

Model selection

STEP1 Confirming load capacity

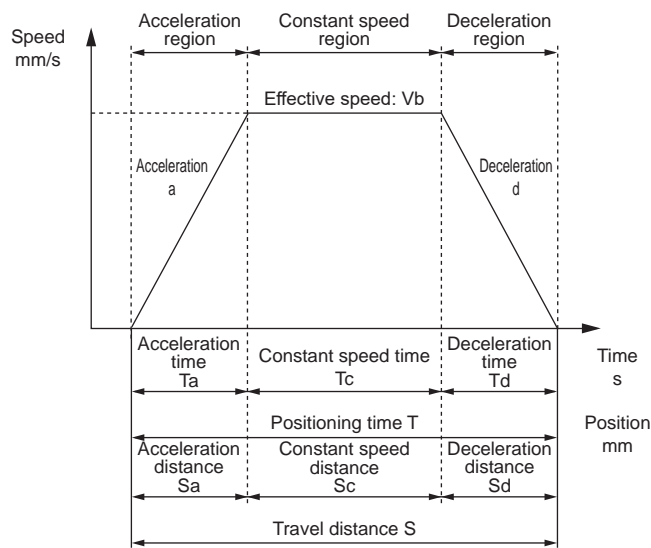
Load capacity varies with mounting orientation, screw lead, transport speed, acceleration/deceleration and power supply voltage.

Refer to the Series Variation (pages 2 to 5), 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 Confirming positioning time

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

Positioning time for general transport operation



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

* Do not use at speeds that exceed the specifications.

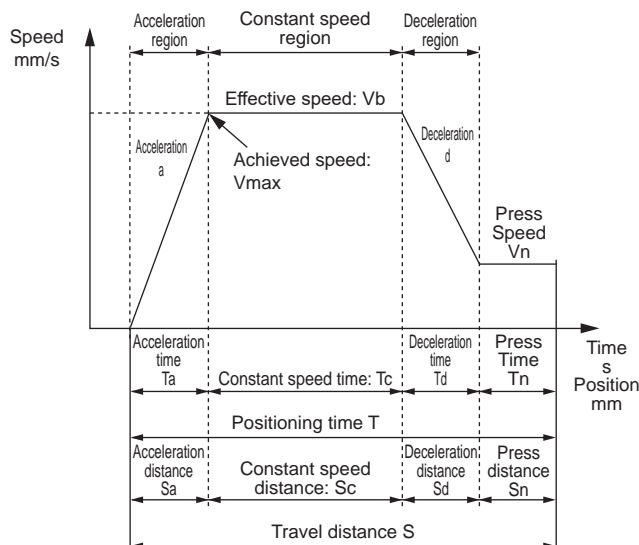
* Depending on the deceleration speed and stroke, the trapezoidal velocity waveform may not form (the set speed may not be reached). In this case, select the effective speed (Vb) from the set speed (V) and the achieved speed (Vmax), whichever is smaller.

* Acceleration/deceleration varies depending on the product and the working conditions. Refer to pages 42 to 45 for details.

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

* $1G \approx 9.8 \text{ m/s}^2$.

Positioning time for pressing operation



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

* Do not use at speeds that exceed the specifications.

* Pressing speed varies depending on the product.

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

* Acceleration/deceleration varies depending on the product and the working conditions. Refer to pages 42 to 45 for details.

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

* $1G \approx 9.8 \text{ m/s}^2$.

STEP3 Confirming static allowable load and moment

Calculate the load and moment that are generated when the table is stopped.
Make sure that the resultant moment (M_T) is as follows (the following formula is satisfied) according to the formula below.

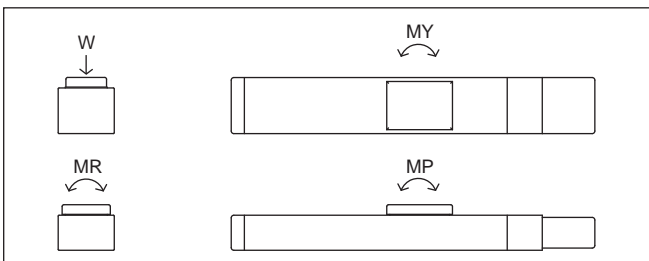
$$M_T = \frac{W}{W_{\max}} + \frac{MP}{MP_{\max}} + \frac{MR}{MR_{\max}} + \frac{MY}{MY_{\max}} < 1$$

Static allowable load and moment

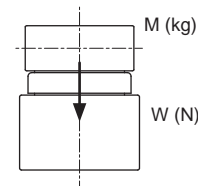
Model No.	Vertical load W max (N)	Pitching moment MP max (N·m)	Yawing moment MY max (N·m)	Rolling moment MR max (N·m)
EBS-04	1030	62	62	92
EBS-05	1168	103	103	144
EBS-08	2781	203	203	336

Calculating static allowable load and moment

How moment is applied

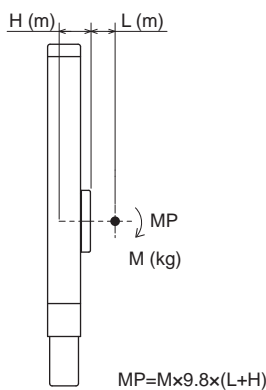


● Vertical load W (N)

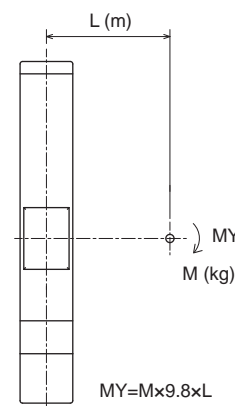


M: Workpiece weight (kg)
 $W = M \times 9.8$

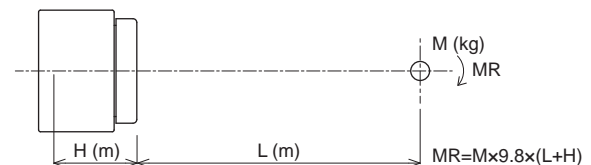
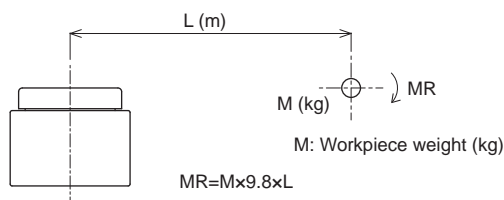
● Pitching moment MP (N·m)



● Yawing moment MY (N·m)



● Rolling moment MR (N·m)



Model No.	H (m)
EBS-04	0.040
EBS-05	0.048
EBS-08	0.052

STEP4 Checking allowable overhang length

Make sure that the load overhang length during operation is within the allowable range (pages 38 to 40).

EBS
(With motor)

EBR
(With motor)

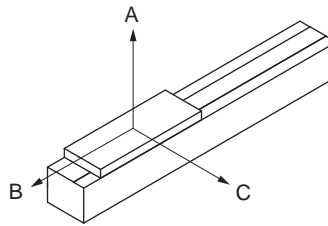
ECR
(Controller)

ECG-A
(Controller)

Safety
precautions

Allowable overhang length (EBS Series)

[When installed horizontally]



[Allowable overhang length]

● EBS-04*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/ bottom	0.3	6	6	800	135	190
			11	595	70	95
			16	375	40	60
		12	4	800	190	255
			9	490	80	105
			13	320	50	65
	1.0	6	5	800	230	330
			10	590	110	160
			16	350	60	90
		12	3	710	260	320
			5	400	150	180
			8	230	90	105

● EBS-05*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm				
				A	B	C		
Straight / side/ bottom	0.3	2	15	1000	105	145		
			30	815	45	65		
			45	520	25	35		
			5	13	820	95	125	
				27	350	40	50	
				40	210	20	30	
		10	12	765	100	130		
			23	355	45	60		
			35	210	25	35		
			20	5	1000	235	285	
				11	520	100	120	
				16	330	65	75	
		1.0	2	15	950	115	160	
				30	450	50	70	
				45	285	30	45	
				5	13	760	120	170
					27	340	50	70
					40	210	30	45
	10		6	1000	235	310		
			11	540	120	160		
			16	220	70	85		
			20	3	1000	440	555	
				7	590	180	225	
				10	400	125	150	

● EBS-08*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm				
				A	B	C		
Straight / side/ bottom	0.3	5	25	1000	185	305		
			50	1000	85	140		
			80	740	45	75		
			10	25	1000	165	260	
		45		875	85	135		
		70		525	50	75		
		20	14	1000	305	490		
			29	1000	140	220		
			43	920	90	140		
			1.0	5	27	1000	195	325
					53	560	90	150
					80	350	55	90
	10	23		1000	230	385		
		47		630	105	175		
		70		410	65	110		
	20	6	1000	665	970			
		12	1000	325	465			
		18	700	210	300			

* Values with actuator operating life restricted to 5,000 km.

* The overhang direction is for a single-direction load.

* Dimensions A, B, and C are measured from the center of the table top.

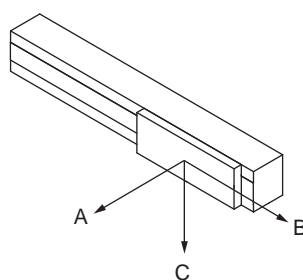
* Values are at maximum speed given stroke of 350 mm and maximum load capacity for the EBS-M series.

* Values may vary according to motor mounting direction and power supply voltage. Contact CKD for details.

* For acceleration/deceleration and load capacity, refer to the Table of Load Capacity by Speed and Acceleration/Deceleration (pages 42 to 45).

Allowable overhang length (EBS Series)

[When wall-mounted]



[Allowable overhang length]

● EBS-04*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm		
				A	B	C
Straight / side/ bottom	0.3	6	6	150	105	800
			11	60	40	490
			16	20	15	240
		12	4	220	165	800
			9	70	50	390
			13	30	25	210
	1.0	6	5	290	200	800
			10	120	80	600
			16	50	35	360
		12	3	290	230	680
			5	150	120	370
			8	75	60	200

● EBS-05*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm				
				A	B	C		
Straight / side/ bottom	0.3	2	10	175	125	1000		
			20	55	40	1000		
			30	15	10	560		
			5	7	205	150	1000	
				13	80	60	685	
				20	30	20	335	
		10	7	195	145	1000		
			13	75	55	575		
			20	25	20	265		
			20	5	245	200	1000	
				11	80	65	400	
				16	35	25	200	
		1.0	2	10	200	140	1000	
				20	70	50	700	
				30	25	15	450	
				5	7	280	200	1000
					13	120	90	770
					20	50	40	490
	10		6	270	200	995		
			11	115	85	495		
			16	60	40	290		
			20	3	520	405	1000	
				7	185	145	555	
				10	110	90	360	

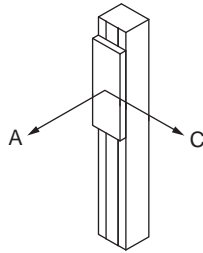
● EBS-08*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm				
				A	B	C		
Straight / side/ bottom	0.3	5	25	250	155	1000		
			50	85	50	1000		
			70	40	20	680		
			10	25	210	130	1000	
				45	85	50	745	
				70	25	15	345	
		20	15	350	220	1000		
			30	140	90	810		
			43	90	55	790		
			1.0	5	27	270	165	1000
					53	100	60	1000
					80	40	25	370
	10	23		330	200	1000		
		47		125	75	660		
		70		55	35	430		
	20	6	920	630	1000			
		12	425	290	1000			
		18	260	180	660			

* Values with actuator operating life restricted to 5,000 km.
 * The overhang direction is for a single-direction load.
 * Dimensions A, B, and C are measured from the center of the table top.
 * Values are at maximum speed given stroke of 350 mm and maximum load capacity for the EBS-M series.
 * Values may vary according to motor mounting direction and power supply voltage. Contact CKD for details.
 * For acceleration/deceleration and load capacity, refer to the Table of Load Capacity by Speed and Acceleration/Deceleration (pages 42 to 45).

Allowable overhang length (EBS Series)

[When installed vertically]



[Allowable overhang length]

● EBS-04*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm	
				A	C
Straight / side/ bottom	0.3	6	3	315	315
			5	175	175
			8	90	90
		12	1	755	725
			2	355	340
			3	225	215
	0.5	6	3	315	315
			5	175	170
			8	90	90
		12	1	790	770
			2	375	365
			3	235	235

● EBS-05*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm			
				A	C		
Straight / side/ bottom	0.3	2	8	175	175		
			16	65	65		
			24	25	25		
			5	6	265	265	
				11	120	120	
				16	70	70	
		10	3	525	525		
			5	295	295		
			8	170	170		
			20	2	815	810	
				3	525	525	
				4.5	340	340	
		0.5	2	8	185	185	
				16	65	65	
				24	30	30	
				5	6	265	265
					11	120	120
					16	70	70
	10		3	525	525		
			5	295	295		
			8	170	170		
			20	2	815	810	
				3	525	525	
				4.5	340	340	

● EBS-08*

Motor mounting	Acceleration/ deceleration speed G	Thread lead	Weight kg	Overhang mm		
				A	C	
Straight / side/ bottom	0.3	5	15	325	325	
			25	175	175	
			40	90	90	
			10	6	690	680
		12		315	315	
		18		195	195	
		20		3	1000	1000
			7	580	575	
			10	390	390	
			0.5	5	12	420
		23			195	195
		35			110	110
	10	6			900	900
		12		420	420	
		18		235	235	
		20		3	1000	1000
	5			835	825	
	8			500	500	

* Values with actuator operating life restricted to 5,000 km.

* The overhang direction is for a single-direction load.

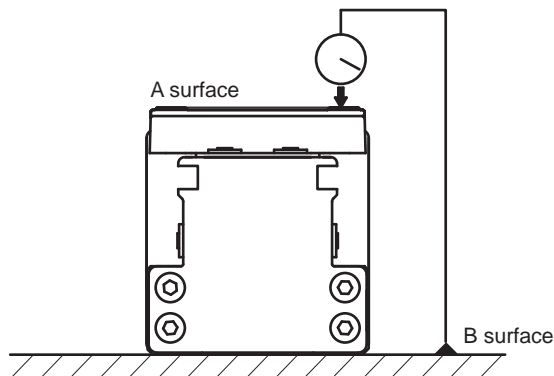
* Dimensions A and C are measured from the center of the table top.

* Values are at maximum speed given stroke of 350 mm and maximum load capacity for the EBS-M series.

* Values may vary according to motor mounting direction and power supply voltage. Contact CKD for details.

* For acceleration/deceleration and load capacity, refer to the Table of Load Capacity by Speed and Acceleration/Deceleration (pages 42 to 45).

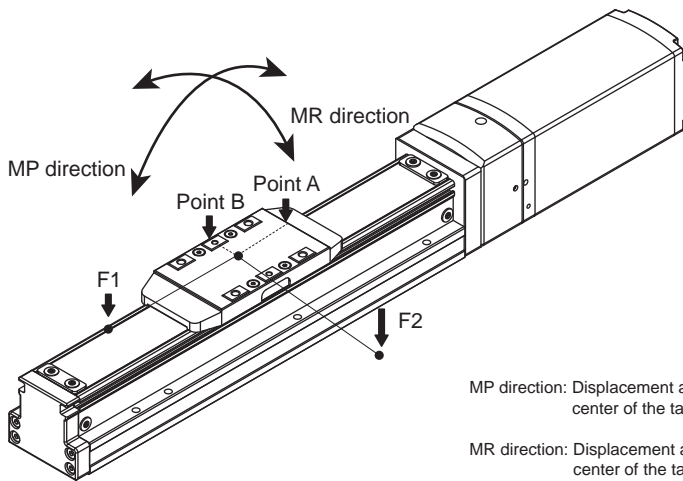
Slider parallelism * Reference value



		(mm)
		Parallelism
		A surface against B surface
EBS-04 Series	0.03	
EBS-05 Series		
EBS-08 Series		

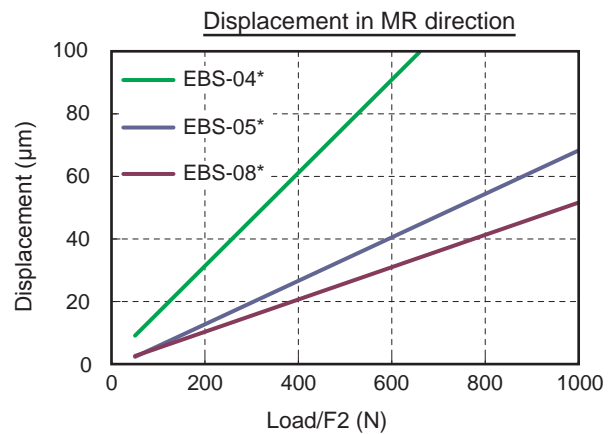
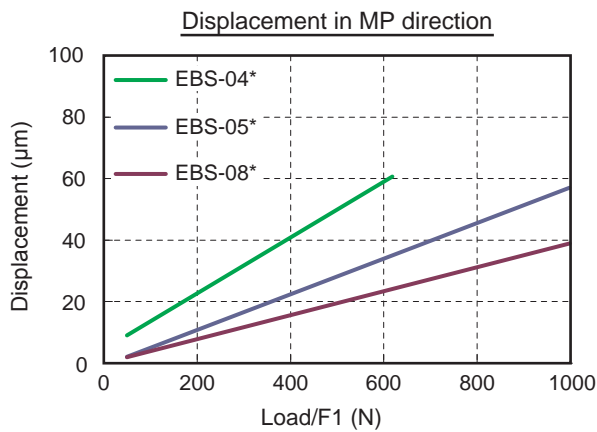
*1. Parallelism with the product fixed to a surface plate.

Table deflection * Reference value



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

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



EBS
(With motor)

EBR
(With motor)

ECR
(Controller)

ECG-A
(Controller)

Safety
precautions

Table of Load Capacity by Speed and Acceleration/Deceleration

48 VDC

[When installed horizontally]

The table below lists the maximum load capacity during acceleration/deceleration and the maximum speed at which operation is possible. Refer to the model that satisfies the required operation conditions.

■ EBS-04M

Screw lead 6

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
50	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
100	16.6	16.6	16.6	15.0	16.6	16.6	16.6	16.6
150	16.6	16.6	16.6	10.0	16.6	16.6	16.6	13.3
200	16.6	16.6	16.6	1.6	16.6	16.6	16.6	8.3
250	16.6	16.6	8.3	1.6	16.6	16.6	8.3	1.6
300	13.3	6.6	1.6		13.3	6.6	1.6	
350	8.3	0.8			8.3	0.8		
400	3.3				6.6			

(kg)

Screw lead 12

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	13.3	13.3	11.6	8.3	13.3	13.3	11.6	8.3
100	13.3	13.3	11.6	8.3	13.3	13.3	11.6	8.3
200	13.3	13.3	11.6	8.3	13.3	13.3	11.6	8.3
300	13.3	13.3	11.6	8.3	13.3	13.3	11.6	8.3
400	13.3	13.3	10	8.3	13.3	13.3	10	8.3
500	6.6	6.6	5	3.3	6.6	6.6	5	3.3
600	5.0	2.5	2.5	2.5	5.0	2.5	2.5	2.5
700	1.6	1.6	1.6	0.8	1.6	1.6	1.6	0.8
800	0.8							

■ EBS-05M

Screw lead 2

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	0.3	0.5G	0.7		
0	45.0	45.0	45.0	45.0	45.0	45.0	45.0	
50	45.0	45.0	45.0	45.0	45.0	45.0	45.0	
60	45.0	45.0	13.3	45.0	26.6	13.3		
70	45.0	20.0	13.3	45.0		13.3		
80	45.0			45.0				
100	45.0			45.0				
110	26.6			26.6				
120	18.3			18.3				
130	10.0			10.0				

■ EBS-05M

Screw lead 5

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
50	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
100	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
150	40.0	35.0	35.0	35.0	40.0	31.6	23.3	18.3
200	40.0	28.3	18.3	18.3	40.0	23.3	15.0	8.3
250	40.0	20.0	11.6	10.0	40.0	16.6	8.3	8.3
300	26.6	15.0	6.6		23.3	6.6		

Screw lead 10

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	35.0	35.0	31.6	16.6	35.0	35.0	31.6	16.6
50	35.0	35.0	31.6	16.6	35.0	35.0	31.6	16.6
100	35.0	35.0	31.6	16.6	35.0	35.0	30.0	16.6
200	35.0	35.0	30.0	16.6	35.0	35.0	25.0	16.6
250	35.0	31.6	26.6	10.0	35.0	26.6	20.0	10.0
300	35.0	23.3	18.3	8.3	35.0	20.0	15.0	8.3
400	25.0	20.0	11.6	8.3	25.0	15.0	8.3	6.6
500	21.6	15.0	10.0	5.0	21.6	11.6	6.6	1.6
600	16.6	11.6	6.6		8.3	3.3	1.6	
650	10.0	6.6	3.3					
700	0.8							

Screw lead 20

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	16.6	16.6	16.6	10.0	16.6	16.6	13.3	10.0
100	16.6	16.6	16.6	10.0	16.6	16.6	13.3	10.0
200	16.6	16.6	16.6	10.0	16.6	16.6	13.3	8.3
300	16.6	16.6	16.6	10.0	16.6	16.6	13.3	8.3
400	16.6	16.6	15.0	6.6	16.6	16.6	11.6	6.6
500	16.6	16.6	13.3	3.3	16.6	16.6	10.0	3.3
600	16.6	16.6	10.0	3.3	16.6	13.3	8.3	3.3
700	15.0	11.6	8.3	3.3	15.0	8.3	6.6	3.3
800	10.0	10.0	6.6	1.6	10.0	8.3	5.0	1.6
900	6.6	6.6	5.0	1.6	6.6	6.6	5.0	1.6
1000	3.3	3.3	3.3		3.3	3.3	3.3	1.6
1100	3.3	3.3	3.3		3.3	3.3	1.6	

■ EBS-08M

Screw lead 5

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
25	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
50	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
60	80.0	80.0	80.0	38.3	80.0	80.0	80.0	38.3
70	80.0	80.0	80.0	21.6	80.0	80.0	80.0	21.6
75	80.0	80.0	80.0	15.0	80.0	80.0	80.0	15.0
80	80.0	80.0	80.0	6.6	80.0	80.0	80.0	6.6
100	80.0	80.0	80.0	6.6	80.0	76.0	55.0	
125	80.0	58.3	46.6	6.6	80.0	35.0	18.0	
150	70.0	35.0	20.0	3.3	46.6	33.3		
175	70.0	16.6			46.6	3.3		
200	18.3	5.0			18.3			
225	3.3				3.3			
250	3.3							

Screw lead 10

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
50	70.0	70.0	70.0	70.0	70.0	70.0	70.0	70.0
100	70.0	70.0	70.0	51.6	70.0	70.0	70.0	70.0
150	70.0	70.0	51.6	51.6	70.0	70.0	51.6	43.3
200	70.0	62.5	38.3	18.3	70.0	46.6	38.3	18.3
250	68.3	41.6	21.6	5.0	68.3	26.6	18.3	4.1
300	41.6	26.6	15.0		68.3	16.6	8.3	
350	36.6	20.0	5.8		48.3	13.3	5.0	
400	33.3	10.0	1.6		35.0	10.0	1.6	
450	25.0	6.6			16.6	6.6		
500	6.6	0.8			5.0	0.8		
550	3.3				5.0			

Screw lead 20

Speed (mm/s)	Straight				Left/Right/Bottom			
	Acceleration/deceleration (G)							
	0.3	0.5	0.7	1.0	0.3	0.5	0.7	1.0
0	43.3	33.3	30.0	18.3	43.3	33.3	26.6	18.3
200	43.3	33.3	30.0	18.3	43.3	33.3	26.6	18.3
300	36.6	33.3	26.6	18.3	36.6	33.3	26.6	18.3
400	26.6	23.3	16.6	8.3	26.6	21.6	15.0	8.3
500	21.6	20.0	11.6	3.3	21.6	16.6	8.3	3.3
600	18.3	16.6	10.0	1.6	20.0	11.6	5.0	1.6
700	16.6	15.0	8.3	0.8	20.0	10.0	5.0	0.8
800	10.0	10.0	8.3		18.3	8.3	3.3	
900	6.6	6.6	5.0		10.0	3.3	0.8	
1000	3.3	3.3	1.6		1.6			
1100	3.3	3.3	0.8					

[When installed vertically]

■ EBS-04M

Screw lead 6

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.5	0.3	0.5
0	8.3	8.3	8.3	8.3
100	8.3	8.3	8.3	8.3
150	5.0	6.6	5.0	5.0
200	5.0	5.0	5.0	5.0
250	5.0	3.3	2.5	1.6
300	3.3	1.6	1.6	0.4
350	1.6	0.4	1.6	0.4
400	0.4			

Screw lead 12

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.5	0.3	0.5
0	3.3	3.3	3.3	3.3
100	3.3	3.3	3.3	3.3
200	3.3	3.3	3.3	3.3
300	3.3	3.3	3.3	3.3
400	3.3	2.5	3.3	2.5
500	2.5	1.6	0.8	0.4
600			0.8	0.4

■ EBS-05M

Screw lead 2

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.5	0.3	0.5
0	24.0	24.0	24.0	24.0
50	24.0	24.0	24.0	24.0
60	24.0	18.3	24.0	18.3
70	24.0	13.3	11.6	8.3
80	18.3	6.6	1.6	
90	18.3	6.6		
100	18.3	6.6		
110	18.3			
120	6.6			
130	1.6			

Screw lead 5

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.5	0.3	0.5
0	16.6	16.6	16.6	16.6
50	16.6	16.6	16.6	16.6
100	15.0	15.0	15.0	15.0
150	11.6	11.6	11.6	11.6
200	10.0	10.0	10.0	10.0
250	10.0	5.0	10.0	5.0
300	5.0	3.3	3.3	3.3

Screw lead 10

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.5	0.3	0.5
0	8.3	8.3	8.3	8.3
100	8.3	8.3	8.3	8.3
200	6.6	6.6	6.6	6.6
250	5.0	5.0	5.0	5.0

Table of Load Capacity by Speed and Acceleration/Deceleration

24 VDC

* At 24 VDC, operation is possible up to 0.7 G when horizontally installed and 0.3 G when vertically installed.
Contact CKD for details.

[When installed horizontally]

■ EBS-04M

Screw lead 6 (kg)

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	16.6	16.6	16.6	16.6
50	16.6	16.6	16.6	16.6
100	16.6	16.6	16.6	16.6
150	16.6	4.1	16.6	4.1
200	6.6		6.6	
250			5.0	

Screw lead 12

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	11.6	11.6	11.6	11.6
100	11.6	11.6	11.6	11.6
200	11.6	11.6	11.6	10.0
300	10.0	5.0	10.0	3.3
400	3.3	1.6	3.3	
500	1.6	0.8	1.6	
600	1.6			

■ EBS-05M

Screw lead 2

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	45.0	45.0	45.0	45.0
25	45.0	45.0	45.0	45.0
40	45.0	45.0	45.0	45.0
50	45.0		45.0	
60	35.0		35.0	
70	2.5		2.5	

Screw lead 5

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	40.0	40.0	40.0	40.0
50	40.0	40.0	40.0	40.0
100	40.0	23.3	40.0	23.3
150	40.0	6.6	20.0	
200	18.3		5.0	
250	8.3		5.0	

Screw lead 10

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	35.0	31.6	35.0	33.3
100	35.0	31.6	35.0	26.6
200	35.0	23.3	35.0	10.0
300	21.6	7.5	18.3	0.8
350	15.0	1.6	13.3	
400	10.0		6.6	
450	7.5		3.3	
500	5.0		3.3	
550	5.0			
600	0.8			

Screw lead 20

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	16.6	16.6	16.6	11.6
100	16.6	16.6	16.6	11.6
200	16.6	16.6	16.6	11.6
300	16.6	11.6	16.6	6.6
400	16.6	8.3	13.3	3.3
500	12.5	5.0	8.3	1.6
600	8.3	2.5	6.6	0.8
700	4.1	0.8	4.1	
800	2.5		2.5	
900	0.8		0.8	

■ EBS-08M

Screw lead 5

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	80.0	80.0	80.0	80.0
25	80.0	80.0	80.0	80.0
50	80.0	80.0	80.0	80.0
75	80.0	18.3	51.6	1.6
100	76.6		3.3	
125	43.3			
150	10.0			

Screw lead 10

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	70.0	70.0	70.0	70.0
50	70.0	70.0	70.0	70.0
100	70.0	50.0	70.0	40.0
150	58.3	15.0	58.3	13.3
200	29.1		29.1	
250	11.6		11.6	
300	2.5		2.5	

Screw lead 20

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	43.3	26.6	43.3	26.6
100	43.3	26.6	43.3	26.6
200	31.6	21.6	30.0	21.6
300	26.6	6.6	21.6	10.0
400	15.0	3.3	10.0	3.3
500	6.2	1.6	8.3	
600	2.5			

[When installed vertically]

■ EBS-04M

Screw lead 6

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	6.6		6.6	
50	6.6		6.6	
100	6.6		6.6	
150	5.0		3.3	
200	1.6		1.6	

Screw lead 12

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	2.5		2.5	
100	2.5		2.5	
200	2.5		2.5	
300	1.6		0.8	
400	0.8		0.8	

■ EBS-05M

Screw lead 2

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	24.0		24.0	
10	24.0		24.0	
20	24.0		24.0	
30	24.0		24.0	
40	24.0		24.0	
50	16.6		16.6	
60	8.3		8.3	
70	0.8		0.8	

Screw lead 5

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	16.6		16.6	
50	16.6		16.6	
75	16.6		16.6	
100	16.6		16.6	
125	11.6		11.6	
150	8.3		8.3	
175	5.8		5.8	
200	4.1		4.1	
225	2.5		2.5	
250	1.6			

Screw lead 10

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	8.3		8.3	
100	8.3		8.3	
200	6.6		5.0	
300	3.3		2.5	
350	3.3		1.6	
400	2.5		0.8	
450	1.6			
500	0.4			

Screw lead 20

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	4.5		4.5	
100	4.5		4.5	
200	4.5		4.5	
300	4.5		4.1	
400	2.5		2.5	
500	1.6		0.8	
600	1.2		0.8	
700	0.8		0.8	
800	0.4		0.4	

■ EBS-08M

Screw lead 5

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	38.3		36.6	
25	38.3		36.6	
50	36.6		36.6	
75	18.3		18.3	
100	4.1		4.1	
125	4.1			
150	4.1			

Screw lead 10

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	18.3		16.6	
50	18.3		16.6	
100	18.3		13.3	
150	8.3		6.6	
200	5.8		5.0	
250	2.5		2.5	
300	0.8			

Screw lead 20

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	10.0		8.3	
100	10.0		8.3	
200	10.0		8.3	
300	5.8		5.0	
400	3.3		2.5	
500	1.6			
600	0.8			

Table of Load Capacity by Speed and Acceleration/Deceleration

24 VDC

[When installed horizontally]

The table below lists the maximum load capacity during acceleration/ deceleration and the maximum speed at which operation is possible. Refer to the model that satisfies the required operation conditions.

■ EBS-04G

Screw lead 6

(kg)

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	20.0	20.0	20.0	20.0
50	20.0	20.0	20.0	20.0
100	20.0	20.0	20.0	20.0
150	20.0	12.5	13.3	11.7
200	15.0	12.5	13.3	10.0
250	11.7	11.7	10.0	8.3
300	7.5	7.5		
320	7.5	7.5		

Screw lead 12

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	15.0	15.0	11.7	10.0
100	15.0	15.0	11.7	10.0
200	15.0	10.8	11.7	10.0
300	10.8	8.3	8.3	8.3
400	4.2	4.2	3.3	3.3
500	2.5	2.5		

■ EBS-05G

Screw lead 2

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	45.0	45.0	45.0	45.0
25	45.0	45.0	45.0	45.0
50	45.0	45.0	45.0	45.0
70	45.0	45.0	45.0	45.0
90	45.0	45.0	45.0	45.0
100	45.0	45.0	45.0	45.0
120	45.0	45.0		

Screw lead 5

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	40.0	40.0	40.0	40.0
50	40.0	40.0	40.0	40.0
100	40.0	40.0	40.0	40.0
150	26.7	26.7	26.7	26.7
200	26.7	26.7	26.7	26.7
250	26.7	26.7	8.3	8.3
290	26.7	15.8		

Screw lead 10

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	27.5	27.5	27.5	27.5
100	27.5	27.5	27.5	27.5
200	27.5	27.5	23.3	20.0
300	15.8	12.5	11.7	11.7
400	10.0	9.2	3.3	3.3
500	5.8	2.5		

Screw lead 20

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	18.3	8.3	18.3	7.5
100	18.3	8.3	18.3	7.5
300	10.0	6.7	10.0	5.0
500	8.3	5.0	6.7	4.2
700	4.2	2.5	3.3	1.7
800	2.5	1.7		
850	0.8	0.4		

■ EBS-08G

Screw lead 5

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	80.0	80.0	80.0	80.0
25	80.0	80.0	80.0	80.0
50	80.0	80.0	80.0	80.0
75	80.0	80.0	68.3	68.3
100	40.0	40.0	40.0	40.0
125	40.0	40.0	40.0	40.0
150	40.0	35.0		

Screw lead 10

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	70.0	70.0	70.0	70.0
50	70.0	70.0	70.0	70.0
100	70.0	70.0	70.0	70.0
150	70.0	70.0	70.0	30.0
200	28.3	17.5	28.3	17.5
250	28.3	17.5	21.7	17.5

Screw lead 20

Speed (mm/s)	Straight		Left/Right/Bottom	
	Acceleration/deceleration (G)			
	0.3	0.7	0.3	0.7
0	30.0	26.7	30.0	26.7
100	30.0	26.7	30.0	26.7
200	30.0	18.3	30.0	18.3
300	26.7	18.3	6.7	6.7
400	20.0	11.7	3.3	3.3
500	3.3			

Table of Load Capacity by Speed and Acceleration/Deceleration

24 VDC

The table below lists the maximum load capacity during acceleration/ deceleration and the maximum speed at which operation is possible. Refer to the model that satisfies the required operation conditions.

[When installed vertically]

■ EBS-04G

Screw lead 6 (kg)

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	9.2	9.2
50	9.2	9.2
100	9.2	6.7
150	6.7	3.3
200	4.2	2.5
225	1.7	0.8
250	1.7	
275	0.4	

Screw lead 12

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	3.3	3.3
100	3.3	3.3
200	3.3	3.3
300	2.5	1.7
350	0.8	0.8
400	0.8	
450	0.4	

■ EBS-05G

Screw lead 2

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	18.3	18.3
20	18.3	18.3
40	18.3	18.3
60	18.3	16.7
70	18.3	13.3
90	11.7	8.3
120	2.5	

Screw lead 5

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	14.0	10.0
50	14.0	10.0
100	9.2	8.3
150	7.5	6.7
200	4.2	2.5
210	3.3	0.8
225	3.3	
250	2.1	
290		

Screw lead 10

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	7.0	3.3
100	7.0	3.3
200	7.0	2.1
300	2.5	1.3
325	2.1	0.4
350	2.1	
400	1.3	
425	0.8	

Screw lead 20

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	2.5	0.8
200	2.5	0.8
400	2.5	0.8
500	0.4	0.4

■ EBS-08G

Screw lead 5

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	43.3	33.3
25	43.3	33.3
50	43.3	25.0
75	15.0	15.0
100	15.0	12.5
125	2.9	2.9
150	2.9	

Screw lead 10

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	28.3	18.3
50	28.3	18.3
100	12.5	12.5
150	10.0	8.3
200	1.7	1.7
250	1.7	


Screw lead 20

Speed (mm/s)	Straight	Left/Right/Bottom
	Acceleration/ deceleration (G)	
	0.3	0.3
0	3.3	3.3
100	3.3	3.3
200	3.3	3.3
300	3.3	3.3
350	0.8	0.8


Maintenance parts

■ Maintenance parts (motor unit)


* Motor unit replacement is applicable only with ECR. ECG units are excluded.

Model No.		Compatibility
		
Without brake	EBS-04ME-MOTORUNIT-N	EBS-04ME
	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
	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

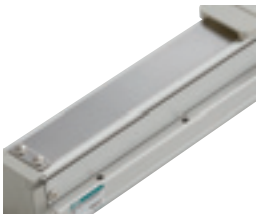
■ Maintenance parts / motor mounting direction: For right/left/downward mounting (timing belt)

Model No.		Compatibility
		
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.	Compatibility
	
EBS-NOZZLE	All models

■ Maintenance parts (steel belt)

Model No.	Compatibility
	
EBS-04-STEELBELT (4-digit stroke code)	EBS-04 (applicable stroke product)
EBS-05-STEELBELT (4-digit stroke code)	EBS-05 (applicable stroke product)
EBS-08-STEELBELT (4-digit stroke code)	EBS-08 (applicable stroke product)