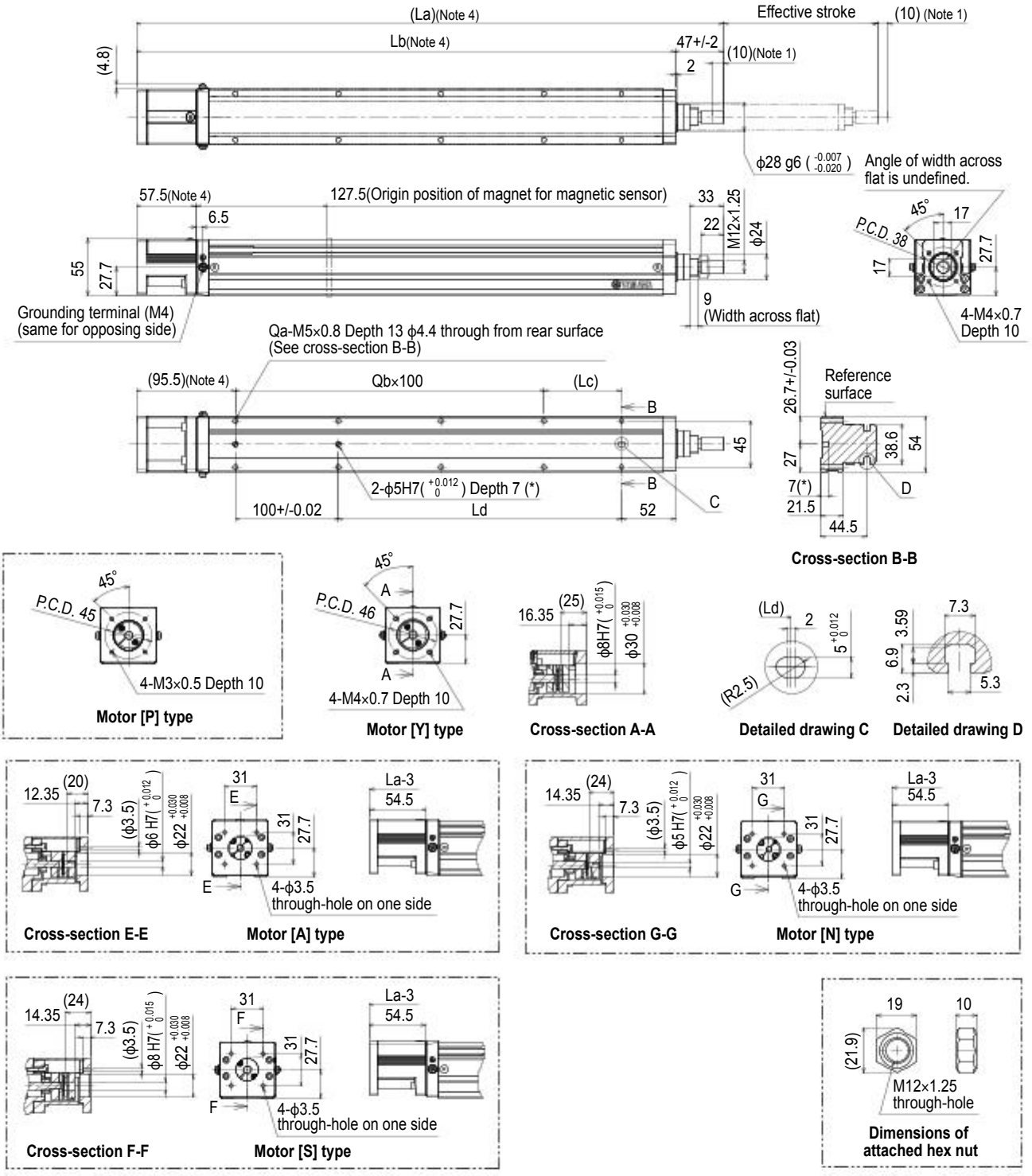
Horizontal/ Wall hanging



Vertical



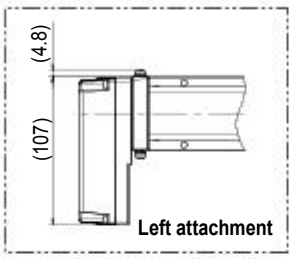
LBAR05 Straight type (S)



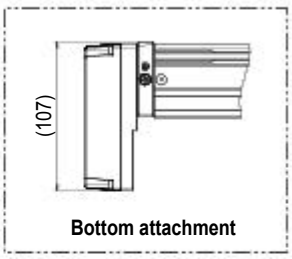
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 30 mm or more>> is recommended for the hex socket head bolts <M4 × 0.7>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M5 × 0.8> 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	550	600
La		319.5	369.5	419.5	469.5	519.5	569.5	619.5	669.5	719.5	769.5	819.5	869.5
Lb		272.5	322.5	372.5	422.5	472.5	522.5	572.5	622.5	672.5	722.5	772.5	822.5
Lc		25	75	25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475	525	575
Qa		6	6	8	8	10	10	12	12	14	14	16	16
Qb		1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg)		1.7	1.9	2	2.2	2.4	2.6	2.7	2.8	2.9	3	3.2	3.4
Maximum speed (mm/sec)	Lead 20	1200							960	780	600	480	420
	Lead 10	600							480	390	300	240	210
	Lead 5	300							240	195	150	120	105
	Speed setting	–							80%	65%	50%	40%	35%

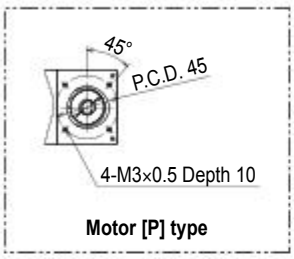
LBAR05 Bending type (A)



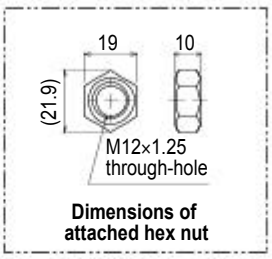
Left attachment



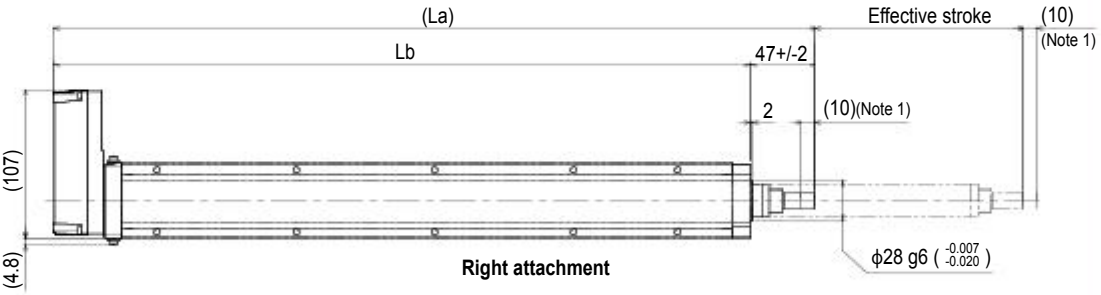
Bottom attachment



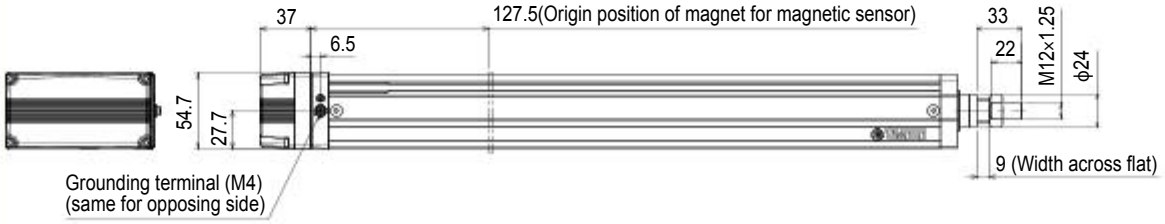
Motor [P] type

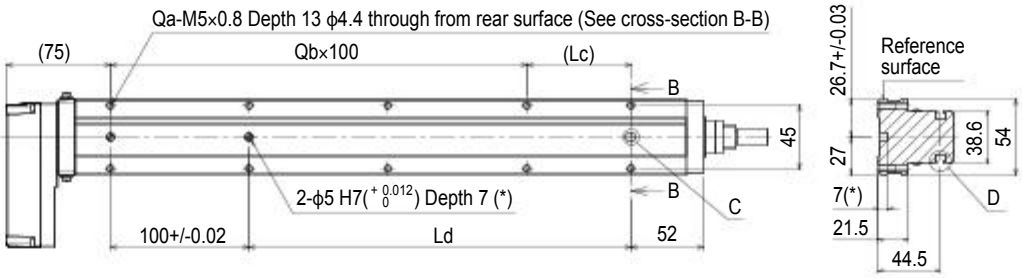


Dimensions of attached hex nut

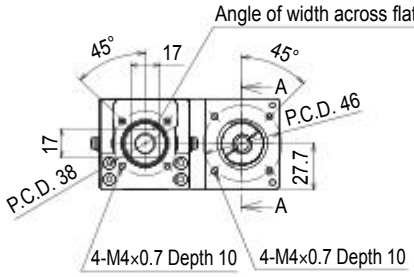


Right attachment

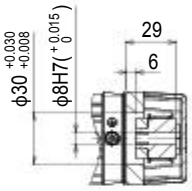




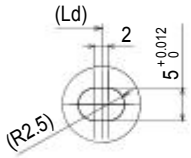
Cross-section B-B



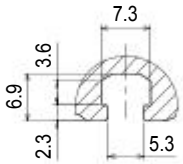
Motor [Y] type



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 <M4 × 0.7>. In the installation tap hole, the length under head <<thickness of stand +10 mm or less>> is recommended for the hex socket head bolts <M5 × 0.8> 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	550	600
La		299	349	399	449	499	549	599	649	699	749	799	849
Lb		252	302	352	402	452	502	552	602	652	702	752	802
Lc		25	75	25	75	25	75	25	75	25	75	25	75
Ld		25	75	125	175	225	275	325	375	425	475	525	575
Qa		6	6	8	8	10	10	12	12	14	14	16	16
Qb		1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg)		1.8	1.9	2.1	2.3	2.5	2.7	2.8	2.9	3	3.1	3.3	3.4
Maximum speed (mm/sec)	Lead 20	1200							960	780	600	480	420
	Lead 10	600							480	390	300	240	210
	Lead 5	300							240	195	150	120	105
	Speed setting	–							80%	65%	50%	40%	35%

LBAR08

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



Ordering method

LBAR08 - [ ] - [ ] - [ ] - [ ]

Model	Lead	Shape	Motor specification	Stroke
	20: 20 mm 10: 10 mm 5: 5 mm	S: Straight A: Bending	Y: Y specification (see below) P: P specification (see below) K: K specification (see below) A: A 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		200 W		
Repeatability Note 1		+/-0.01 mm		
Deceleration mechanism		Shifting position ball screw ϕ 16 (C7 class)		
Stroke		50 mm to 800 mm (50 mm pitch)		
Maximum speed Note 2 Note 3		1200 mm/sec	600 mm/sec	300 mm/sec
Ball screw lead		20 mm	10 mm	5 mm
Maximum payload Note 3	**Horizontal**	30 kg	60 kg	80 kg
	Vertical	8 kg	20 kg	30 kg
Max. pressing force Note 3		201 N	402 N	804 N
Rotating backlash		+/-0 °		
Maximum dimensions of cross section of main unit		W 82 mm × H 73.5 mm		
Overall length	**Straight**	ST + 326 mm		
	Bending	ST + 312.5 mm		
Using ambient temperature and humidity		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 400 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.138 for acceleration/deceleration and inertia moment.

Applicable motor

Applicable servo motor

Specification		
Flange size		□ 60
Wattage		200 W

Motor specification	Manufacturer	Model
Y	Yaskawa Electric Corp.	SGMJV-02
		SGM7J-02
	Keyence Corp.	SV- □ 020
		SV2- □ 020
	Mitsubishi Electric Corp.	HF-KP23
		HG-KR23
		HK-KT23
	Sanyo Denki	R2 □ A06020
	Tamagawa Seiki	TSM3202
	Delta Electronics	ECMA-C10602
	Siemens	1FL6032-2AF
	Schneider	BCH2LD023
P	Omron Electronics	R88M-K20030
		R88M-1M20030
	Panasonic Corp.	MSMD02
		MSMF02
		MHMF02
K	Kingservo	KSMA02LI
		KSMA02LG

Applicable stepping motor

Specification	
Flange size	□ 60
	□ 56 (NEMA)

Motor specification	Manufacturer	Model
A	Oriental Motor	AZM66
		AZM69
		ARM66
		ARM69
		RKS56
N	NEMA standard	NEMA23

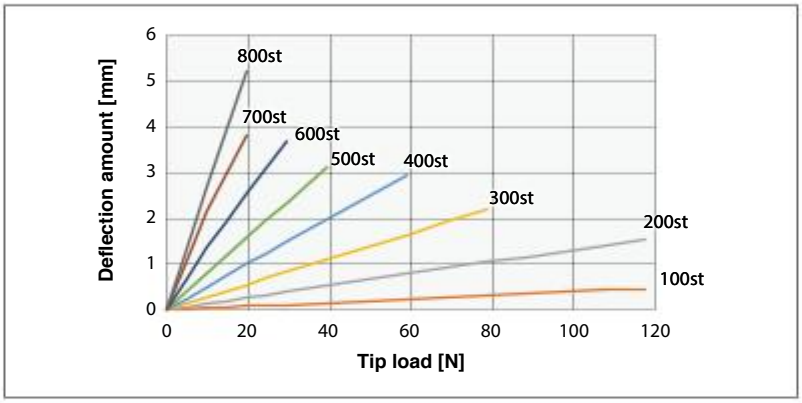
Note. Be aware that the dimensions of the NEMA standard motor may vary depending on the manufacturer.
Note. For the motor specifications A and N, the parts dedicated for bending cannot be used.

Access the website below.

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

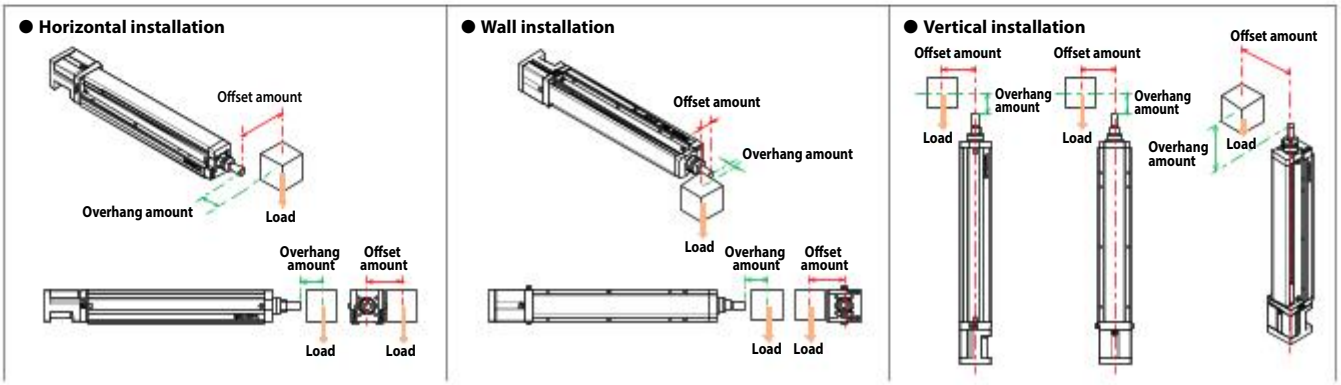
Rod deflection amount (reference value)

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

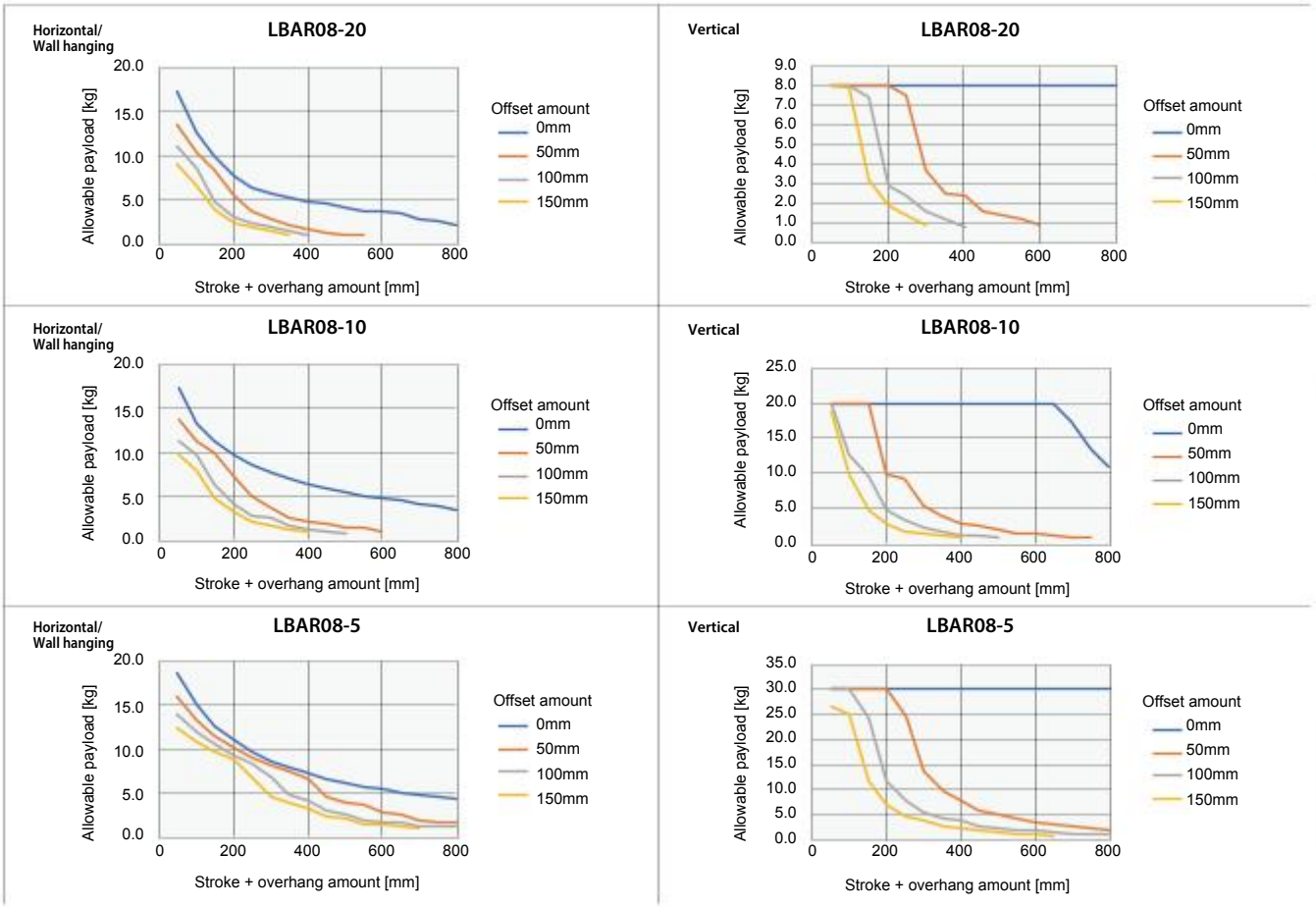


Allowable payload

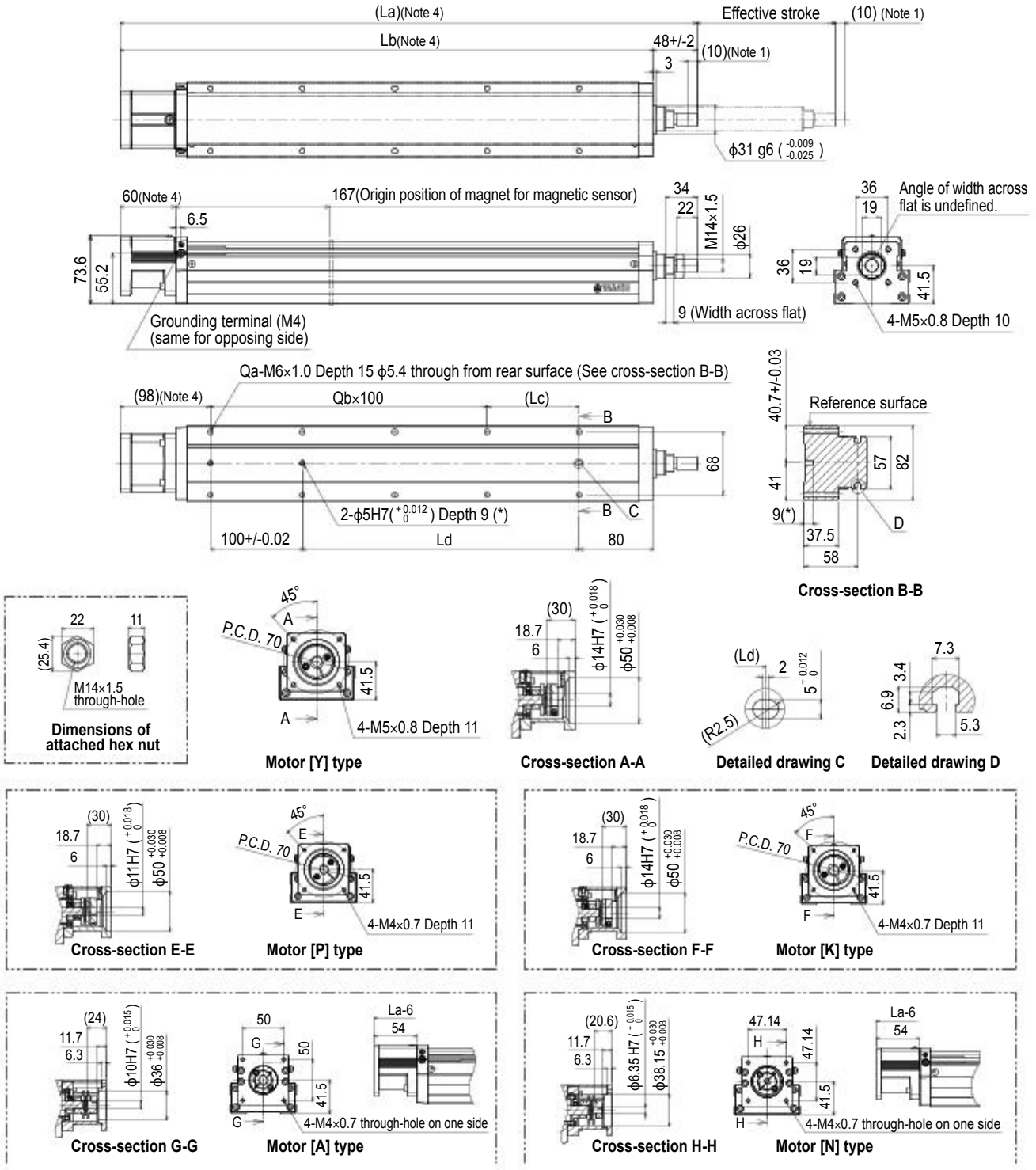
For the allowable payload per offset amount, see the graph below.



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.



LBAR08 Straight type (S)



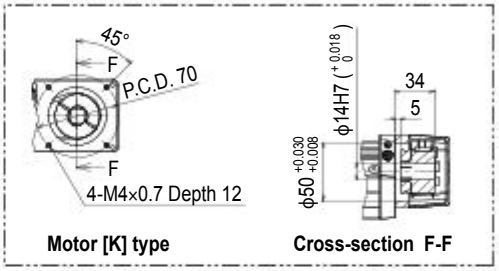
Note 1. Stop positions are determined by the mechanical stoppers at both ends.
Note 2. Please perform installation and adjustment on the special parts for motor installation by the customer. For detail, refer to the manual.
Note 3. For the installation through hole, the length under head << 45 mm or more>> is recommended for the hex socket head bolts <M5 × 0.8>. In the installation tap hole, the length under head <<thickness of stand +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> used to install the main unit.
Note 4. For the motor specifications A and N the dimensions are that those stated in the table <<-6 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	550	600	650	700	750	800
La		376	426	476	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Lb		328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078
Lc		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Ld		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)		3.9	4.3	4.7	5	5.3	5.7	6	6.3	6.6	7	7.4	7.7	8.1	8.4	8.6	8.9
Maximum speed (mm/sec)	Lead 20	1200								900	720	600	480	420	360	300	240
	Lead 10	600								450	360	300	240	210	180	150	120
	Lead 5	300								225	180	150	120	105	90	75	60
	Speed setting	–								75%	60%	50%	40%	35%	30%	25%	20%

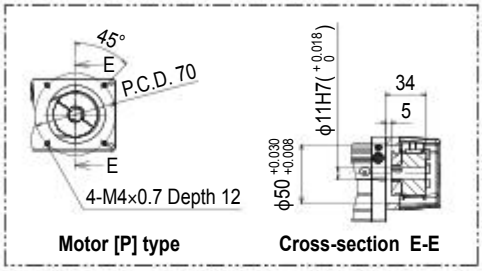
LBAR08 Bending type (A)



Left attachment



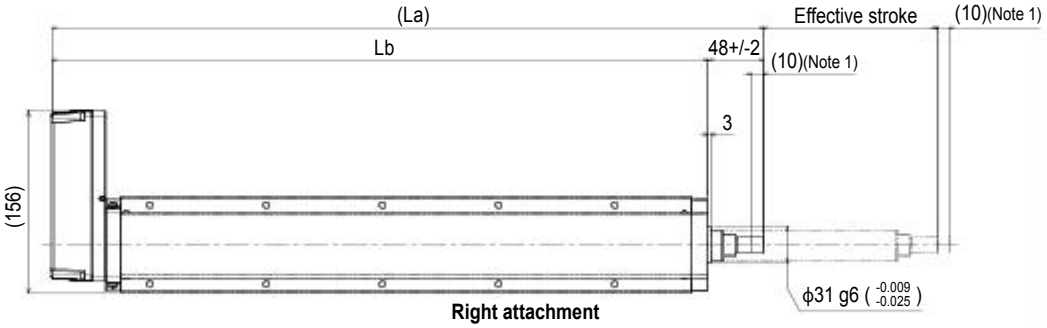
Motor [K] type　　Cross-section F-F



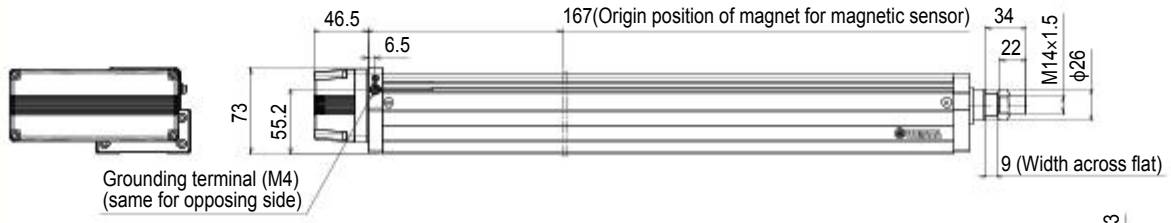
Motor [P] type　　Cross-section E-E

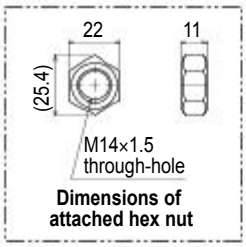


Bottom attachment

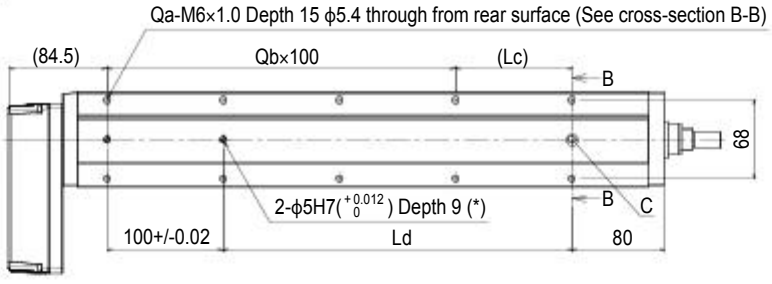


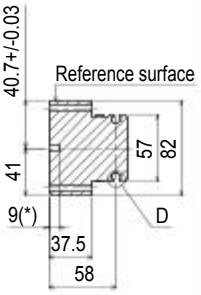
Right attachment



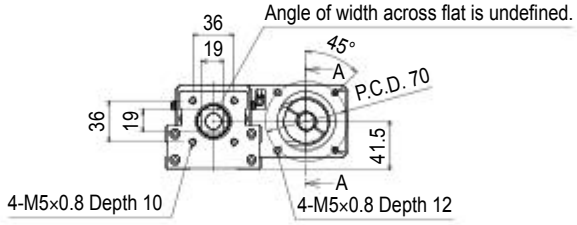


Dimensions of attached hex nut

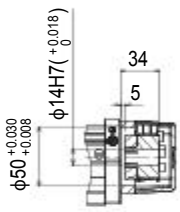




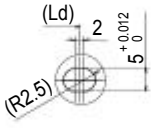
Cross-section B-B



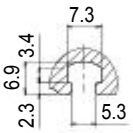
Motor [Y] type



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 << 45 mm 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 +15 mm or less>> is recommended for the hex socket head bolts <M6 × 1.0> 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	550	600	650	700	750	800
La		362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5	762.5	812.5	862.5	912.5	962.5	1012.5	1062.5	1112.5
Lb		314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5
Lc		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
Ld		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)		4.3	4.7	5.1	5.4	5.7	6.1	6.4	6.7	7	7.4	7.8	8.1	8.5	8.8	9	9.3
Maximum speed (mm/sec)	Lead 20	1200								900	720	600	480	420	360	300	240
	Lead 10	600								450	360	300	240	210	180	150	120
	Lead 5	300								225	180	150	120	105	90	75	60
	Speed setting	–								75%	60%	50%	40%	35%	30%	25%	20%