

EBR-L

Rod with built-in guide

Stepper motor compatible
electric actuator
Motorless specifications



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Series variation													
Type	Model No.		Applicable motor size	Body width (mm)	Screw lead (mm)	Max. load capacity (kg) *2							
						Horizontal *1	Vertical	50 mm	100	150			
Rod with built-in guide		EBR-04L*-06	☐ 42	44	6	20	5	300 mm/s					
		EBR-04L*-12			12	12	2	600					
		EBR-05L*-02	☐ 42	54	2	30	10	100 mm/s					
		EBR-05L*-05			5	30	10	250					
		EBR-05L*-10			10	15	5	500					
		EBR-05L*-20			20	10	2.5	1000					
		EBR-08L*-05	☐ 56 ☐ 60	82	5	50	15	250					
		EBR-08L*-10			10	30	8	500					
		EBR-08L*-20			20	12	2.5	1000					

How to order													
Rod with built-in guide													
EBR - 05 L E - 00 - 02 0050 N NN - A A N N													
A B C D E F G H I J													
A Body size		D Screw lead		F Brake		G Mounted motor specification		I Limit sensor					
04 Body width 44 mm		02 2 mm		N None				N None					
05 Body width 54 mm		05 5 mm						B Yes					
08 Body width 82 mm		06 6 mm											
B Motor		10 10 mm											
L None		12 12 mm											
C Motor mounting direction		E Stroke length						I Origin sensor					
E Straight mounting		0050 50 mm						N None					
R Right mounting		to (In 50 mm increments)						C Yes					
D Bottom mounting		0700 700 mm											
L Left mounting													

*This product is composed of an actuator (and motor mounting parts) only; there is no motor attached.
The user must prepare, mount, and adjust the motor and driver.

	Stroke length (mm) and max. speed (mm/s) *3																				Page
	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100		
						^{*4}  1.63 sec															554
						 0.84 sec															
						 4.71 sec															560
						 2.02 sec															
						 1.04 sec															
						 0.56 sec															
																					566

*1: The load capacity when wall mounted is the same as for horizontal installation.

*2: The rated thrust and max. load capacity values are the allowable values for the actuator body; the actual thrust and load capacity are limited by the motor used.

*3: The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

*4: 🕒 shows the positioning time. Maximum stroke when installed horizontally and operated at max. speed and max. acceleration/deceleration. Note that this is not the value at maximum load capacity.

List of stepper motors recommended for mounting

Code	Manufacturer	Series	□42	□56	□60
A	Oriental Motor Co., Ltd.	AZ	AZM46□0□	-	AZM66□0□ AZM69□0□
		AR	ARM46□0□	-	ARM66□0□ ARM69□0□
B	MinebeaMitsumi Inc.	A17PM/A23KM	A17PM□□□□CSTBCN	A23KM□□□□CSTBCN	-
B	Dyadic Systems Co., Ltd.	RMJ	RMJ0411	-	-
C		RMJ	-	RMJ0611/RMJ1211	-



Electric actuator (motorless) Rod with built-in guide

EBR-04LE

Straight motor mounting

● Stepper motor size: ☐42

RoHS

How to order

EBR	- 04	L	E	- 00	- 06	0050	N	NN	- A	A	N	N	
	A	B	C		D	E	F		G	H	I	J	
A Body size		B Motor		C Motor mounting direction		D Screw lead		E Stroke length		F Brake		G Mounted motor specification	
04 Body width 44 mm		L None		E Straight mounting		06 6 mm 12 12 mm		0050 50 mm to 0400 400 mm (In 50 mm increments)		N None C Yes		A Select the mounted motor specification from the table at right.	
										H Motor size		I Limit sensor *1	
										A ☐ 42		N None B Yes	
										J Origin sensor *1			
										N None C Yes			
											Manufacturer		☐ 42
											Oriental Motor Co., Ltd.		A
											MinebeaMitsumi Inc.		B
											Dyadic Systems Co., Ltd.		B

*Refer to page 553 for the motor model No.

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable motor sizes	☐ 42 Stepper motor	
Drive method	Ball screw ϕ 10	
Stroke length mm	50 to 400	
Screw lead mm	6	12
Max. load capacity kg	Horizontal	20
*1	Vertical	5
Max. speed mm/s	300	600
Rated thrust *1 N	141	71
Repeatability mm	± 0.01	
Lost motion mm	0.1 or less	
Drive system weight kg	0.6	
Other inertia kg·cm ²	0.045	
Coefficient of friction	0.03	
Mechanical efficiency	0.8	
Sliding resistance N	6	
Ball screw length	Stroke + 200	
Operating ambient temperature, humidity	0 to 40°C (no freezing), 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity	-10 to 50°C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere	No corrosive gas, explosive gas, or dust	

*Reference value. The output is limited by the motor used. Select a model suited to the customer's motor.

*Refer to page 574 for the allowable applied load for the overhang amount.

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

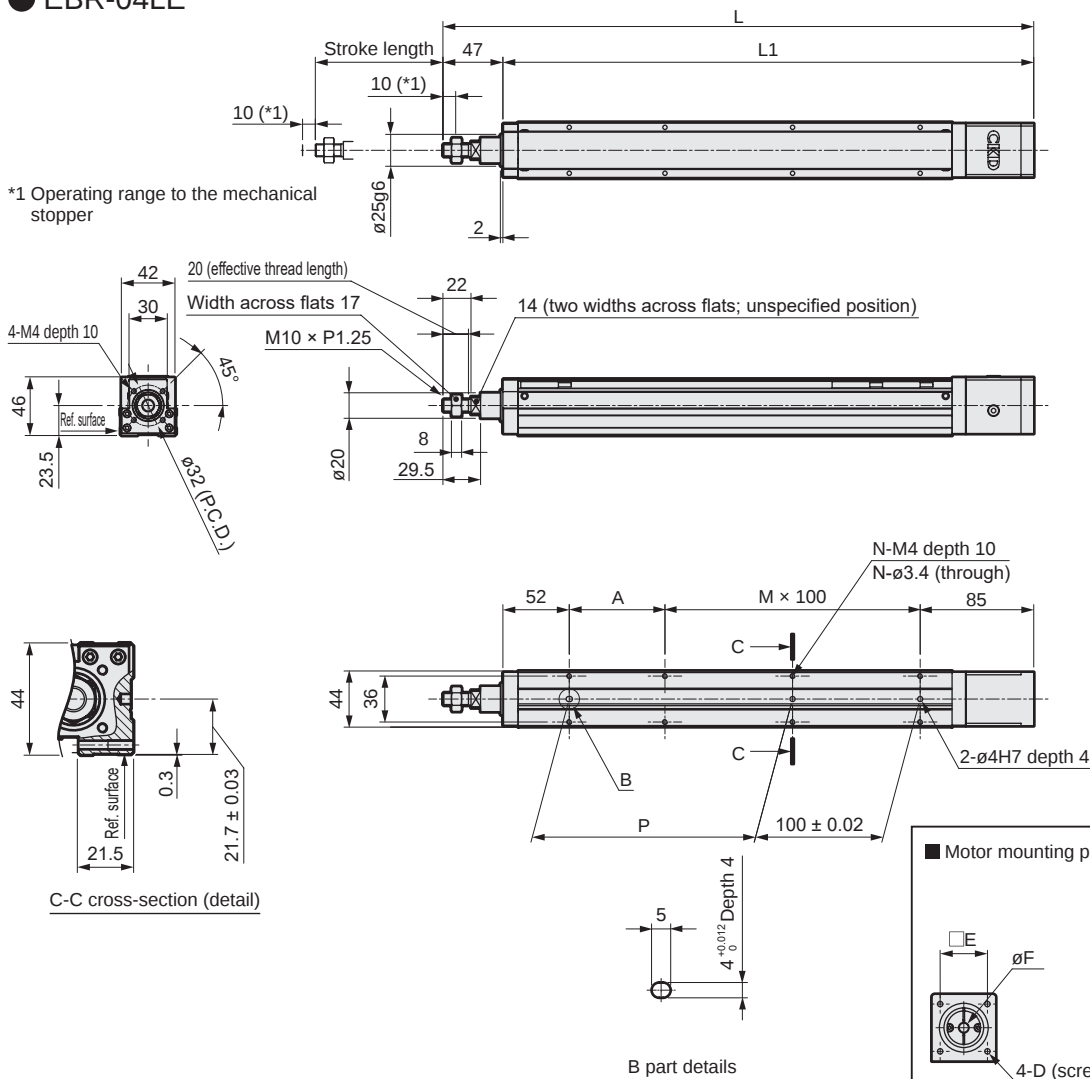
		(mm/s)			
Stroke length	Screw lead	50 to 250	300	350	400
6		300	250		
12		600	510		

*Max. speed is when the motor mounted by the customer can output rotation speed of 3000 rpm.

The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Dimensions Straight motor mounting

● EBR-04LE



*When the stroke is 50 mm, in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	309	359	409	459	509	559	609	659
L1	262	312	362	412	462	512	562	612
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.1	1.2	1.4	1.6	1.7	1.9	2.0	2.2

■ Motor mounting part

The drawing shows two views of the motor mounting part. The front view (left) is a square with a central circular feature. Dimensions include 'E' for the width of the top flange, 'øF' for the outer diameter, and '4-D (screw hole) (motor fixed)' for the four mounting holes. The side view (right) shows the profile of the part with dimensions: '23.3' for the total height, '15.1' for the height of the top flange, 'ø22 H7' for the inner bore diameter, '2-M2.5' for the mounting holes, and '4' for the width of the base.

Mounted motor specification	D	E	F	Motor mounting bolt
A	3.5	31	6	4-M3 × L12
B	3.5	31	5	4-M3 × L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Assembled at shipment	M3	4
B		M3	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.



Electric actuator (motorless) Rod with built-in guide

EBR-04L*

Motor side mounting (left, right, bottom)

● Stepper motor size: ☐42

RoHS

How to order

EBR - 04 L R - 00 - 06 0050 N NN - A A N N

A Body size
04 Body width 44 mm

B Motor
L None

C Motor mounting direction
R Right mounting
D Bottom mounting
L Left mounting

D Screw lead
06 6 mm
12 12 mm

E Stroke length
0050 50 mm
to (In 50 mm increments)
0400 400 mm

F Brake
N None

G Mounted motor specification
A Select the mounted motor specification from the table at right.
B

H Motor size
A ☐42

I Origin sensor *1
N None
C Yes

J Limit sensor *1
N None
B Yes

Manufacturer	☐ 42
Oriental Motor Co., Ltd.	A
MinebeaMitsumi Inc.	B
Dyadic Systems Co., Ltd.	B

*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable motor sizes	☐ 42 Stepper motor	
Drive method	Ball screw ø10	
Stroke length mm	50 to 400	
Screw lead mm	6	12
Max. load capacity kg	Horizontal	20
*1	Vertical	5
Max. speed mm/s	300	600
Rated thrust *1 N	141	71
Repeatability mm	±0.01	
Lost motion mm	0.1 or less	
Drive system weight kg	0.6	
Other inertia kg·cm ²	0.09	
Coefficient of friction	0.03	
Mechanical efficiency	0.8	
Sliding resistance N	6	
Ball screw length	Stroke + 200	
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)	
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)	
Atmosphere	No corrosive gas, explosive gas, or dust	

*Reference value. The output is limited by the motor used. Select a model suited to the customer's motor.

*Refer to page 574 for the allowable applied load for the overhang amount.

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

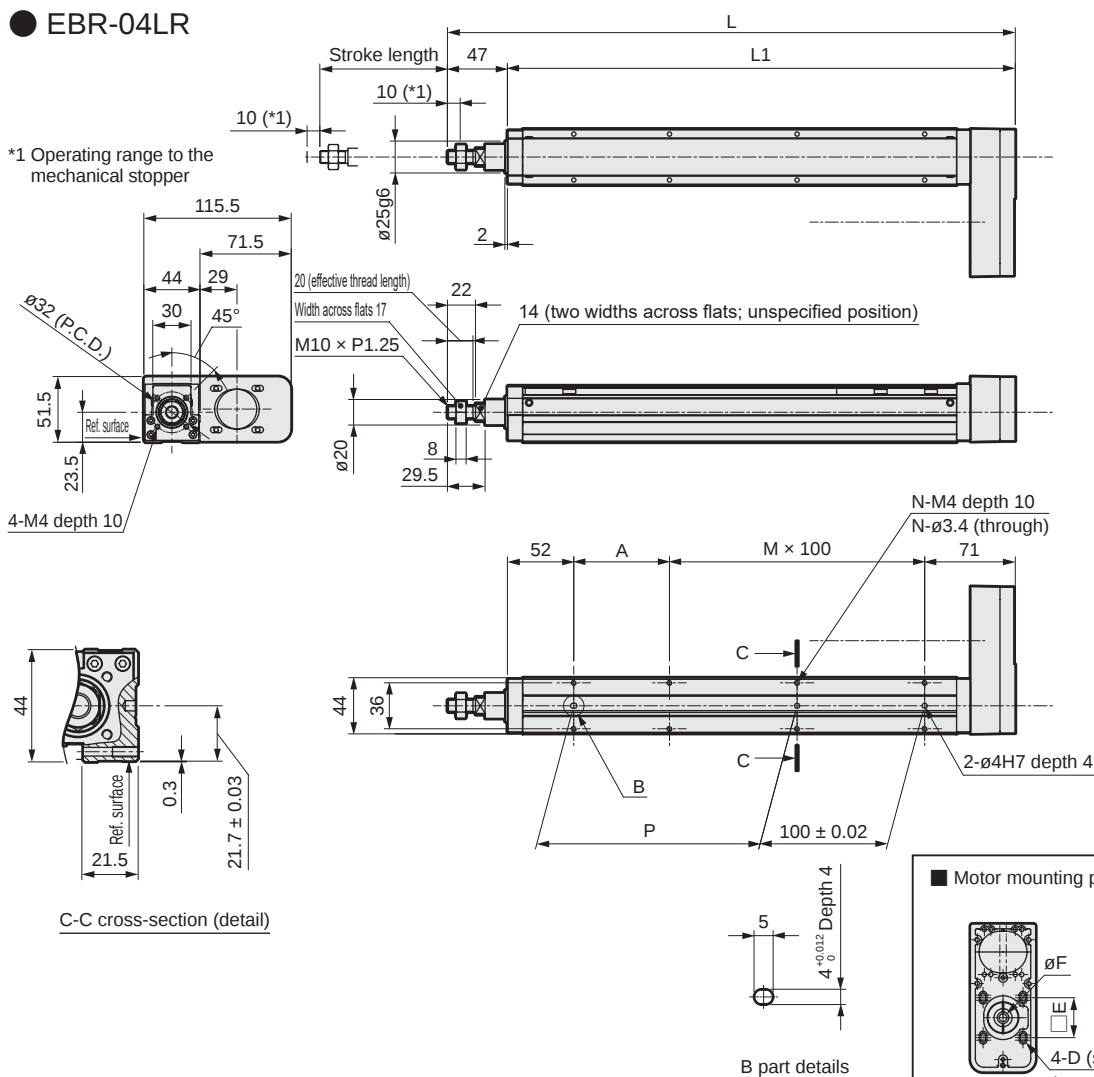
		(mm/s)			
Stroke length	Screw lead	50 to 250	300	350	400
	6	300	250		
	12	600	510		

*Max. speed is when the motor mounted by the customer can output rotation speed of 3000 rpm.

The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Dimensions Motor right-side mounting

EBR-04LR



*When the stroke is 50 mm, in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	295	345	395	445	495	545	595	645
L1	248	298	348	398	448	498	548	598
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.3	1.5	1.6	1.8	1.9	2.1	2.2	2.4

Mounted motor specification	D	E	F	Motor mounting bolt
A	3.5	31	6	4-M3 × L12
B	3.5	31	5	4-M3 × L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Included at shipment	M3	4
B		M3	4

[Origin sensor, limit sensor]

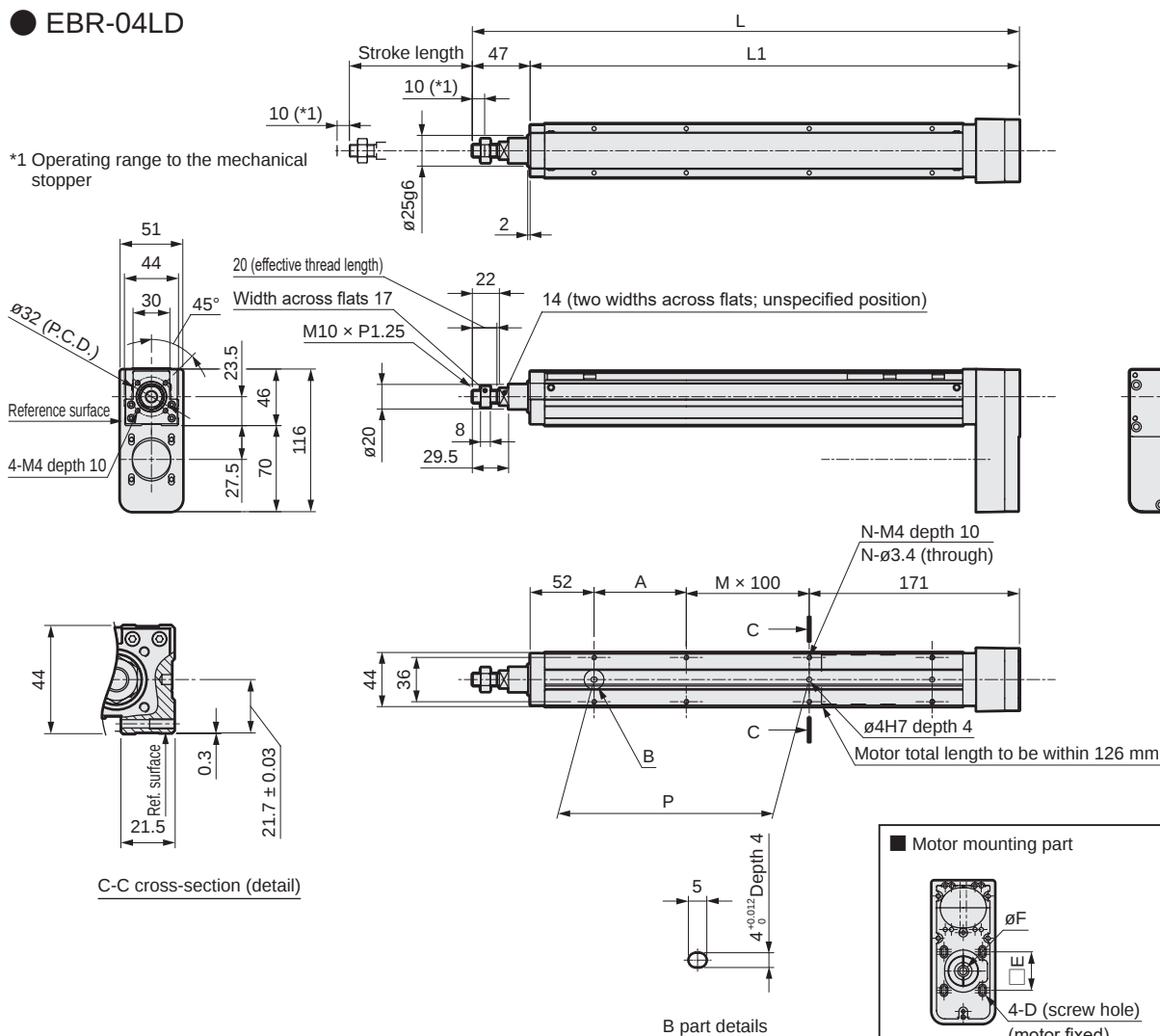
Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.

EBR-04L*

Dimensions Motor bottom mounting

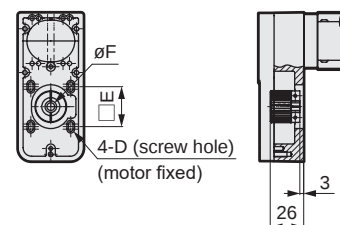
● EBR-04LD



*When the stroke is 50 mm, in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	295	345	395	445	495	545	595	645
L1	248	298	348	398	448	498	548	598
A	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3
N	4	4	6	6	8	8	10	10
P	25	75	125	175	225	275	325	375
Weight (kg)	1.3	1.5	1.6	1.8	1.9	2.1	2.2	2.4

■ Motor mounting part



Mounted motor specification	D	E	F	Motor mounting bolt
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

List of attachments

[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Included at shipment	M3	4
B		M3	4

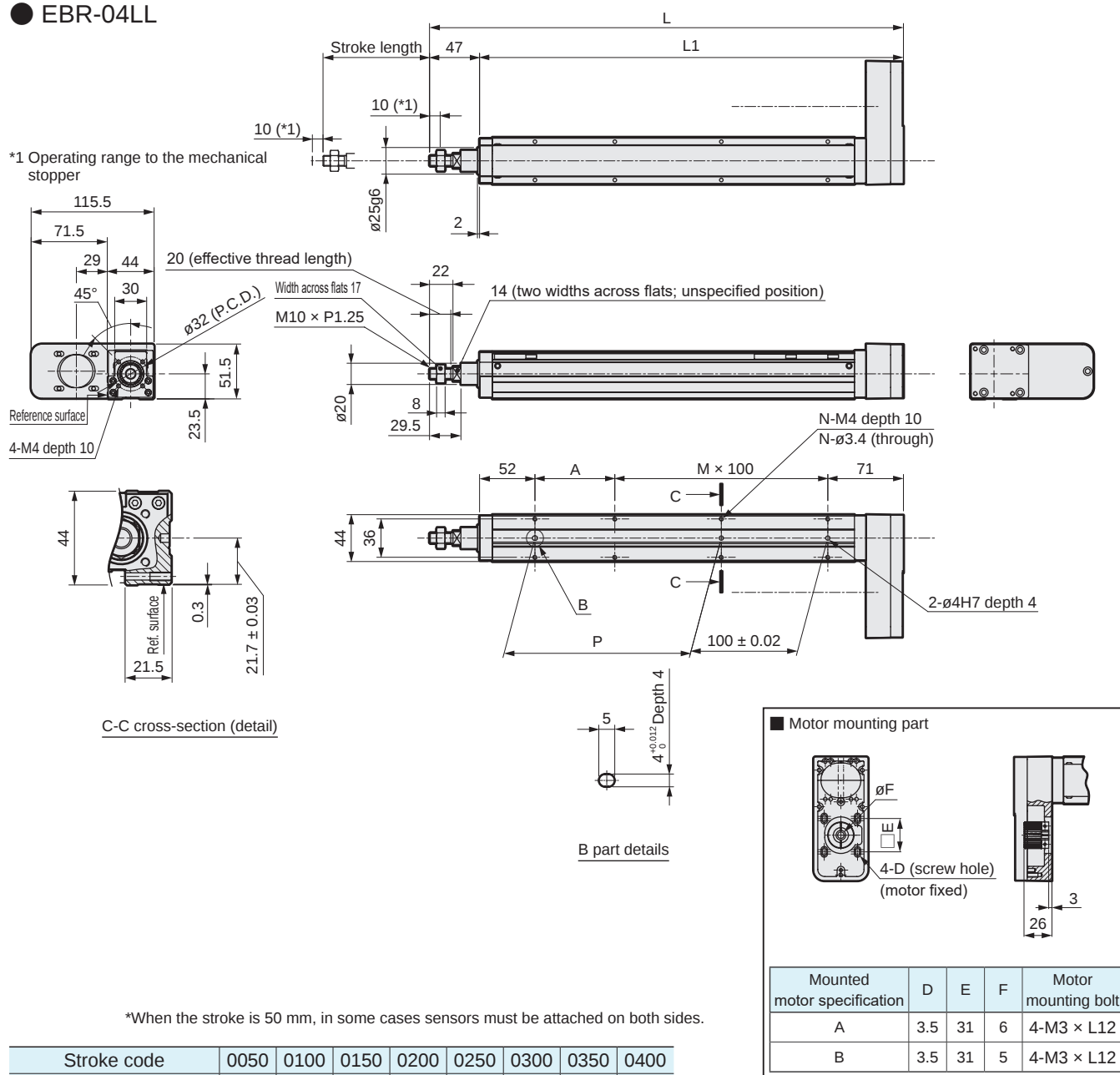
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.

Dimensions Motor left-side mounting

● EBR-04LL



Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	295	345	395	445	495	545	595	645
L1	248	298	348	398	448	498	548	598
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.3	1.5	1.6	1.8	1.9	2.1	2.2	2.4

List of attachments

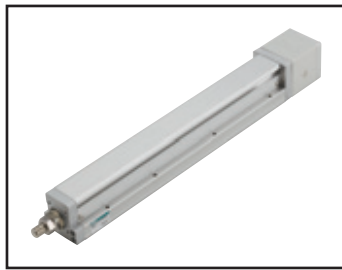
[Motor mounting parts]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Included at shipment	M3	4
B		M3	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.



Electric actuator (motorless) Rod with built-in guide

EBR-05LE

Straight motor mounting

● Stepper motor size: ☐42

RoHS

How to order

EBR - 05 L E - 00 - 02 0050 N NN - A A N N

A Body size
05 Body width 54 mm

B Motor
L None

C Motor mounting method
E Straight mounting

D Screw lead
02 2 mm
05 5 mm
10 10 mm
20 20 mm

E Stroke length
0050 50 mm
to 0400 (In 50 mm increments) 400 mm

F Brake
N None

G Mounted motor specification
A Select the mounted motor specification from the table at right.
B

H Motor size
A ☐42

I Origin sensor *1
N None
C Yes

J Limit sensor *1
N None
B Yes

Manufacturer ☐ 42
Oriental Motor Co., Ltd. A
MinebeaMitsumi Inc. B
Dyadic Systems Co., Ltd. B

*Refer to page 553 for the motor model No.

*1 Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable motor sizes	☐ 42 Stepper motor			
Drive method	Ball screw ø12			
Stroke length mm	50 to 400			
Screw lead mm	2	5	10	20
Max. load capacity kg	Horizontal	30	30	15
*1	Vertical	10	10	5
Max. speed mm/s	100	250	500	1000
Rated thrust *1 N	854	341	170	85
Repeatability mm	±0.01			
Lost motion mm	0.1 or less			
Drive system weight kg	0.9			
Other inertia kg·cm ²	0.09			
Coefficient of friction	0.03			
Mechanical efficiency	0.8			
Sliding resistance N	6			
Ball screw length	Stroke + 200			
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)			
Atmosphere	No corrosive gas, explosive gas, or dust			

*Reference value. The output is limited by the motor used. Select a model suited to the customer's motor.

*Refer to page 574 for the allowable applied load for the overhang amount.

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

(mm/s)

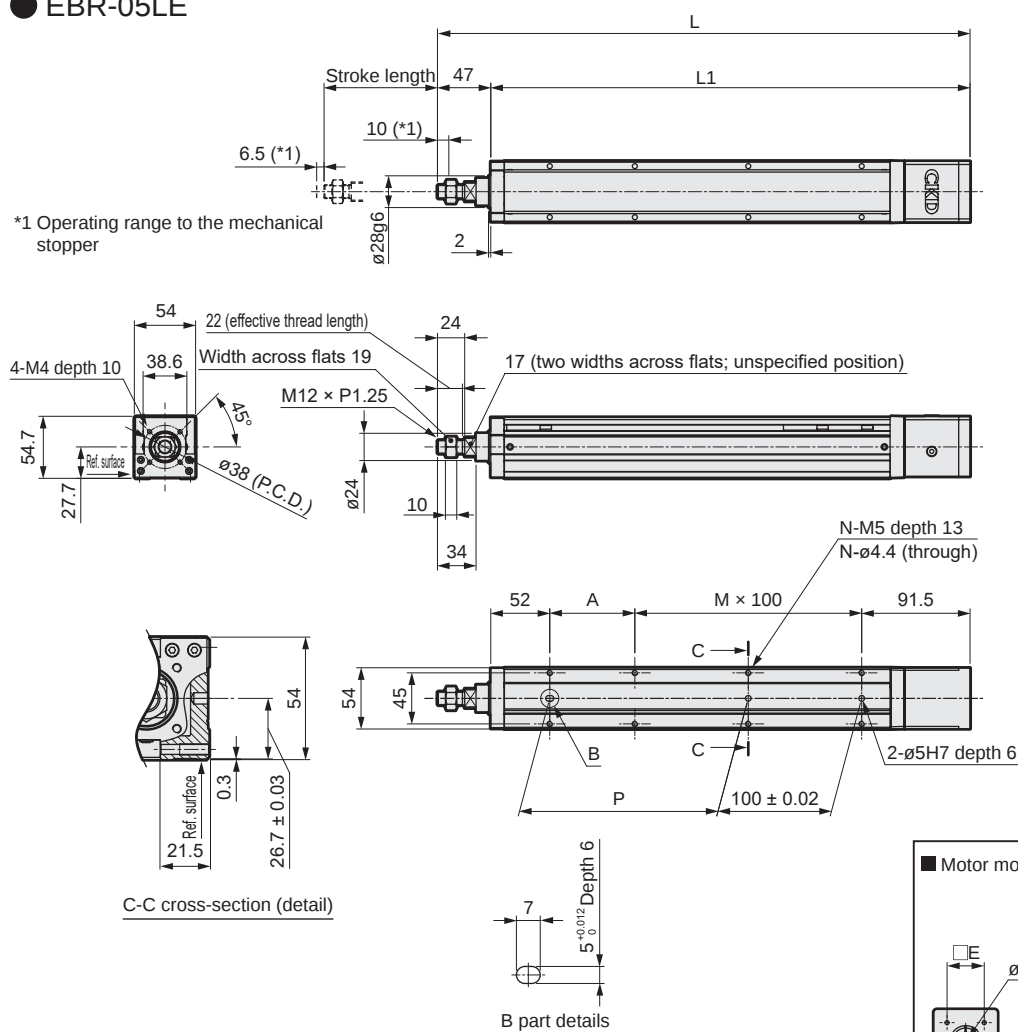
Stroke length Screw lead	50 to 250	300 to 400
2	100	85
5	250	200
10	500	400
20	1000	850

*Max. speed is when the motor mounted by the customer can output rotation speed of 3000 rpm.

The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

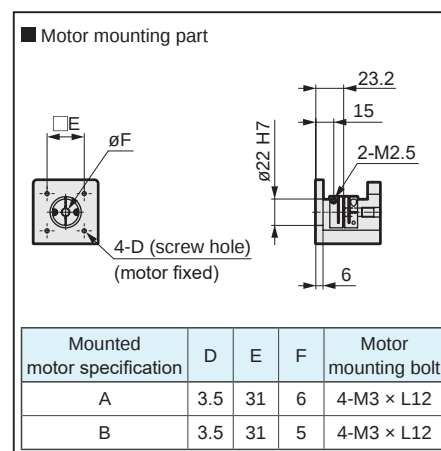
Dimensions Straight motor mounting

● EBR-05LE



*When the stroke is 50 mm, in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	315.5	365.5	415.5	495.5	515.5	565.5	615.5	665.5
L1	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.0



List of attachments

[Motor mounting parts]

Mounted motor specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Assembled at shipment	M3	4
B		M3	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.



Electric actuator (motorless) Rod with built-in guide

EBR-05L*

Motor side mounting (left, right, bottom)

● Stepper motor size: ☐42

RoHS

How to order

EBR - 05 L R - 00 - 02 0050 N NN - A A N N

A Body size
05 Body width 54 mm

B Motor
L None

C Motor mounting direction
R Right mounting
D Bottom mounting
L Left mounting

D Screw lead
02 2 mm
05 5 mm
10 10 mm
20 20 mm

E Stroke length
0050 50 mm
to 0400 (In 50 mm increments) 400 mm

F Brake
N None

G Motor size
A ☐42

H Origin sensor *1
N None
C Yes

I Limit sensor *1
N None
B Yes

J Manufacturer ☐ 42
Oriental Motor Co., Ltd. A
MinebeaMitsumi Inc. B
Dyadic Systems Co., Ltd. B

*1 Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable motor sizes	☐ 42 Stepper motor			
Drive method	Ball screw ø12			
Stroke length mm	50 to 400			
Screw lead	2	5	10	20
Max. load capacity kg	Horizontal	30	30	15
	Vertical	10	10	5
Max. speed mm/s		100	250	500
Rated thrust *1 N		854	341	170
Repeatability mm		±0.01		
Lost motion mm		0.1 or less		
Drive system weight kg		0.9		
Other inertia kg·cm ²		0.09		
Coefficient of friction		0.03		
Mechanical efficiency		0.8		
Sliding resistance N		6		
Ball screw length		Stroke + 200		
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity		-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*Reference value. The output is limited by the motor used. Select a model suited to the customer's motor.

*Refer to page 574 for the allowable applied load for the overhang amount.

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

		(mm/s)			
Stroke length	Lead	50 to 250	300	350	400
2		100		85	
5		250		200	
10		500		400	
20		1000		850	

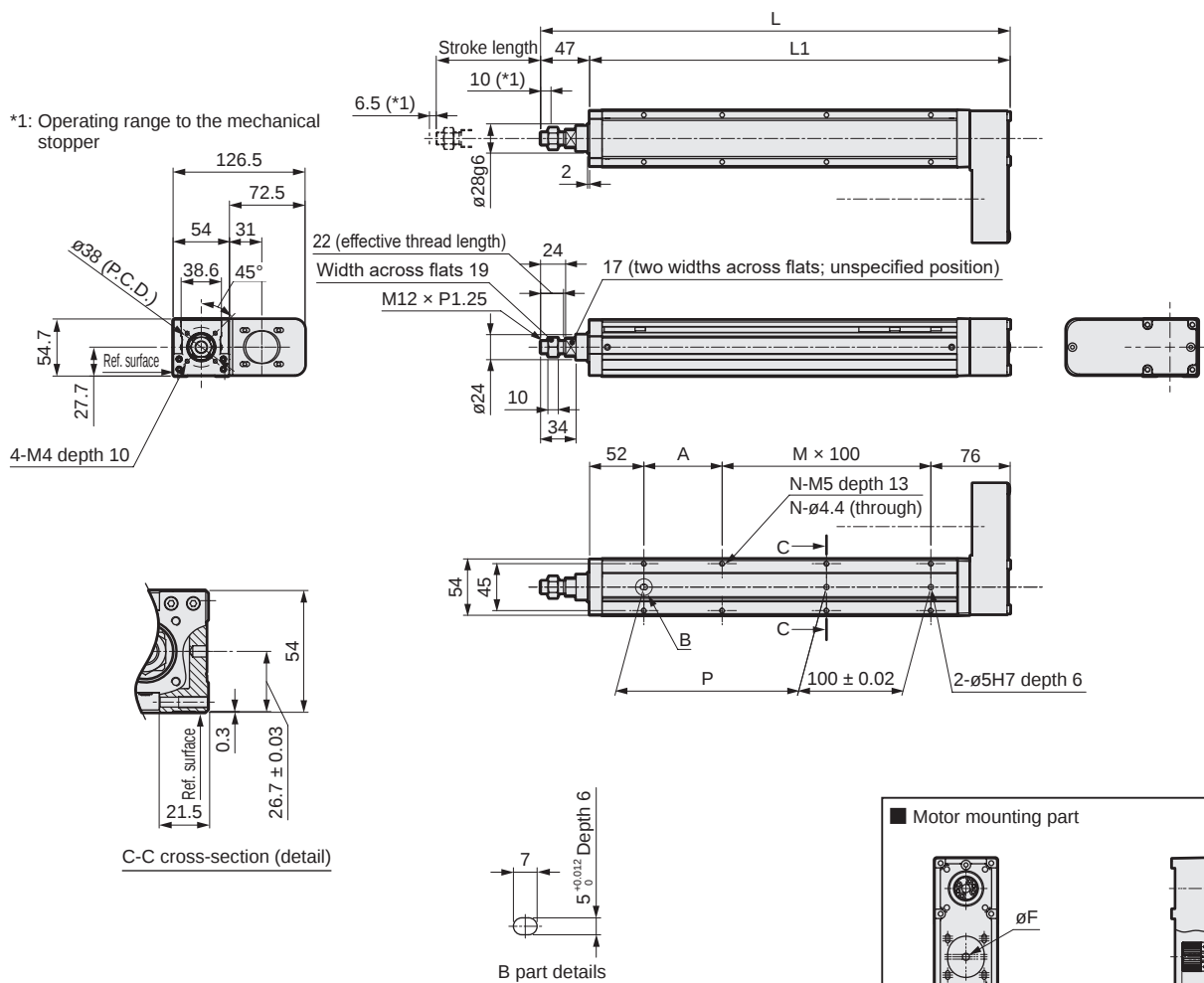
*Max. speed is when the motor mounted by the customer can output rotation speed of 3000 rpm.

The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Use Lead 2 at 0.5 G or less.

Dimensions Motor right-side mounting

EBR-05LR



*When the stroke is 50 mm, in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	300	350	400	450	500	550	600	650
L1	253	303	353	403	453	503	553	603
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.2

Mounted motor specification	D	E	F	Motor screw
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

List of attachments

[Motor mounting]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
A	Included at shipment	M3	4
B		M3	4

[When origin/limit sensors are selected]

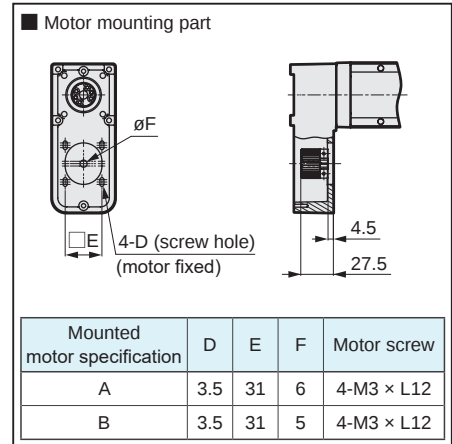
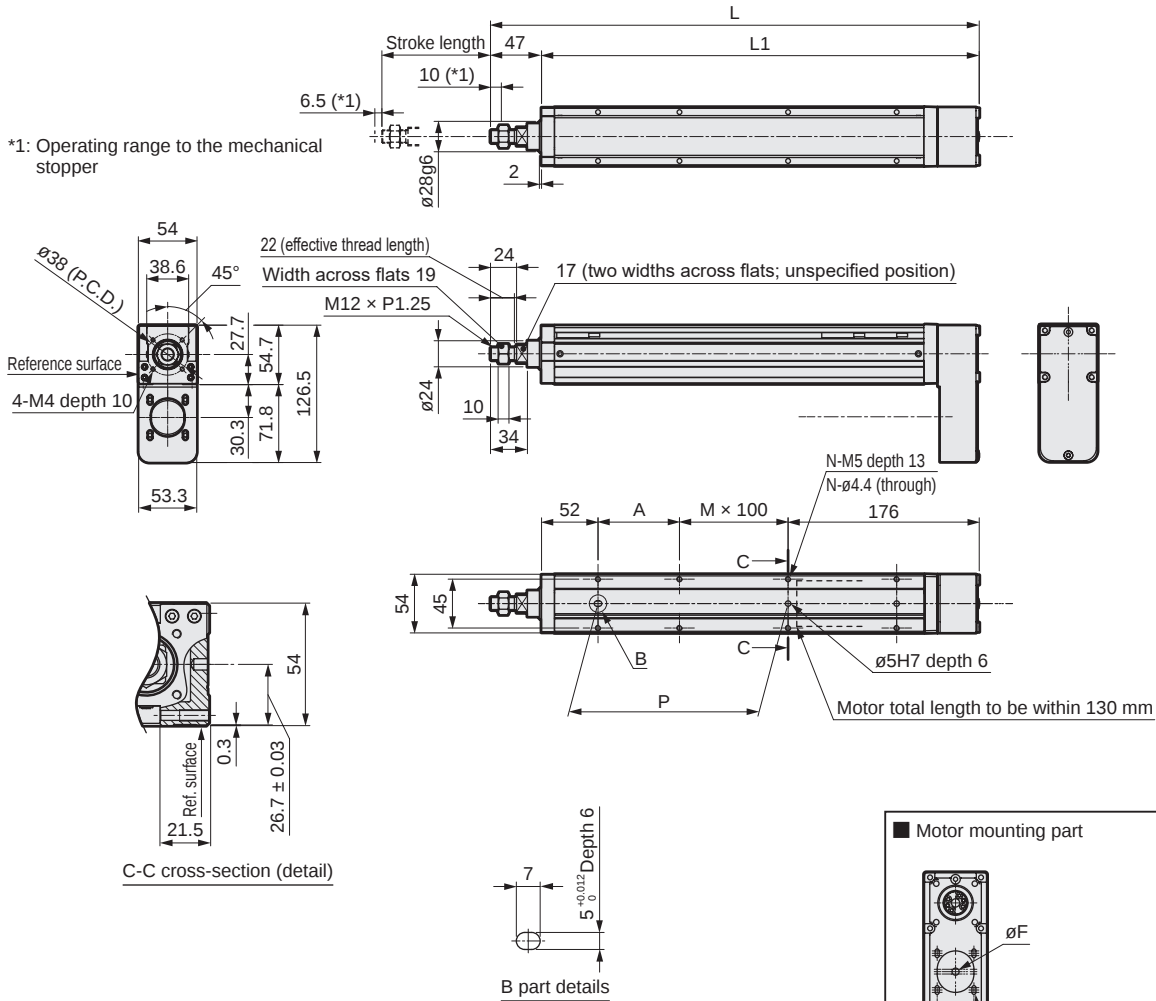
Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.

EBR-05L*

Dimensions Motor bottom mounting

● EBR-05LD



*When the stroke is 50 mm, in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	300	350	400	450	500	550	600	650
L1	253	303	353	403	453	503	553	603
A	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3
N	4	4	6	6	8	8	10	10
P	25	75	125	175	225	275	325	375
Weight (kg)	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.2

List of attachments

[Motor mounting]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
A	Included at shipment	M3	4
B		M3	4

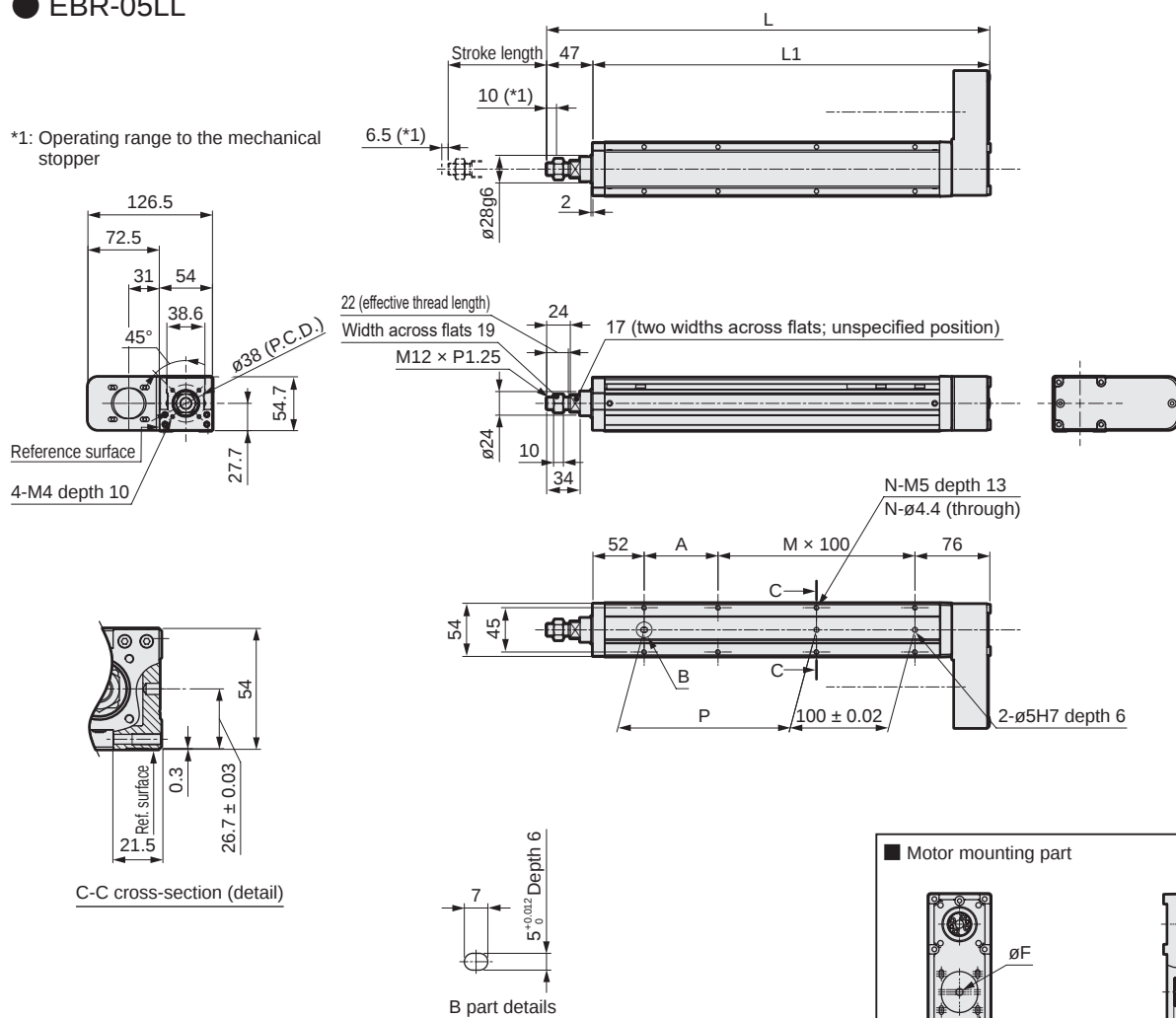
[When origin/limit sensors are selected]

Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.

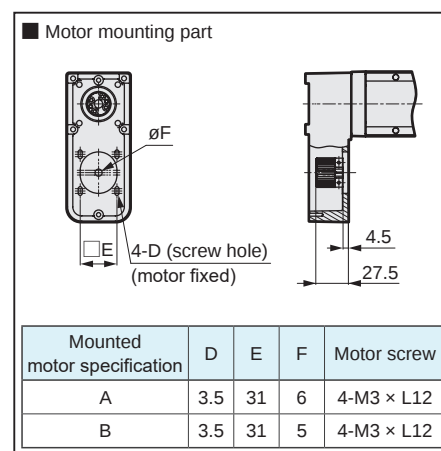
Dimensions Motor left-side mounting

EBR-05LL



*When the stroke is 50 mm, in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke length (mm)	50	100	150	200	250	300	350	400
L	300	350	400	450	500	550	600	650
L1	253	303	353	403	453	503	553	603
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.2



List of attachments

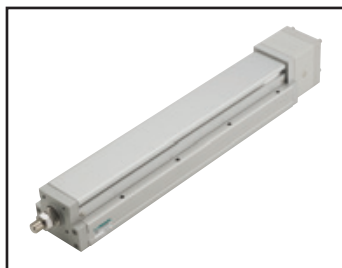
[Motor mounting]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
A	Included at shipment	M3	4
B		M3	4

[When origin/limit sensors are selected]

Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.



Electric actuator (motorless) Rod with built-in guide

EBR-08LE

Straight motor mounting

● Stepper motor size: ☐56, ☐60

RoHS

How to order

EBR - 08 L E - 00 - 05 0050 N NN - A B N N

A Body size
08 Body width 82 mm

B Motor
L None

C Motor mounting direction
E Straight mounting

D Stroke length
0050 50 mm
to 0700 (In 50 mm increments) 700 mm

E Stroke length
0050 50 mm
to 0700 (In 50 mm increments) 700 mm

F Brake
N None

G Motor size
B ☐56
C ☐60

H Motor size
B ☐56
C ☐60

I Limit sensor *1
N None
B Yes

J Limit sensor *1
N None
B Yes

K Origin sensor *1
N None
C Yes

L Screw lead
05 5 mm
10 10 mm
20 20 mm

M Mounted motor specification
A Select the mounted motor
B specification from the table
C at right.

Manufacturer	☐ 56	☐ 60
Oriental Motor Co., Ltd.	-	A
MinebeaMitsumi Inc.	B	-
Dyadic Systems Co., Ltd.	C	-

*1 Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable motor sizes	☐ 56, ☐ 60 stepper motor		
Drive method	Ball screw ø16		
Stroke length mm	50 to 700		
Screw lead mm	5	10	20
Max. load capacity kg	Horizontal	50	30
	Vertical	15	8
Max. speed mm/s	250	500	1000
Rated thrust *1 N	683	341	174
Repeatability mm	±0.01		
Lost motion mm	0.1 or less		
Drive system weight kg	1.7		
Other inertia kg·cm ²	0.24		
Coefficient of friction	0.03		
Mechanical efficiency	0.8		
Sliding resistance N	20		
Ball screw length	Stroke + 200		
Operating ambient temperature, humidity	0 to 40°C (no freezing) 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity	-10 to 50°C (no freezing) 35 to 80% RH (no condensation)		
Atmosphere	No corrosive gas, explosive gas, or dust		

*Reference value. The output is limited by the motor used. Select a model suited to the customer's motor.

*Refer to page 574 for the allowable applied load for the overhang amount.

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

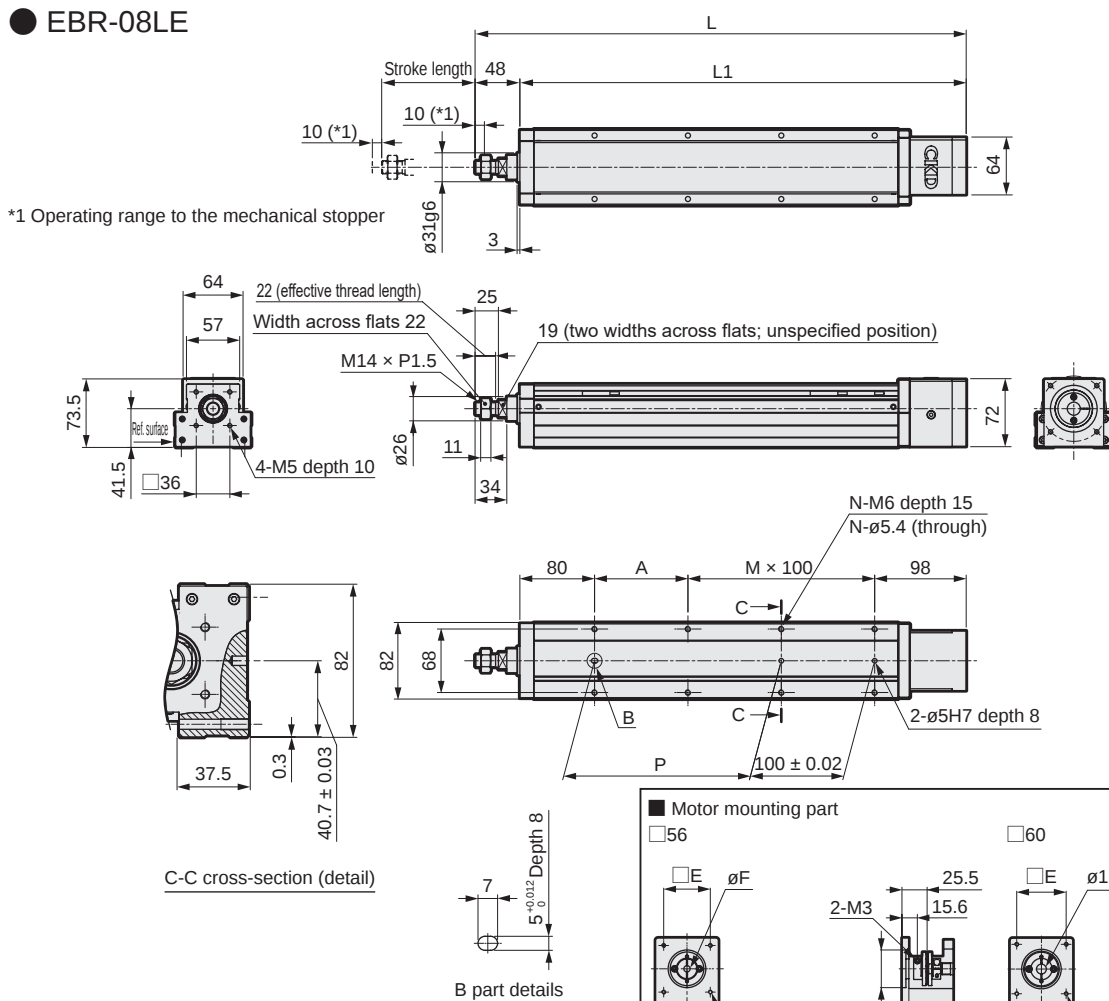
(mm/s)		
Stroke length	50 to 300	350 to 700
Screw lead		
5	250	200
10	500	400
20	1000	850

*Max. speed is when the motor mounted by the customer can output rotation speed of 3000 rpm.

The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Dimensions Straight motor mounting

● EBR-08LE



*When the stroke is 50 mm,,
in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700
Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	376	426	476	526	576	626	676	726	776	826	876	926	976	1026
L1	328	378	428	478	528	578	628	678	728	778	828	878	928	978
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700
Weight (kg)	4.0	4.4	4.8	5.1	5.5	5.9	6.3	6.6	7.0	7.4	7.7	8.1	8.5	8.8

List of attachments

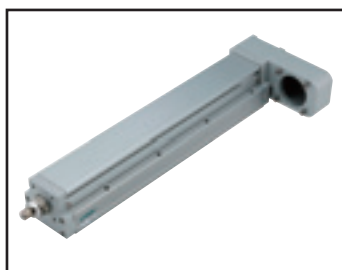
[Motor mounting parts]

Mounted motor specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Assembled at shipment	M4	4
B		M4	4
C		M4	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.



Electric actuator (motorless) Rod with built-in guide

EBR-08L*

Motor side mounting (left, right, bottom)

● Stepper motor size: ☐56, ☐60

RoHS

How to order

EBR - 08 L R - 00 - 05 0050 N NN - A B N N

A Body size
08 Body width 82 mm

B Motor
L None

C Motor mounting direction
R Right mounting
D Bottom mounting
L Left mounting

D Screw lead
05 5 mm
10 10 mm
20 20 mm

E Stroke length
0050 50 mm
to (In 50 mm increments)
0700 700 mm

F Brake
N None

G Mounted motor specification
A Select the mounted motor specification from the table at right.
B
C

H Motor size
B ☐56
C ☐60

I Origin sensor *1
N None
C Yes

J Limit sensor *1
N None
B Yes

Manufacturer	☐ 56	☐ 60
Oriental Motor Co., Ltd.	-	A
MinebeaMitsumi Inc.	B	-
Dyadic Systems Co., Ltd.	C	-

*1 Origin sensor and limit sensor are available as a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable motor sizes	☐ 56, ☐ 60 stepper motor		
Drive method	Ball screw ϕ 16		
Stroke length mm	50 to 700		
Screw lead	5	10	20
Max. load capacity kg	Horizontal	50	30
	Vertical	15	8
Max. speed mm/s	250	500	1000
Rated thrust N	683	341	174
Repeatability mm	± 0.01		
Lost motion mm	0.1 or less		
Drive system weight kg	1.7		
Other inertia kg·cm ²	0.52		
Coefficient of friction	0.03		
Mechanical efficiency	0.8		
Sliding resistance N	20		
Ball screw length	Stroke + 200		
Operating ambient temperature, humidity	0 to 40°C (no freezing), 35 to 80% RH (no condensation)		
Storage ambient temperature, humidity	-10 to 50°C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere	No corrosive gas, explosive gas, or dust		

*Reference value. The output is limited by the motor used. Select a model suited to the customer's motor.

*Refer to page 574 for the allowable applied load for the overhang amount.

*1 Rated thrust and max. load capacity are guideline values assuming that the motor mounted will output the rated torque.

Stroke and max. speed

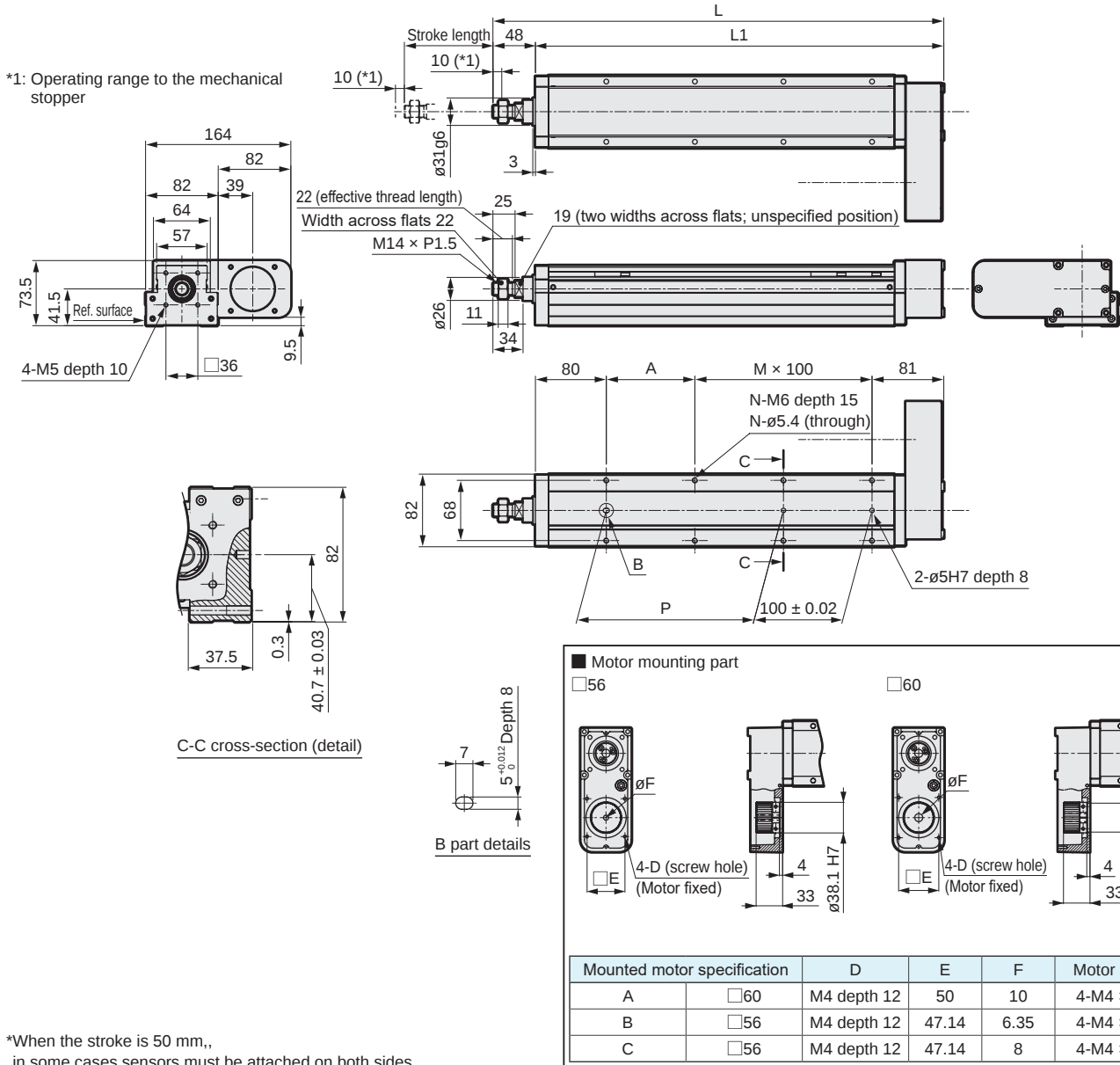
		(mm/s)							
Stroke length	Lead	50 to 300	350	400	450	500	550	600	700
5	5	250	200						
	10	500	400						
	20	1000	850						

*Max. speed is when the motor mounted by the customer can output rotation speed of 3000 rpm.

The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Dimensions Motor right-side mounting

EBR-08LR



Stroke code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700
Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700
Weight (kg)	4.4	4.8	5.1	5.5	5.9	6.2	6.6	7.0	7.3	7.7	8.1	8.4	8.8	9.1

List of attachments

[Motor mounting]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
A	Included at shipment	M4	4
B		M4	4
C		M4	4

[When origin/limit sensors are selected]

Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

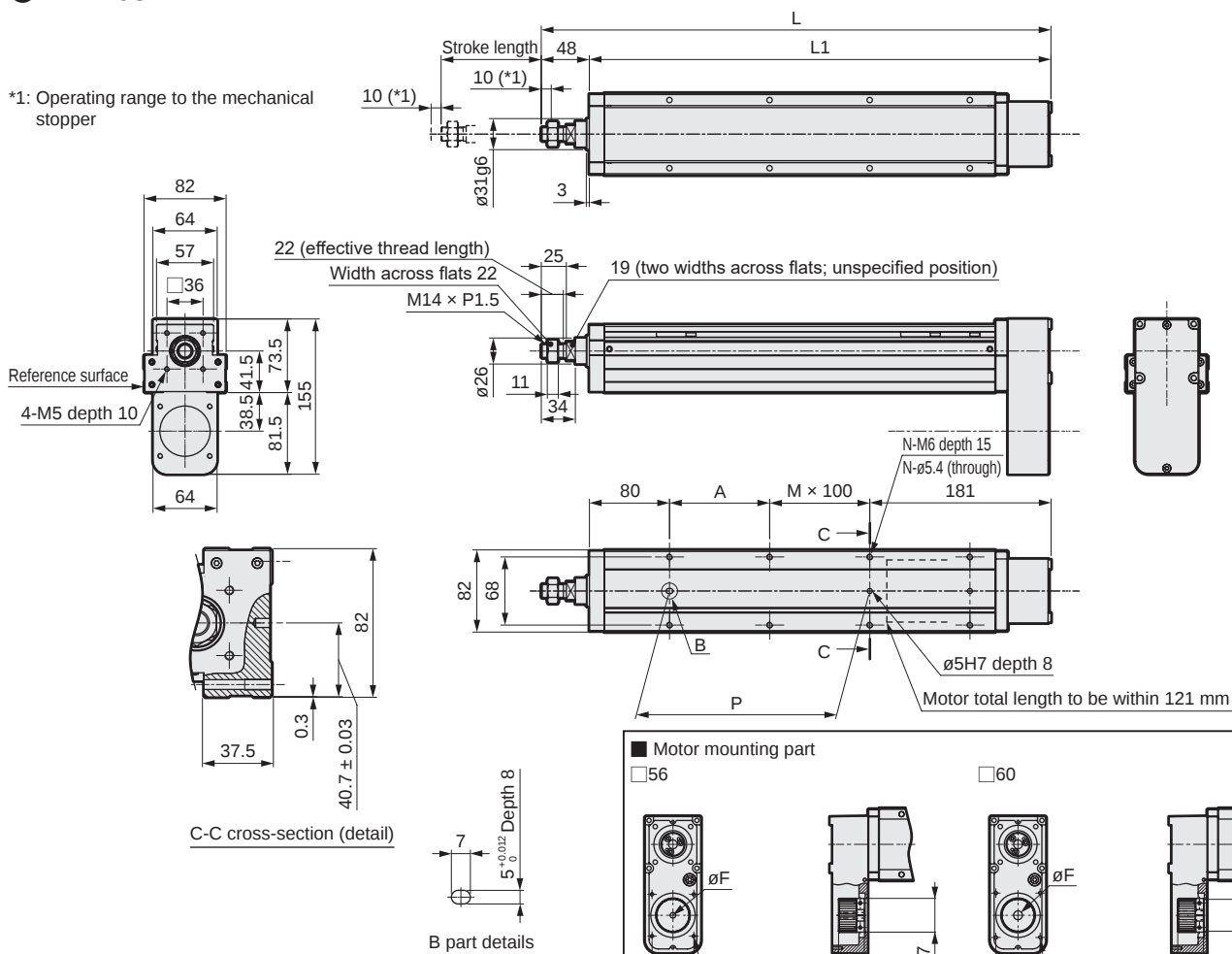
*Refer to page 578 for sensor specifications.

EBR-08L*

Dimensions Motor bottom mounting

● EBR-08LD

*1: Operating range to the mechanical stopper



*When the stroke is 50 mm,,
in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700
Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700
Weight (kg)	4.4	4.8	5.1	5.5	5.9	6.2	6.6	7.0	7.3	7.7	8.1	8.4	8.8	9.1

List of attachments

[Motor mounting]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
A	Included at shipment	M4	4
B		M4	4
C		M4	4

[When origin/limit sensors are selected]

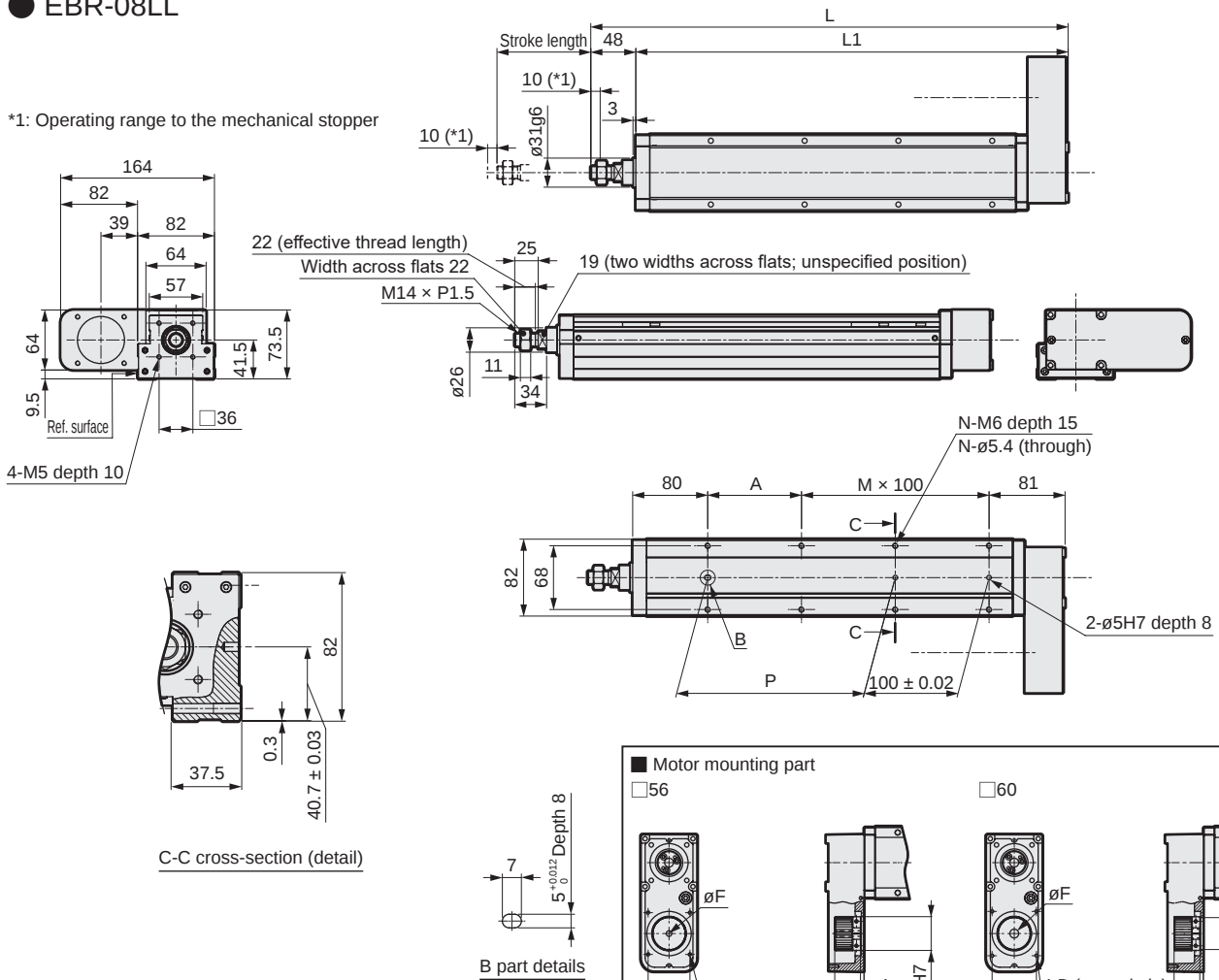
Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.

Dimensions Motor left-side mounting

● EBR-08LL

*1: Operating range to the mechanical stopper



*When the stroke is 50 mm,,
in some cases sensors must be attached on both sides.

Stroke code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700
Stroke length (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700
L	359	409	459	509	559	609	659	709	759	809	859	909	959	1009
L1	311	361	411	461	511	561	611	661	711	761	811	861	911	961
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700
Weight (kg)	4.4	4.8	5.1	5.5	5.9	6.2	6.6	7.0	7.3	7.7	8.1	8.4	8.8	9.1

List of attachments

[Motor mounting]

Mounted motor specification	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
A	Included at shipment	M4	4
B		M4	4
C		M4	4

[When origin/limit sensors are selected]

Sensor		
Manufacturer	Model	Included quantity
KITA	KT-32N-2M	3

*Refer to page 578 for sensor specifications.

Model selection

STEP 1 Confirming load capacity

Load capacity varies with mounting orientation, screw lead and motor performance.

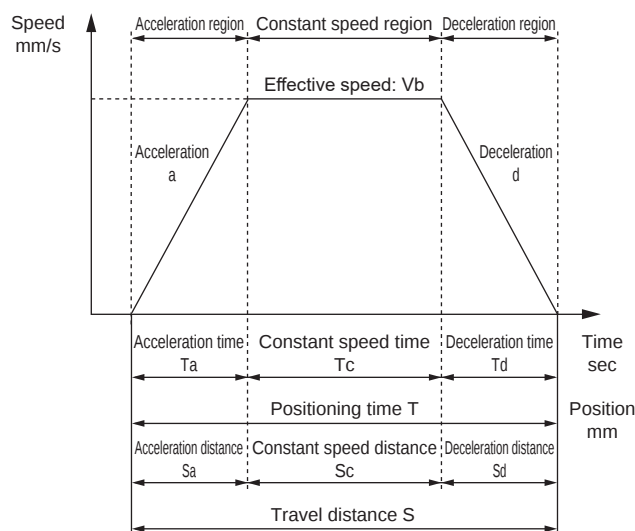
Refer to the Series Variation (page 552) and the specification table for each model to select the size and screw lead.

For motor performance, contact the motor manufacturer. For motor selection, use the actuator information (mechanical efficiency, etc.) in the specifications.

STEP 2 Confirming positioning time

Calculate the positioning time of the selected product according to the following example and confirm that the required tact is achievable.

Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Description	Code	Unit	Remarks
Set value	Set speed	V	mm/s	
	Set acceleration	a	mm/s ²	
	Set deceleration	d	mm/s ²	
	Travel distance	S	mm	
Calculated value	Achieved speed	Vmax	mm/s	$= \{2 \times a \times d \times S / (a + d)\}^{1/2}$
	Effective speed	Vb	mm/s	Smaller of V and Vmax
	Acceleration time	Ta	s	$= Vb/a$
	Deceleration time	Td	s	$= Vb/d$
	Constant speed time	Tc	s	$= Sc/Vb$
	Acceleration distance	Sa	mm	$= (a \times Ta^2)/2$
	Deceleration distance	Sd	mm	$= (d \times Td^2)/2$
	Constant speed distance	Sc	mm	$= S - (Sa + Sd)$
	Positioning time	T	s	$= Ta + Tc + Td$

*Do not use at speeds that exceed the specifications.

*Depending on the acceleration/deceleration and stroke, the trapezoidal velocity waveform may not form (the set speed may not be reached). In this case, select the effective speed (Vb) from the set speed (V) and the achieved speed (Vmax), whichever is smaller.

*Use at acceleration and deceleration of 1 G or less for horizontal use and 0.5 G or less for vertical use.

*While settling time depends on working conditions, it may take 0.2 seconds or so.

*1 G $\approx$ 9.8 m/s².

*Set the speed and acceleration by the motor selected by the customer. For motor selection and calculation of speed and acceleration, use the actuator information (mechanical efficiency, etc.) in the specifications.

STEP 3 Confirming allowable load weight

Confirm that the load weight during operation is within the allowable range (pages 574 to 575).

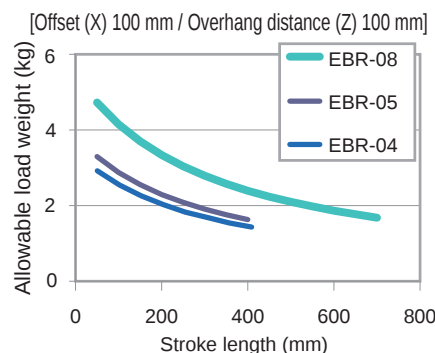
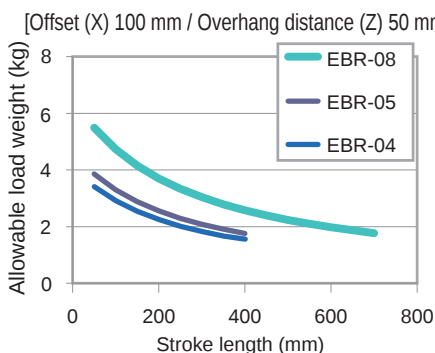
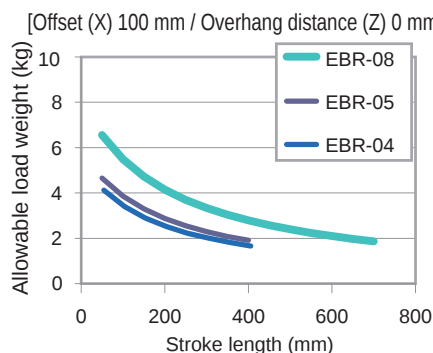
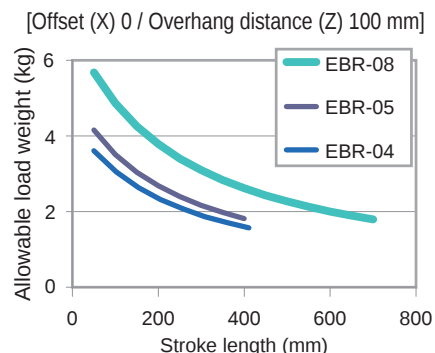
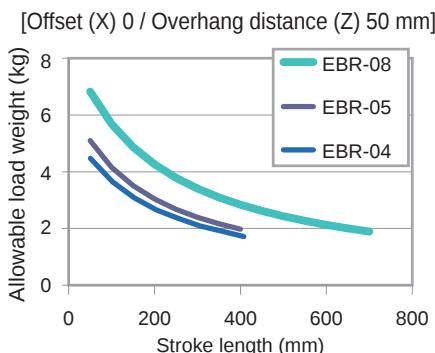
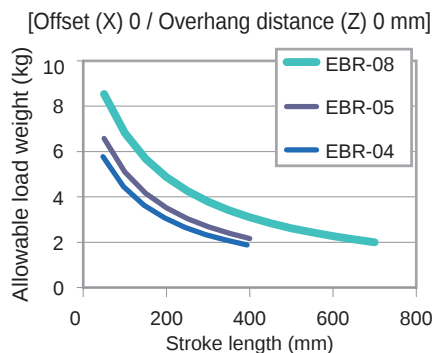
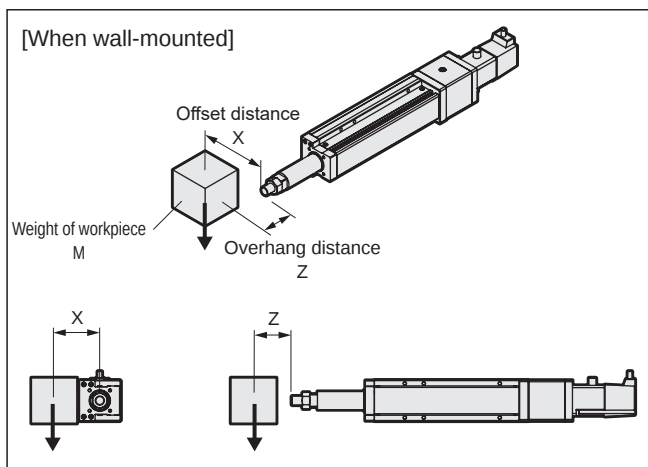
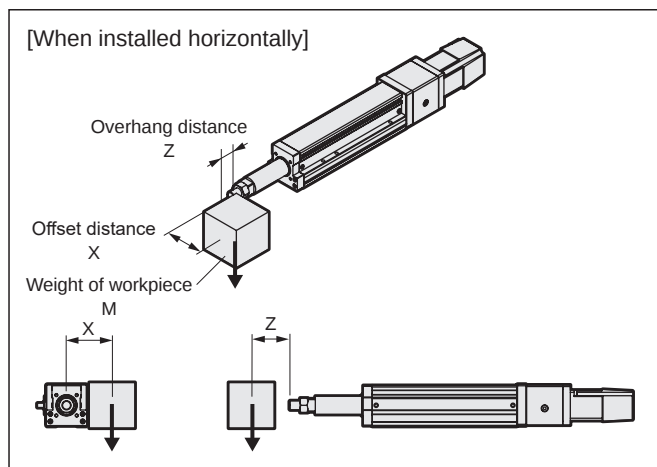
If the allowable load weight is exceeded, increase the size or use an external guide in conjunction.

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

Allowable load weight

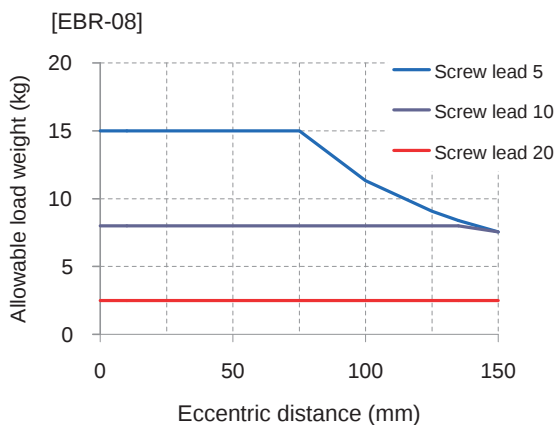
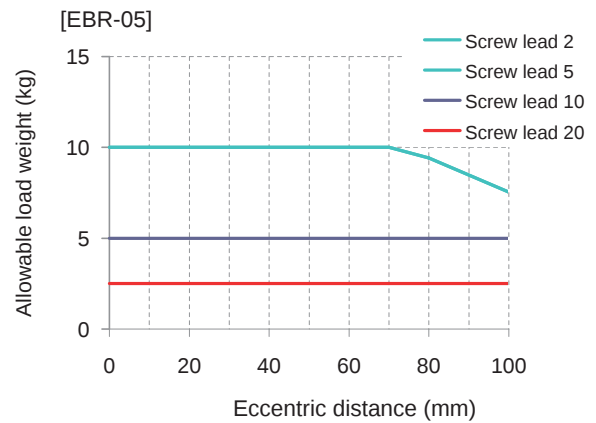
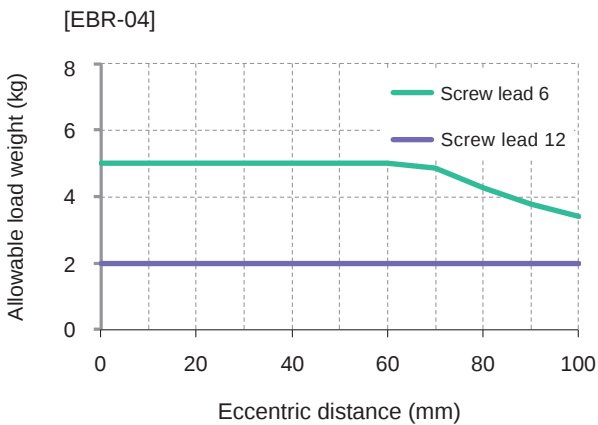
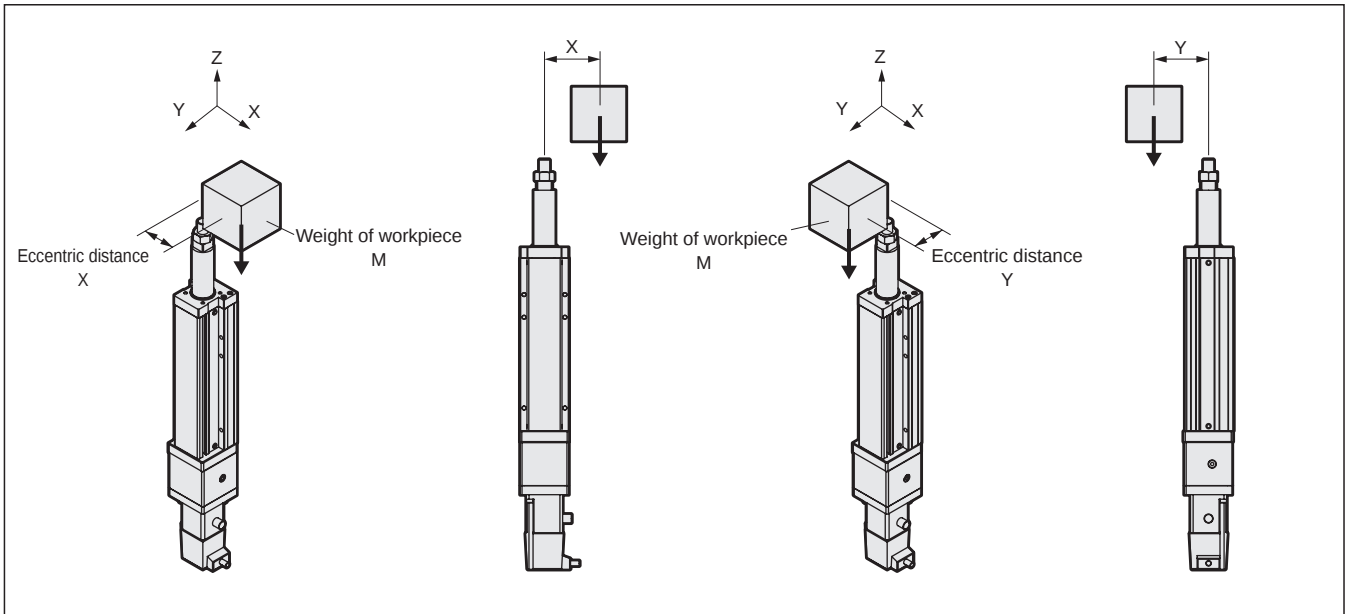
[When installed horizontally or wall-mounted]



* Values are when the actuator operating life is 5,000km. (Acceleration/deceleration 0.5G, speed 300mm/s)
Screw lead: 2 mm is the value when the travel life is 1,000km.

Allowable load weight

[When installed vertically]



* Values are when the actuator operating life is 5,000km. (Acceleration/deceleration 0.5G, speed 300mm/s)
Screw lead: 2 mm is the value when the travel life is 1,000km.

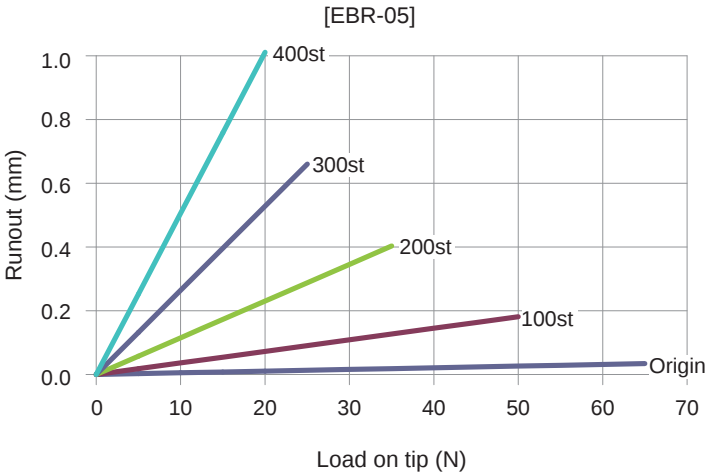
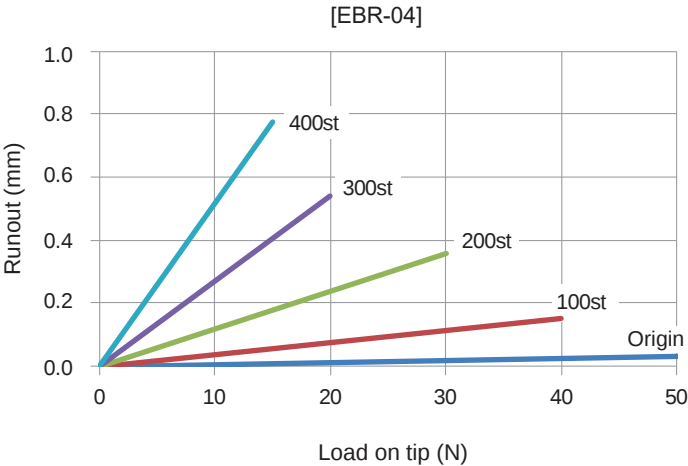
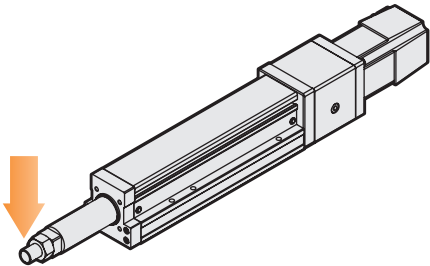
EBR
EBR
ETS
ETS Multi-Axis
ECS
ETV
ECV
EKS
EBS
EBR
ETS
ECS

Servo motor compatible

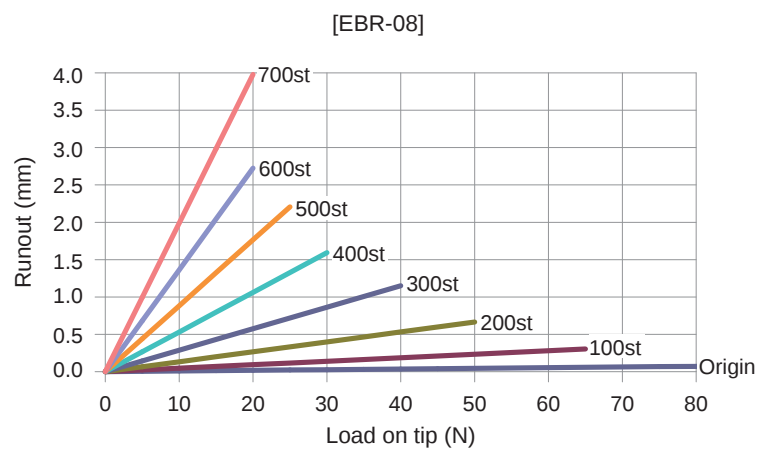
Stepper motor compatible

Safety
precautions

Rod end runout (EBR Series) *Reference value



Rod end runout (EBR Series) *Reference value



Servo motor compatible				
EBR	EBR	ETS	ETS Multi-Axis	ECS
Stepper motor compatible				
EBR	EBR	ETS	ETS	ECS

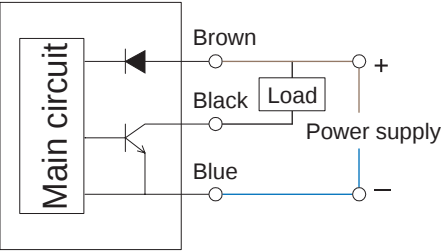
Safety precautions

Origin sensor, limit sensor

[Specifications]

Item		Specifications
Manufacturer	Manufacturer	KITA
	Model	KT-32N-2M
Output method		NPN output
Load voltage		10 to 30 VDC
Load current		100 mA or less
Current consumption		17 mA at 24 DC
Internal voltage drop		Max. 1.5 V
Leakage current		Max. 0.01 mA
Indicator lamp		Red
Impact resistance		50G
Ambient temperature		-10 to 70°C
Degree of protection		IP67 IEC 60529 Standards
Cord length		2 m

Output circuit



List of attachments

Motor mounting bolt (common motor mounting direction)

Model No.	Mounted motor specification	Motor size	Size	Quantity
EBR-04	A	□ 42	M3	4
	B		M3	4
EBR-05	A	□ 42	M3	4
	B		M3	4
EBR-08	A	□ 56 □ 60	M4	4
	B		M4	4
	C		M4	4

Coupling

Model No.	Attachment name	Quantity
LE (Motor mounting direction: Straight)	Coupling (Assembled at shipment)	1

Timing belt, pulley (motor side)

Model No.	Shipping format	Quantity
L* (Motor mounting on side/bottom)	Included at shipment *1	1 each

*1 The body side pulley is assembled.

Origin sensor, limit sensor

Model No.	Shipping format	Quantity
When "with" sensor is selected	Included at shipment	3 *1

*1 When "None" is selected for origin sensor or limit sensor, the other sensor is also "None".

Servo motor compatible

ECS

ETV

ECV

EKS

EBS

EBR

ETS

EBR

ETS

EBR

EBS

Maintenance parts

■ Maintenance parts (origin sensor, limit sensor)

Model No.		Compatibility	Part
EBR-SENSOR-N		All EBR models	Body

■ Maintenance parts (grease nozzle)

Model No.		Compatibility	
EBS-NOZZLE		All models	

Stepper motor compatible

ECS

ETS

EBR

EBS

Safety precautions