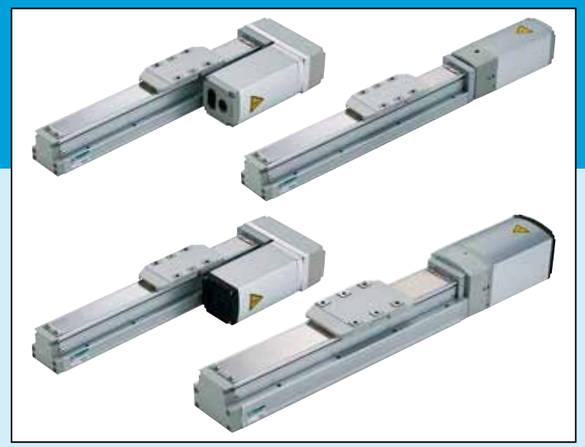
Electric Actuator with Motor Specification

EBS-M/G

Slider Type



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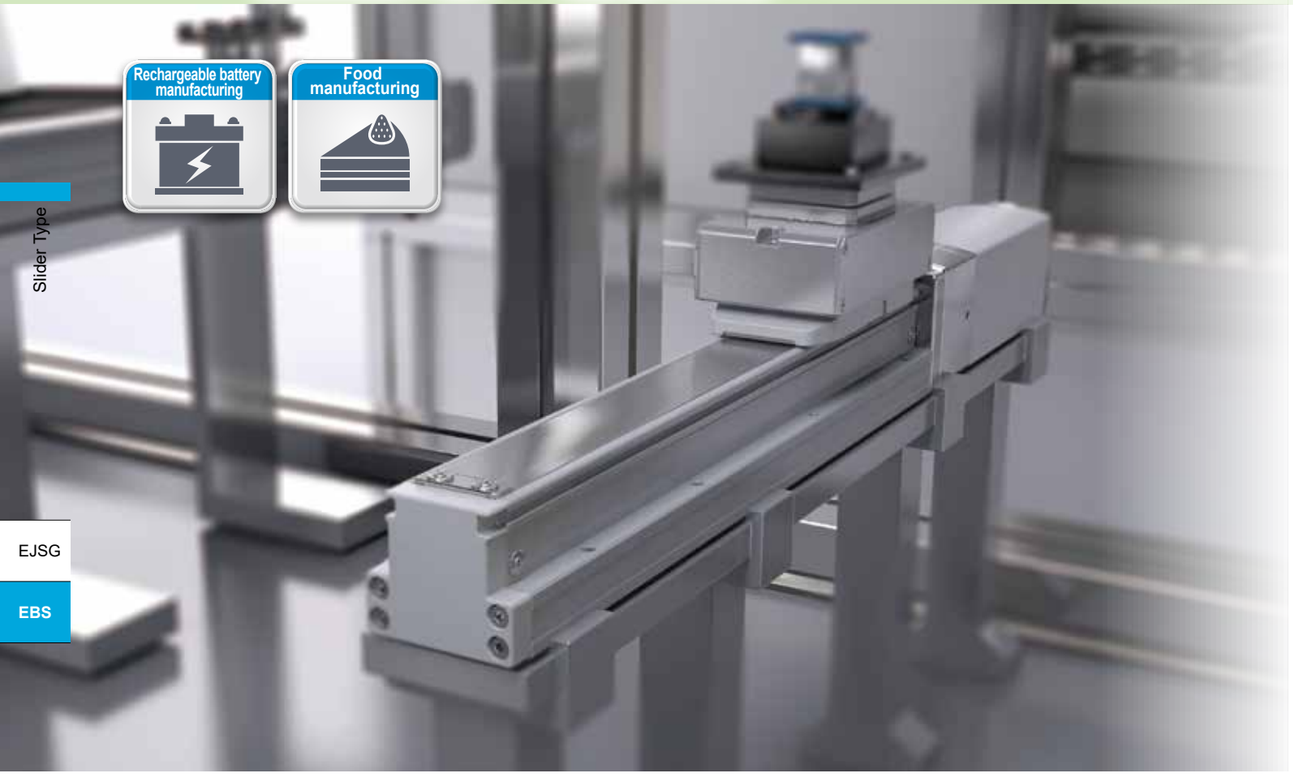
Slider EBS-G/M Series



Ideal for high-speed transport

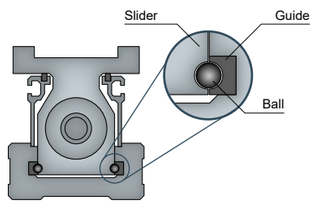
Line-up		Size 04	Size 05	Size 08	Catalog page
Actuator	Slider EBS-G/M	●	●	●	104
Application Controller	ECMG	●	●	●	535
	ECG-A *1	●	●	●	565
	ECR *2	●	●	●	595

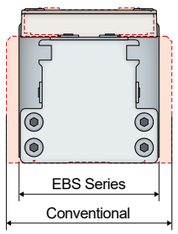
*1. EBS-P4 (for rechargeable battery manufacturing processes) can be connected to only Controllers ECG-A.
*2. EBS-FP1 (for food manufacturing processes) can be connected to Controllers ECR only.

High rigidity | Space saving | Reduced design | Reduced parts | Reduced man-hours

Compact, high-rigidity body

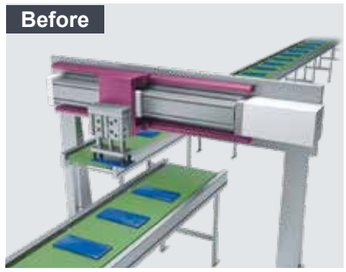
The guide that supports the load uses an outer rail. The wide guide integrated with the body achieves both high rigidity and space saving.





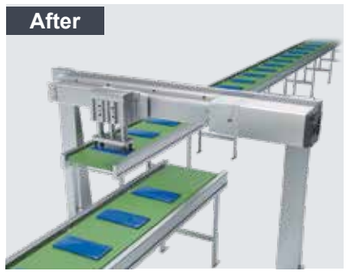
		Conventional Product	EBS-05
Body Width		64 mm	54 mm
Static Allowable Moment	MP	25.7 N·m	103 N·m
	MY	25.7 N·m	103 N·m
	MR	58 N·m	144 N·m

Before



Use of an additional guide to reduce moment

After

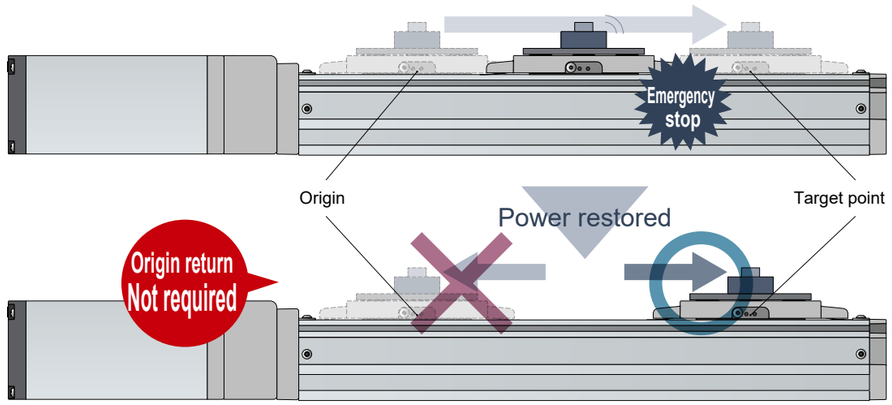


The high-rigidity body supports the moment, so the number of additional guides can be reduced

Easy maintenance | Reduced parts

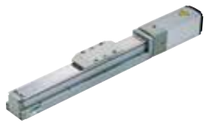
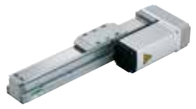
Battery-less Absolute Encoder

Equipped with an absolute encoder that retains current position information.
Because it is a battery-less specification, battery replacement maintenance is not required.
* Option for all series



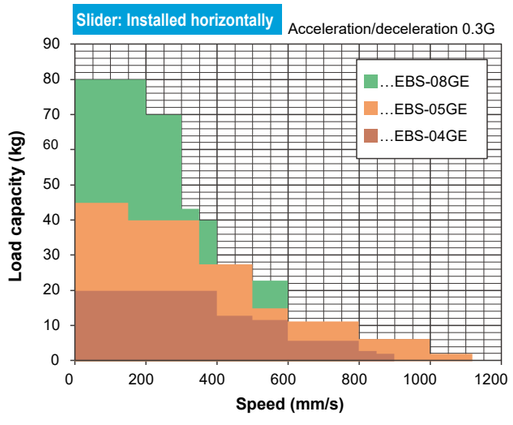
EBS Series

System Table

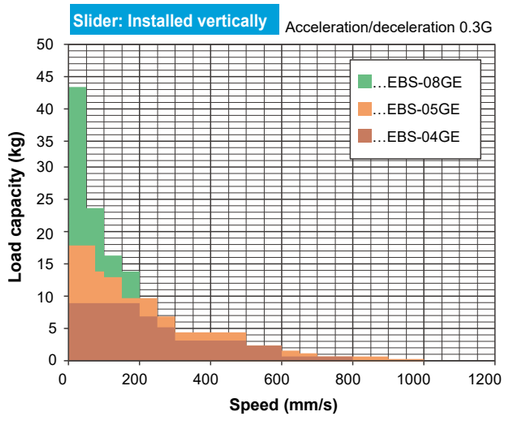
Controller	Actuator Model No.		Motor Size	Motor Mounting Direction	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Max. Pushing Force (N)	Stroke (mm) and Max. Speed (mm/s) 50 mm	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	Page
ECMG Series		EBS-04GE-06	□35	Straight	44	6	20.0	9.2	155	450 mm/s									400													108
		EBS-04GE-12				12	15.0	3.3	77	900									850													
		EBS-04GR/D/L-06		Reverse Parallel		6	20.0	9.2	155	375																					112
		EBS-04GR/D/L-12				12	15.0	3.3	77	600																					
		EBS-05GE-02	□42	Straight	54	2	45.0	18.3	550	130										120	105	95	80	70								118
		EBS-05GE-05				5	40.0	14.2	220	375										310	270	235	200	185								
		EBS-05GE-10				10	27.5	7.1	110	750										625	540	475	415	370								
		EBS-05GE-20				20	18.3	2.5	55	1120											1080	950	830	740								
		EBS-05GR/D/L-02		Reverse Parallel		2	45.0	18.3	55	130										120	105	95	80	70								122
		EBS-05GR/D/L-05				5	40.0	10.0	220	350										310	270	235	200	185								
		EBS-05GR/D/L-10				10	27.5	3.3	110	635										625	540	475	415	370								
		EBS-05GR/D/L-20				20	18.3	0.8	55	1120											1080	950	830	740								
		EBS-08GE-05	□56	Straight	82	5	80.0	43.3	965	230															220	200	180	135	120	110	100	128
		EBS-08GE-10				10	70.0	28.3	482	430															410	370	270	240	225	200		
		EBS-08GE-20				20	30.0	3.3	241	800																740	540	490	450	410		
		EBS-08GR/D/L-05		Reverse Parallel		5	80.0	33.3	965	200																180	135	120	110	100		132
		EBS-08GR/D/L-10				10	70.0	21.7	482	430															410	370	270	240	225	200		
		EBS-08GR/D/L-20				20	30.0	3.3	241	800																740	540	490	450	410		

* This data is for an acceleration of 0.3 G.
* For wall mounting, the payload is the same as for horizontal installation.

Slider: Installed horizontally Acceleration/deceleration 0.3G



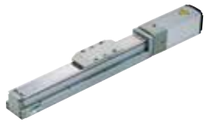
Slider: Installed vertically Acceleration/deceleration 0.3G



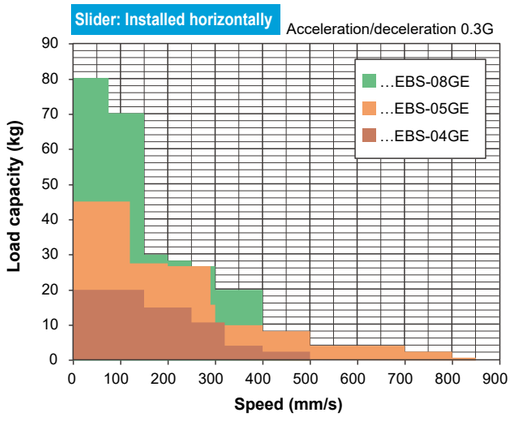
Slider Type
EJSG
EBS
Ending

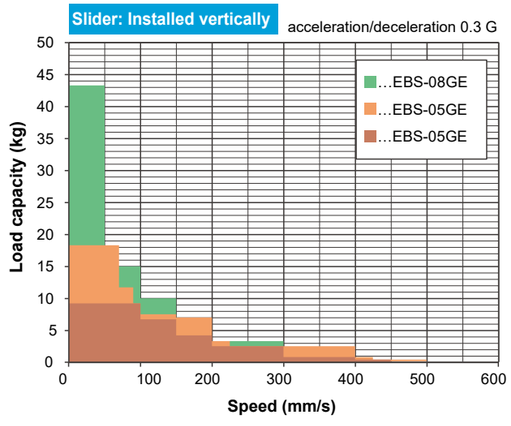
EBS Series

System Table

Controller	Actuator Model No.		Motor Size	Motor Mounting Direction	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal	Max. Payload (kg) Vertical	Max. Pushing Force (N)	Stroke (mm) and Max. Speed (mm/s)	Page
ECG Series		EBS-04GE-06	□35	Straight	44	6	20.0	9.2	155	320 mm/s	108
		EBS-04GE-12				12	15.0	3.3	77	500	
		EBS-04GR/D/L-06		Reverse Parallel		6	20.0	9.2	155	250	112
		EBS-04GR/D/L-12				12	11.7	3.3	77	400	
		EBS-05GE-02	□42	Straight	54	2	45.0	18.3	550	120 (105, 95, 80, 70)	118
		EBS-05GE-05				5	40.0	14.0	220	290 (270, 235, 200, 185)	
		EBS-05GE-10				10	27.5	7.0	110	500 (475, 415, 370)	
		EBS-05GE-20				20	18.3	2.5	55	850 (830, 740)	
		EBS-05GR/D/L-02		Reverse Parallel		2	45.0	18.3	550	100 (95, 80, 70)	122
		EBS-05GR/D/L-05				5	40.0	10.0	220	250 (235, 200, 185)	
		EBS-05GR/D/L-10				10	27.5	3.3	110	400 (370)	
		EBS-05GR/D/L-20				20	18.3	0.8	55	700	
		EBS-08GE-05	□56	Straight	82	5	80.0	43.3	965	150 (135, 120, 110, 100)	128
		EBS-08GE-10				10	70.0	28.3	482	250 (240, 225, 200)	
		EBS-08GE-20				20	30.0	3.3	241	500 (490, 450, 410)	
		EBS-08GR/D/L-05		Reverse Parallel		5	80.0	33.3	965	125 (120, 110, 100)	132
		EBS-08GR/D/L-10				10	70.0	18.3	482	250 (240, 225, 200)	
		EBS-08GR/D/L-20				20	30.0	3.3	241	400	

* This data is for an acceleration/deceleration of 0.3 G.
* For wall mounting, the payload is the same as for horizontal installation.





Slider Type
EJSG
EBS
Ending

Electric Actuator Slider Type

EBS-04□E

Inline Motor Mount Type

□35 Stepping Motor

For compatible detailed model numbers, please see our website.

Model No. Notation Method

EBS - 04 M E - 06 0300 N A N - C S03

❶Body Size

04	Body width 44 mm

❷Connected Controller *1

G	ECMG/ECG
M	ECR

❸Motor Mounting Direction

E	Inline Mount

❹Screw Lead

06	6 mm
12	12 mm

❺Stroke

0050 to 0500	50 mm (every 50 mm) 500 mm

❻Brake*2

N	None
B	Yes

❼Encoder

A	Battery-less Absolute Encoder (for ECR)
B	Battery-less Absolute Encoder (for ECMG/ECG)
C	Incremental Encoder (for ECMG/ECG)

❽Relay Cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Flexible cable 1 m
R03	Flexible cable 3 m
R05	Flexible cable 3 m
R10	Flexible cable 10 m

*1 Select the controller from P. 529.
*2 Select "Yes" for vertical use.
*3 For the external dimension drawing of the relay cable, refer to P. 607 for ECR and 576 for ECMG/ECG.

EAR-Subject Item (product incorporating EAR99)

Specifications

Connected Controller		ECMG		ECG		ECR	
Motor		□35 Stepping Motor					
Encoder Type		Battery-less Absolute Encoder/Incremental Encoder				Battery-less Absolute Encoder	
Drive Method		Ball screw ø10					
Stroke	mm	50 to 500					
Screw lead	mm	6	12	6	12	6	12
Max. Payload *1*2	Horizontal kg	20.0	15.0	20.0	15.0	16.6 (16.6)	11.6 (13.3)
	Vertical kg	9.2	3.3	9.2	3.3	6.6 (8.3)	2.5 (3.3)
Operating Speed Range *1*3	mm/s	7 to 450	15 to 900	7 to 320	15 to 500	7 to 200 (400)	15 to 600 (800)
Max. Acceleration/ Deceleration G*1	Horizontal	1.0		0.7		0.7 (1.0)	
	Vertical	0.5		0.3		0.3 (0.5)	
Max. Pushing Force	N	155	77	155	77	177	89
Pushing Operation Speed Range	mm/s	5 to 20		5 to 20		5 to 25	5 to 30
Repeatability	mm	±0.01					
Lost Motion	mm	0.1 or less					
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92					
Motor Power Supply Voltage		24 VDC ±10%				24 VDC ±10% or 48 VDC ±10%	
Brake	Type, Power Supply Voltage	Non-excitation operating type, 24 VDC ±10%					
	Power Consumption W	6.1				7	
	Holding Force N	140	70	140	70	126	63
Insulation Resistance		10 MΩ, 500 VDC					
Dielectric Strength		500 VAC for 1 minute					
Operating Ambient Temperature, Humidity		10°C to 40°C (no freezing) 35 to 80% RH (no condensation)				0 to 40°C (no freezing) 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10°C to 50°C (no freezing) 35 to 80% RH (no condensation)					
Atmosphere		No corrosive gas, explosive gas, or dust					
Protection Structure		IP20					

*1 Values in ( ) are for 48 VDC.
*2 Payload varies depending on acceleration/deceleration and speed. For details, please refer to the next P. (ECMG, ECG) or P. 144 (ECR).
*3 Maximum speed may decrease depending on conditions.

Stroke and Max. Speed

[EBS-04G (Connected Controller: ECMG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm) 50 to 450	Stroke (mm) 500
6	24 VDC	450	400
12	24 VDC	900	850

[EBS-04G (Connected Controller: ECG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm) 50 to 500
6	24 VDC	320
12	24 VDC	500

* For EBS-04M (connected controller ECR), please refer to P. 151.

Speed and Payload

[EBS-04G (Connected Controller: ECMG)]

[Horizontal Installation]

■ EBS-04GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	1.0 Screw Lead (mm) 6	12
7	20.0		16.7	
15	20.0	15.0	16.7	5.4
100	20.0	15.0	16.7	5.4
150	20.0	15.0	15.0	5.4
200	20.0	15.0	14.2	5.4
350	20.0	15.0	12.1	5.4
400	20.0	15.0	9.2	5.4
450	11.7	12.9	8.3	5.4
500		12.9		5.4
600		11.7		5.4
800		5.8		2.5
850		2.9		1.7
900		2.1		0.8

[Vertical Installation]

■ EBS-04GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.5 Screw Lead (mm) 6	12
7	9.2		9.2	
15	9.2	3.3	9.2	3.3
200	9.2	3.3	9.2	3.3
250	7.1	3.3	6.7	3.3
300	5.4	3.3	4.2	3.3
350	2.5	3.3	1.7	3.3
400	1.7	3.3		3.3
500		3.3		3.3
600		2.5		2.5
800		0.8		0.8

[EBS-04G (Connected Controller: ECG)]

[Horizontal Installation]

■ EBS-04GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.7 Screw Lead (mm) 6	12
7	20.0		20.0	
15	20.0	15.0	20.0	15.0
100	20.0	15.0	20.0	10.8
150	20.0	15.0	12.5	10.8
200	15.0	15.0	12.5	10.8
250	11.7	10.8	11.7	8.3
300	7.5	10.8	7.5	8.3
320	7.5	4.2	7.5	4.2
400		4.2		4.2
500		2.5		2.5

*This is for an acceleration/deceleration of 0.3 G.
*For ECR, please refer to P. 144.

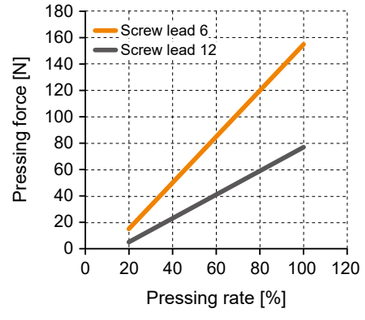
[Vertical Installation]

■ EBS-04GE (kg)

Speed (mm/s)	Acceleration/ Deceleration (G) 0.3 Screw Lead (mm) 6	12
7	9.2	
15	9.2	3.3
100	9.2	3.3
150	6.7	3.3
200	4.2	3.3
225	1.7	2.5
250	1.7	2.5
275	0.4	2.5
300		2.5
350		0.8
400		0.8
450		0.4

Pushing Force

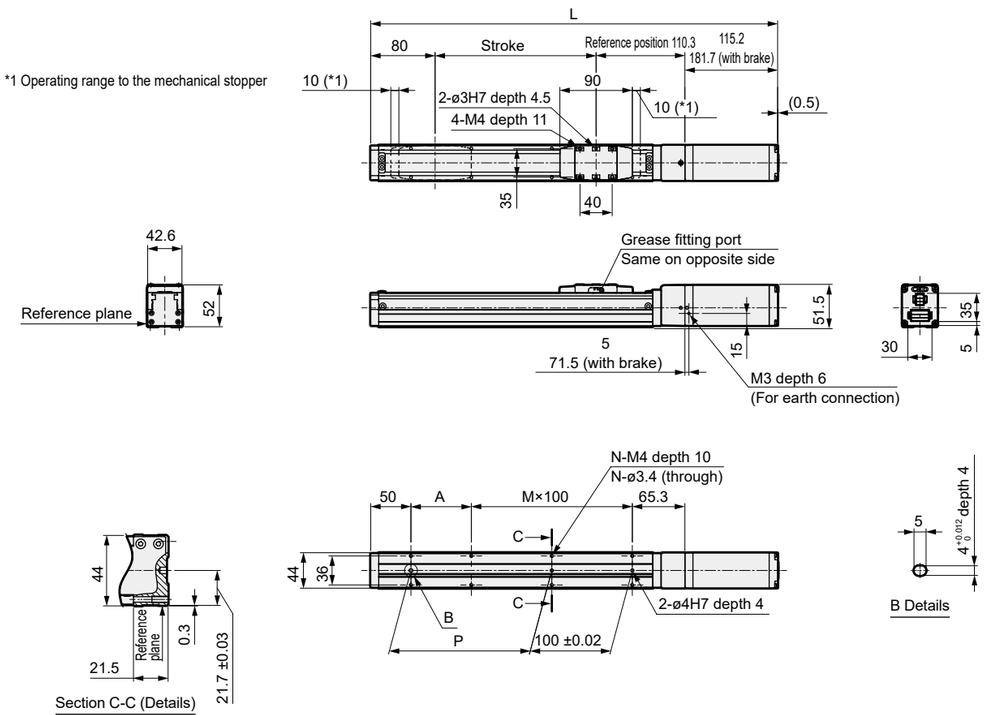
[EBS-04G (Connected Controller ECMG/ECG)]



* The pushing force above is a reference value. It may vary depending on conditions such as pushing speed.
* For ECR, please refer to P. 151.

Outline Dimensions, Inline Motor Mount

● EBS-04□E



Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)		50	100	150	200	250	300	350	400	450	500
L	Without Brake	355.5	405.5	455.5	505.5	555.5	605.5	655.5	705.5	755.5	805.5
	With Brake	422	472	522	572	622	672	722	772	822	872
A		25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		25	75	125	175	225	275	325	375	425	475
Weight (kg)	Without Brake	1.5	1.6	1.8	1.9	2.0	2.2	2.3	2.4	2.6	2.7
	With Brake	2.0	2.1	2.3	2.4	2.5	2.7	2.8	2.9	3.1	3.2

MEMO

Slider Type
EJSG
EBS
Ending

Electric Actuator Slider Type

EBS-04 □□

Reverse Parallel Motor Mount Type

□35 Stepping Motor

For compatible detailed model numbers, please see our website.

Model No. Notation Method

EBS - 04 ❶ | M ❷ | R ❸ | - 06 ❹ | 0300 ❺ | N ❻ | A ❼ | N - C | S03 ❽

❶Body Size

04	Body width 44 mm

❷Connected Controller *1

G	ECMG/ECG
M	ECR

❸Motor Mounting Direction *2

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹Screw Lead

06	6 mm
12	12 mm

❺Stroke *2

0050 to 0500	50 mm (every 50 mm) 500 mm

❻Brake *3

N	None
B	Yes

❼Encoder

A	Battery-less Absolute Encoder (for ECR)
B	Battery-less Absolute Encoder (for ECMG/ECG)
C	Incremental Encoder (for ECMG/ECG)

❽Relay Cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Flexible cable 1 m
R03	Flexible cable 3 m
R05	Flexible cable 3 m
R10	Flexible cable 10 m

*1 Select the controller from P. 529.
*2 When "D" is selected for the motor mounting direction, the stroke can be selected from "0250 (250 mm)" to "0500 (500 mm)".
*3 Select "Yes" for vertical use.
*4 For the external dimension drawing of the relay cable, refer to P. 607 for ECR and 576 for ECMG/ECG.

EAR-Subject Item (product incorporating EAR99)

Specifications

Connected Controller		ECMG		ECG		ECR	
Motor		□35 Stepping Motor					
Encoder Type		Battery-less Absolute Encoder/Incremental Encoder				Battery-less Absolute Encoder	
Drive Method		Ball screw ø10					
Stroke	mm	50 to 500					
Screw lead	mm	6	12	6	12	6	12
Max. Payload *1*2	kg Horizontal	20.0	15.0	20.0	11.7	16.6 (16.6)	11.6 (13.3)
	Vertical	9.2	3.3	9.2	3.3	6.6 (8.3)	2.5 (3.3)
Operating Speed Range *1*3	mm/s	7 to 375	15 to 600	7 to 250	15 to 400	7 to 200 (400)	15 to 500 (700)
Max. Acceleration/ Deceleration G *1	Horizontal	1.0		0.7		0.7 (1.0)	
	Vertical	0.5		0.3		0.3 (0.5)	
Max. Pushing Force	N	155	77	155	77	177	89
Pushing Operation Speed Range	mm/s	5 to 20		5 to 20		5 to 25	5 to 30
Repeatability	mm	±0.01					
Lost Motion	mm	0.1 or less					
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92					
Motor Power Supply Voltage		24 VDC ±10%				24 VDC ±10% or 48 VDC ±10%	
Brake	Type, Power Supply Voltage	Non-excitation operating type, 24 VDC ±10%					
	Power Consumption W	6.1				7	
	Holding Force N	140	70	140	70	126	63
Insulation Resistance		10 MΩ, 500 VDC					
Dielectric Strength		500 VAC for 1 minute					
Operating Ambient Temperature, Humidity		10°C to 40°C (no freezing) 35 to 80% RH (no condensation)				0 to 40°C (no freezing) 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10°C to 50°C (no freezing) 35 to 80% RH (no condensation)					
Atmosphere		No corrosive gas, explosive gas, or dust					
Protection Structure		IP20					

*1 Values in ( ) are for 48 VDC.
*2 Payload varies depending on acceleration/deceleration and speed. For details, please refer to the next P. (ECMG, ECG) or P. 144 (ECR).
*3 Maximum speed may decrease depending on conditions.

Stroke and Max. Speed

[EBS-04G (Connected Controller: ECMG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm) 50 to 500
6	24 VDC	375
12	24 VDC	600

[EBS-04G (Connected Controller: ECG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm) 50 to 500
6	24 VDC	250
12	24 VDC	400

* For EBS-04M (connected controller ECR), please refer to P. 151.

Speed and Payload

[EBS-04G (Connected Controller: ECMG)]

[Horizontal Installation]

■ EBS-04GR/L/D (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	0.3 12	1.0 6	1.0 12
7	20.0		16.7	
15	20.0	15.0	16.7	5.4
100	20.0	15.0	16.7	5.4
150	20.0	15.0	15.0	5.4
200	20.0	15.0	14.2	5.4
250	20.0	15.0	12.1	5.4
300	20.0	15.0	11.7	5.4
350	20.0	15.0	11.3	5.4
375	15.8	15.0	9.2	5.4
400		15.0		5.4
500		11.7		5.4
600		0.8		

[Vertical Installation]

■ EBS-04GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	0.3 12	0.5 6	0.5 12
7	9.2		9.2	
15	9.2	3.3	9.2	3.3
150	9.2	3.3	9.2	3.3
200	8.3	3.3	8.3	3.3
250	5.8	3.3	5.8	3.3
300	4.6	3.3	4.2	3.3
350	2.5	2.1	1.7	2.1
375	0.8	2.1		2.1
400		2.1		2.1
500		0.8		0.8
600				
800				

[EBS-04G (Connected Controller: ECG)]

[Horizontal Installation]

■ EBS-04GR/L/D (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	0.3 12	0.7 6	0.7 12
7	20.0		20.0	
100	20.0	11.7	20.0	10.0
150	13.3	11.7	11.7	10.0
200	13.3	11.7	10.0	10.0
250	10.0	8.3	8.3	8.3
300		8.3		8.3
400		3.3		3.3

[Vertical Installation]

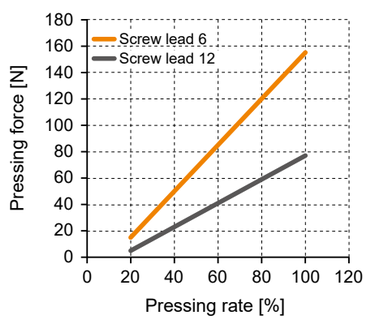
■ EBS-04GR/D/L (kg)

Speed (mm/s)	Acceleration/ Deceleration (G) 0.3 Screw Lead (mm) 6	0.3 12
7	9.2	
15	9.2	3.3
50	9.2	3.3
100	6.7	3.3
150	3.3	3.3
200	2.5	3.3
225	0.8	1.7
300		1.7
350		0.8

* This is for an acceleration/deceleration of 0.3 G.
* For ECR, please refer to P. 144.

Pushing Force

[EBS-04G (Connected Controller ECMG/ECG)]

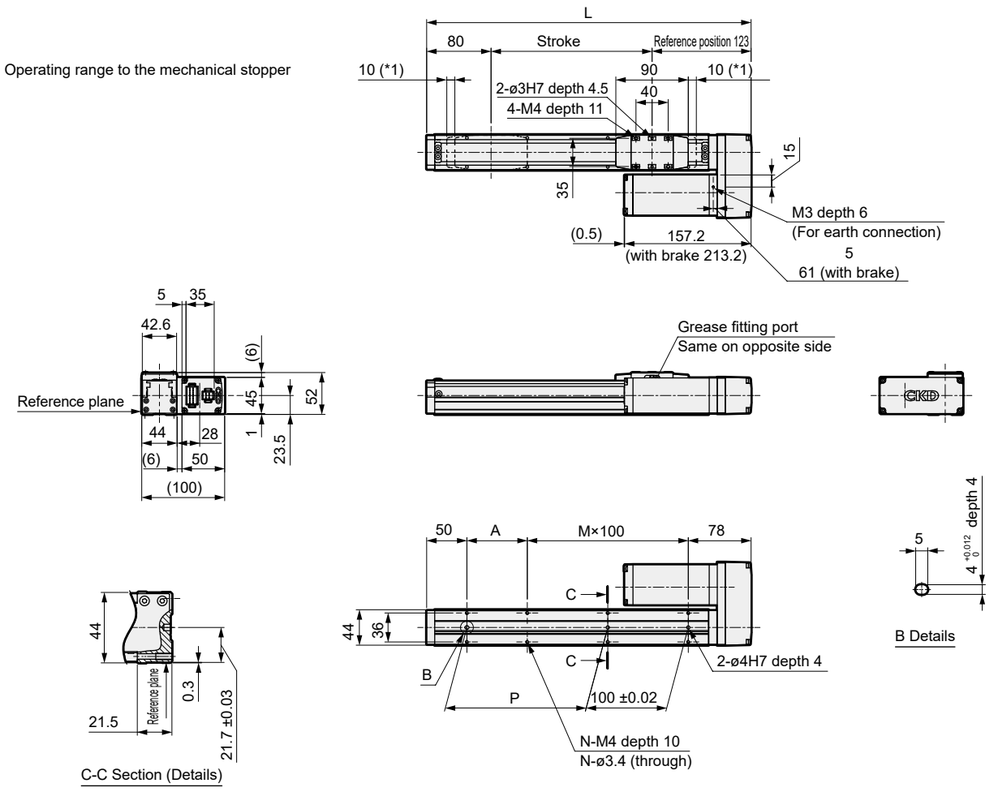


* The pushing force above is a reference value. It may vary depending on conditions such as pushing speed.
* For ECR, please refer to P. 151.

External Dimension Drawing Motor Right Side Return Mount

● EBS-04□R

*1 Operating range to the mechanical stopper

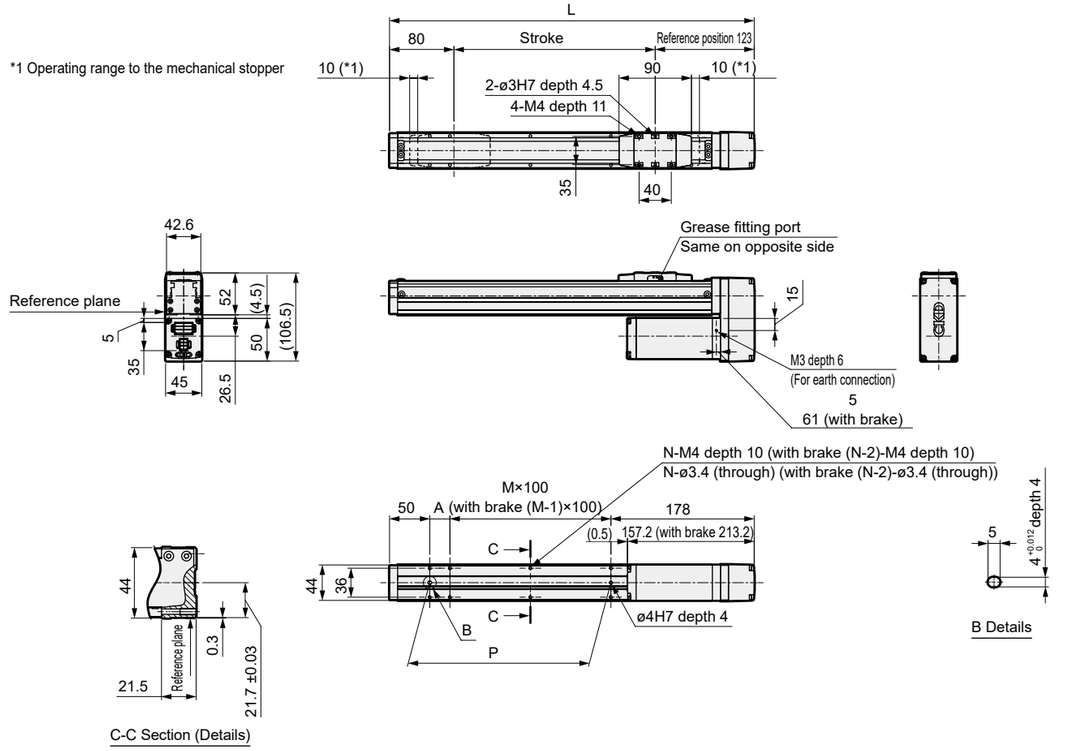


Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)		50	100	150	200	250	300	350	400	450	500
L		253	303	353	403	453	503	553	603	653	703
A		25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		25	75	125	175	225	275	325	375	425	475
Weight (kg)	Without Brake	1.7	1.9	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3
	With Brake	2.2	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-04□D

*1 Operating range to the mechanical stopper

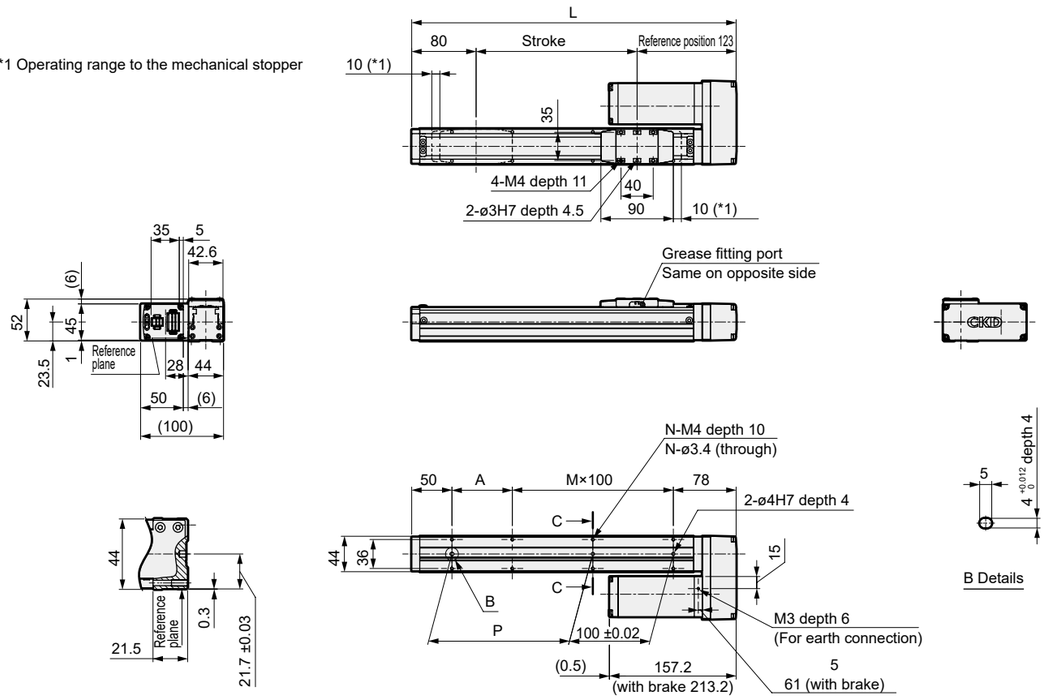


Stroke Code		0250	0300	0350	0400	0450	0500
Stroke (mm)		250	300	350	400	450	500
L		453	503	553	603	653	703
A		25	75	25	75	25	75
M		2	2	3	3	4	4
N		8	8	10	10	12	12
P		225	275	325	375	425	475
Weight (kg)	Without Brake	2.4	2.6	2.7	2.9	3.1	3.3
	With Brake	2.9	3.1	3.2	3.4	3.6	3.8

External Dimension Drawing Motor Left Side Return Mount

● EBS-04□L

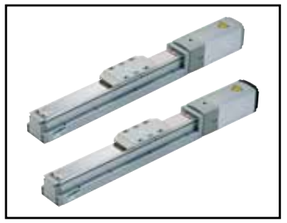
*1 Operating range to the mechanical stopper



Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)		50	100	150	200	250	300	350	400	450	500
L		253	303	353	403	453	503	553	603	653	703
A		25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5
N		6	6	8	8	10	10	12	12	14	14
P		25	75	125	175	225	275	325	375	425	475
Weight (kg)	Without Brake	1.7	1.9	2.0	2.2	2.4	2.6	2.7	2.9	3.1	3.3
	With Brake	2.2	2.4	2.5	2.7	2.9	3.1	3.2	3.4	3.6	3.8

MEMO

Slider Type
EJSG
EBS
Ending



Electric Actuator Slider Type

EBS-05□E

Inline Motor Mount Type

□42 Stepping Motor

For compatible detailed model numbers, please see our website.

Model No. Notation Method

EBS - 05 M E - 05 0300 N A N - C S03

❶Body Size

05	Body width 54 mm

❷Connected Controller*1

G	ECMG/ECG
M	ECR

❸Motor Mounting Direction

E	Inline Mount

❹Screw Lead

02	2 mm
05	5 mm
10	10 mm
20	20 mm

❺Stroke

0050 to 0800	50 mm (every 50 mm) 800 mm

❻Brake*2

N	None
B	Yes

❼Encoder

A	Battery-less Absolute Encoder (for ECR)
B	Battery-less Absolute Encoder (for ECMG/ECG)
C	Incremental Encoder (for ECMG/ECG)

❽Relay Cable *3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Flexible cable 1 m
R03	Flexible cable 3 m
R05	Flexible cable 3 m
R10	Flexible cable 10 m

*1 Select the controller from P. 529.
*2 Select "Yes" for vertical use.
*3 For the external dimension drawing of the relay cable, refer to P. 607 for ECR and 576 for ECMG/ECG.

EAR-Subject Item (product incorporating EAR99)

Specifications

Connected Controller		ECMG				ECG				ECR		
Motor		□42 Stepping Motor										
Encoder Type		Battery-less Absolute Encoder/Incremental Encoder								Battery-less Absolute Encoder		
Drive Method		Ball screw ø12										
Stroke	mm	50 to 800										
Screw lead	mm	2	5	10	20	2	5	10	20	2	5	10	20
Max. Payload *1*2	kg Horizontal	45.0	40.0	27.5	18.3	45.0	40.0	27.5	18.3	45.0 (45.0)	40.0 (40.0)	35.0 (35.0)	16.6 (16.6)
	Vertical	18.3	14.2	7.1	2.5	18.3	14.0	7.0	2.5	24.0 (24.0)	16.6 (16.6)	8.3 (8.3)	4.5 (4.5)
Operating Speed Range *1*3	mm/s	2 to 130	6 to 375	12 to 750	25 to 1120	2 to 120	6 to 290	12 to 500	25 to 850	2 to 70 (130)	6 to 250 (300)	12 to 600 (700)	25 to 900 (1100)
Max. Acceleration/ Deceleration G *1	Horizontal	0.7	1.0			0.7				0.7 (0.7)	0.7 (1.0)		
	Vertical	0.5				0.3				0.3 (0.5)			
Max. Pushing Force	N	550	220	110	55	550	220	110	55	385	250	121	44
Pushing Operation Speed Range	mm/s	5 to 20				5 to 20				5 to 25		5 to 30	
Repeatability	mm	±0.01											
Lost Motion	mm	0.1 or less											
Static Allowable Moment	N·m	MP: 103 MY: 103 MR: 144											
Motor Power Supply Voltage		24 VDC ±10%								24 VDC ±10% or 48 VDC ±10%			
Brake	Type, Power Supply Voltage	Non-excitation operating type, 24 VDC ±10%											
	Power Consumption W	6.1								7			
	Holding Force N	420	168	84	42	420	168	84	42	471	188	94	47
Insulation Resistance		10 MΩ, 500 VDC											
Dielectric Strength		500 VAC for 1 minute											
Operating Ambient Temperature, Humidity		10°C to 40°C (no freezing) 35 to 80% RH (no condensation)								0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10°C to 50°C (no freezing) 35 to 80% RH (no condensation)											
Atmosphere		No corrosive gas, explosive gas, or dust											
Protection Structure		IP20											

*1 Values in ( ) are for 48 VDC.
*2 Payload varies depending on acceleration/deceleration and speed. For details, please refer to the next P. (ECMG, ECG) or P. 144 (ECR).
*3 Maximum speed may decrease depending on conditions.

Stroke and Max. Speed

[EBS-05G (Connected Controller: ECMG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)					
		50 to 500	500 to 600	650	700	750	800
2	24 VDC	130	120	105	95	80	70
5	24 VDC	375	310	270	235	200	185
10	24 VDC	750	625	540	475	415	370
20	24 VDC	1120		1080	950	830	740

[EBS-05G (Connected Controller: ECG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)				
		50 to 600	650	700	750	800
2	24 VDC	120	105	95	80	70
5	24 VDC	290	270	235	200	185
10	24 VDC	500		475	415	370
20	24 VDC	850				740

* For EBS-05M (connected controller ECR), please refer to P. 151.

Speed and Payload

[EBS-05G (Connected Controller: ECMG)]

[Horizontal Installation]

■ EBS-05GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.7 2	5	1.0 10	20
2	45.0				45.0			
6	45.0	40.0			45.0	40.0		
12	45.0	40.0	27.5		45.0	40.0	22.9	
25	45.0	40.0	27.5	18.3	45.0	40.0	22.9	8.3
100	45.0	40.0	27.5	18.3	45.0	40.0	22.9	8.3
130	45.0	40.0	27.5	18.3		30.4	14.2	6.7
200		40.0	27.5	18.3		30.4	14.2	6.7
250		40.0	27.5	15.0		20.4	12.9	6.3
300		40.0	27.5	15.0		13.8	12.9	6.3
350		40.0	27.5	15.0		9.2	12.9	6.3
375		20.0	27.5	15.0		7.9	12.9	6.3
400			27.5	15.0			12.9	6.3
500			20.4	13.3			10.8	6.3
600			15.0	13.3			6.3	6.3
700			6.7	11.3			3.3	4.2
750			2.9	11.3			2.9	4.2
800				11.3				4.2
1,000				6.3				2.9
1120				2.1				1.7

[Vertical Installation]

■ EBS-05GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 2	5	10	20
2	18.3				18.3			
6	18.3	14.2			18.3	14.2		
12	18.3	14.2	7.1		18.3	14.2	7.1	
25	18.3	14.2	7.1	2.5	18.3	14.2	7.1	2.5
75	18.3	14.2	7.1	2.5	18.3	14.2	7.1	2.5
100	14.2	14.2	7.1	2.5	7.9	14.2	7.1	2.5
130	4.2	13.3	7.1	2.5		13.3	7.1	2.5
150		13.3	7.1	2.5		13.3	7.1	2.5
250		10.0	7.1	2.5		10.0	7.1	2.5
300		6.3	7.1	2.5		6.3	7.1	2.5
350		2.9	4.6	2.5		2.9	3.8	2.5
375		1.3	4.6	2.5		1.3	3.8	2.5
400			4.6	2.5			3.8	2.5
500			2.5	1.3			1.7	1.3
600			1.7	1.3			0.8	1.3
650			0.8	1.3				1.3
700				1.3				1.3
900				0.8				0.8
1,000				0.4				

[EBS-05G (Connected Controller: ECG)]

[Horizontal Installation]

■ EBS-05GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.7 2	5	10	20
2	45.0				45.0			
6	45.0	40.0			45.0	40.0		
12	45.0	40.0	27.5		45.0	40.0	27.5	
25	45.0	40.0	27.5	18.3	45.0	40.0	27.5	8.3
100	45.0	40.0	27.5	18.3	45.0	40.0	27.5	8.3
120	45.0	26.7	27.5	10.0	45.0	26.7	27.5	6.7
200		26.7	27.5	10.0		26.7	27.5	6.7
250		26.7	15.8	10.0		26.7	12.5	6.7
290		26.7	15.8	10.0		15.8	12.5	6.7
300			15.8	10.0			12.5	6.7
400			10.0	8.3			9.2	5.0
500			5.8	8.3			2.5	5.0
700				4.2				2.5
800				2.5				1.7
850				0.8				0.4

[Vertical Installation]

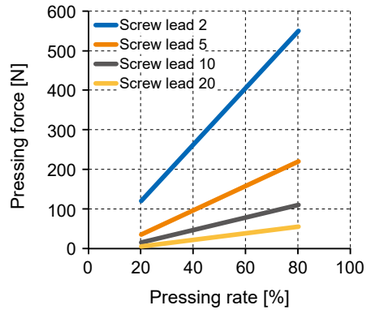
■ EBS-05GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20
2	18.3			
6	18.3	14.0		
12	18.3	14.0	7.0	
20	18.3	14.0	7.0	
25	18.3	14.0	7.0	2.5
50	18.3	14.0	7.0	2.5
70	18.3	9.2	7.0	2.5
90	11.7	9.2	7.0	2.5
100	2.5	9.2	7.0	2.5
120	2.5	7.5	7.0	2.5
150		7.5	7.0	2.5
200		4.2	7.0	2.5
225		3.3	2.5	2.5
250		2.1	2.5	2.5
300			2.5	2.5
350			2.1	2.5
400			1.3	2.5
425			0.8	0.4
500				0.4

* This is for an acceleration/deceleration of 0.3 G.
*For ECR, please refer to P. 144.

Pushing Force

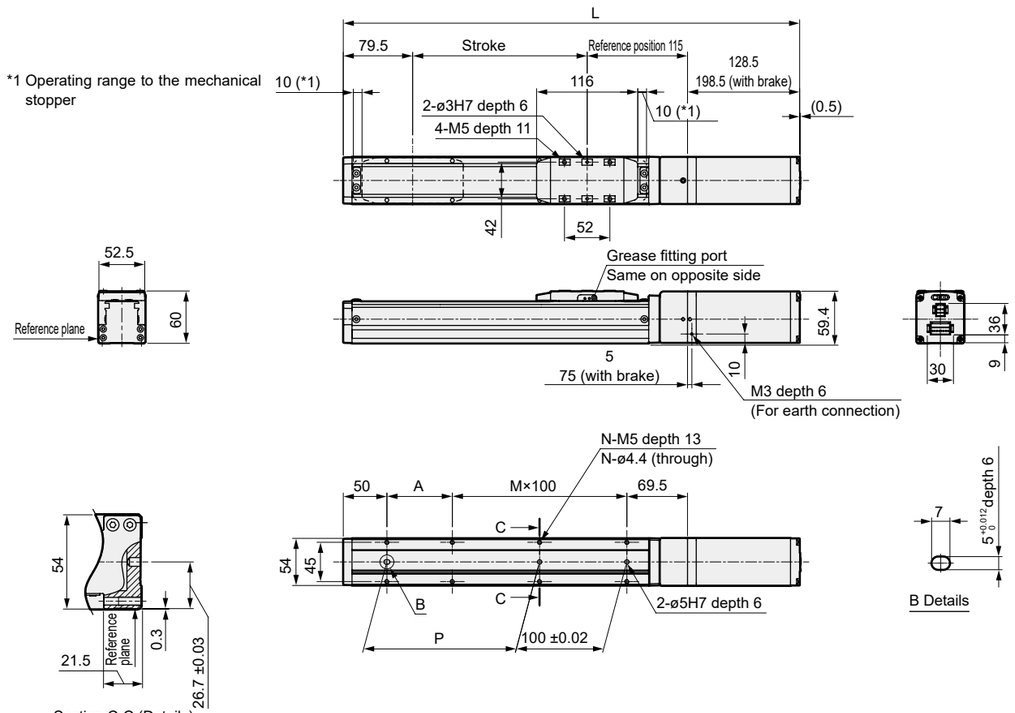
[EBS-05G (Connected Controller ECMG/ECG)]



* The pushing force above is a reference value. It may vary depending on conditions such as pushing speed.
* For ECR, please refer to P. 151.

Outline Dimensions, Inline Motor Mount

● EBS-05□E



Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	Without Brake	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123
	With Brake	443	493	543	593	643	693	743	793	843	893	943	993	1043	1093	1143	1193
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without Brake	2.8	2.9	3.1	3.2	3.4	3.5	3.7	3.8	4.0	4.1	4.2	4.4	4.5	4.7	4.8	5.0
	With Brake	3.5	3.6	3.8	3.9	4.1	4.2	4.4	4.5	4.7	4.8	4.9	5.1	5.2	5.4	5.5	5.7

MEMO

Slider Type
EJSG
EBS
Ending

Electric Actuator Slider Type

EBS-05□□

Reverse Parallel Motor Mount Type

□42 Stepping Motor

For compatible detailed model numbers, please see our website.

Model No. Notation Method

EBS - 05 ❶ M ❷ R ❸ - 05 ❹ 0300 ❺ N ❻ A ❼ N - C ❽ S03

❶Body Size

05	Body width 54 mm

❷Connected Controller*1

G	ECMG/ECG
M	ECR

❸Motor Mounting Direction *2

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹Screw Lead

02	2 mm
05	5 mm
10	10 mm
20	20 mm

❺Stroke *2

0050 to 0800	50 mm (every 50 mm) 800 mm

❻Brake *3

N	None
B	Yes

❼Encoder

A	Battery-less Absolute Encoder (for ECR)
B	Battery-less Absolute Encoder (for ECMG/ECG)
C	Incremental Encoder (for ECMG/ECG)

❽Relay Cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Flexible cable 1 m
R03	Flexible cable 3 m
R05	Flexible cable 3 m
R10	Flexible cable 10 m

*1 Select the controller from P. 529.
*2 When "D" is selected for the motor mounting direction, the stroke can be selected from "0250 (250 mm)" to "0800 (800 mm)".
*3 Select "Yes" for vertical use.
*4 For the external dimension drawing of the relay cable, refer to P. 607 for ECR and 576 for ECMG/ECG.

EAR-Subject Item (product incorporating EAR99)

Specifications

Connected Controller		ECMG				ECG				ECR		
Motor		□42 Stepping Motor										
Encoder Type		Battery-less Absolute Encoder/Incremental Encoder								Battery-less Absolute Encoder		
Drive Method		Ball screw ø12										
Stroke	mm	50 to 800										
Screw lead	mm	2	5	10	20	2	5	10	20	2	5	10	20
Max. Payload *1*2	kg Horizontal	45.0	40.0	27.5	18.3	45.0	40.0	27.5	18.3	45.0 (45.0)	40.0 (40.0)	35.0 (35.0)	16.6 (16.6)
	Vertical	18.3	10.0	3.3	0.8	18.3	10.0	3.3	0.8	24.0 (24.0)	16.6 (16.6)	8.3 (8.3)	4.5 (4.5)
Operating Speed Range *1*3	mm/s	2 to 130	6 to 325	12 to 635	25 to 1120	2 to 100	6 to 250	12 to 400	25 to 700	2 to 70 (130)	6 to 250 (300)	12 to 500 (600)	25 to 900 (1100)
Max. Acceleration/ Deceleration G *1	Horizontal	0.7	1.0			0.7				0.7 (0.7)	0.7 (1.0)		
	Vertical	0.5				0.3				0.3 (0.5)			
Max. Pushing Force	N	550	220	110	55	550	220	110	55	385	250	121	44
Pushing Operation Speed Range	mm/s	5 to 20				5 to 20				5 to 25		5 to 30	
Repeatability	mm	±0.01											
Lost Motion	mm	0.1 or less											
Static Allowable Moment	N·m	MP: 103 MY: 103 MR: 144											
Motor Power Supply Voltage		24 VDC ±10%								24 VDC ±10% or 48 VDC ±10%			
Brake	Type, Power Supply Voltage	Non-excitation operating type, 24 VDC ±10%											
	Power Consumption W	6.1								7			
	Holding Force N	420	168	84	42	420	168	84	42	471	188	94	47
Insulation Resistance		10 MΩ, 500 VDC											
Dielectric Strength		500 VAC for 1 minute											
Operating Ambient Temperature, Humidity		10°C to 40°C (no freezing) 35 to 80% RH (no condensation)								0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10°C to 50°C (no freezing) 35 to 80% RH (no condensation)											
Atmosphere		No corrosive gas, explosive gas, or dust											
Protection Structure		IP20											

*1 Values in ( ) are for 48 VDC.
*2 Payload varies depending on acceleration/deceleration and speed. For details, please refer to the next P. (ECMG, ECG) or P. 144 (ECR).
*3 Maximum speed may decrease depending on conditions.

Stroke and Max. Speed

[EBS-05G (Connected Controller: ECMG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)					
		50 to 500	500 to 600	650	700	750	800
2	24 VDC	130	120	105	95	80	70
5	24 VDC	350	310	270	235	200	185
10	24 VDC	635	625	540	475	415	370
20	24 VDC	1120		1080	950	830	740

[EBS-05G (Connected Controller: ECG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)			
		50 to 650	700	750	800
2	24 VDC	100	95	80	70
5	24 VDC	250	235	200	185
10	24 VDC	400			370
20	24 VDC	700			

* For EBS-05M (connected controller ECR), please refer to P. 151.

Speed and Payload

[EBS-05G (Connected Controller: ECMG)]

[Horizontal Installation]

■ EBS-05GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.7 2	5	1.0 10	20
2	45.0				45.0			
6	45.0	40.0			45.0	40.0		
12	45.0	40.0	27.5		45.0	40.0	22.9	
25	45.0	40.0	27.5	18.3	45.0	40.0	22.9	8.3
50	45.0	40.0	27.5	18.3	45.0	40.0	22.9	8.3
70	45.0	40.0	27.5	18.3	39.2	40.0	22.9	8.3
100	45.0	40.0	27.5	18.3	3.3	40.0	22.9	8.3
130	31.3	40.0	27.5	15.0		23.3	14.2	6.7
150		40.0	27.5	15.0		23.3	14.2	6.7
200		40.0	27.5	15.0		18.3	14.2	6.7
250		40.0	27.5	15.0		13.3	12.9	6.3
325		19.2	27.5	15.0			12.9	6.3
400			27.5	15.0			12.9	6.3
500			20.4	13.3			10.8	6.3
600			15.0	13.3			6.3	6.3
635			4.6	11.3			3.3	4.2
800				11.3				4.2
1,000				6.3				2.5
1120				1.3				

[Vertical Installation]

■ EBS-05GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 2	5	10	20
2	18.3				18.3			
6	18.3	10.0			18.3	10.0		
12	18.3	10.0	3.3		18.3	10.0	3.3	
25	18.3	10.0	3.3	0.8	18.3	10.0	3.3	0.8
75	18.3	10.0	3.3	0.8	18.3	10.0	3.3	0.8
100	14.2	10.0	3.3	0.8	7.9	10.0	3.3	0.8
200		10.0	3.3	0.8		10.0	3.3	0.8
250		7.5	3.3	0.8		5.8	3.3	0.8
300		3.8	3.3	0.8		1.7	3.3	0.8
325		0.8	3.3	0.8			2.9	0.8
400			3.3	0.8			2.9	0.8
500			2.5	0.8			1.7	0.8
600			0.8	0.8			0.8	0.8
900				0.8				0.8

[EBS-05G (Connected Controller: ECG)]

[Horizontal Installation]

■ EBS-05GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.7 2	5	10	20
2	45.0				45.0			
6	45.0	40.0			45.0	40.0		
12	45.0	40.0	27.5		45.0	40.0	27.5	
25	45.0	40.0	27.5	18.3	45.0	40.0	27.5	7.5
100	45.0	40.0	27.5	18.3	45.0	40.0	27.5	7.5
120	45.0	26.7	23.3	10.0	45.0	26.7	20.0	5.0
200		26.7	23.3	10.0		26.7	20.0	5.0
250		8.3	11.7	10.0		8.3	11.7	5.0
300			11.7	10.0			11.7	5.0
400			3.3	6.7			3.3	4.2
500				6.7				4.2
700				3.3				1.7

[Vertical Installation]

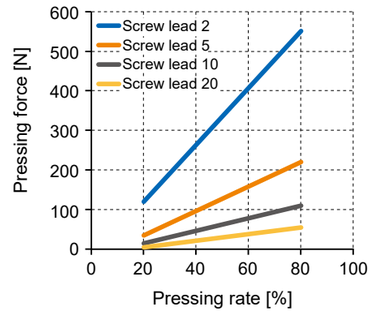
■ EBS-05GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20
2	18.3			
6	18.3	10.0		
12	18.3	10.0	3.3	
20	18.3	10.0	3.3	
25	18.3	10.0	3.3	0.8
50	18.3	10.0	3.3	0.8
70	18.3	8.3	3.3	0.8
90	11.7	8.3	3.3	0.8
100	2.5	8.3	3.3	0.8
120	2.5	6.7	2.1	0.8
150		6.7	2.1	0.8
200		2.5	2.1	0.8
210		0.8	1.3	0.8
300			1.3	0.8
325			0.4	0.8
400				0.8
500				0.4

* This is for an acceleration/deceleration of 0.3 G.
* For ECR, please refer to P. 144.

Pushing Force

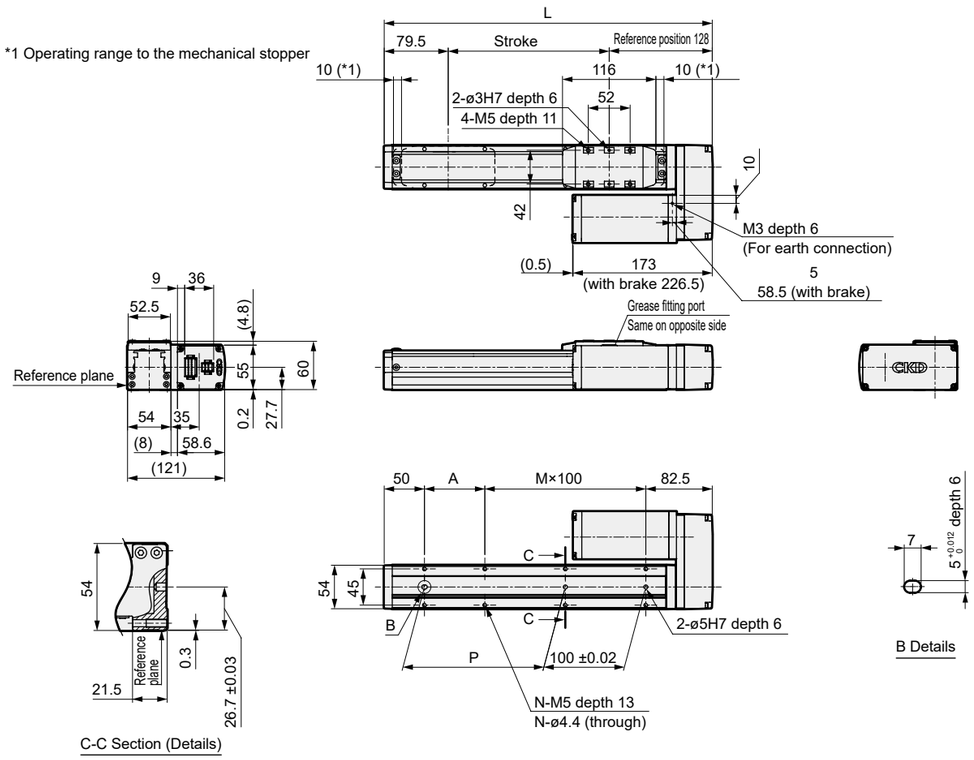
[EBS-05G (Connected Controller ECMG/ECG)]



* The pushing force above is a reference value. It may vary depending on conditions such as pushing speed.
* For ECR, please refer to P. 151.

External Dimension Drawing Motor Right Side Return Mount

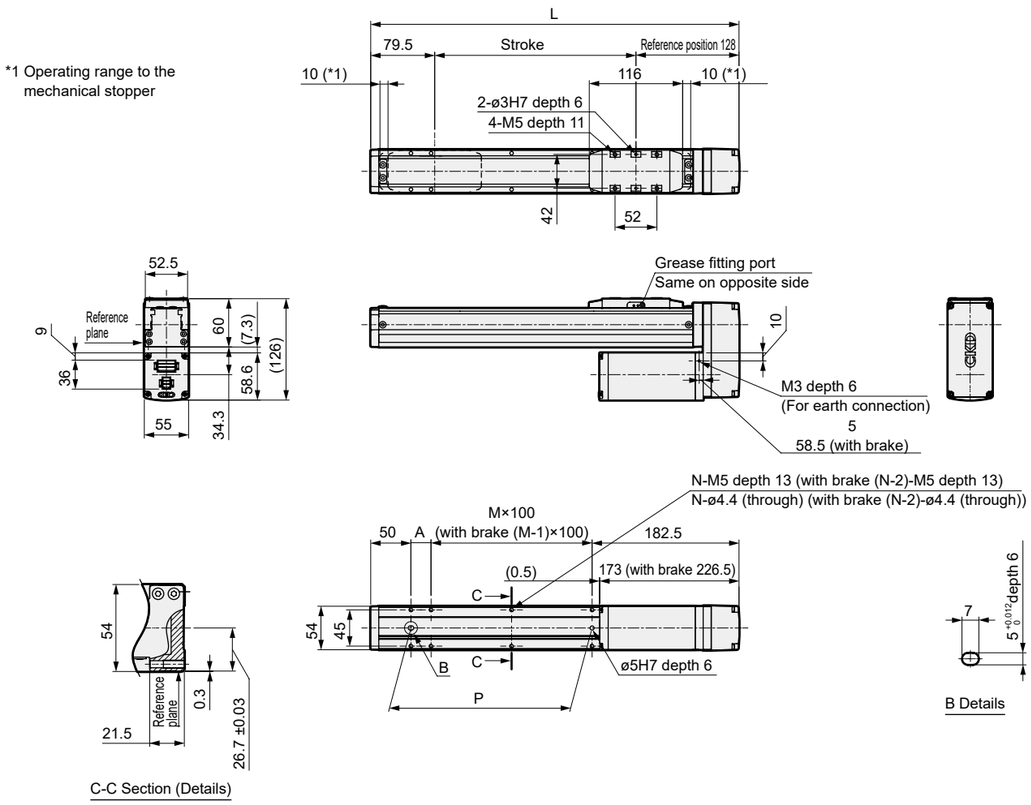
● EBS-05□R



Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		257.5	307.5	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without Brake	2.7	2.8	3.0	3.1	3.4	3.5	3.6	3.8	3.9	4.0	4.2	4.3	4.5	4.6	4.7	5.1
	With Brake	3.4	3.5	3.7	3.8	4.1	4.2	4.3	4.5	4.6	4.7	4.9	5.0	5.2	5.3	5.4	5.8

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-05□D

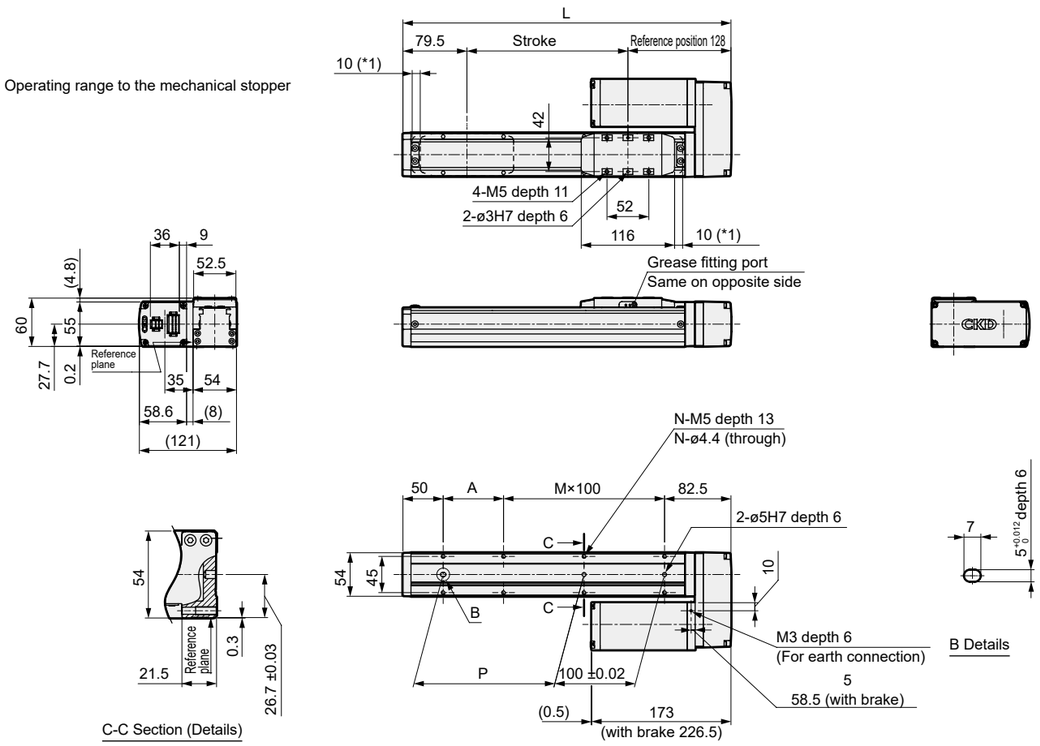


Stroke Code		0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		250	300	350	400	450	500	550	600	650	700	750	800
L		457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5
A		25	75	25	75	25	75	25	75	25	75	25	75
M		2	2	3	3	4	4	5	5	6	6	7	7
N		8	8	10	10	12	12	14	14	16	16	18	18
P		225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without Brake	3.4	3.5	3.6	3.8	3.9	4.0	4.2	4.3	4.5	4.6	4.7	5.1
	With Brake	4.1	4.2	4.3	4.5	4.6	4.7	4.9	5.0	5.2	5.3	5.4	5.8

External Dimension Drawing Motor Left Side Return Mount

● EBS-05□L

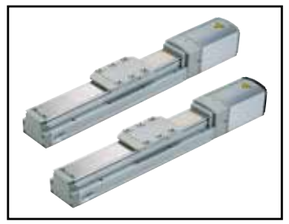
*1 Operating range to the mechanical stopper



Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		257.5	307.5	357.5	407.5	457.5	507.5	557.5	607.5	657.5	707.5	757.5	807.5	857.5	907.5	957.5	1007.5
A		25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	Without Brake	2.7	2.8	3.0	3.1	3.4	3.5	3.6	3.8	3.9	4.0	4.2	4.3	4.5	4.6	4.7	5.1
	With Brake	3.4	3.5	3.7	3.8	4.1	4.2	4.3	4.5	4.6	4.7	4.9	5.0	5.2	5.3	5.4	5.8

MEMO

Slider Type
EJSG
EBS
Ending



Electric Actuator Slider Type

EBS-08□E

Inline Motor Mount Type

□56 Stepping Motor

CE UKCA RoHS

For compatible detailed model numbers, please see our website.

Model No. Notation Method

EBS - 08 M E - 05 0300 N A N - C S03

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body Size

08	Body width 82 mm

❷Connected Controller *1

G	ECMG/ECG
M	ECR

❸Motor Mounting Direction

E	Inline Mount

❹Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺Stroke

0050 to 1100	50 mm (every 50 mm) 1100 mm

❻Brake*2

N	None
B	Yes

❼Encoder

A	Battery-less Absolute Encoder (for ECR)
B	Battery-less Absolute Encoder (for ECMG/ECG)
C	Incremental Encoder (for ECMG/ECG)

❽Relay Cable*3

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Flexible cable 1 m
R03	Flexible cable 3 m
R05	Flexible cable 3 m
R10	Flexible cable 10 m

*1 Select the controller from P. 529.
*2 Select "Yes" for vertical use.
*3 For the external dimension drawing of the relay cable, refer to P. 607 for ECR and 576 for ECMG/ECG.

EAR-subject item (product incorporating EAR99)

Specifications

Connected Controller		ECMG			ECG			ECR		
Motor		□56 Stepping Motor								
Encoder Type		Battery-less Absolute Encoder/Incremental Encoder						Battery-less Absolute Encoder		
Drive Method		Ball screw ø16								
Stroke	mm	50 to 1100								
Screw lead	mm	5	10	20	5	10	20	5	10	20
Max. Payload *1*2	kg Horizontal	80.0	70.0	30.0	80.0	70.0	30.0	80.0 (80.0)	70.0 (70.0)	43.3 (43.3)
	Vertical	43.3	28.3	3.3	43.3	28.3	3.3	38.3 (40.0)	18.3 (18.3)	10.0 (10.0)
Operating Speed Range *1*3	mm/s	6 to 230	12 to 430	25 to 800	6 to 150	12 to 250	25 to 500	6 to 150 (250)	12 to 300 (550)	25 to 600 (1100)
Max. Acceleration/ Deceleration G *1	Horizontal	1.0			0.7			0.7 (1.0)		
	Vertical	0.5			0.3			0.3 (0.5)		
Max. Pushing Force	N	965	482	241	965	482	241	970	477	250
Pushing Operation Speed Range	mm/s	5 to 20			5 to 20			5 to 25	5 to 30	
Repeatability	mm	±0.01								
Lost Motion	mm	0.1 or less								
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336								
Motor Power Supply Voltage		24 VDC ±10%						24 VDC ±10% or 48 VDC ±10%		
Brake	Type, Power Supply Voltage	Non-excitation operating type, 24 VDC ±10%								
	Power Consumption W	7.2						8		
	Holding Force N	768	384	192	768	384	192	754	377	188
Insulation Resistance		10 MΩ, 500 VDC								
Dielectric Strength		500 VAC for 1 minute								
Operating Ambient Temperature, Humidity		10°C to 40°C (no freezing) 35 to 80% RH (no condensation)						0 to 40°C (no freezing) 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		-10°C to 50°C (no freezing) 35 to 80% RH (no condensation)								
Atmosphere		No corrosive gas, explosive gas, or dust								
Protection Structure		IP20								

*1 Values in ( ) are for 48 VDC.
*2 Payload varies depending on acceleration/deceleration and speed. For details, please refer to the next P. (ECMG, ECG) or P. 144 (ECR).
*3 Maximum speed may decrease depending on conditions.

Stroke and Max. Speed

[EBS-08M (Connected Controller: ECMG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)							
		50 to 750	800	850	900	950	1,000	1050	1100
5	24 VDC	230	220	200	180	135	120	110	100
10	24 VDC	430		410	370	270	240	225	200
20	24 VDC	800			740	540	490	450	410

[EBS-08G (Connected Controller: ECG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)				
		50 to 900	950	1,000	1050	1100
5	24 VDC	150	135	120	110	100
10	24 VDC	250		240	225	200
20	24 VDC	500		490	450	410

* For EBS-08M (connected controller ECR), please refer to P. 151.

Speed and Payload

[EBS-08G (Connected Controller: ECMG)]

[Horizontal Installation]

■ EBS-08GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	1.0 5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	30.0
100	80.0	70.0	30.0	80.0	70.0	30.0
150	80.0	70.0	30.0	50.0	40.0	26.7
200	80.0	70.0	30.0	18.3	40.0	26.7
230	18.3	70.0	30.0		15.0	24.2
300		70.0	30.0		15.0	24.2
350		43.3	30.0		3.8	24.2
400		40.0	30.0			24.2
430		12.5	22.9			13.8
600			22.9			13.8
800			5.4			2.5

[Vertical Installation]

■ EBS-08GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.5 5	10	20
6	43.3			43.3		
12	43.3	28.3		43.3	28.3	
25	43.3	28.3	3.3	43.3	28.3	3.3
50	43.3	28.3	3.3	43.3	28.3	3.3
100	16.7	24.2	3.3	16.7	12.1	3.3
150	16.7	14.2	3.3	16.7	12.1	3.3
200	5.0	14.2	3.3	5.0	12.1	3.3
230	0.8	5.4	3.3		2.1	3.3
300		5.4	3.3		2.1	3.3
400		2.1	3.3		2.1	3.3
600			2.5			2.5
700			0.8			0.8

[EBS-08G (Connected Controller: ECG)]

[Horizontal Installation]

■ EBS-08GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.7 5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
125	40.0	70.0	30.0	40.0	70.0	18.3
150	40.0	70.0	30.0	35.0	70.0	18.3
200		28.3	30.0		17.5	18.3
250		28.3	26.7		17.5	18.3
300			26.7			18.3
400			20.0			11.7
500			3.3			

[Vertical Installation]

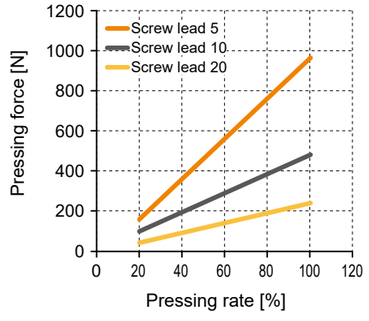
■ EBS-08GE (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20
6	43.3		
12	43.3	28.3	
25	43.3	28.3	3.3
50	43.3	28.3	3.3
100	15.0	12.5	3.3
150	2.9	10.0	3.3
250		1.7	3.3
300			3.3
350			0.8

* This is for an acceleration/deceleration of 0.3 G.
* For ECR, please refer to P. 144.

Pushing Force

[EBS-08G (Connected Controller ECMG/ECG)]

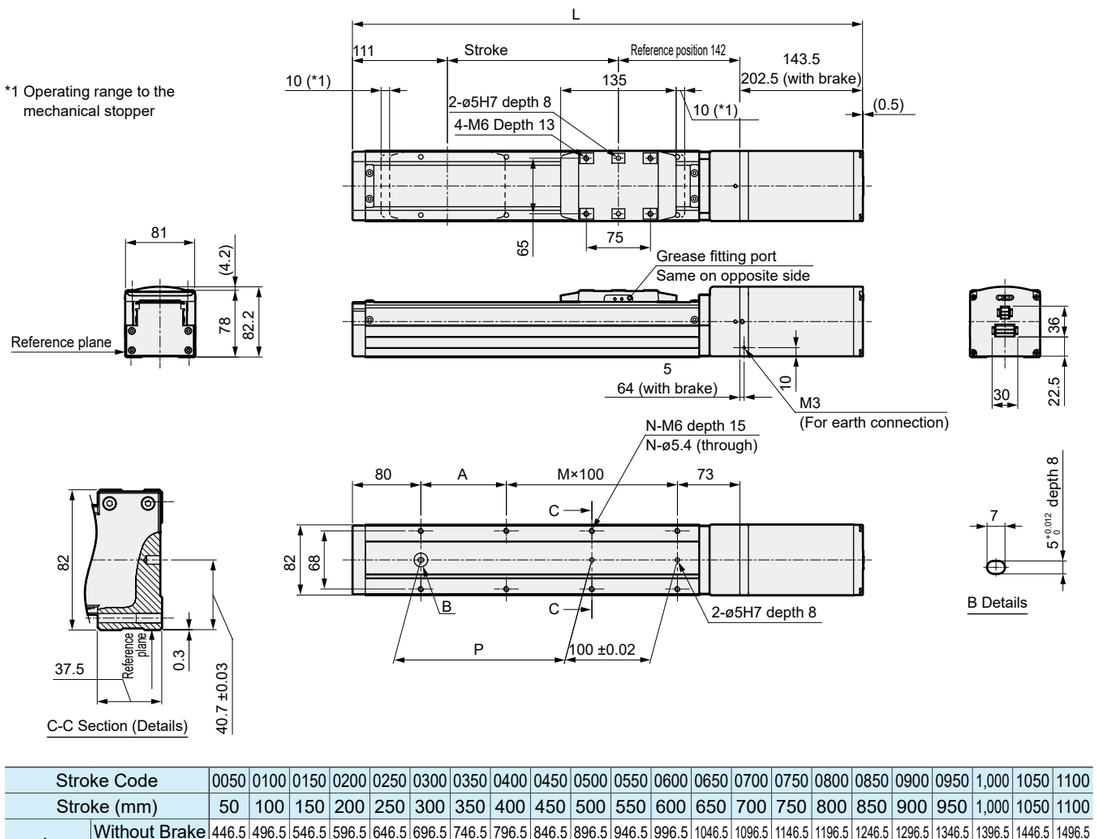


* The pushing force above is a reference value. It may vary depending on conditions such as pushing speed.
* For ECR, please refer to P. 151.

Outline Dimensions, Inline Motor Mount

● EBS-08□E

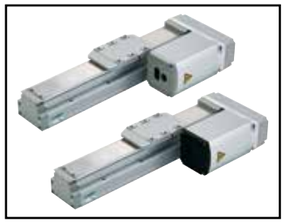
*1 Operating range to the mechanical stopper



Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	Without Brake	446.5	496.5	546.5	596.5	646.5	696.5	746.5	796.5	846.5	896.5	946.5	996.5	1046.5	1096.5	1146.5	1196.5	1246.5	1296.5	1346.5	1396.5	1446.5	1496.5
	With Brake	505.5	555.5	605.5	655.5	705.5	755.5	805.5	855.5	905.5	955.5	1005.5	1055.5	1105.5	1155.5	1205.5	1255.5	1305.5	1355.5	1405.5	1455.5	1505.5	1555.5
A		50	100	50	100	50	100	50	100	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	8	8	9	9	10	10	11	11
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	Without Brake	6.7	7.0	7.3	7.6	8.0	8.3	8.6	9.0	9.3	9.6	9.9	10.3	10.6	10.9	11.2	11.6	11.9	12.2	12.6	12.9	13.2	13.5
	With Brake	8.0	8.3	8.6	8.9	9.3	9.6	9.9	10.3	10.6	10.9	11.2	11.6	11.9	12.2	12.5	12.9	13.2	13.5	13.9	14.2	14.5	14.8

MEMO

Slider Type
EJSG
EBS
Ending



Electric Actuator Slider Type

EBS-08□□

Reverse Parallel Motor Mount Type

□56 Stepping Motor

For compatible detailed model numbers, please see our website.

Model No. Notation Method

EBS - 08 M R - 05 0300 N A N - C S03

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶Body Size

08	Body width 82 mm

❷Connected Controller *1

G	ECMG/ECG
M	ECR

❸Motor Mounting Direction *2

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺Stroke *2

0050 to 1100	50 mm (every 50 mm) 1100 mm

❻Brake *3

N	None
B	Yes

❼Encoder

A	Battery-less Absolute Encoder (for ECR)
B	Battery-less Absolute Encoder (for ECMG/ECG)
C	Incremental Encoder (for ECMG/ECG)

❽Relay Cable *4

N00	None
S01	Fixed cable 1 m
S03	Fixed cable 3 m
S05	Fixed cable 5 m
S10	Fixed cable 10 m
R01	Flexible cable 1 m
R03	Flexible cable 3 m
R05	Flexible cable 3 m
R10	Flexible cable 10 m

*1 Select the controller from P. 529.
*2 When "D" is selected for the motor mounting direction, the stroke can be selected from "0250 (250 mm)" to "1100 (1100 mm)".
*3 Select "Yes" for vertical use.
*4 For the external dimension drawing of the relay cable, refer to P. 607 for ECR and 576 for ECMG/ECG.

EAR-Subject Item (product incorporating EAR99)

Specifications

Connected Controller		ECMG			ECG			ECR	
Motor		□56 Stepping Motor							
Encoder Type		Battery-less Absolute Encoder/Incremental Encoder						Battery-less Absolute Encoder	
Drive Method		Ball screw ø16							
Stroke	mm	50 to 1100							
Screw lead	mm	5	10	20	5	10	20	5	10	20
Max. Payload *1*2	kg Horizontal	80.0	70.0	30.0	80.0	70.0	30.0	80.0 (80.0)	70.0 (70.0)	43.3 (43.3)
	Vertical	33.3	21.7	3.3	33.3	18.3	3.3	36.6 (40.0)	16.6 (18.3)	8.3 (8.3)
Operating Speed Range *1*3	mm/s	6 to 200	12 to 430	25 to 800	6 to 150	12 to 250	25 to 500	6 to 100 (225)	12 to 300 (550)	25 to 500 (1000)
Max. Acceleration/ Deceleration G *1	Horizontal	1.0			0.7			0.7 (1.0)		
	Vertical	0.5			0.3			0.3 (0.5)		
Max. Pushing Force	N	965	482	241	965	482	241	970	477	250
Pushing Operation Speed Range	mm/s	5 to 20			5 to 20			5 to 25	5 to 30	
Repeatability	mm	±0.01							
Lost Motion	mm	0.1 or less							
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336							
Motor Power Supply Voltage		24 VDC ±10%						24 VDC ±10% or 48 VDC ±10%	
Brake	Type, Power Supply Voltage	Non-excitation operating type, 24 VDC ±10%							
	Power Consumption W	7.2						8	
	Holding Force N	768	384	192	768	384	192	754	377	188
Insulation Resistance		10 MΩ, 500 VDC							
Dielectric Strength		500 VAC for 1 minute							
Operating Ambient Temperature, Humidity		10°C to 40°C (no freezing) 35 to 80% RH (no condensation)						0 to 40°C (no freezing) 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10°C to 50°C (no freezing) 35 to 80% RH (no condensation)							
Atmosphere		No corrosive gas, explosive gas, or dust							
Protection Structure		IP20							

*1 Values in ( ) are for 48 VDC.
*2 Payload varies depending on acceleration/deceleration and speed. For details, please refer to the next P. (ECMG, ECG) or P. 144 (ECR).
*3 Maximum speed may decrease depending on conditions.

Stroke and Max. Speed

[EBS-08G (Connected Controller: ECMG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)							
		50 to 800	850	900	950	1,000	1050	1100
5	24 VDC	200		180	135	120	110	100
10	24 VDC	430	410	370	270	240	225	200
20	24 VDC	800		740	540	490	450	410

[EBS-08G (Connected Controller: ECG)]

(mm/s)

Screw lead (mm)	Power supply voltage	Stroke (mm)			
		50 to 950	1,000	1050	1100
5	24 VDC	125	120	110	100
10	24 VDC	250	240	225	200
20	24 VDC	400			

* For EBS-08M (connected controller ECR), please refer to P. 151.

Speed and Payload

[EBS-08G (Connected Controller: ECMG)]

[Horizontal Installation]

■ EBS-08GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	1.0 5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	30.0
50	80.0	70.0	30.0	80.0	70.0	30.0
100	80.0	70.0	30.0	40.0	70.0	30.0
150	80.0	70.0	30.0	8.8	40.0	26.7
200	80.0	70.0	30.0		40.0	26.7
300		70.0	30.0		15.0	16.3
350		43.3	30.0		3.8	16.3
400		40.0	30.0			16.3
430		12.5	16.7			9.6
600			16.7			9.6
800			3.8			1.7

[Vertical Installation]

■ EBS-08GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.5 5	10	20
6	33.3			33.3		
12	33.3	21.7		33.3	21.7	
25	33.3	21.7	3.3	33.3	21.7	3.3
50	33.3	21.7	3.3	33.3	21.7	3.3
100	16.7	21.7	3.3	16.7	12.1	3.3
150	8.3	12.5	3.3	8.3	12.1	3.3
200	3.3	12.5	3.3	3.3	12.1	3.3
300		5.4	3.3		2.1	3.3
400		0.8	3.3			3.3
600			1.7			1.7

[EBS-08G (Connected Controller: ECG)]

[Horizontal Installation]

■ EBS-08GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.7 5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	30.0	80.0	70.0	26.7
50	80.0	70.0	30.0	80.0	70.0	26.7
75	68.3	70.0	30.0	68.3	70.0	26.7
100	40.0	70.0	30.0	40.0	70.0	26.7
125	40.0	70.0	30.0	40.0	30.0	18.3
150		70.0	30.0		30.0	18.3
200		28.3	30.0		17.5	18.3
250		21.7	6.7		17.5	6.7
300			6.7			6.7
400			3.3			3.3

[Vertical Installation]

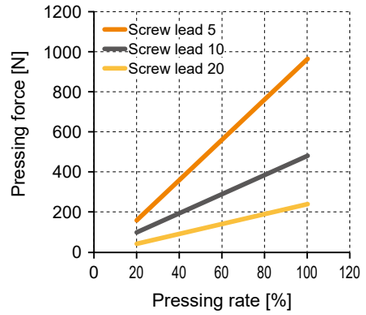
■ EBS-08GR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20
6	33.3		
12	33.3	18.3	
25	33.3	18.3	3.3
50	25.0	18.3	3.3
75	15.0	12.5	3.3
100	12.5	12.5	3.3
125	2.9	10.0	3.3
200		1.7	3.3
300			3.3
350			0.8

* This is for an acceleration/deceleration of 0.3 G.
*For ECR, please refer to P. 144.

Pushing Force

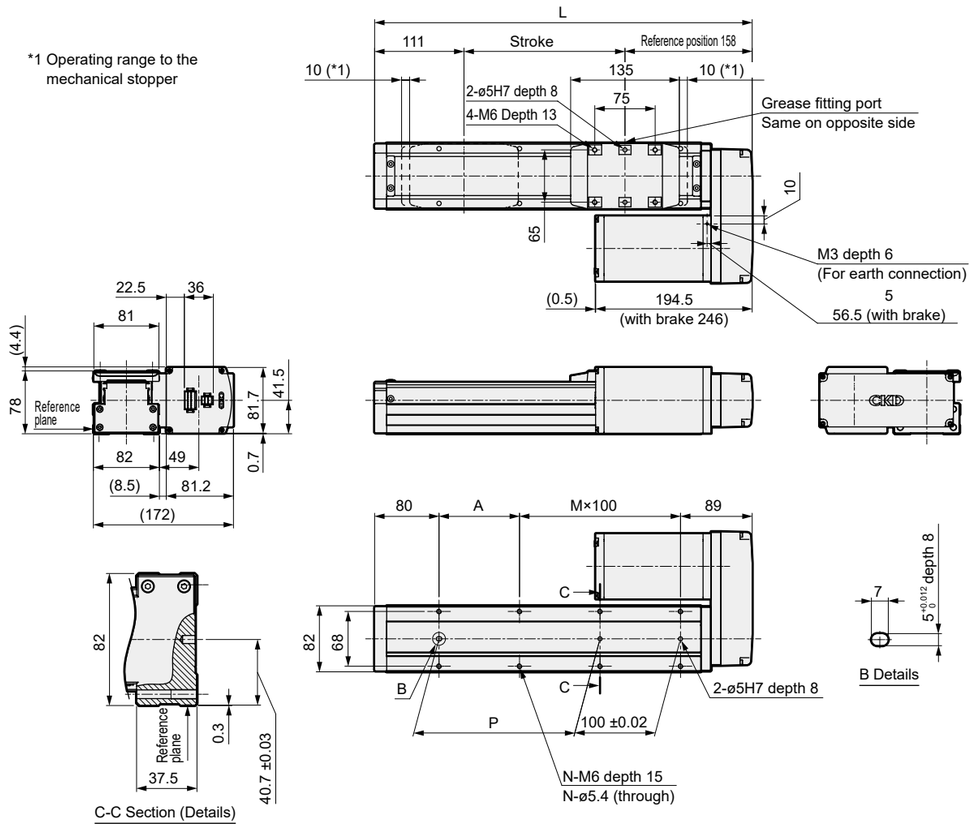
[EBS-08G (Connected Controller ECMG/ECG)]



* The pushing force above is a reference value. It may vary depending on conditions such as pushing speed.
* For ECR, please refer to P. 151.

External Dimension Drawing Motor Right Side Return Mount

● EBS-08□R

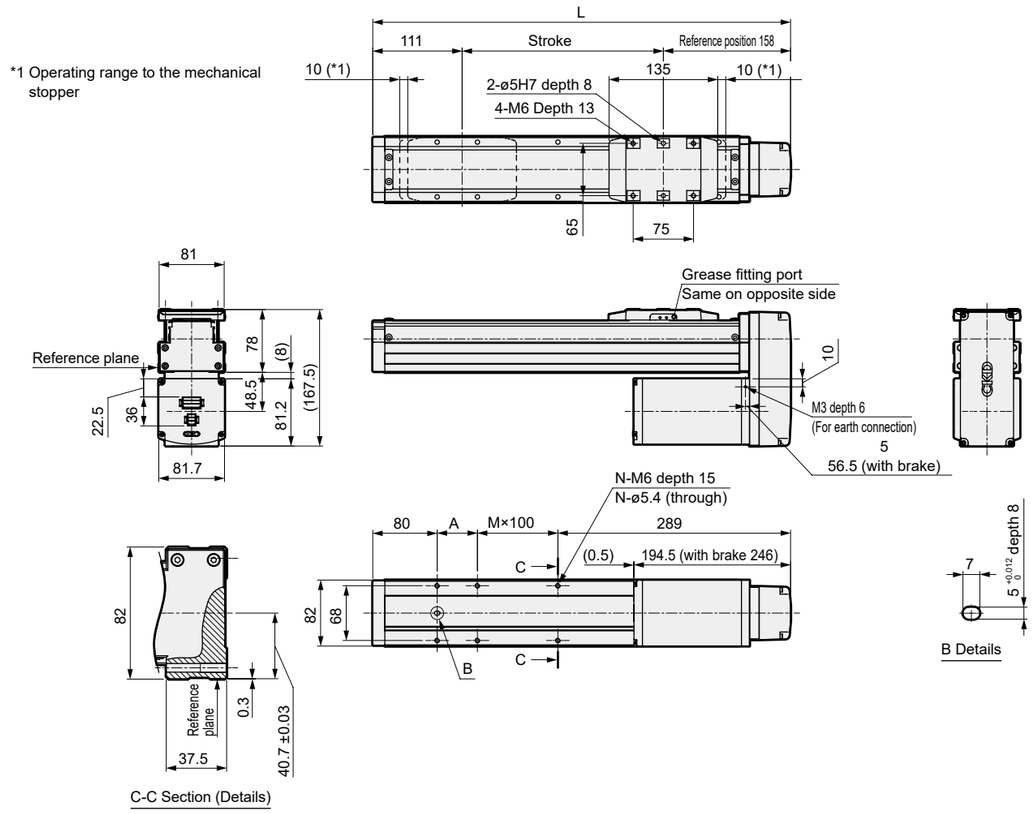


Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069
A		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg)	Without Brake	5.7	6.1	6.5	6.8	7.2	7.5	7.8	8.2	8.5	8.8	9.2	9.5	9.9	10.2	10.5	10.8
	With Brake	7.0	7.4	7.8	8.1	8.5	8.8	9.1	9.5	9.8	10.1	10.5	10.8	11.2	11.5	11.8	12.1

Stroke Code		0850	0900	0950	1,000	1050	1100
Stroke (mm)		850	900	950	1,000	1050	1100
L		1119	1169	1219	1269	1319	1369
A		50	100	50	100	50	100
M		9	9	10	10	11	11
N		22	22	24	24	26	26
P		850	900	950	1,000	1050	1100
Weight (kg)	Without Brake	11.2	11.4	11.8	12.1	12.5	12.9
	With Brake	12.5	12.7	13.1	13.4	13.8	14.2

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-08□D



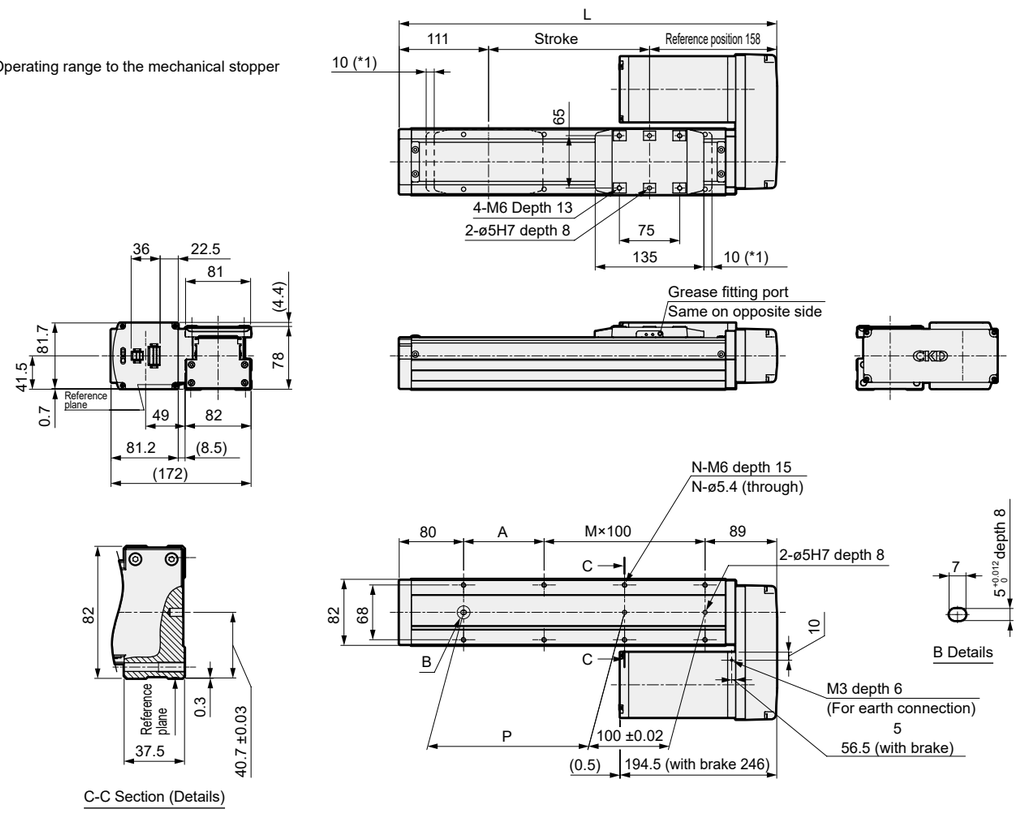
Stroke Code		0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000
Stroke (mm)		250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000
L		519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269
A		50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M		1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
Weight (kg)	Without Brake	7.2	7.5	7.8	8.2	8.5	8.8	9.2	9.5	9.9	10.2	10.5	10.8	11.2	11.4	11.8	12.1
	With Brake	8.5	8.8	9.1	9.5	9.8	10.1	10.5	10.8	11.2	11.5	11.8	12.1	12.5	12.7	13.1	13.4

Stroke Code		1050	1100
Stroke (mm)		1050	1100
L		1319	1369
A		50	100
M		9	9
N		22	22
Weight (kg)	Without Brake	12.5	12.9
	With Brake	13.8	14.2

External Dimension Drawing Motor Left Side Return Mount

● EBS-08□L

*1 Operating range to the mechanical stopper



Stroke Code		0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L		319	369	419	469	519	569	619	669	719	769	819	869	919	969	1019	1069
A		50	100	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	8	8
N		6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
Weight (kg)	Without Brake	5.7	6.1	6.5	6.8	7.2	7.5	7.8	8.2	8.5	8.8	9.2	9.5	9.9	10.2	10.5	10.8
	With Brake	7.0	7.4	7.8	8.1	8.5	8.8	9.1	9.5	9.8	10.1	10.5	10.8	11.2	11.5	11.8	12.1

Stroke Code		0850	0900	0950	1,000	1050	1100
Stroke (mm)		850	900	950	1,000	1050	1100
L		1119	1169	1219	1269	1319	1369
A		50	100	50	100	50	100
M		9	9	10	10	11	11
N		22	22	24	24	26	26
P		850	900	950	1,000	1050	1100
Weight (kg)	Without Brake	11.2	11.4	11.8	12.1	12.5	12.9
	With Brake	12.5	12.7	13.1	13.4	13.8	14.2

MEMO

Slider Type
EJSG
EBS
Ending

Model Selection

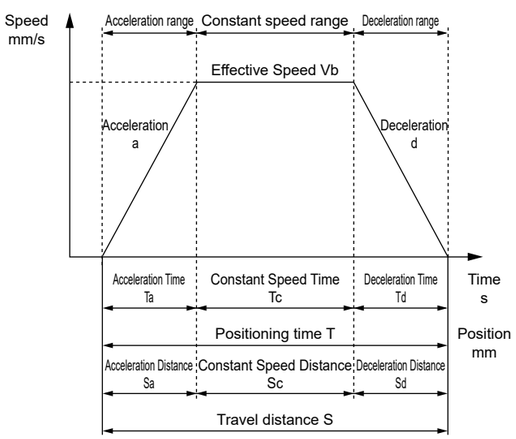
STEP1 Confirmation of Payload

The payload changes depending on the mounting orientation, screw lead, transport speed, acceleration/deceleration, and power supply voltage. Refer to the System Table (pages 104 to 107), the specification table for each model and the Table of Load Capacity by Speed and Acceleration/Deceleration to select the size and screw lead.

STEP2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time.

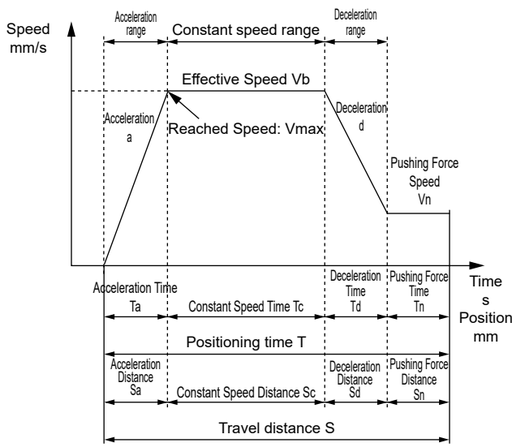
Positioning time for general transfer operations



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s^2	
	Set Deceleration	d	mm/s^2	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$=[2\times a\times d\times S/(a+d)]^{1/2}$
	Effective Speed	Vb	mm/s	The 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 exceeding the specifications.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Acceleration and deceleration vary depending on the product and usage conditions. For details, please refer to the specifications P. for each model.
* Settling time varies depending on the usage conditions, but it may take about 0.2 s.
* 1G ≈ 9.8 m/s².

Positioning time for pushing operations



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s^2	
	Set Deceleration	d	mm/s^2	
	Travel Distance	S	mm	
	Pushing Speed	Vn	mm/s	
	Pushing Distance	Sn	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$=[2\times a\times d\times(S-Sn+Vn^2/2/d)/(a+d)]^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb / a
	Deceleration Time	Td	s	= (Vb - Vn) / d
	Constant Speed Time	Tc	s	= Sc / Vb
	Pushing Time	Tn	s	= Sn / Vn
	Acceleration Distance	Sa	mm	$=(a\times Ta^2)/2$
	Deceleration Distance	Sd	mm	= ((Vb+Vn)×Td) / 2
	Constant Speed Distance	Sc	mm	= S - (Sa+Sd+Sn)
	Positioning Time	T	s	= Ta+Tc+Td+Tn

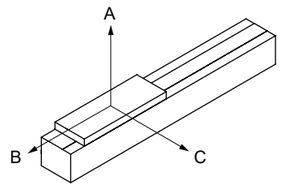
* Do not use at speeds exceeding the specifications.
* Pushing speed varies depending on the product.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Acceleration and deceleration vary depending on the product and usage conditions. For details, please refer to the specifications P. for each model.
* Settling time varies depending on the usage conditions, but it may take about 0.2 s.
* 1G≈ 9.8 m/s².

STEP3 Confirmation of Allowable Overhang Length

Make sure that the load overhang length during operation is within the allowable range (pages 140 to 142).
For details on selection, please contact our sales representative.

Allowable Overhang Length (EBS Series)

[Horizontal Installation]



[Allowable Overhang Length]

● EBS-04GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	B	C
Straight	0.3	6	7	450	590	105	135
			14	400	295	50	60
			20	400	185	30	40
		12	5	800	480	130	135
			10	600	290	65	75
			15	400	270	45	55
	1.0	6	8	450	210	90	100
			12	350	160	60	70
			16	100	85	60	50
		12	1	850	800	680	615
			3	600	485	240	250
			5	600	270	140	140

● EBS-05GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	B	C
Straight	0.3	2	15	130	1,000	100	140
			30	130	645	45	60
			45	130	400	25	35
		5	20	375	345	55	65
			30	350	220	30	40
			40	350	140	20	25
		10	6	700	745	180	195
			15	600	300	65	75
			27	400	215	35	40
		20	6	1,000	505	160	150
			13	600	355	80	90
			18	200	735	70	95
	0.7	2	15	100	950	105	145
			30	100	450	45	65
			45	100	280	25	35
	1.0	5	20	250	205	55	70
			30	200	160	35	45
			40	100	210	30	45
		10	6	600	370	190	185
			12	400	245	95	105
			22	100	425	65	95
		20	2	1,000	730	510	405
			4	800	430	270	230
			6	600	370	190	185

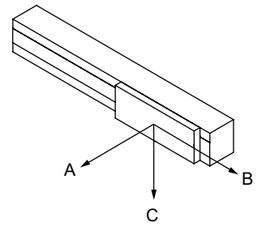
● EBS-08GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	B	C
Straight	0.3	5	40	200	1,000	95	155
			60	200	635	60	95
			80	200	450	40	65
		10	30	400	715	115	165
			50	300	515	65	100
			70	300	340	40	65
		20	10	600	1,000	345	460
			20	600	760	165	215
			30	400	715	115	165
	1.0	5	40	150	580	105	165
			60	100	485	70	115
			80	100	350	50	80
		10	30	200	595	135	205
			50	100	595	90	145
			70	100	45	45	25
		20	10	600	705	345	385
			20	400	480	180	235
			30	100	1,000	160	260

* Value when the actuator's running life is 5,000 km. (Screw lead = 2 mm is the value when the travel life is 1,000 km.)
* The load in the overhang direction is in a single direction only.
* Dimensions A, B, and C are from the center of the top surface of the table.
* Controller: For ECMG, Stroke: 350 mm, the value is the maximum speed for each payload.
* The value may differ depending on the motor mounting direction.
* For acceleration/deceleration and payload, please refer to the payload table by speed and acceleration/deceleration (specifications P. for each model).

Allowable Overhang Length (EBS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

● EBS-04GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	B	C
Straight	0.3	6	7	450	100	75	495
			10	450	55	44	290
			14	400	25	20	180
		12	5	800	105	95	390
			10	600	40	35	190
			15	400	20	15	155
	1.0	6	8	450	70	60	175
			12	350	40	30	125
			16	100	35	30	60
		12	1	850	595	645	800
			3	600	225	210	455
			5	600	115	110	240

● EBS-05GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	B	C
Straight	0.3	2	10	130	170	120	1,000
			15	130	90	65	1,000
			20	130	50	35	840
		5	10	375	110	85	650
			15	375	50	40	355
			20	375	25	15	190
		10	6	700	160	140	630
			10	600	80	70	370
			15	600	35	30	170
		20	6	1,000	115	115	390
			13	600	50	40	235
			18	200	50	35	580
	0.7	2	15	100	100	70	905
			20	100	60	40	630
			25	100	35	25	450
	1.0	5	10	300	110	90	360
			15	250	60	45	250
			20	250	30	20	150
		10	6	600	155	150	335
			12	400	70	60	205
			22	100	45	35	430
		20	2	1,000	380	465	700
			4	800	205	225	400
			6	600	155	150	335

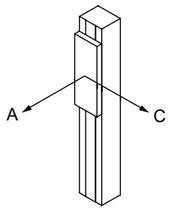
● EBS-08GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	B	C
Straight	0.3	5	20	200	285	175	1,000
			40	200	105	65	880
			60	200	45	25	480
		10	30	400	120	80	600
			40	350	80	50	460
			50	300	55	35	380
		20	10	600	420	310	1,000
			20	600	175	130	655
			30	400	120	80	600
	1.0	5	40	150	120	75	535
			60	100	65	40	485
			80	100	30	20	305
		10	20	200	275	175	890
			30	200	160	100	555
			40	200	100	65	385
		20	10	600	355	310	670
			20	400	195	145	445
			30	100	210	125	1,000

* Value when the actuator's running life is 5,000 km. (Screw lead = 2 mm is the value when the travel life is 1,000 km.)
* The load in the overhang direction is in a single direction only.
* Dimensions A, B, and C are from the center of the top surface of the table.
* Controller: For ECMG, Stroke: 350 mm, the value is the maximum speed for each payload.
* The value may differ depending on the motor mounting direction.
* For acceleration/deceleration and payload, please refer to the payload table by speed and acceleration/deceleration (specifications P. for each model).

Allowable Overhang Length (EBS Series)

[Vertical Installation]



[Allowable Overhang Length]

● EBS-04GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	Overhang (mm) C
Straight	0.3	6	2	350	370	360
			5	300	125	125
			9	200	60	60
		12	1	600	690	635
			2	600	325	300
			3	500	215	200
	0.5	6	2	300	380	370
			5	250	130	130
			9	200	60	60
		12	1	400	760	730
			2	300	380	370
			3	300	240	235

● EBS-05GE

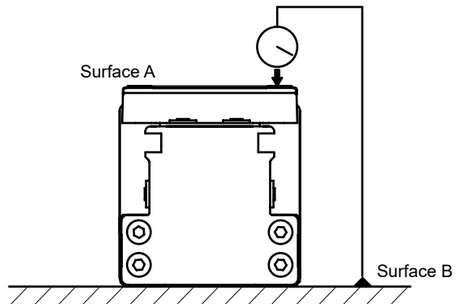
Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	Overhang (mm) C
Straight	0.3	2	6	100	240	240
			12	100	95	95
			18	75	50	50
		5	6	300	175	170
			10	250	90	90
			14	100	75	75
		10	2	500	565	535
			4	400	275	265
			7	300	145	140
		20	0.5	900	1,000	1,000
			1	700	1,000	960
			2	400	600	575
	0.5	2	6	100	240	240
			12	75	100	100
			18	75	50	50
		5	6	300	175	170
			10	250	90	80
			14	100	70	70
		10	2	400	590	570
			4	300	290	280
			7	300	140	140
		20	0.5	900	1,000	1,000
			1	700	1,000	940
			2	400	590	570

● EBS-08GE

Motor Mounting	Acceleration/ Deceleration (G)	Screw Lead (mm)	Payload (kg)	Max. Speed (mm/s)	Overhang (mm) A	Overhang (mm) C
Straight	0.3	5	16	150	250	240
			24	50	180	180
			43	50	80	80
		10	12	200	320	310
			20	100	210	200
			28	50	150	150
		20	1	600	1,000	1,000
			2	600	1,000	1,000
			3	400	1,000	1,000
	0.5	5	16	150	240	240
			24	50	185	185
			43	50	80	80
		10	12	200	320	310
			20	50	230	230
			28	50	150	150
		20	1	600	1,000	1,000
			2	400	1,000	1,000
			3	400	1,000	1,000

* Value when the actuator's running life is 5,000 km. (Screw lead = 2 mm is the value when the travel life is 1,000 km.)
* The load in the overhang direction is in a single direction only.
* Dimensions A and C are from the center of the top surface of the table.
* Controller: For ECMG, Stroke: 350 mm, the value is the maximum speed for each payload.
* The value may differ depending on the motor mounting direction.
* For acceleration/deceleration and payload, please refer to the payload table by speed and acceleration/deceleration (specifications P. for each model).

Slider Parallelism *Reference Value

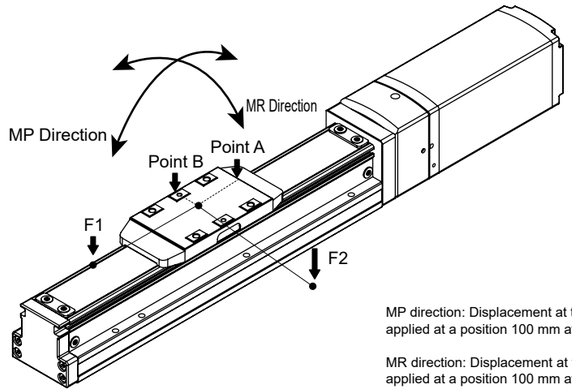


(mm)

	Parallelism: Surface A with respect to Surface B
EBS-04 Series	0.03
EBS-05 Series	
EBS-08 Series	

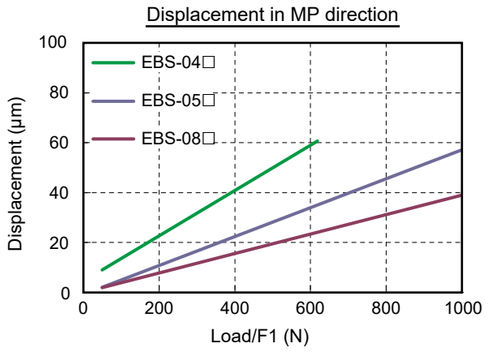
* This is the parallelism when the product is fixed to a surface plate.

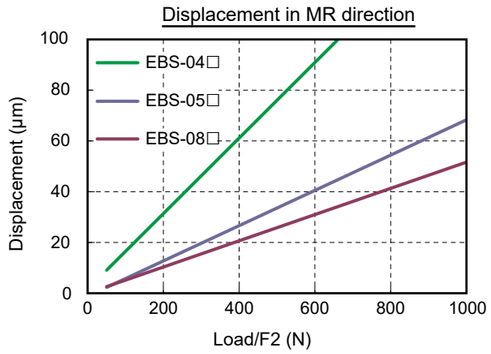
Table Displacement *Reference Value



MP direction: Displacement at the table end (point A) when a load (F1) is applied at a position 100 mm away from the table center

MR direction: Displacement at the table end (point B) when a load (F2) is applied at a position 100 mm away from the table center





Payload table by speed and acceleration/deceleration

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The table below lists the maximum payload by acceleration/deceleration and the maximum operable speed.
Please check the model that meets the operating conditions.

[Horizontal Installation]

■ EBS-04ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.5 6	12	0.7 6	12	1.0 6	12
7	16.6		16.6		16.6		16.6	
15	16.6	13.3	16.6	13.3	16.6	11.6	16.6	8.3
50	16.6	13.3	16.6	13.3	16.6	11.6	16.6	8.3
100	16.6	13.3	16.6	13.3	16.6	11.6	15.0	8.3
150	16.6	13.3	16.6	13.3	16.6	11.6	10.0	8.3
200	16.6	13.3	16.6	13.3	16.6	11.6	1.6	8.3
250	16.6	13.3	16.6	13.3	8.3	11.6	1.6	8.3
300	13.3	13.3	6.6	13.3	1.6	11.6		8.3
350	8.3	13.3	0.8	13.3		10.0		8.3
400	3.3	13.3		13.3		10.0		8.3
500		6.6		6.6		5.0		3.3
600		5.0		2.5		2.5		2.5
700		1.6		1.6		1.6		0.8
800		0.8						

■ EBS-05ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 2	5	10	20	0.7 2	5	10	20	1.0 5	10	20
2	45.0				45.0				45.0						
6	45.0	40.0			45.0	40.0			45.0	40.0			40.0		
12	45.0	40.0	35.0		45.0	40.0	35.0		45.0	40.0	31.6		40.0	16.6	
25	45.0	40.0	35.0	16.6	45.0	40.0	35.0	16.6	45.0	40.0	31.6	16.6	40.0	16.6	10.0
50	45.0	40.0	35.0	16.6	45.0	40.0	35.0	16.6	45.0	40.0	31.6	16.6	40.0	16.6	10.0
60	45.0	40.0	35.0	16.6	45.0	40.0	35.0	16.6	13.3	40.0	31.6	16.6	40.0	16.6	10.0
70	45.0	40.0	35.0	16.6	20.0	40.0	35.0	16.6	13.3	40.0	31.6	16.6	40.0	16.6	10.0
100	45.0	40.0	35.0	16.6		40.0	35.0	16.6		40.0	31.6	16.6	40.0	16.6	10.0
110	26.6	40.0	35.0	16.6		35.0	35.0	16.6		35.0	30.0	16.6	35.0	16.6	10.0
120	18.3	40.0	35.0	16.6		35.0	35.0	16.6		35.0	30.0	16.6	35.0	16.6	10.0
150	10.0	40.0	35.0	16.6		35.0	35.0	16.6		35.0	30.0	16.6	35.0	16.6	10.0
200		40.0	35.0	16.6		28.3	35.0	16.6		18.3	30.0	16.6	18.3	16.6	10.0
250		40.0	35.0	16.6		20.0	31.6	16.6		11.6	26.6	16.6	10.0	10.0	10.0
300		26.6	35.0	16.6		15.0	23.3	16.6		6.6	18.3	16.6		8.3	10.0
400			25.0	16.6			20.0	16.6			11.6	15.0		8.3	6.6
500			21.6	16.6			15.0	16.6			10.0	13.3		5.0	3.3
600			16.6	16.6			11.6	16.6			6.6	10.0			3.3
650			10.0	15.0			6.6	11.6			3.3	8.3			3.3
700			0.8	15.0				11.6				8.3			3.3
800				10.0				10.0				6.6			1.6
900				6.6				6.6				5.0			1.6
1100				3.3				3.3				3.3			

■ EBS-08ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.5 5	10	20	0.7 5	10	20	1.0 5	10	20
6	80.0			80.0			80.0			80.0		
12	80.0	70.0		80.0	70.0		80.0	70.0		80.0	70.0	
25	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	30.0	80.0	70.0	18.3
50	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	30.0	80.0	70.0	18.3
60	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	30.0	38.3	51.6	18.3
70	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	30.0	21.6	51.6	18.3
75	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	30.0	15.0	51.6	18.3
100	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	30.0	6.6	51.6	18.3
125	80.0	70.0	43.3	58.3	70.0	33.3	46.6	51.6	30.0	6.6	51.6	18.3
150	70.0	70.0	43.3	35.0	70.0	33.3	20.0	51.6	30.0	3.3	51.6	18.3
175	70.0	70.0	43.3	16.6	62.5	33.3		38.3	30.0		18.3	18.3
200	18.3	70.0	43.3	5.0	62.5	33.3		38.3	30.0		18.3	18.3
250	3.3	68.3	36.6		41.6	33.3		21.6	26.6		5.0	18.3
300		41.6	36.6		26.6	33.3		15.0	26.6			18.3
350		36.6	26.6		20.0	23.3		5.8	16.6			8.3
400		33.3	26.6		10.0	23.3		1.6	16.6			8.3
450		25.0	21.6		6.6	20.0			11.6			3.3
500		6.6	21.6		0.8	20.0			11.6			3.3
550		3.3	18.3			16.6			10.0			1.6
600			18.3			16.6			10.0			1.6
700			16.6			15.0			8.3			0.8
800			10.0			10.0			8.3			
900			6.6			6.6			5.0			
1,000			3.3			3.3			1.6			
1100			3.3			3.3			0.8			

Payload table by speed and acceleration/deceleration

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The table below lists the maximum payload by acceleration/deceleration and the maximum operable speed.
Please check the model that meets the operating conditions.

[Horizontal Installation]

■ EBS-04MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.5 6	12	0.7 6	12	1.0 6	12
7	16.6		16.6		16.6		16.6	
15	16.6	13.3	16.6	13.3	16.6	11.6	16.6	8.3
100	16.6	13.3	16.6	13.3	16.6	11.6	16.6	8.3
150	16.6	13.3	16.6	13.3	16.6	11.6	13.3	8.3
200	16.6	13.3	16.6	13.3	16.6	11.6	8.3	8.3
250	16.6	13.3	16.6	13.3	8.3	11.6	1.6	8.3
300	13.3	13.3	6.6	13.3	1.6	11.6		8.3
350	8.3	13.3	0.8	13.3		10.0		8.3
400	6.6	13.3		13.3		10.0		8.3
500		6.6		6.6		5.0		3.3
600		2.5		2.5		2.5		2.5
700		1.6		1.6		1.6		0.8

■ EBS-05MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 2	5	10	20	0.7 2	5	10	20	1.0 5	10	20
2	45.0				45.0				45.0						
6	45.0	40.0			45.0	40.0			45.0	40.0			40.0		
12	45.0	40.0	35.0		45.0	40.0	35.0		45.0	40.0	31.6		40.0	16.6	
25	45.0	40.0	35.0	16.6	45.0	40.0	35.0	16.6	45.0	40.0	31.6	13.3	40.0	16.6	10.0
50	45.0	40.0	35.0	16.6	45.0	40.0	35.0	16.6	45.0	40.0	31.6	13.3	40.0	16.6	10.0
60	45.0	40.0	35.0	16.6	26.6	40.0	35.0	16.6	13.3	40.0	30.0	13.3	40.0	16.6	10.0
70	45.0	40.0	35.0	16.6		40.0	35.0	16.6	13.3	40.0	30.0	13.3	40.0	16.6	10.0
100	45.0	40.0	35.0	16.6		40.0	35.0	16.6		40.0	30.0	13.3	40.0	16.6	10.0
110	26.6	40.0	35.0	16.6		31.6	35.0	16.6		23.3	25.0	13.3	18.3	16.6	8.3
120	18.3	40.0	35.0	16.6		31.6	35.0	16.6		23.3	25.0	13.3	18.3	16.6	8.3
150	10.0	40.0	35.0	16.6		31.6	35.0	16.6		23.3	25.0	13.3	18.3	16.6	8.3
200		40.0	35.0	16.6		23.3	35.0	16.6		15.0	25.0	13.3	8.3	16.6	8.3
250		40.0	35.0	16.6		16.6	26.6	16.6		8.3	20.0	13.3	8.3	10.0	8.3
300		23.3	35.0	16.6		6.6	20.0	16.6			15.0	13.3		8.3	8.3
400			25.0	16.6			15.0	16.6			8.3	11.6		6.6	6.6
500			21.6	16.6			11.6	16.6			6.6	10.0		1.6	3.3
600			8.3	16.6			3.3	13.3			1.6	8.3			3.3
700				15.0				8.3				6.6			3.3
800				10.0				8.3				5.0			1.6
900				6.6				6.6				5.0			1.6
1,000				3.3				3.3				3.3			1.6
1100				3.3				3.3				1.6			

■ EBS-08MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.5 5	10	20	0.7 5	10	20	1.0 5	10	20
6	80.0			80.0			80.0			80.0		
12	80.0	70.0		80.0	70.0		80.0	70.0		80.0	70.0	
25	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	26.6	80.0	70.0	18.3
50	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	26.6	80.0	70.0	18.3
60	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	26.6	38.3	70.0	18.3
70	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	26.6	21.6	70.0	18.3
75	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	26.6	15.0	70.0	18.3
80	80.0	70.0	43.3	80.0	70.0	33.3	80.0	70.0	26.6	6.6	70.0	18.3
100	80.0	70.0	43.3	76.0	70.0	33.3	55.0	70.0	26.6		70.0	18.3
125	80.0	70.0	43.3	35.0	70.0	33.3	18.0	51.6	26.6		43.3	18.3
150	46.6	70.0	43.3	33.3	70.0	33.3		51.6	26.6		43.3	18.3
175	46.6	70.0	43.3	3.3	46.6	33.3		38.3	26.6		18.3	18.3
200	18.3	70.0	43.3		46.6	33.3		38.3	26.6		18.3	18.3
225	3.3	68.3	36.6		26.6	33.3		18.3	26.6		4.1	18.3
250		68.3	36.6		26.6	33.3		18.3	26.6		4.1	18.3
300		68.3	36.6		16.6	33.3		8.3	26.6			18.3
350		48.3	26.6		13.3	21.6		5.0	15.0			8.3
400		35.0	26.6		10.0	21.6		1.6	15.0			8.3
450		16.6	21.6		6.6	16.6			8.3			3.3
500		5.0	21.6		0.8	16.6			8.3			3.3
550		5.0	20.0			11.6			5.0			1.6
600			20.0			11.6			5.0			1.6
700			20.0			10.0			5.0			1.6
800			18.3			8.3			3.3			
900			10.0			3.3			0.8			
1,000			1.6									

Payload table by speed and acceleration/deceleration

48 VDC

The table below lists the maximum payload by acceleration/deceleration and the maximum operable speed.
Please check the model that meets the operating conditions.

[Vertical Installation]

■ EBS-04ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.5 Screw Lead (mm) 6	12
7	8.3		8.3	
15	8.3	3.3	8.3	3.3
100	8.3	3.3	8.3	3.3
150	5.0	3.3	6.6	3.3
200	5.0	3.3	5.0	3.3
250	5.0	3.3	3.3	3.3
300	3.3	3.3	1.6	3.3
350	1.6	3.3	0.4	2.5
400	0.4	3.3		2.5
500		2.5		1.6

■ EBS-05ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 Screw Lead (mm) 2	5	10	20
2	24.0				24.0			
6	24.0	16.6			24.0	16.6		
12	24.0	16.6	8.3		24.0	16.6	8.3	
20	24.0	16.6	8.3		24.0	16.6	8.3	
25	24.0	16.6	8.3	4.5	24.0	16.6	8.3	4.5
50	24.0	16.6	8.3	4.5	24.0	16.6	8.3	4.5
60	24.0	15.0	8.3	4.5	18.3	15.0	8.3	4.5
70	24.0	15.0	8.3	4.5	13.3	15.0	8.3	4.5
90	18.3	15.0	8.3	4.5	6.6	15.0	8.3	4.5
100	18.3	15.0	8.3	4.5	6.6	15.0	8.3	4.5
110	18.3	11.6	6.6	4.1		11.6	6.6	4.1
120	6.6	11.6	6.6	4.1		11.6	6.6	4.1
130	1.6	11.6	6.6	4.1		11.6	6.6	4.1
150		11.6	6.6	4.1		11.6	6.6	4.1
200		10.0	6.6	4.1		10.0	6.6	4.1
250		10.0	5.0	4.1		10.0	5.0	4.1
300		5.0	5.0	4.1		3.3	5.0	4.1
450			5.0	3.3			3.3	3.3
500			5.0	3.3				3.3
600			1.6	3.3				3.3
700				2.9				2.9
1100				2.5				2.0

■ EBS-08ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.5 Screw Lead (mm) 5	10	20
6	40.0			35.0		
12	40.0	18.3		35.0	18.3	
25	40.0	18.3	10.0	35.0	18.3	8.3
50	40.0	18.3	10.0	35.0	18.3	8.3
75	30.0	18.3	10.0	31.6	18.3	8.3
100	25.0	18.3	10.0	25.0	18.3	8.3
125	23.3	18.3	10.0	25.0	11.6	8.3
150	23.3	18.3	10.0	11.6	11.6	8.3
175	18.3	18.3	10.0	5.0	11.6	8.3
200	11.6	18.3	10.0		11.6	8.3
225	5.0	10.0	8.3		10.0	6.6
250	3.3	10.0	8.3		10.0	6.6
300		10.0	8.3		10.0	6.6
400		5.0	6.6		1.6	5.0
500		1.6	6.6		1.6	5.0
600			5.0			3.3
700			3.3			3.3
800			3.3			1.6
900			1.6			1.6

Payload table by speed and acceleration/deceleration

48 VDC

The table below lists the maximum payload by acceleration/deceleration and the maximum operable speed.
Please check the model that meets the operating conditions.

[Vertical Installation]

■ EBS-04MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.5 Screw Lead (mm) 6	12
7	8.3		8.3	
15	8.3	3.3	8.3	3.3
100	8.3	3.3	8.3	3.3
200	5.0	3.3	5.0	3.3
250	2.5	3.3	1.6	3.3
300	1.6	3.3	0.4	3.3
350	1.6	3.3	0.4	2.5
400		3.3		2.5
500		0.8		0.4
600		0.8		0.4

■ EBS-05MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 Screw Lead (mm) 2	5	10	20
2	24.0				24.0			
6	24.0	16.6			24.0	16.6		
12	24.0	16.6	8.3		24.0	16.6	8.3	
20	24.0	16.6	8.3		24.0	16.6	8.3	
25	24.0	16.6	8.3	4.5	24.0	16.6	8.3	4.5
50	24.0	16.6	8.3	4.5	24.0	16.6	8.3	4.5
60	24.0	15.0	8.3	4.5	18.3	15.0	8.3	4.5
70	11.6	15.0	8.3	4.5	8.3	15.0	8.3	4.5
80	1.6	15.0	8.3	4.5		15.0	8.3	4.5
100		15.0	8.3	4.5		15.0	8.3	4.5
150		11.6	6.6	4.5		11.6	6.6	4.5
200		10.0	6.6	4.5		10.0	6.6	4.5
250		10.0	5.0	4.5		5.0	5.0	4.5
300		3.3	5.0	4.5		3.3	5.0	4.5
400			5.0	4.5			3.3	4.5
450			3.3	4.5			3.3	4.1
500			3.3	4.5				4.1
600			0.4	4.1				3.3
700				3.3				2.9
800				3.3				2.0
900				1.6				2.0
1,000				1.6				1.6
1100				0.8				0.8

■ EBS-08MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.5 Screw Lead (mm) 5	10	20
6	40.0			35.0		
12	40.0	18.3		35.0	18.3	
25	40.0	18.3	8.3	35.0	18.3	8.3
50	40.0	18.3	8.3	35.0	18.3	8.3
75	30.0	13.3	8.3	31.6	13.3	8.3
100	25.0	13.3	8.3	25.0	13.3	8.3
125	20.0	13.3	8.3	18.3	11.6	8.3
150	11.6	13.3	8.3	6.6	11.6	8.3
175	6.6	13.3	8.3	0.8	11.6	8.3
200	3.3	13.3	8.3		11.6	8.3
225	0.8	10.0	8.3		10.0	6.6
250		10.0	8.3		10.0	6.6
300		8.3	8.3		8.3	6.6
400		5.0	6.6		1.6	5.0
500		0.8	5.8			4.1
600			5.0			3.3
700			3.3			2.5
800			1.6			0.8
900			0.8			

Payload table by speed and acceleration/deceleration

24 VDC

The table below lists the maximum payload by acceleration/deceleration and the maximum operable speed.
Please check the model that meets the operating conditions.

[Horizontal Installation]

■ EBS-04ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.7 Screw Lead (mm) 6	12
7	16.6		16.6	
15	16.6	11.6	16.6	11.6
100	16.6	11.6	16.6	11.6
150	16.6	11.6	4.1	11.6
200	6.6	11.6		11.6
300		10.0		5.0
400		3.3		1.6
500		1.6		0.8
600		1.6		

■ EBS-05ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 Screw Lead (mm) 2	5	0.7 Screw Lead (mm) 10	20
2	45.0				45.0			
6	45.0	40.0			45.0	40.0		
12	45.0	40.0	35.0		45.0	40.0	31.6	
25	45.0	40.0	35.0	16.6	45.0	40.0	31.6	16.6
40	45.0	40.0	35.0	16.6	45.0	40.0	31.6	16.6
50	45.0	40.0	35.0	16.6		40.0	31.6	16.6
60	35.0	40.0	35.0	16.6		23.3	31.6	16.6
70	2.5	40.0	35.0	16.6		23.3	31.6	16.6
100		40.0	35.0	16.6		23.3	31.6	16.6
150		40.0	35.0	16.6		6.6	23.3	16.6
200		18.3	35.0	16.6			23.3	16.6
250		8.3	21.6	16.6			7.5	11.6
300			21.6	16.6			7.5	11.6
350			15.0	16.6			1.6	8.3
400			10.0	16.6				8.3
450			7.5	12.5				5.0
500			5.0	12.5				5.0
550			5.0	8.3				2.5
600			0.8	8.3				2.5
700				4.1				0.8
800				2.5				
900				0.8				

■ EBS-08ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.5 Screw Lead (mm) 5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	43.3	80.0	70.0	26.6
50	80.0	70.0	43.3	80.0	70.0	26.6
75	80.0	70.0	43.3	18.3	50.0	26.6
80	76.6	70.0	43.3		50.0	26.6
100	76.6	70.0	43.3		50.0	26.6
125	43.3	58.3	31.6		15.0	21.6
150	10.0	58.3	31.6		15.0	21.6
175		29.1	31.6			21.6
200		29.1	31.6			21.6
250		11.6	26.6			6.6
300		2.5	26.6			6.6
400			15.0			3.3
500			6.2			1.6
600			2.5			

Payload table by speed and acceleration/deceleration

24 VDC

The table below lists the maximum payload by acceleration/deceleration and the maximum operable speed.
Please check the model that meets the operating conditions.

[Horizontal Installation]

■ EBS-04MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12	0.7 Screw Lead (mm) 6	12
7	16.6		16.6	
15	16.6	11.6	16.6	11.6
100	16.6	11.6	16.6	11.6
150	16.6	11.6	4.1	10.0
200	6.6	11.6		10.0
300		10.0		3.3
400		3.3		
500		1.6		
600		1.6		

■ EBS-05MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20	0.5 Screw Lead (mm) 2	5	0.7 Screw Lead (mm) 10	20
2	45.0				45.0			
6	45.0	40.0			45.0	40.0		
12	45.0	40.0	35.0		45.0	40.0	33.3	
25	45.0	40.0	35.0	16.6	45.0	40.0	26.6	11.6
40	45.0	40.0	35.0	16.6	45.0	40.0	26.6	11.6
50	45.0	40.0	35.0	16.6		40.0	26.6	11.6
60	35.0	40.0	35.0	16.6		23.3	26.6	11.6
70	2.5	40.0	35.0	16.6		23.3	26.6	11.6
100		40.0	35.0	16.6		23.3	26.6	11.6
150		20.0	35.0	16.6			10.0	11.6
200		5.0	35.0	16.6			10.0	11.6
250		5.0	18.3	16.6			0.8	6.6
300			18.3	16.6			0.8	6.6
350			13.3	13.3				3.3
400			6.6	13.3				3.3
450			3.3	8.3				1.6
500			3.3	8.3				1.6
600				6.6				0.8
700				4.1				
800				2.5				
900				0.8				

■ EBS-08MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20	0.7 Screw Lead (mm) 5	10	20
6	80.0			80.0		
12	80.0	70.0		80.0	70.0	
25	80.0	70.0	43.3	80.0	70.0	26.6
50	80.0	70.0	43.3	80.0	70.0	26.6
75	51.6	70.0	43.3	1.6	40.0	26.6
100	3.3	70.0	43.3		40.0	26.6
150		58.3	30.0		13.3	21.6
200		29.1	30.0			21.6
250		11.6	21.6			10.0
300		2.5	21.6			10.0
400			10.0			3.3
500			8.3			

Payload table by speed and acceleration/deceleration

24 VDC

The table below lists the maximum payload by acceleration/deceleration and the maximum operable speed.
Please check the model that meets the operating conditions.

[Vertical Installation]

■ EBS-04ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12
7	6.6	
15	6.6	2.5
50	6.6	2.5
100	6.6	2.5
150	5.0	2.5
200	1.6	2.5
300		1.6
400		0.8

■ EBS-04MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 6	12
7	6.6	
15	6.6	2.5
50	6.0	2.5
100	6.6	2.5
150	3.3	2.5
200	1.6	2.5
300		0.8
400		0.8

■ EBS-05ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20
2	24.0			
6	24.0	16.6		
12	24.0	16.6	8.3	
20	24.0	16.6	8.3	
25	24.0	16.6	8.3	4.5
40	24.0	16.6	8.3	4.5
50	16.6	16.6	8.3	4.5
60	8.3	16.6	8.3	4.5
70	0.8	16.6	8.3	4.5
100		16.6	8.3	4.5
125		11.6	6.6	4.5
150		8.3	6.6	4.5
175		5.8	6.6	4.5
200		4.1	6.6	4.5
225		2.5	3.3	4.5
250		1.6	3.3	4.5
300			3.3	4.5
350			3.3	2.5
400			2.5	2.5
450			1.6	1.6
500			0.4	1.6
600				1.2
700				0.8
800				0.4

■ EBS-05MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 2	5	10	20
2	24.0			
6	24.0	16.6		
12	24.0	16.6	8.3	
20	24.0	16.6	8.3	
25	24.0	16.6	8.3	4.5
40	24.0	16.6	8.3	4.5
50	16.6	16.6	8.3	4.5
60	8.3	16.6	8.3	4.5
70	0.8	16.6	8.3	4.5
100		16.6	8.3	4.5
125		11.6	5.0	4.5
150		8.3	5.0	4.5
175		5.8	5.0	4.5
200		4.1	5.0	4.5
225		2.5	2.5	4.1
300			2.5	4.1
350			1.6	2.5
400			0.8	2.5
700				0.8
800				0.4

■ EBS-08ME (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20
6	38.3		
12	38.3	18.3	
25	38.3	18.3	10.0
50	36.6	18.3	10.0
75	18.3	18.3	10.0
100	4.1	18.3	10.0
150	4.1	8.3	10.0
200		5.8	10.0
250		2.5	5.8
300		0.8	5.8
400			3.3
500			1.6
600			0.8

■ EBS-08MR/D/L (kg)

Speed (mm/s)	Acceleration/Deceleration (G) 0.3 Screw Lead (mm) 5	10	20
6	36.6		
12	36.6	16.6	
25	36.6	16.6	8.3
50	36.6	16.6	8.3
75	18.3	13.3	8.3
100	4.1	13.3	8.3
150		6.6	8.3
200		5.0	8.3
250		2.5	5.0
300			5.0
400			2.5

Stroke and Max. Speed

■ 48 VDC (mm/s)

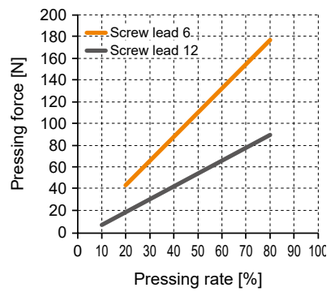
Model No.	Motor Mounting Direction	Screw Lead	Stroke 50 to 500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
EBS-04ME	**Straight**	6	400												
		12	800												
EBS-04MR/D/L	**Reverse Parallel**	6	400												
		12	700												
EBS-05ME	**Straight**	2	130	120		105	95	80	70						
		5	300			270	235	200	185						
		10	700	625		540	475	415	370						
		20	1100			1080	950	830	740						
EBS-05MR/D/L	**Reverse Parallel**	2	130	120		105	95	80	70						
		5	300			270	235	200	185						
		10	600			540	475	415	370						
		20	1100			1080	950	830	740						
EBS-08ME	**Straight**	5	250						220	200	180	135	120	110	100
		10	550					510	450	410	370	270	240	225	200
		20	1100			1,000			910	820	740	540	490	450	410
EBS-08MR/D/L	**Reverse Parallel**	5	225						220	200	180	135	120	110	100
		10	550					510	450	410	370	270	240	225	200
		20	1,000						910	820	740	540	490	450	410

■ 24 VDC (mm/s)

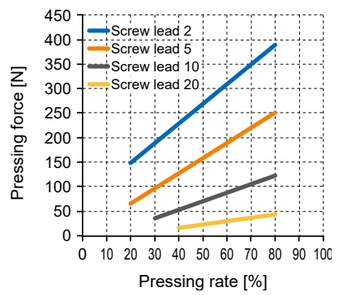
Model No.	Motor Mounting Direction	Screw Lead	Stroke 50 to 500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
EBS-04ME	**Straight**	6	200												
		12	600												
EBS-04MR/D/L	**Reverse Parallel**	6	200												
		12	500												
EBS-05ME	**Straight**	2	70												
		5	250				235	200	185						
		10	600			540	475	415	370						
		20	900					830	740						
EBS-05MR/D/L	**Reverse Parallel**	2	70												
		5	250				235	200	185						
		10	500				475	415	370						
		20	900					830	740						
EBS-08ME	**Straight**	5	150									135	120	110	100
		10	300									270	240	225	200
		20	600									540	490	450	410
EBS-08MR/D/L	**Reverse Parallel**	5	100												
		10	300									270	240	225	200
		20	500										490	450	410

Pushing Force

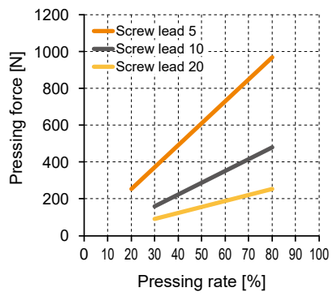
[EBS-04M (Connected Controller ECR)]



[EBS-05M (Connected Controller ECR)]



[EBS-08M (Connected Controller ECR)]



Maintenance Parts

Maintenance Parts (ECMG/ECG Motor Unit)

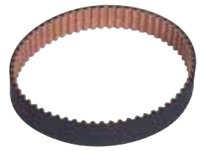
		Model No.	Applicable Models
			
Without Brake	Absolute Encoder	EJSG-04E-MOTORUNIT-NB	EBS-04GE
		EJSG-04R-MOTORUNIT-NB	EBS-04GR/D/L
		EJSG-05E-MOTORUNIT-NB	EBS-05GE
		EJSG-05R-MOTORUNIT-NB	EBS-05GR/D/L
		EJSG-08E-MOTORUNIT-NB	EBS-08GE
		EJSG-08R-MOTORUNIT-NB	EBS-08GR/D/L
	Incremental Encoder	EJSG-04E-MOTORUNIT-NC	EBS-04GE
		EJSG-04R-MOTORUNIT-NC	EBS-04GR/D/L
		EJSG-05E-MOTORUNIT-NC	EBS-05GE
		EJSG-05R-MOTORUNIT-NC	EBS-05GR/D/L
		EJSG-08E-MOTORUNIT-NC	EBS-08GE
		EJSG-08R-MOTORUNIT-NC	EBS-08GR/D/L
With Brake	Absolute Encoder	EJSG-04E-MOTORUNIT-BB	EBS-04GE
		EJSG-04R-MOTORUNIT-BB	EBS-04GR/D/L
		EJSG-05E-MOTORUNIT-BB	EBS-05GE
		EJSG-05R-MOTORUNIT-BB	EBS-05GR/D/L
		EJSG-08E-MOTORUNIT-BB	EBS-08GE
		EJSG-08R-MOTORUNIT-BB	EBS-08GR/D/L
	Incremental Encoder	EJSG-04E-MOTORUNIT-BC	EBS-04GE
		EJSG-04R-MOTORUNIT-BC	EBS-04GR/D/L
		EJSG-05E-MOTORUNIT-BC	EBS-05GE
		EJSG-05R-MOTORUNIT-BC	EBS-05GR/D/L
		EJSG-08E-MOTORUNIT-BC	EBS-08GE
		EJSG-08R-MOTORUNIT-BC	EBS-08GR/D/L

Maintenance Parts (ECR Motor Unit)

	Model No.	Applicable Models	
			
Without Brake	EBS-04ME-MOTORUNIT-N	EBS-04ME	Without Brake
	EBS-04MR-MOTORUNIT-N	EBS-04MR/D/L	
	EBS-05ME-MOTORUNIT-N	EBS-05ME	
	EBS-05MR-MOTORUNIT-N	EBS-05MR/D/L	
	EBS-08ME-MOTORUNIT-N	EBS-08ME	
	EBS-08MR-MOTORUNIT-N	EBS-08MR/D/L	
With Brake	EBS-04ME-MOTORUNIT-B	EBS-04ME	With Brake
	EBS-04MR-MOTORUNIT-B	EBS-04MR/D/L	
	EBS-05ME-MOTORUNIT-B	EBS-05ME	
	EBS-05MR-MOTORUNIT-B	EBS-05MR/D/L	
	EBS-08ME-MOTORUNIT-B	EBS-08ME	
	EBS-08MR-MOTORUNIT-B	EBS-08MR/D/L	

Maintenance Parts

Maintenance Parts / Motor Mounting Direction: For right, bottom, and left folded-back type (Timing Belt)

Model No.	Applicable Models
	
EBS-04MR-BELT	EBS-04□R/D/L
EBS-05MR-BELT	EBS-05□R/D/L
EBS-08MR-BELT	EBS-08□R/D/L

Maintenance Parts (Grease Nozzle)

Model No.	Applicable Models
	
EBS-NOZZLE	All models

Maintenance Parts (Steel Belt)

Model No.	Applicable Models
	
EBS-04-STEELBELT (4-digit stroke code)	EBS-04 (corresponding stroke product)
EBS-05-STEELBELT (4-digit stroke code)	EBS-05 (corresponding stroke product)
EBS-08-STEELBELT (4-digit stroke code)	EBS-08 (corresponding stroke product)

To Use This Product Safely

Be sure to read this before use.
For general information on electric actuators, please see Intro 17.

Individual Precautions: Electric Actuator EBS Series

During Design and Selection

Danger

■Do not use in places where hazardous materials such as flammable, ignitable, or explosive substances are present.
There is a risk of ignition, fire, or explosion.

■Do not allow water droplets, oil droplets, etc. to come into contact with the product.
This can cause fire or malfunction.

■When installing the product, be sure to hold and fix it securely (including the workpiece).
There is a risk of injury due to the product tipping over, falling, malfunctioning, etc. As a general rule, please fix the product using all mounting holes.

Warning

■Use the product within its specific specification range.

■Install a safety fence to prevent entry into the movable range of the electric actuator. Also, in preparation for emergencies, install an emergency stop push button switch for the device in an easily accessible location. The emergency stop push button must have a structure and wiring that does not automatically reset and cannot be carelessly reset by a person.

■When an emergency stop is performed, it may take several seconds to stop depending on the speed during movement and the mounted load.

■In the event of a system abnormality such as an emergency stop or power failure, if the machine stops, design the safety circuit or device to prevent damage to the equipment, personal injury, etc.

■Install in a dry indoor location.
In places where it is exposed to rainwater or in humid places (humidity of 80% or more, places with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited. Use in such environments can cause damage or malfunction.

■The product must be subjected to Class D grounding work (grounding resistance of 100 Ω or less).
If an electric leakage occurs, there is a risk of electric shock or malfunction.

■If using the actuator in an installation other than horizontal/wall-mounted, select the one with a brake.
If it does not have a brake, when the servo is OFF (including emergency stop and alarm) or when the power is OFF, the movable part may fall, causing injury or damage to the workpiece.

■The brake cannot completely hold the actuator in all cases. When performing maintenance on applications that move the slider with an unbalanced load, or when stopping the machine for a long time, if safety needs to be ensured, be sure to bring it to a balanced state or provide a mechanical locking mechanism.

■When using the actuator in a vertical installation, position the motor as high as possible.
If the motor is on the lower side, there is no problem in normal operation, but if it is stopped for a long period of time, the grease may separate and flow into the motor, which may cause a malfunction in rare cases.

■Observe the operating and storage temperatures, and use and store in a condensation-free state.
(Storage Temperature: -10°C to 50°C, Storage Humidity: 35% to 80%, Operating Temperature: 0°C to 40°C (10°C to 40°C for EBS-G and EBR-G), Operating Humidity: 35% to 80%) It may cause abnormal shutdown of the product or decrease its service life. Ventilate if heat builds up.

■Do not use in places where condensation occurs due to sudden changes in ambient temperature.

■Install in a location free from direct sunlight, dust, heat sources, corrosive gases, explosive gases, flammable gases, and combustible materials. In addition, this product has not been considered for chemical resistance.
This can cause malfunction, explosion, or fire.

■Use and store in a location free from strong electromagnetic waves, ultraviolet rays, and radiation.
This can cause malfunction or failure.

■Consider the possibility of power source failure.
Take measures to ensure that even if a failure occurs in the power source, it does not cause injury or damage to people or equipment.

■Consider the operating state when restarting after an emergency stop or abnormal stop.
Design it so that restarting does not cause harm to people or equipment. Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device. Consider the possibility of failure of the installed motor. Take measures to ensure that even if a failure occurs in the power source, it does not cause harm to people or equipment.

■Do not use in places with impact or vibration.

■Do not apply a load to the product that exceeds the allowable value in the selection data.

Caution

■Please use within a range where the moving table does not collide at the stroke end.

■Clearly state the maintenance conditions in the equipment's instruction manual.
Depending on the usage status, usage environment, and maintenance, the functions of this product may be significantly degraded, and safety may not be ensured. If maintenance is performed correctly, the product functions can be fully demonstrated.

■The product is manufactured in accordance with various standards. Never disassemble or modify.

■Please confirm the suitability of our products for the system, machine, and equipment you use at your own responsibility.

■Use wiring that does not induce induction noise.
Avoid places where large currents or strong magnetic fields are generated. Do not use the same wiring (with multi-core cables) as the power lines for large motors other than this product. Do not use the same wiring as the inverter power supply and wiring part used for robots, etc., apply a frame ground to the power supply, and insert a filter in the output part.

■Do not use in an environment where strong magnetic fields are generated.
This can cause malfunction.

■Separate the power supply for the output part of this product from the power supply for inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current will flow into the output part, causing damage. If a separate power supply cannot be used, connect a surge absorbing element directly in parallel to all inductive loads.

■Select a power supply with sufficient capacity for the number of products installed. If there is not enough capacity, it may malfunction.
[In case of ECMG Series]
(□35...12.4 A/unit, □42...12.2 A/unit, □56...12.5 A/unit)
[In case of ECG Series]
(□35...2.4 A/unit, □42...2.7 A/unit, □56...4.0 A/unit)
[In case of ECR Series]
(□35...4.0 A/unit, □42...5.2 A/unit, □56...8.6 A/unit)

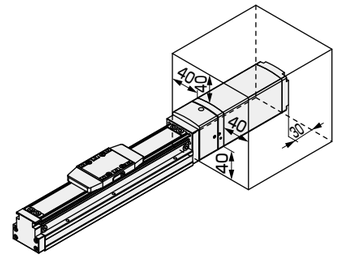
■Fixed cables cannot be used for applications involving repeated bending, so please fix them so that they do not move easily. For use in locations involving repeated bending, please use a flexible cable.

■Please use the fixed/flexible cable with a bending radius of 51 mm or more.
The bending radius cannot accommodate bending of the connector part, so it is recommended to fix it near the connector.

■When the power is turned on, to recognize the home position, if there is an external stopper or holding mechanism (brake, etc.), there is a possibility that an unintended position will be recognized as the home position. After turning on the power, please pay attention to the placement of external stoppers, etc., so that the home position can be reliably detected.

■When using the EBS-G series, do not apply a magnetic field with a magnetic flux density of 0.7 mT or more to the product surface of the motor section.
This can cause damage to the product or malfunction.

■When using multiple EBS-G series units, please install them with the motor parts separated by the distance shown in the figure below or more.
Installation at close intervals can cause malfunction.



■When transporting or installing the actuator, hold the main body and avoid applying excessive force to the motor part.

■Please confirm that there is no interference between the workpiece attached to the slider and the motor part.
Some types have a motor part dimension that is larger than the slider mounting surface height.
(EBS-08□E, EBS-08□R, EBS-08□L)

For precautions regarding mounting, installation, adjustment, operation, and maintenance, please refer to the CKD Equipment Product Site(https: //www.ckd.co.jp/kiki/en/) → 'model No.' → Instruction Manual .

EBS Model Selection Checklist → **for CKD**(Contact)

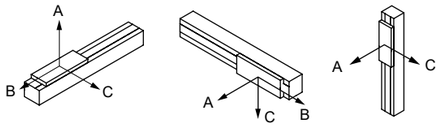
Please fill out the form and send it to your nearest sales office. We will reply with the model selection results.

MEMO

Customer:

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions:

Desired Model	EBS-	
Basic Specifications	Max. Stroke: mm, Ball screw lead: mm	
Operating Conditions	Moving stroke: mm, travel time: s	
	Set Speed: mm/s	
	Set acceleration/deceleration: mm/s^2 (set acceleration/deceleration time: s)	
	Repeatability: ± mm	
Load Conditions	Slider Type	
	Payload: kg	
	Mounting orientation: Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A: mm Direction B: mm Direction C: mm	
	Pushing load: None / Yes (N) During operation / When stopped Direction of force applied to the slider center ( )	
Operating Environment	Ambient Temperature: °C, Ambient Humidity: %	
	Atmosphere:	
Interface Specifications	Parallel I/O / IO-Link / CC-Link / EtherCAT / EtherNet/IP	
Special Notes		

Slider Type
EJSG
EBS
Ending