

# EBR-M/G

Electric actuator  
Motor specifications

Rod with built-in guide



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EBS  
(With motor)

EBR  
(With motor)

ECR  
(Controller)

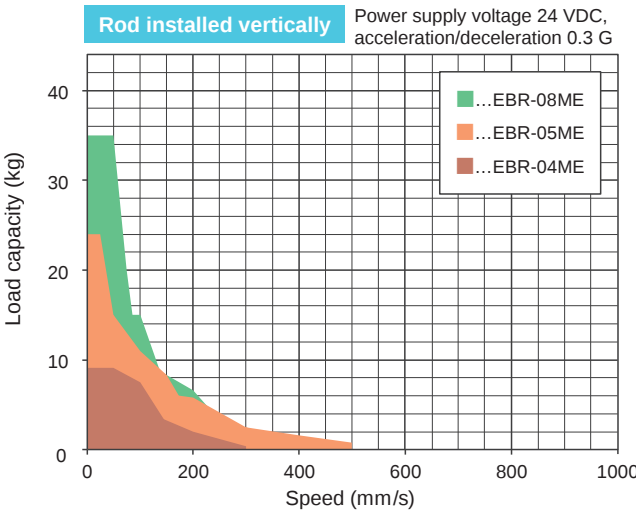
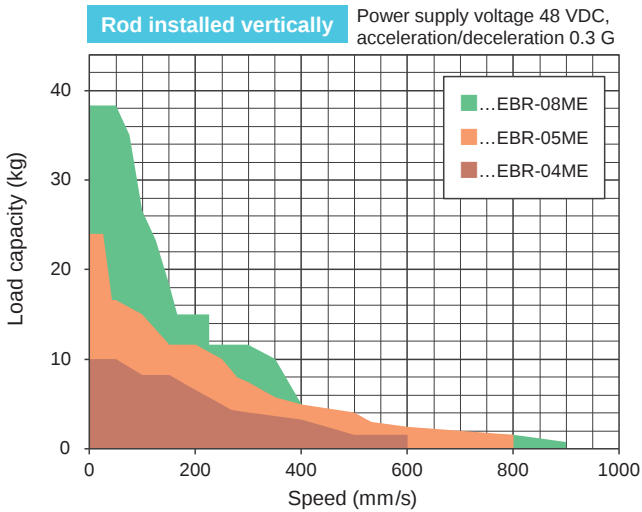
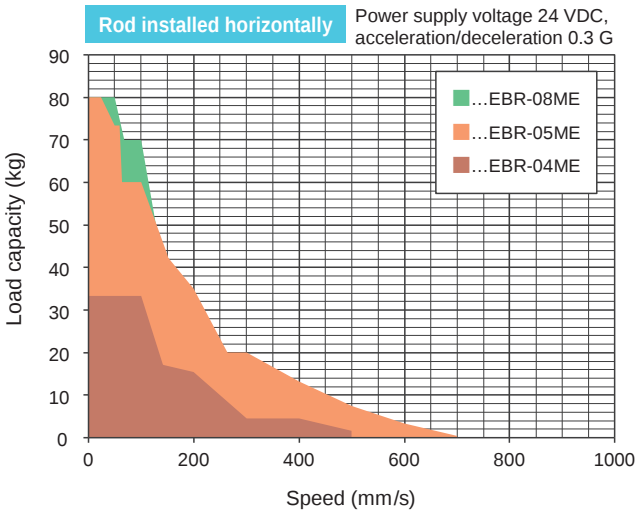
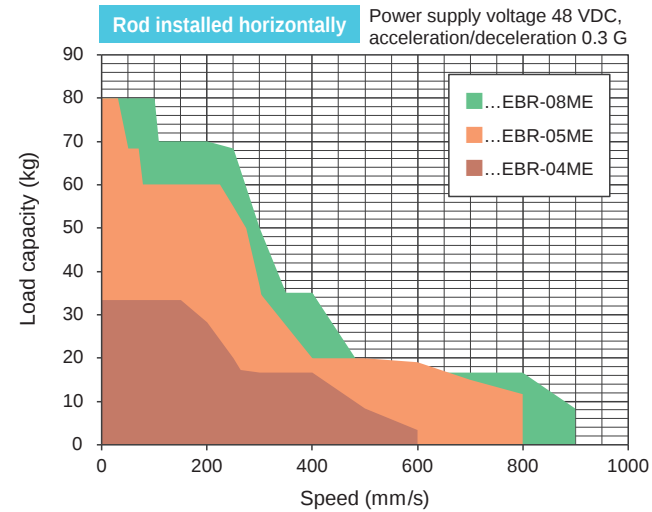
ECG-A  
(Controller)

Safety  
precautions

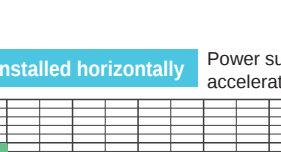
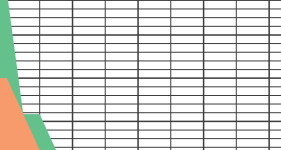
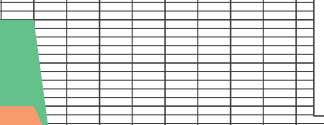
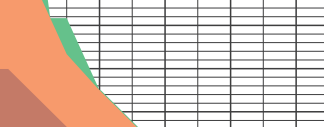
Series variation

| Controller                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Actuator model No. |                   | Motor size        | Motor mounting direction | Body width (mm) | Screw lead (mm) | Max. load capacity (kg) |          | Max. Pressing force (N) |          | Stroke (mm) and max. speed (mm/s) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Page |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------------|-------------------|--------------------------|-----------------|-----------------|-------------------------|----------|-------------------------|----------|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                    |                   |                   |                          |                 |                 | Horizontal              | Vertical |                         |          | 50 mm                             | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |      |
| <div></div> | EBR-04ME-06        | □35               | Straight          | 44                       | 6               | 33.3            | 10                      | 131      |                         | 350 mm/s |                                   | 300 | 250 |     |     |     |     |     |     |     |     |     |     |     |     | 52  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-04ME-12        |                   |                   |                          | 12              | 18.3            | 5                       | 69       |                         | 600      |                                   | 490 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-04MR/D/L-06    |                   | Left/Right/Bottom |                          | 6               | 33.3            | 9.1                     | 131      |                         | 350      |                                   | 300 | 250 |     |     |     |     |     |     |     |     |     |     |     |     |     | 56   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-04MR/D/L-12    |                   |                   |                          | 12              | 18.3            | 5                       | 69       |                         | 600      |                                   | 490 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05ME-02        | □42               | Straight          | 54                       | 2               | 80              | 24                      | 397      |                         | 130      |                                   | 85  |     |     |     |     |     |     |     |     |     |     |     |     |     | 62  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05ME-05        |                   |                   |                          | 5               | 60              | 16.6                    | 193      |                         | 330      |                                   | 210 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05ME-10        |                   |                   |                          | 10              | 50              | 10                      | 94       |                         | 600      |                                   | 420 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05ME-20        |                   |                   |                          | 20              | 20              | 4.1                     | 33       |                         | 800      |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05MR/D/L-02    | Left/Right/Bottom | 2                 | 80                       | 24              | 397             |                         | 120      |                         | 85       |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     | 66  |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05MR/D/L-05    |                   | 5                 | 60                       | 16.6            | 193             |                         | 330      |                         | 210      |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05MR/D/L-10    |                   | 10                | 36.6                     | 8.3             | 94              |                         | 500      |                         | 420      |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-05MR/D/L-20    |                   | 20                | 18.3                     | 4.1             | 33              |                         | 800      |                         |          |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-08ME-05        | □56               | Straight          | 82                       | 5               | 80              | 38.3                    | 1050     |                         | 225      |                                   | 200 |     |     |     |     |     |     |     |     |     |     |     |     |     | 72  |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-08ME-10        |                   |                   |                          | 10              | 70              | 18.3                    | 468      |                         | 450      |                                   | 400 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-08ME-20        |                   |                   |                          | 20              | 35              | 11.6                    | 213      |                         | 900      |                                   | 600 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-08MR/D/L-05    |                   | Left/Right/Bottom |                          | 5               | 80              | 38.3                    | 1050     |                         | 225      |                                   | 200 |     |     |     |     |     |     |     |     |     |     |     |     | 76  |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-08MR/D/L-10    |                   |                   |                          | 10              | 70              | 18.3                    | 468      |                         | 450      |                                   | 400 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | EBR-08MR/D/L-20    |                   |                   |                          | 20              | 35              | 8.3                     | 213      |                         | 700      |                                   | 600 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |

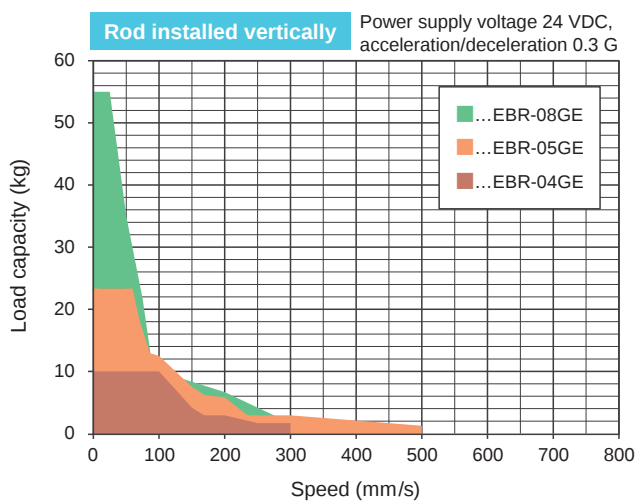
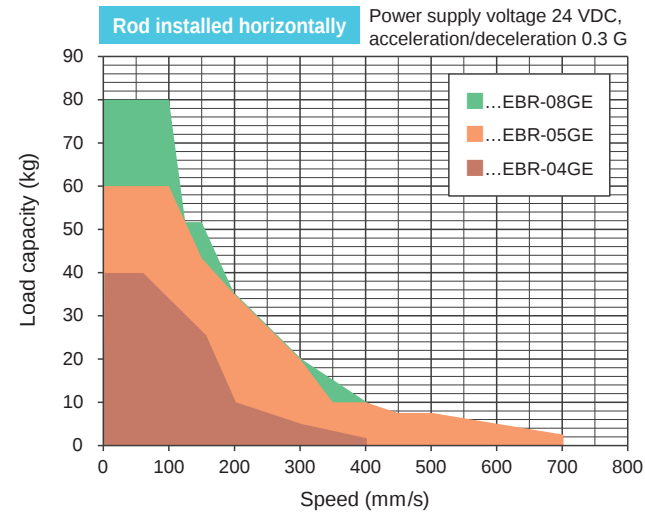
\* This data is at power supply voltage 48 VDC and acceleration/deceleration 0.3 G.  
\* The load capacity when wall mounted is the same as for horizontal installation.



Series variation

| Controller                                                                                                                                                                                                          | Actuator model No.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 | Motor size        | Motor mounting direction | Body width (mm) | Screw lead (mm) | Max. load capacity (kg) |          | Max. Pressing force (N) |     | Stroke (mm) and max. speed (mm/s) |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | Page |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|--------------------------|-----------------|-----------------|-------------------------|----------|-------------------------|-----|-----------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|----|
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                   |                          |                 |                 | Horizontal              | Vertical |                         |     | 50 mm                             | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |      |    |
| <div><br/><br/><br/><br/><b>ECG Series</b></div> | <br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EBR-04GE-06     | □35               | Straight                 | 44              | 6               | 40.0                    | 10.0     | 155                     |     | 200 mm/s                          |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      | 52 |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-04GE-12     |                   |                          |                 | 12              | 12.5                    | 2.9      | 77                      |     | 400                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-04GR/D/L-06 | Left/Right/Bottom | 6                        |                 | 40.0            | 8.3                     | 155      |                         | 200 |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 56   |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-04GR/D/L-12 |                   | 12                       |                 | 12.5            | 2.9                     | 77       |                         | 350 |                                   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     | <br><br><br><br><br><br><br> | EBR-05GE-02     | □42               | Straight                 | 54              | 2               | 80.0                    | 23.3     | 550                     |     | 90                                |     |     |     | 85  |     |     |     |     |     |     |     |     |     |     | 62  |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-05GE-05     |                   |                          |                 | 5               | 60.0                    | 14.0     | 220                     |     | 300                               |     |     |     | 210 |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-05GE-10     |                   |                          |                 | 10              | 41.7                    | 7.0      | 110                     |     | 500                               |     |     |     | 420 |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-05GE-20     |                   |                          |                 | 20              | 11.7                    | 2.9      | 55                      |     | 700                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-05GR/D/L-02 |                   | Left/Right/Bottom        |                 | 2               | 80.0                    | 23.3     | 550                     |     | 90                                |     |     |     | 85  |     |     |     |     |     |     |     |     |     |     | 66  |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-05GR/D/L-05 |                   |                          |                 | 5               | 60.0                    | 14.0     | 220                     |     | 250                               |     |     |     | 210 |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-05GR/D/L-10 |                   |                          |                 | 10              | 38.3                    | 6.7      | 110                     |     | 400                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-05GR/D/L-20 |                   |                          |                 | 20              | 11.7                    | 1.7      | 55                      |     | 600                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     | <br><br><br><br><br>                                                                                                                                                                          | EBR-08GE-05     | □56               | Straight                 | 82              | 5               | 80.0                    | 55.0     | 965                     |     | 125                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 72  |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-08GE-10     |                   |                          |                 | 10              | 70.0                    | 23.3     | 482                     |     | 300                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-08GE-20     |                   |                          |                 | 20              | 35.0                    | 10.0     | 241                     |     | 500                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-08GR/D/L-05 |                   | Left/Right/Bottom        |                 | 5               | 80.0                    | 55.0     | 965                     |     | 125                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 76  |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-08GR/D/L-10 |                   |                          |                 | 10              | 70.0                    | 20.0     | 482                     |     | 250                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |
|                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | EBR-08GR/D/L-20 |                   |                          |                 | 20              | 35.0                    | 8.3      | 241                     |     | 400                               |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |    |

\* This data is at power supply voltage 24 VDC and acceleration/deceleration 0.3 G.  
\* The load capacity when wall mounted is the same as for horizontal installation.





Electric actuator Rod with built-in guide

# EBR-04\*E

Straight motor mounting

☐ 35 stepper motor



## How to order

**EBR** - **04** **M** **E** - **00** - **06** **0300** **N** **A** **N** - **C** **S03**

**A** Body size  
**04** Body width 44 mm

**B** Applicable controller \*1  
**M** ECR  
**G** ECG

**C** Motor mounting direction  
**E** Straight mounting

**D** Mounting  
**00** Basic  
**FA** Rod side flange

**E** Screw lead  
**06** 6 mm  
**12** 12 mm

**F** Stroke  
**0050 to 0400** 50 mm (In 50 mm increments) 400 mm

**H** encoder \*1  
**A** Battery-less absolute encoder (for ECR)  
**B** Battery-less absolute encoder (for ECG)  
**C** Incremental encoder (for ECG)

**G** Brake \*2  
**N** None  
**B** Yes

**I** Relay cable \*3  
**N00** None  
**S01** Fixing cable 1 m  
**S03** Fixing cable 3 m  
**S05** Fixing cable 5 m  
**S10** Fixing cable 10 m  
**R01** Movable cable 1 m  
**R03** Movable cable 3 m  
**R05** Movable cable 5 m  
**R10** Movable cable 10 m

\*1 Select the controller from page 93 or page 105.

Select encoder "A" when an ECR controller is selected and "B" or "C" when an ECG controller is selected.

\*2 Select "Yes" for vertical use.

\*3 Refer to page 103 for ECR and page 116 for ECG relay cable dimensions.

Product subject to the EAR (EAR99)

## Specifications

[EBR-04M (applicable controller ECR)]

|                                  |                                           |                                       |
|----------------------------------|-------------------------------------------|---------------------------------------|
| Motor                            | <input type="checkbox"/> 35 stepper motor |                                       |
| Encoder type                     | Battery-less absolute encoder             |                                       |
| Drive method                     | Ball screw ø10                            |                                       |
| Stroke length mm                 | 50 to 400                                 |                                       |
| Screw lead mm                    | 6                                         | 12                                    |
| Max. load capacity kg            | Horizontal 33.3 (33.3)                    | 18.3 (18.3)                           |
| *1 *2                            | Vertical 10 (9.1)                         | 5 (4.5)                               |
| Operation speed range*3*4 mm/s   | 7 to 350 (250)                            | 15 to 600 (500)                       |
| Maximum pressing force N         | 131                                       | 69                                    |
| Press operation speed range mm/s | 5 to 20                                   | 5 to 30                               |
| Repeatability mm                 | ±0.01                                     |                                       |
| Lost motion mm                   | 0.1 or less                               |                                       |
| Motor power supply voltage       | 24 VDC ±10% or 48 VDC ±10%                |                                       |
| Brake                            | Model, power supply voltage               | Non-excitation operation, 24 VDC ±10% |
|                                  | Power consumption W                       | 7                                     |
|                                  | Holding force N                           | 126 63                                |

\*1 The values in ( ) are at 24 VDC.

\*2 Load capacity varies according to acceleration/deceleration and speed. Refer to page 88 for details.

\*3 The maximum speed values in ( ) are at 24 VDC.

\*4 The maximum speed may decrease depending on the conditions.

[EBR-04G (applicable controller ECG)]

|                                  |                                                      |                                       |
|----------------------------------|------------------------------------------------------|---------------------------------------|
| Motor                            | <input type="checkbox"/> 35 stepper motor            |                                       |
| Encoder type                     | Battery-less absolute encoder<br>Incremental encoder |                                       |
| Drive method                     | Ball screw ø10                                       |                                       |
| Stroke length mm                 | 50 to 400                                            |                                       |
| Screw lead mm                    | 6                                                    | 12                                    |
| Max. load capacity kg            | Horizontal 40.0                                      | 12.5                                  |
| *1                               | Vertical 10.0                                        | 2.9                                   |
| Operation speed range*2 mm/s     | 7 to 200                                             | 15 to 400                             |
| Maximum pressing force N         | 155                                                  | 77                                    |
| Press operation speed range mm/s | 5 to 20                                              | 5 to 20                               |
| Repeatability mm                 | ±0.01                                                |                                       |
| Lost motion mm                   | 0.1 or less                                          |                                       |
| Motor power supply voltage       | 24 VDC ±10%                                          |                                       |
| Brake                            | Model, power supply voltage                          | Non-excitation operation, 24 VDC ±10% |
|                                  | Power consumption W                                  | 6.1                                   |
|                                  | Holding force N                                      | 140 70                                |

\*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 90 for details.

\*2 The maximum speed may decrease depending on the conditions.

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| Insulation resistance                     | 10MΩ, 500 VDC                                                |
| Withstand voltage                         | 500 VAC for 1 minute                                         |
| Operating ambient temperature, humidity * | 0 to 40 °C (no freezing)<br>35 to 80% RH (no condensation)   |
| Storage ambient temperature, humidity     | -10 to 50 °C (no freezing)<br>35 to 80% RH (no condensation) |
| Atmosphere                                | No corrosive gas, explosive gas, or dust                     |
| Degree of protection                      | IP40                                                         |

\*The operating ambient temperature of EBR-\*\*G is 10°C to 40°C.

### Stroke and max. speed

[EBR-04M (applicable controller ECR)]

(mm/s)

| Screw lead | Power supply voltage | Stroke length |     |     |     |     |
|------------|----------------------|---------------|-----|-----|-----|-----|
|            |                      | 50 to 200     | 250 | 300 | 350 | 400 |
| 6          | 48 VDC               | 350           | 300 | 250 | 250 | 250 |
|            | 24 VDC               | 250           | 250 | 250 | 250 | 250 |
| 12         | 48 VDC               | 600           | 600 | 490 | 490 | 490 |
|            | 24 VDC               | 500           | 500 | 490 | 490 | 490 |

[EBR-04G (applicable controller ECG)]

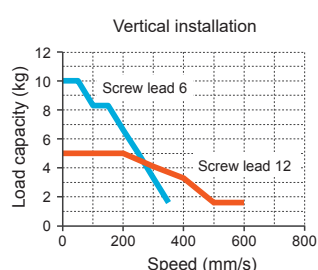
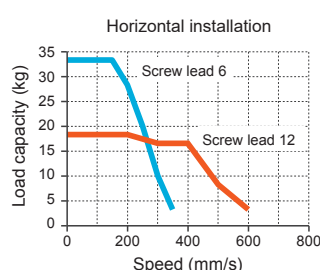
(mm/s)

| Screw lead | Power supply voltage | Stroke length |
|------------|----------------------|---------------|
|            |                      | 50 to 400     |
| 6          | 24 VDC               | 200           |
| 12         | 24 VDC               | 400           |

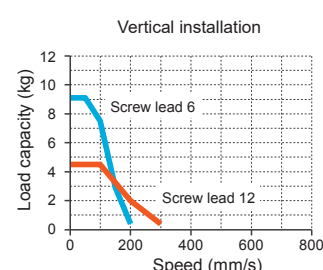
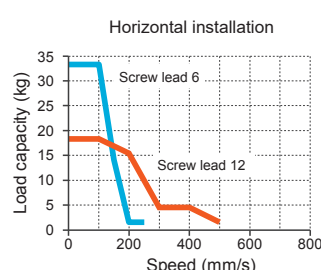
### Speed and load capacity

[EBR-04M (applicable controller ECR)]

· At 48 VDC

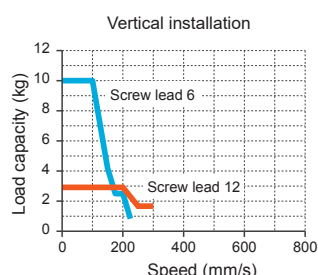
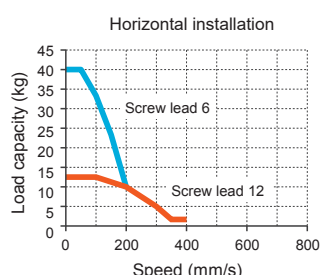


· At 24 VDC



[EBR-04G (applicable controller ECG)]

· At 24 VDC



\* At acceleration of 0.3 G.

\* Confirm each of the pages listed below for details.

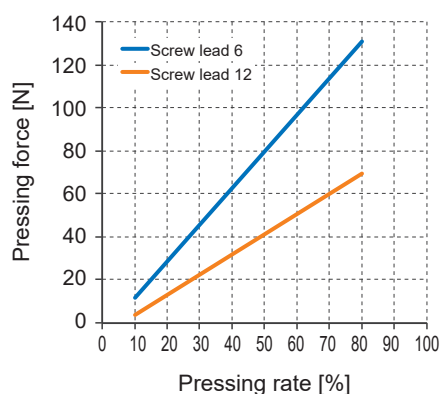
ECR: Page 88

ECG: Page 90

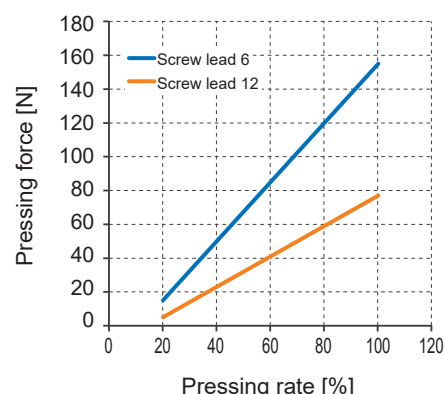
\* Incorrectly applying a 48 VDC power supply could result in damage.

### Pressing force

[EBR-04M (applicable controller ECR)]



[EBR-04G (applicable controller ECG)]



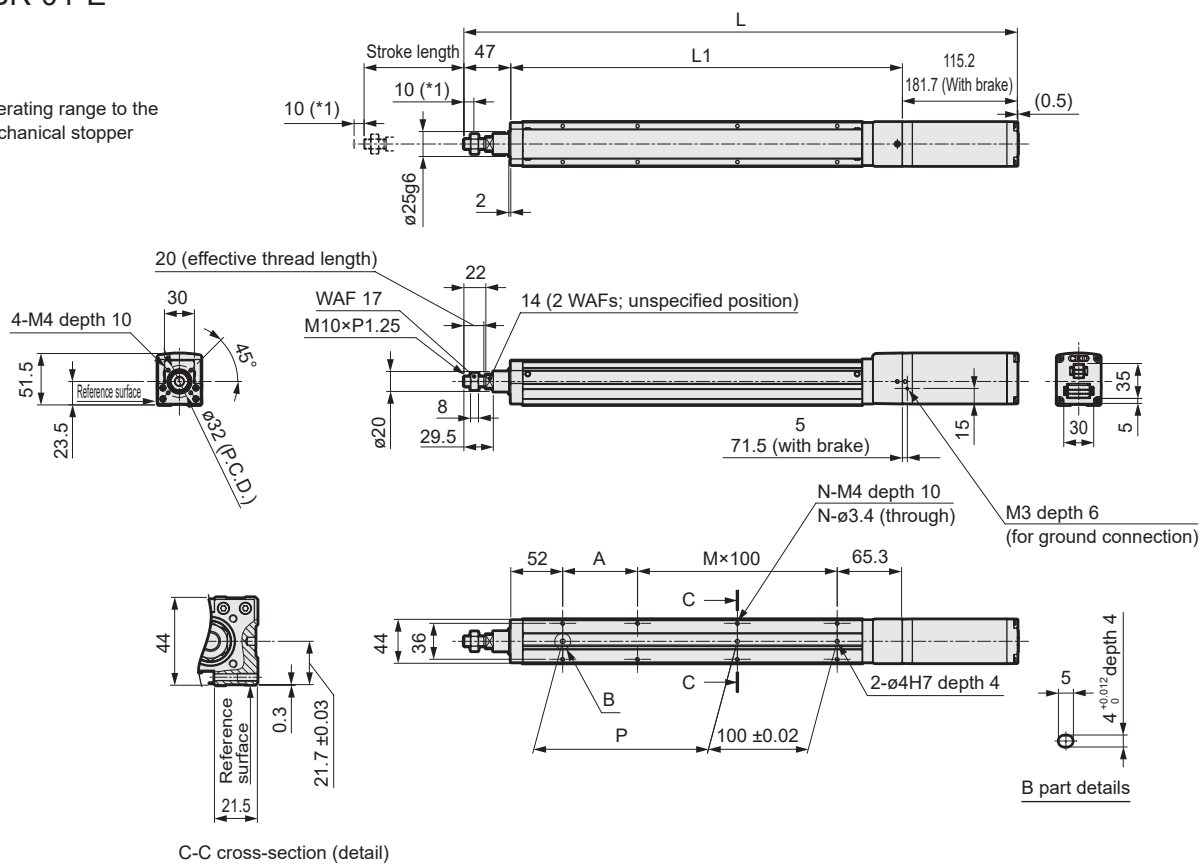
\* The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

# EBR-04\*E

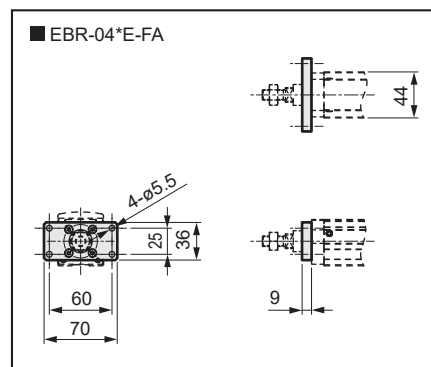
Dimensions: Straight motor mounting

## EBR-04\*E

\*1 Operating range to the mechanical stopper



| Stroke code        | 0050          | 0100  | 0150  | 0200  | 0250  | 0300  | 0350  | 0400  |
|--------------------|---------------|-------|-------|-------|-------|-------|-------|-------|
| Stroke length (mm) | 50            | 100   | 150   | 200   | 250   | 300   | 350   | 400   |
| L                  | Without brake | 404.5 | 454.5 | 504.5 | 554.5 | 604.5 | 654.5 | 704.5 |
|                    | With brake    | 471   | 521   | 571   | 621   | 671   | 721   | 771   |
| L1                 | 242.3         | 292.3 | 342.3 | 392.3 | 442.3 | 492.3 | 542.3 | 592.3 |
| A                  | 25            | 75    | 25    | 75    | 25    | 75    | 25    | 75    |
| M                  | 1             | 1     | 2     | 2     | 3     | 3     | 4     | 4     |
| N                  | 6             | 6     | 8     | 8     | 10    | 10    | 12    | 12    |
| P                  | 25            | 75    | 125   | 175   | 225   | 275   | 325   | 375   |
| Weight (kg)        | Without brake | 1.6   | 1.8   | 1.9   | 2.1   | 2.2   | 2.4   | 2.5   |
|                    | With brake    | 2.1   | 2.3   | 2.4   | 2.6   | 2.7   | 2.9   | 3.0   |



Notes

|                     |                     |                     |                       |                       |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|
| EBS<br>(With motor) | EBR<br>(With motor) | ECR<br>(Controller) | ECG-A<br>(Controller) | Safety<br>precautions |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|



Electric actuator Rod with built-in guide

# EBR-04\*\*

Motor side mounting (left, right, bottom)

☐ 35 stepper motor



## How to order

| EBR - 04 M R - 00 - 06 0300 N A N - C S03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |          |          |          |          |          |          |          |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|--|
| <b>A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>B</b> | <b>C</b> | <b>D</b> | <b>E</b> | <b>F</b> | <b>G</b> | <b>H</b> | <b>I</b> |  |
| <div> <div> <b>A Body size</b><br/> <b>04</b> Body width 44 mm         </div> <div> <b>B Applicable controller</b> *1<br/> <b>M</b> ECR<br/> <b>G</b> ECG         </div> <div> <b>C Motor mounting direction</b> *2<br/> <b>R</b> Right mounting<br/> <b>D</b> Bottom mounting<br/> <b>L</b> Left mounting         </div> <div> <b>D Mounting</b><br/> <b>00</b> Basic<br/> <b>FA</b> Rod side flange         </div> <div> <b>E Screw lead</b><br/> <b>06</b> 6 mm<br/> <b>12</b> 12 mm         </div> <div> <b>F Stroke</b> *2<br/> <b>0050 to 0400</b> 50 mm (In 50 mm increments) 400 mm         </div> <div> <b>G Brake</b> *3<br/> <b>N</b> None<br/> <b>B</b> Yes         </div> <div> <b>H Encoder</b><br/> <b>A</b> Battery-less absolute encoder (for ECR)<br/> <b>B</b> Battery-less absolute encoder (for ECG)<br/> <b>C</b> Incremental encoder (for ECG)         </div> <div> <b>I Relay cable</b> *4<br/> <b>N00</b> None<br/> <b>S01</b> Fixing cable 1 m<br/> <b>S03</b> Fixing cable 3 m<br/> <b>S05</b> Fixing cable 5 m<br/> <b>S10</b> Fixing cable 10 m<br/> <b>R01</b> Movable cable 1 m<br/> <b>R03</b> Movable cable 3 m<br/> <b>R05</b> Movable cable 5 m<br/> <b>R10</b> Movable cable 10 m         </div> </div> |          |          |          |          |          |          |          |          |  |

\*1 Select the controller from page 93 or page 105.

Select encoder "A" when an ECR controller is selected and "B" or "C" when an ECG controller is selected.

\*2 If "D" is selected for the motor mounting direction, select a stroke length from "0250 (250 mm)" to "0400 (400 mm)".

\*3 Select "Yes" for vertical use.

\*4 Refer to page 103 for ECR and page 116 for ECG relay cable dimensions.

Product subject to the EAR (EAR99)

## Specifications

### [EBR-04M (applicable controller ECR)]

|                                  |                                           |                                       |
|----------------------------------|-------------------------------------------|---------------------------------------|
| Motor                            | <input type="checkbox"/> 35 stepper motor |                                       |
| Encoder type                     | Battery-less absolute encoder             |                                       |
| Drive method                     | Ball screw ø10                            |                                       |
| Stroke length mm                 | 50 to 400                                 |                                       |
| Screw lead mm                    | 6                                         | 12                                    |
| Max. load capacity kg            | Horizontal 33.3 (33.3)                    | 18.3 (18.3)                           |
| *1 *2                            | Vertical 9.1 (9.1)                        | 5 (4.5)                               |
| Operation speed range *3 4 mm/s  | 7 to 350 (200)                            | 15 to 600 (400)                       |
| Maximum pressing force N         | 131                                       | 69                                    |
| Press operation speed range mm/s | 5 to 20                                   | 5 to 30                               |
| Repeatability mm                 | ±0.01                                     |                                       |
| Lost motion mm                   | 0.1 or less                               |                                       |
| Motor power supply voltage       | 24 VDC ±10% or 48 VDC ±10%                |                                       |
| Brake                            | Model, power supply voltage               | Non-excitation operation, 24 VDC ±10% |
|                                  | Power consumption W                       | 7                                     |
|                                  | Holding force N                           | 126 63                                |

\*1 The values in ( ) are at 24 VDC.

\*2 Load capacity varies according to acceleration/deceleration and speed. Refer to page 88 for details.

\*3 The maximum speed values in ( ) are at 24 VDC.

\*4 The maximum speed may decrease depending on the conditions.

### [EBR-04G (applicable controller ECG)]

|                                  |                                                      |                                       |
|----------------------------------|------------------------------------------------------|---------------------------------------|
| Motor                            | <input type="checkbox"/> 35 stepper motor            |                                       |
| Encoder type                     | Battery-less absolute encoder<br>Incremental encoder |                                       |
| Drive method                     | Ball screw ø10                                       |                                       |
| Stroke length mm                 | 50 to 400                                            |                                       |
| Screw lead mm                    | 6                                                    | 12                                    |
| Max. load capacity kg            | Horizontal 40.0                                      | 12.5                                  |
| *1                               | Vertical 8.3                                         | 2.9                                   |
| Operation speed range *2 mm/s    | 7 to 200                                             | 15 to 350                             |
| Maximum pressing force N         | 155                                                  | 77                                    |
| Press operation speed range mm/s | 5 to 20                                              | 5 to 20                               |
| Repeatability mm                 | ±0.01                                                |                                       |
| Lost motion mm                   | 0.1 or less                                          |                                       |
| Motor power supply voltage       | 24 VDC ±10%                                          |                                       |
| Brake                            | Model, power supply voltage                          | Non-excitation operation, 24 VDC ±10% |
|                                  | Power consumption W                                  | 6.1                                   |
|                                  | Holding force N                                      | 140 70                                |

\*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 90 for details.

\*2 The maximum speed may decrease depending on the conditions.

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| Common specifications                     | 10MΩ, 500 VDC                                                |
| Withstand voltage                         | 500 VAC for 1 minute                                         |
| Operating ambient temperature, humidity * | 0 to 40 °C (no freezing)<br>35 to 80% RH (no condensation)   |
| Storage ambient temperature, humidity     | -10 to 50 °C (no freezing)<br>35 to 80% RH (no condensation) |
| Atmosphere                                | No corrosive gas, explosive gas, or dust                     |
| Degree of protection                      | IP40                                                         |

\* The operating ambient temperature of EBR-\*\*G is 10°C to 40°C.

### Stroke and max. speed

[EBR-04M (applicable controller ECR)]

(mm/s)

| Screw lead | Power supply voltage | Stroke length |     |     |     |     |
|------------|----------------------|---------------|-----|-----|-----|-----|
|            |                      | 50 to 200     | 250 | 300 | 350 | 400 |
| 6          | 48 VDC               | 350           | 300 | 250 | 250 | 250 |
|            | 24 VDC               | 200           | 200 | 200 | 200 | 200 |
| 12         | 48 VDC               | 600           | 600 | 490 | 490 | 490 |
|            | 24 VDC               | 400           | 400 | 400 | 400 | 400 |

[EBR-04G (applicable controller ECG)]

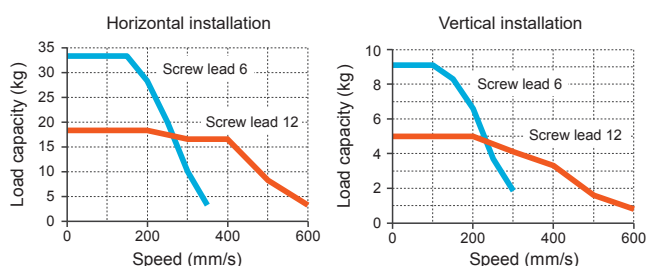
(mm/s)

| Screw lead | Power supply voltage | Stroke length |
|------------|----------------------|---------------|
|            |                      | 50 to 400     |
| 6          | 24 VDC               | 200           |
| 12         | 24 VDC               | 350           |

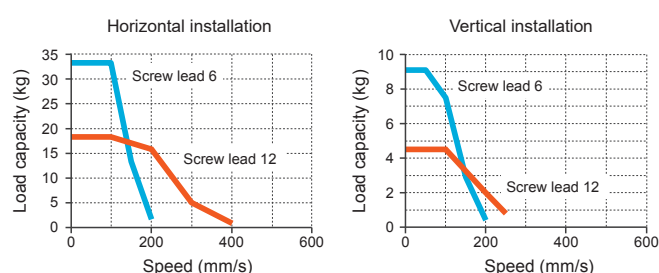
### Speed and load capacity

[EBR-04M (applicable controller ECR)]

· At 48 VDC

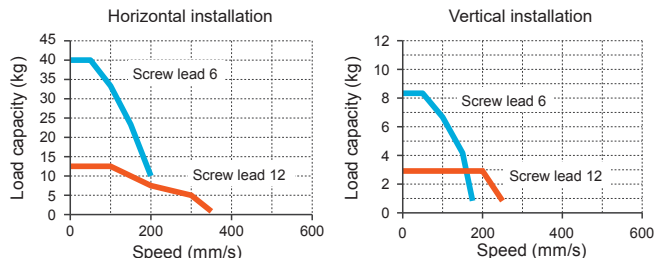


· At 24 VDC



[EBR-04G (applicable controller ECG)]

· At 24 VDC



\* Incorrectly applying a 48 VDC power supply could result in damage.

\* At acceleration of 0.3 G.

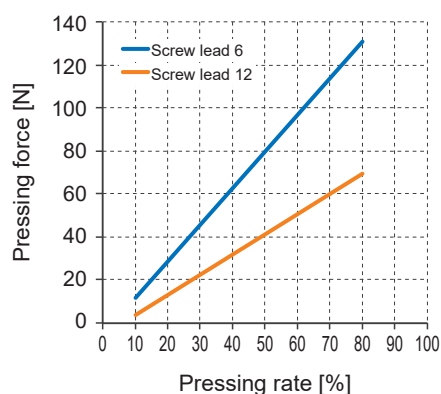
\* Confirm each of the pages listed below for details.

ECR: Page 88

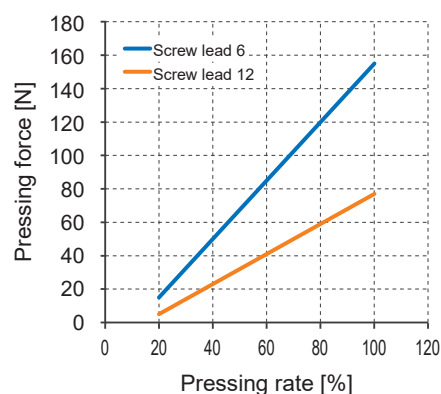
ECG: Page 90

### Pressing force

[EBR-04M (applicable controller ECR)]



[EBR-04G (applicable controller ECG)]



\* The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

EBS  
(With motor)

EBR  
(With motor)

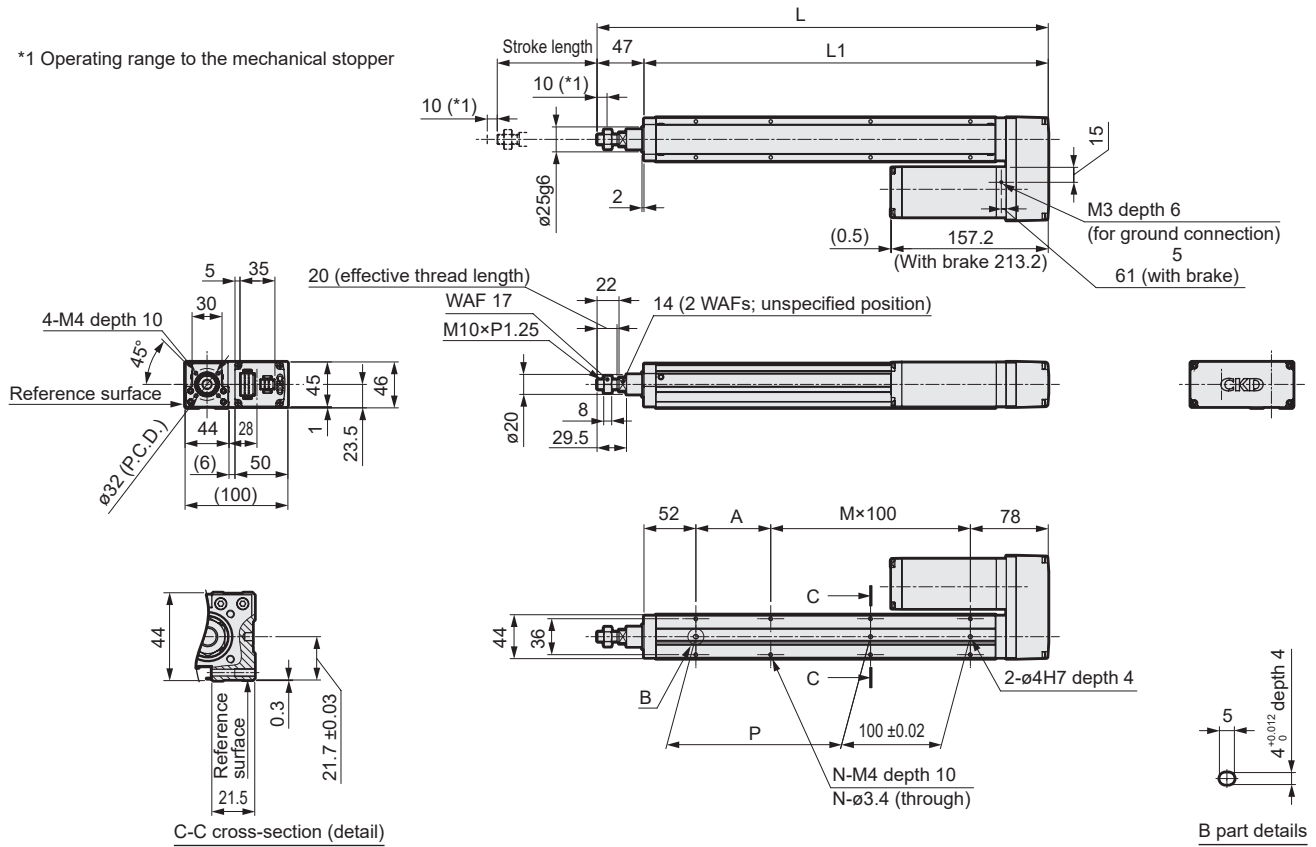
ECR  
(Controller)

ECG-A  
(Controller)

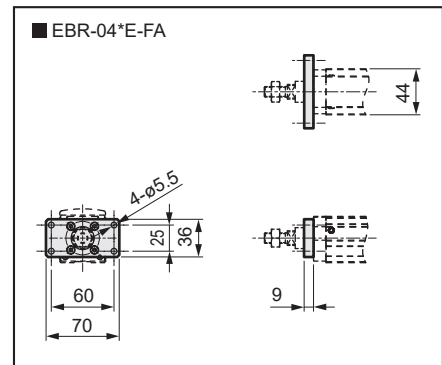
Safety  
precautions

### EBR-04\*R

\*1 Operating range to the mechanical stopper

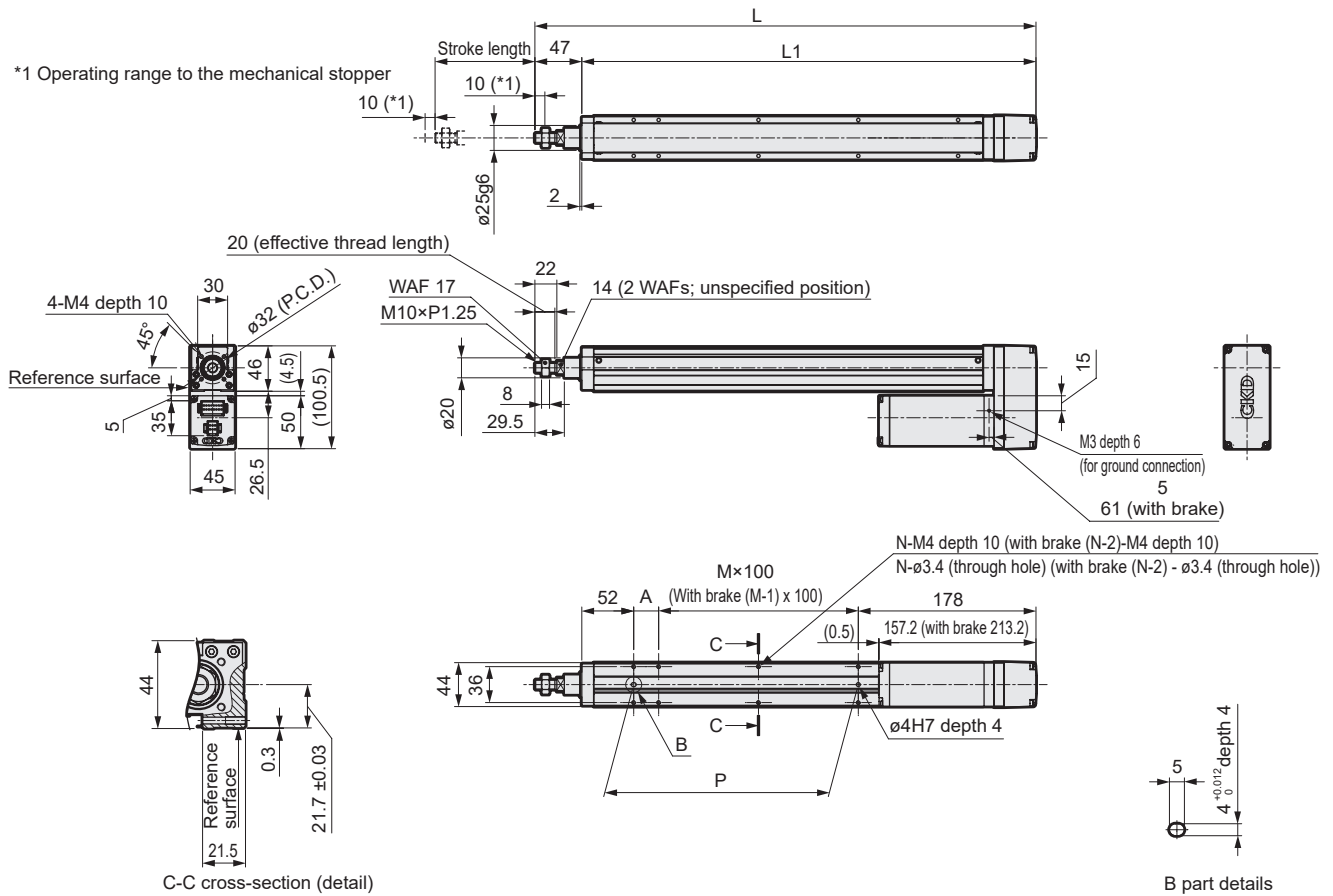


| Stroke code        | 0050          | 0100 | 0150 | 0200 | 0250 | 0300 | 0350 | 0400 |
|--------------------|---------------|------|------|------|------|------|------|------|
| Stroke length (mm) | 50            | 100  | 150  | 200  | 250  | 300  | 350  | 400  |
| L                  | 302           | 352  | 402  | 452  | 502  | 552  | 602  | 652  |
| L1                 | 255           | 305  | 355  | 405  | 455  | 505  | 555  | 605  |
| A                  | 25            | 75   | 25   | 75   | 25   | 75   | 25   | 75   |
| M                  | 1             | 1    | 2    | 2    | 3    | 3    | 4    | 4    |
| N                  | 6             | 6    | 8    | 8    | 10   | 10   | 12   | 12   |
| P                  | 25            | 75   | 125  | 175  | 225  | 275  | 325  | 375  |
| Weight (kg)        | Without brake | 1.6  | 1.8  | 1.9  | 2.1  | 2.3  | 2.5  | 2.8  |
|                    | With brake    | 2.1  | 2.3  | 2.4  | 2.6  | 2.8  | 3.0  | 3.3  |



### Dimensions: Motor bottom mounting

#### ● EBR-04\*D



| Stroke code        |               | 0250 | 0300 | 0350 | 0400 |
|--------------------|---------------|------|------|------|------|
| Stroke length (mm) |               | 250  | 300  | 350  | 400  |
| L                  |               | 502  | 552  | 602  | 652  |
| L1                 |               | 455  | 505  | 555  | 605  |
| A                  |               | 25   | 75   | 25   | 75   |
| M                  |               | 2    | 2    | 3    | 3    |
| N                  |               | 8    | 8    | 10   | 10   |
| P                  |               | 225  | 275  | 325  | 375  |
| Weight<br>(kg)     | Without brake | 2.3  | 2.5  | 2.6  | 2.8  |
|                    | With brake    | 2.8  | 3.0  | 3.1  | 3.3  |

EBR  
(With motor)

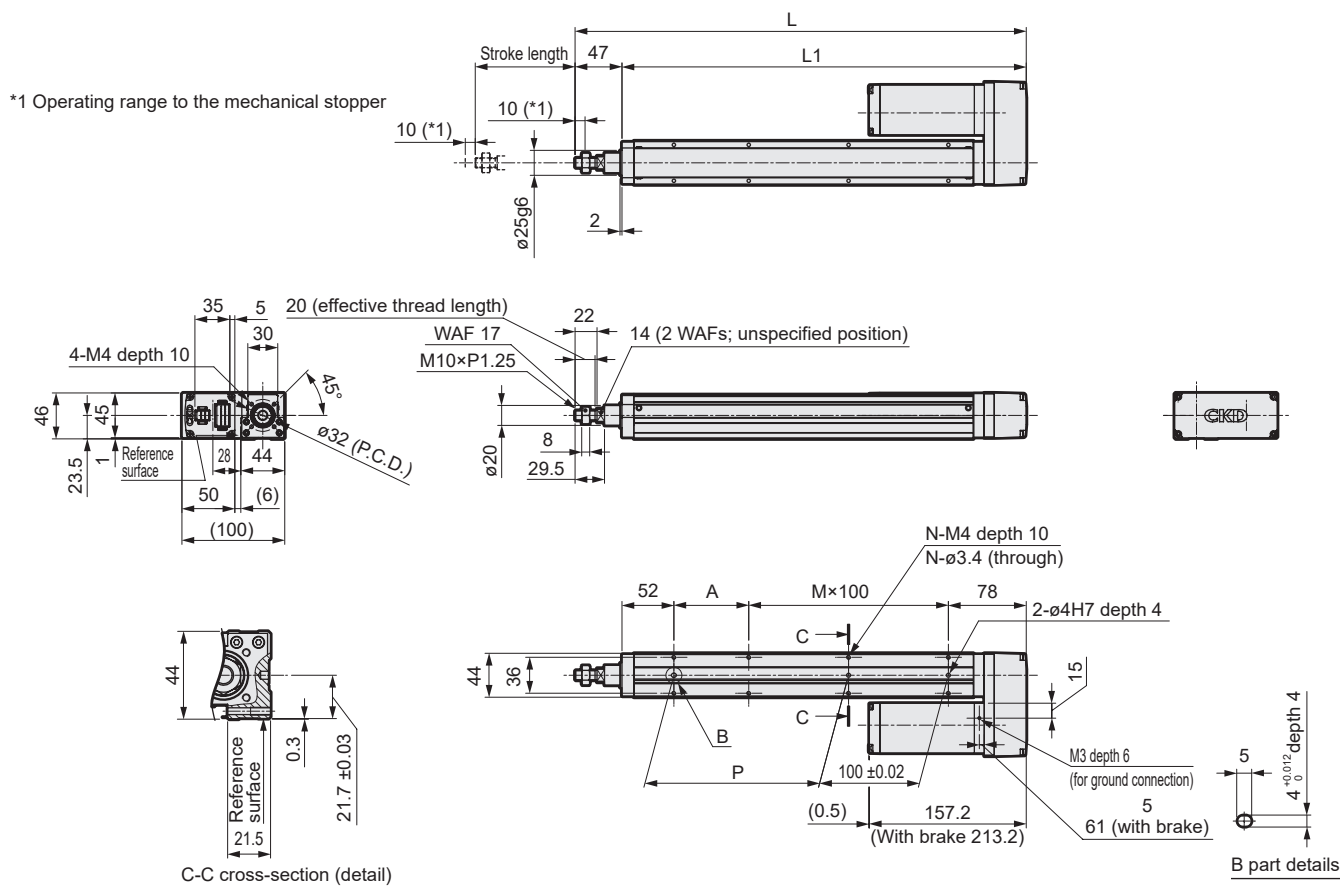
EBR  
(With motor)

ECR  
(Controller)

ECG-A  
(Controller)

Safety  
precautions

● EBR-04\*L



| Stroke code        |               | 0050 | 0100 | 0150 | 0200 | 0250 | 0300 | 0350 | 0400 |
|--------------------|---------------|------|------|------|------|------|------|------|------|
| Stroke length (mm) |               | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  |
| L                  |               | 302  | 352  | 402  | 452  | 502  | 552  | 602  | 652  |
| L1                 |               | 255  | 305  | 355  | 405  | 455  | 505  | 555  | 605  |
| A                  |               | 25   | 75   | 25   | 75   | 25   | 75   | 25   | 75   |
| M                  |               | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    |
| N                  |               | 6    | 6    | 8    | 8    | 10   | 10   | 12   | 12   |
| P                  |               | 25   | 75   | 125  | 175  | 225  | 275  | 325  | 375  |
| Weight<br>(kg)     | Without brake | 1.6  | 1.8  | 1.9  | 2.1  | 2.3  | 2.5  | 2.6  | 2.8  |
|                    | With brake    | 2.1  | 2.3  | 2.4  | 2.6  | 2.8  | 3.0  | 3.1  | 3.3  |

Notes

|                     |                     |                     |                       |                       |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|
| EBS<br>(With motor) | EBR<br>(With motor) | ECR<br>(Controller) | ECG-A<br>(Controller) | Safety<br>precautions |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|



Electric actuator Rod with built-in guide

# EBR-05\*E

Straight motor mounting

☐ 42 Stepper motor



## How to order

**EBR** - **05** **M** **E** - **00** - **05** **0300** **N** **A** **N - C** **S03**

|                            |
|----------------------------|
| <b>A</b> Body size         |
| <b>05</b> Body width 54 mm |

|                                   |
|-----------------------------------|
| <b>B</b> Applicable controller *1 |
| <b>M</b> ECR                      |
| <b>G</b> ECG                      |

|                                   |
|-----------------------------------|
| <b>C</b> Motor mounting direction |
| <b>E</b> Straight mounting        |

|                           |
|---------------------------|
| <b>D</b> Mounting         |
| <b>00</b> Basic           |
| <b>FA</b> Rod side flange |

|                     |
|---------------------|
| <b>E</b> Screw lead |
| <b>02</b> 2 mm      |
| <b>05</b> 5 mm      |
| <b>10</b> 10 mm     |
| <b>20</b> 20 mm     |

|                                                        |
|--------------------------------------------------------|
| <b>F</b> Stroke                                        |
| <b>0050 to 0400</b> 50 mm (In 50 mm increments) 400 mm |

|                                                  |
|--------------------------------------------------|
| <b>H</b> encoder *1                              |
| <b>A</b> Battery-less absolute encoder (for ECR) |
| <b>B</b> Battery-less absolute encoder (for ECG) |
| <b>C</b> Incremental encoder (for ECG)           |

|                   |
|-------------------|
| <b>G</b> Brake *2 |
| <b>N</b> None     |
| <b>B</b> Yes      |

|                               |
|-------------------------------|
| <b>I</b> Relay cable *3       |
| <b>N00</b> None               |
| <b>S01</b> Fixing cable 1 m   |
| <b>S03</b> Fixing cable 3 m   |
| <b>S05</b> Fixing cable 5 m   |
| <b>S10</b> Fixing cable 10 m  |
| <b>R01</b> Movable cable 1 m  |
| <b>R03</b> Movable cable 3 m  |
| <b>R05</b> Movable cable 5 m  |
| <b>R10</b> Movable cable 10 m |

\*1 Select the controller from page 93 or page 105.

Select encoder "A" when an ECR controller is selected and "B" or "C" when an ECG controller is selected.

\*2 Select "Yes" for vertical use.

\*3 Refer to page 103 for ECR and page 116 for ECG relay cable dimensions.

Product subject to the EAR (EAR99)

## Specifications

### [EBR-05M (applicable controller ECR)]

|                                  |                                           |                                       |           |           |
|----------------------------------|-------------------------------------------|---------------------------------------|-----------|-----------|
| Motor                            | <input type="checkbox"/> 42 Stepper motor |                                       |           |           |
| Encoder type                     | Battery-less absolute encoder             |                                       |           |           |
| Drive method                     | Ball screw ø12                            |                                       |           |           |
| Stroke length mm                 | 50 to 400                                 |                                       |           |           |
| Screw lead mm                    | 2                                         | 5                                     | 10        | 20        |
| Max. load capacity kg            | Horizontal 80 (80)                        | 60 (60)                               | 50 (50)   | 20 (20)   |
| *1 *2                            | Vertical 24 (24)                          | 16.6 (15)                             | 10 (6.6)  | 4.1 (4.1) |
| Operation speed range            | 2 to 130                                  | 6 to 330                              | 12 to 600 | 25 to 800 |
| *3 *4                            | mm/s (80)                                 | (275)                                 | (500)     | (700)     |
| Maximum pressing force N         | 397                                       | 193                                   | 94        | 33        |
| Press operation speed range mm/s | 5 to 20                                   | 5 to 20                               | 5 to 30   | 5 to 30   |
| Repeatability mm                 | ±0.01                                     |                                       |           |           |
| Lost motion mm                   | 0.1 or less                               |                                       |           |           |
| Motor power supply voltage       | 24 VDC ±10% or 48 VDC ±10%                |                                       |           |           |
| Brake                            | Model, power supply voltage               | Non-excitation operation, 24 VDC ±10% |           |           |
|                                  | Power consumption W                       | 7                                     |           |           |
|                                  | Holding force N                           | 471                                   | 188       | 94 47     |

\*1 The values in ( ) are at 24 VDC.

\*2 Load capacity varies according to acceleration/deceleration and speed. Refer to page 88 for details.

\*3 The maximum speed values in ( ) are at 24 VDC.

\*4 The maximum speed may decrease depending on the conditions.

### [EBR-05G (applicable controller ECG)]

|                                  |                                                      |                                       |           |           |
|----------------------------------|------------------------------------------------------|---------------------------------------|-----------|-----------|
| Motor                            | <input type="checkbox"/> 42 Stepper motor            |                                       |           |           |
| Encoder type                     | Battery-less absolute encoder<br>Incremental encoder |                                       |           |           |
| Drive method                     | Ball screw ø12                                       |                                       |           |           |
| Stroke length mm                 | 50 to 400                                            |                                       |           |           |
| Screw lead mm                    | 2                                                    | 5                                     | 10        | 20        |
| Max. load capacity kg            | Horizontal 80.0                                      | 60.0                                  | 41.7      | 11.7      |
| *1                               | Vertical 23.3                                        | 14.0                                  | 7.0       | 2.9       |
| Operation speed range            | 2 to 90                                              | 6 to 300                              | 12 to 500 | 25 to 700 |
| *2                               | mm/s                                                 |                                       |           |           |
| Maximum pressing force N         | 550                                                  | 220                                   | 110       | 55        |
| Press operation speed range mm/s | 5 to 20                                              | 5 to 20                               | 5 to 20   | 5 to 20   |
| Repeatability mm                 | ±0.01                                                |                                       |           |           |
| Lost motion mm                   | 0.1 or less                                          |                                       |           |           |
| Motor power supply voltage       | 24 VDC ±10%                                          |                                       |           |           |
| Brake                            | Model, power supply voltage                          | Non-excitation operation, 24 VDC ±10% |           |           |
|                                  | Power consumption W                                  | 6.1                                   |           |           |
|                                  | Holding force N                                      | 420                                   | 168       | 84 42     |

\*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 90 for details.

\*2 The maximum speed may decrease depending on the conditions.

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| Insulation resistance                     | 10MΩ, 500 VDC                                                |
| Withstand voltage                         | 500 VAC for 1 minute                                         |
| Operating ambient temperature, humidity * | 0 to 40 °C (no freezing)<br>35 to 80% RH (no condensation)   |
| Storage ambient temperature, humidity     | -10 to 50 °C (no freezing)<br>35 to 80% RH (no condensation) |
| Atmosphere                                | No corrosive gas, explosive gas, or dust                     |
| Degree of protection                      | IP40                                                         |

\*The operating ambient temperature of EBR-\*\*G is 10°C to 40°C.

### Stroke and max. speed

[EBR-05M (applicable controller ECR)]

(mm/s)

| Thread lead | Power supply voltage | Stroke length |     |     |     |
|-------------|----------------------|---------------|-----|-----|-----|
|             |                      | 50 to 250     | 300 | 350 | 400 |
| 2           | 48 VDC               | 130           | 85  | 85  | 85  |
|             | 24 VDC               | 80            | 80  | 80  | 80  |
| 5           | 48 VDC               | 330           | 210 | 210 | 210 |
|             | 24 VDC               | 275           | 210 | 210 | 210 |
| 10          | 48 VDC               | 600           | 420 | 420 | 420 |
|             | 24 VDC               | 500           | 420 | 420 | 420 |
| 20          | 48 VDC               | 800           | 800 | 800 | 800 |
|             | 24 VDC               | 700           | 700 | 700 | 700 |

[EBR-05G (applicable controller ECG)]

(mm/s)

| Thread lead | Power supply voltage | Stroke length |     |     |     |
|-------------|----------------------|---------------|-----|-----|-----|
|             |                      | 50 to 250     | 300 | 350 | 400 |
| 2           | 24 VDC               | 90            | 85  | 85  | 85  |
| 5           | 24 VDC               | 300           | 210 | 210 | 210 |
| 10          | 24 VDC               | 500           | 420 | 420 | 420 |
| 20          | 24 VDC               | 700           | 700 | 700 | 700 |

EBS  
(With motor)

EBR  
(With motor)

ECR  
(Controller)

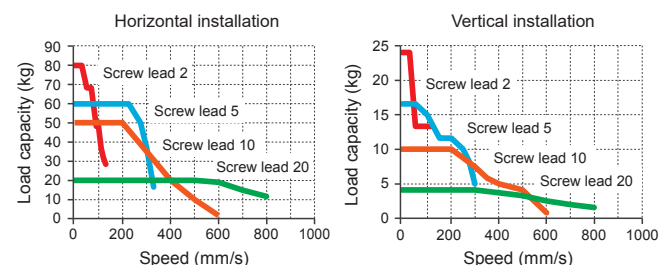
ECG-A  
(Controller)

Safety  
precautions

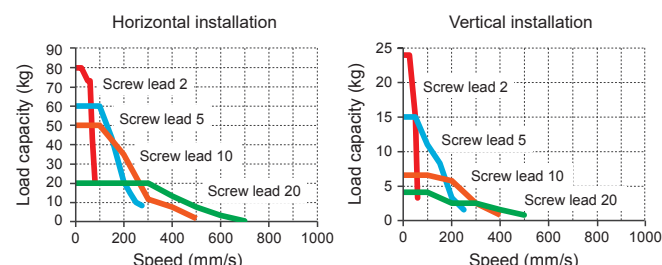
### Speed and load capacity

[EBR-05M (applicable controller ECR)]

· At 48 VDC

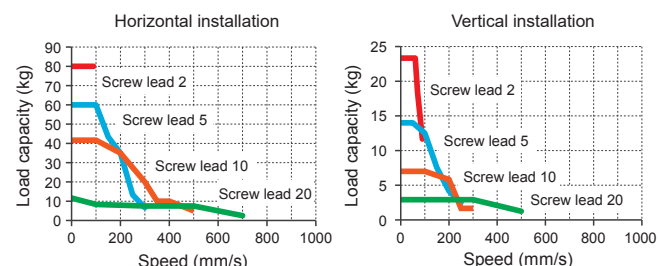


· At 24 VDC



[EBR-05G (applicable controller ECG)]

· At 24 VDC



\* At acceleration of 0.3 G.

\* Confirm each of the pages listed below for details.

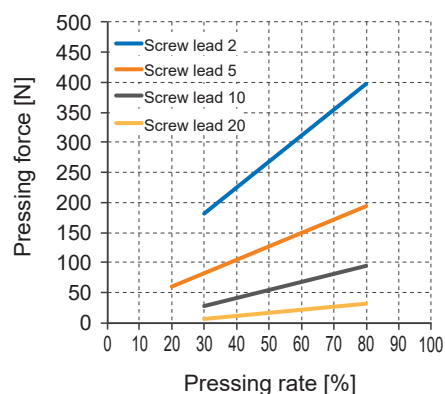
ECR: Page 88

ECG: Page 90

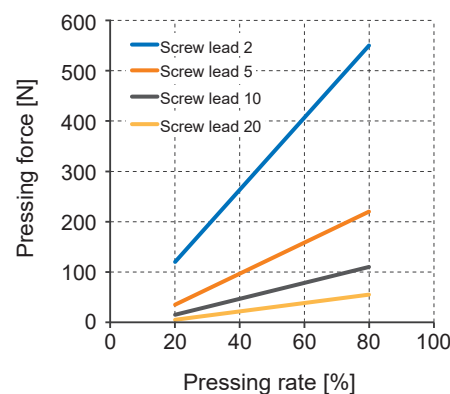
\* Incorrectly applying a 48 VDC power supply could result in damage.

### Pressing force

[EBR-05M (applicable controller ECR)]



[EBR-05G (applicable controller ECG)]



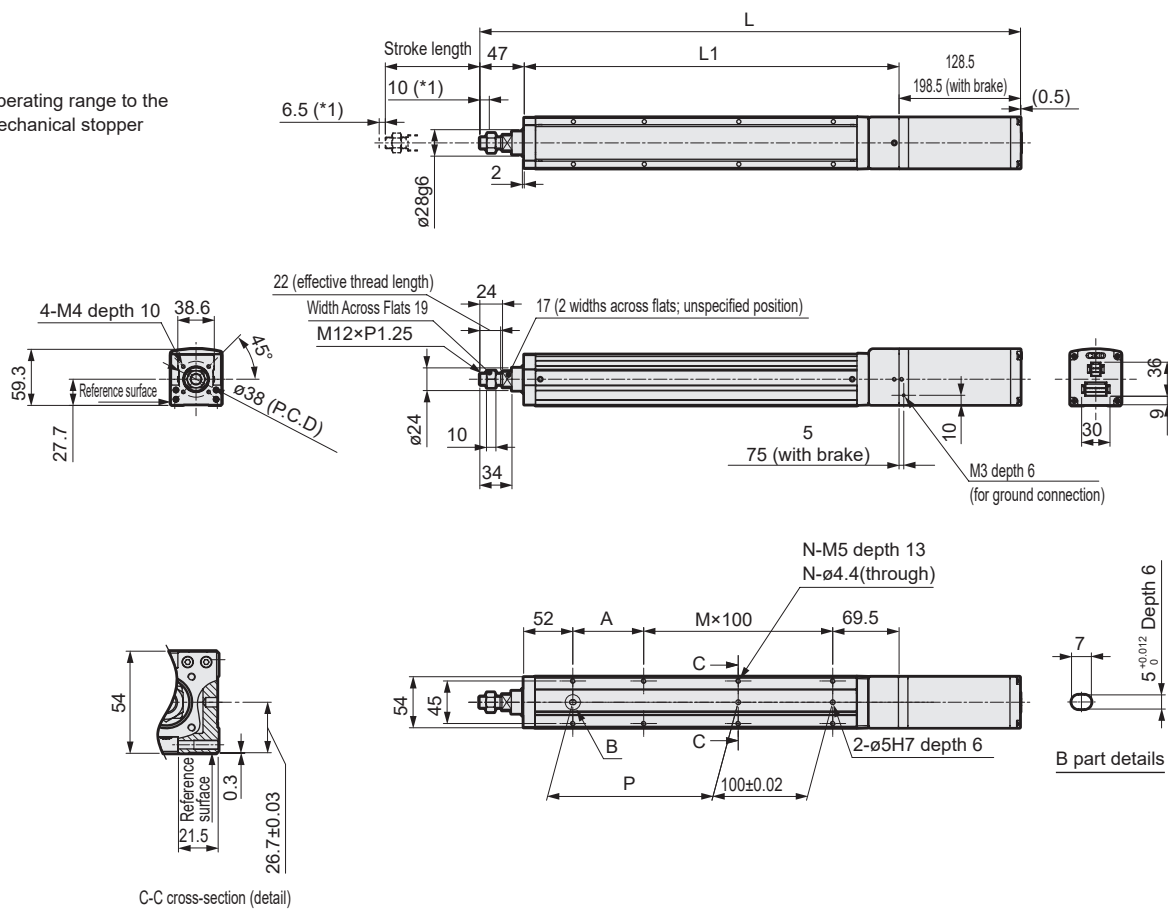
\* The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

# EBR-05\*E

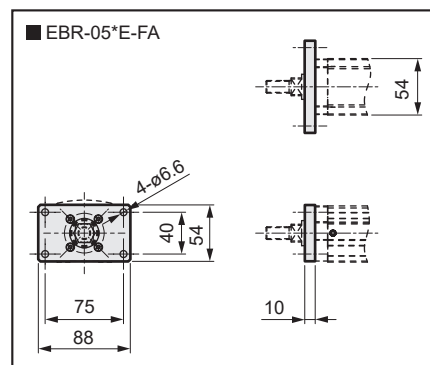
## Dimensions

### EBR-05\*E

\*1 Operating range to the mechanical stopper



| Stroke code        |               | 0050  | 0100  | 0150  | 0200  | 0250  | 0300  | 0350  | 0400  |
|--------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Stroke length (mm) |               | 50    | 100   | 150   | 200   | 250   | 300   | 350   | 400   |
| L                  | Without brake | 422   | 472   | 522   | 572   | 622   | 672   | 722   | 772   |
|                    | With brake    | 492   | 542   | 592   | 642   | 692   | 742   | 792   | 842   |
| L1                 |               | 246.5 | 296.5 | 346.5 | 396.5 | 446.5 | 496.5 | 546.5 | 596.5 |
| A                  |               | 25    | 75    | 25    | 75    | 25    | 75    | 25    | 75    |
| M                  |               | 1     | 1     | 2     | 2     | 3     | 3     | 4     | 4     |
| N                  |               | 6     | 6     | 8     | 8     | 10    | 10    | 12    | 12    |
| P                  |               | 25    | 75    | 125   | 175   | 225   | 275   | 325   | 375   |
| Weight (kg)        | Without brake | 2.5   | 2.7   | 2.9   | 3.1   | 3.3   | 3.5   | 3.7   | 3.8   |
|                    | With brake    | 3.3   | 3.5   | 3.7   | 3.9   | 4.1   | 4.3   | 4.5   | 4.6   |



Notes

|                     |                     |                     |                       |                       |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|
| EBS<br>(With motor) | EBR<br>(With motor) | ECR<br>(Controller) | ECG-A<br>(Controller) | Safety<br>precautions |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|



Electric actuator Rod with built-in guide

# EBR-05\*\*

Motor side mounting (left, right, bottom)

☐ 42 Stepper motor



## How to order

**EBR** - **05** **M** **R** - **00** - **05** **0300** **N** **A** **N** - **C** **S03**

|                            |
|----------------------------|
| <b>A</b> Body size         |
| <b>05</b> Body width 54 mm |

|                                   |
|-----------------------------------|
| <b>B</b> Applicable controller *1 |
| <b>M</b> ECR                      |
| <b>G</b> ECG                      |

|                                      |
|--------------------------------------|
| <b>C</b> Motor mounting direction *2 |
| <b>R</b> Right mounting              |
| <b>D</b> Bottom mounting             |
| <b>L</b> Left mounting               |

|                     |
|---------------------|
| <b>E</b> Screw lead |
| <b>02</b> 2 mm      |
| <b>05</b> 5 mm      |
| <b>10</b> 10 mm     |
| <b>20</b> 20 mm     |

|                                                        |
|--------------------------------------------------------|
| <b>F</b> Stroke *2                                     |
| <b>0050 to 0400</b> 50 mm (In 50 mm increments) 400 mm |

|                           |
|---------------------------|
| <b>D</b> Mounting         |
| <b>00</b> Basic           |
| <b>FA</b> Rod side flange |

|                                                  |
|--------------------------------------------------|
| <b>H</b> encoder *1                              |
| <b>A</b> Battery-less absolute encoder (for ECR) |
| <b>B</b> Battery-less absolute encoder (for ECG) |
| <b>C</b> Incremental encoder (for ECG)           |

|                   |
|-------------------|
| <b>G</b> Brake *3 |
| <b>N</b> None     |
| <b>B</b> Yes      |

|                               |
|-------------------------------|
| <b>I</b> Relay cable *4       |
| <b>N00</b> None               |
| <b>S01</b> Fixing cable 1 m   |
| <b>S03</b> Fixing cable 3 m   |
| <b>S05</b> Fixing cable 5 m   |
| <b>S10</b> Fixing cable 10 m  |
| <b>R01</b> Movable cable 1 m  |
| <b>R03</b> Movable cable 3 m  |
| <b>R05</b> Movable cable 5 m  |
| <b>R10</b> Movable cable 10 m |

\*1 Select the controller from page 93 or page 105.

Select encoder "A" when an ECR controller is selected and "B" or "C" when an ECG controller is selected.

\*2 If "D" is selected for the motor mounting direction, select a stroke length from "0250 (250 mm)" to "0400 (400 mm)".

\*3 Select "Yes" for vertical use.

\*4 Refer to page 103 for ECR and page 116 for ECG relay cable dimensions.

Product subject to the EAR (EAR99)

## Specifications

### [EBR-05M (applicable controller ECR)]

|                                  |                                           |                                       |             |             |
|----------------------------------|-------------------------------------------|---------------------------------------|-------------|-------------|
| Motor                            | <input type="checkbox"/> 42 Stepper motor |                                       |             |             |
| Encoder type                     | Battery-less absolute encoder             |                                       |             |             |
| Drive method                     | Ball screw ø12                            |                                       |             |             |
| Stroke length mm                 | 50 to 400                                 |                                       |             |             |
| Screw lead mm                    | 2                                         | 5                                     | 10          | 20          |
| Max. load capacity kg            | Horizontal 80 (80)                        | 60 (60)                               | 36.6 (36.6) | 18.3 (18.3) |
| *1 *2                            | Vertical 24 (24)                          | 16.6 (15)                             | 8.3 (6.6)   | 4.1 (4.1)   |
| Operation speed range            | 2 to 120                                  | 6 to 330                              | 12 to 500   | 25 to 800   |
| *3 *4 mm/s                       | (80)                                      | (250)                                 | (400)       | (700)       |
| Maximum pressing force N         | 397                                       | 193                                   | 94          | 33          |
| Press operation speed range mm/s | 5 to 20                                   | 5 to 20                               | 5 to 30     | 5 to 30     |
| Repeatability mm                 | ±0.01                                     |                                       |             |             |
| Lost motion mm                   | 0.1 or less                               |                                       |             |             |
| Motor power supply voltage       | 24 VDC ±10% or 48 VDC ±10%                |                                       |             |             |
| Brake                            | Model, power supply voltage               | Non-excitation operation, 24 VDC ±10% |             |             |
|                                  | Power consumption W                       | 7                                     |             |             |
|                                  | Holding force N                           | 471                                   | 188         | 94 47       |

\*1 The values in ( ) are at 24 VDC.

\*2 Load capacity varies according to acceleration/deceleration and speed. Refer to page 88 for details.

\*3 The maximum speed values in ( ) are at 24 VDC.

\*4 The maximum speed may decrease depending on the conditions.

### [Common specifications]

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| Insulation resistance                     | 10MΩ, 500 VDC                                                |
| Withstand voltage                         | 500 VAC for 1 minute                                         |
| Operating ambient temperature, humidity * | 0 to 40 °C (no freezing)<br>35 to 80% RH (no condensation)   |
| Storage ambient temperature, humidity     | -10 to 50 °C (no freezing)<br>35 to 80% RH (no condensation) |
| Atmosphere                                | No corrosive gas, explosive gas, or dust                     |
| Degree of protection                      | IP40                                                         |

### [EBR-05G (applicable controller ECG)]

|                                  |                                                      |                                       |           |           |
|----------------------------------|------------------------------------------------------|---------------------------------------|-----------|-----------|
| Motor                            | <input type="checkbox"/> 42 Stepper motor            |                                       |           |           |
| Encoder type                     | Battery-less absolute encoder<br>Incremental encoder |                                       |           |           |
| Drive method                     | Ball screw ø12                                       |                                       |           |           |
| Stroke length mm                 | 50 to 400                                            |                                       |           |           |
| Screw lead mm                    | 2                                                    | 5                                     | 10        | 20        |
| Max. load capacity kg            | Horizontal 80.0                                      | 60.0                                  | 38.3      | 11.7      |
| *1                               | Vertical 23.3                                        | 14.0                                  | 6.7       | 1.7       |
| Operation speed range            | 2 to 90                                              | 6 to 250                              | 12 to 400 | 25 to 600 |
| *2 mm/s                          |                                                      |                                       |           |           |
| Maximum pressing force N         | 550                                                  | 220                                   | 110       | 55        |
| Press operation speed range mm/s | 5 to 20                                              | 5 to 20                               | 5 to 20   | 5 to 20   |
| Repeatability mm                 | ±0.01                                                |                                       |           |           |
| Lost motion mm                   | 0.1 or less                                          |                                       |           |           |
| Motor power supply voltage       | 24 VDC ±10%                                          |                                       |           |           |
| Brake                            | Model, power supply voltage                          | Non-excitation operation, 24 VDC ±10% |           |           |
|                                  | Power consumption W                                  | 6.1                                   |           |           |
|                                  | Holding force N                                      | 420                                   | 168       | 84 42     |

\*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 90 for details.

\*2 The maximum speed may decrease depending on the conditions.

\*The operating ambient temperature of EBR-\*\*G is 10°C to 40°C.

### Stroke and max. speed

[EBR-05M (applicable controller ECR)]

(mm/s)

| Thread lead | Power supply voltage | Stroke length |     |     |     |
|-------------|----------------------|---------------|-----|-----|-----|
|             |                      | 50 to 250     | 300 | 350 | 400 |
| 2           | 48 VDC               | 120           | 85  | 85  | 85  |
|             | 24 VDC               | 80            | 80  | 80  | 80  |
| 5           | 48 VDC               | 330           | 210 | 210 | 210 |
|             | 24 VDC               | 250           | 210 | 210 | 210 |
| 10          | 48 VDC               | 500           | 420 | 420 | 420 |
|             | 24 VDC               | 400           | 400 | 400 | 400 |
| 20          | 48 VDC               | 800           | 800 | 800 | 800 |
|             | 24 VDC               | 700           | 700 | 700 | 700 |

[EBR-05G (applicable controller ECG)]

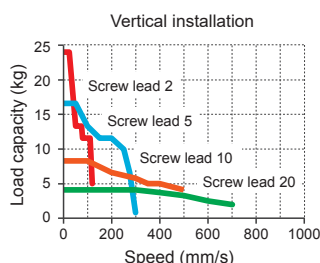
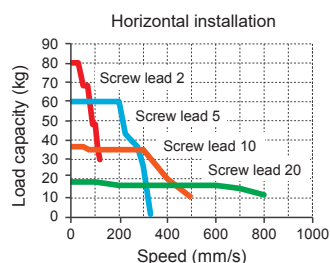
(mm/s)

| Thread lead | Power supply voltage | Stroke length |     |     |     |
|-------------|----------------------|---------------|-----|-----|-----|
|             |                      | 50 to 250     | 300 | 350 | 400 |
| 2           | 24 VDC               | 90            | 85  | 85  | 85  |
| 5           | 24 VDC               | 250           | 210 | 210 | 210 |
| 10          | 24 VDC               | 400           | 400 | 400 | 400 |
| 20          | 24 VDC               | 600           | 600 | 600 | 600 |

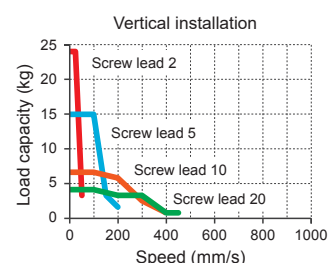
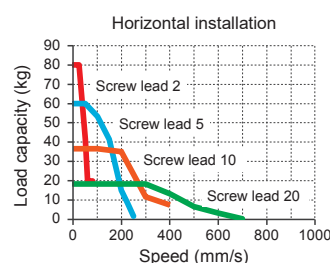
### Speed and load capacity

[EBR-05M (applicable controller ECR)]

· At 48 VDC

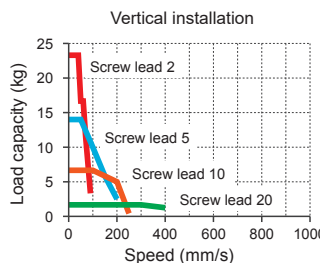
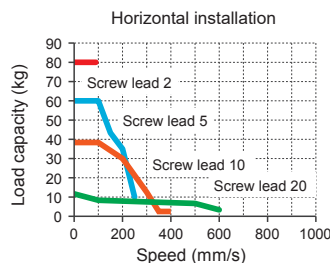


· At 24 VDC



[EBR-05G (applicable controller ECG)]

· At 24 VDC



\* At acceleration of 0.3 G.

\* Confirm each of the pages listed below for details.

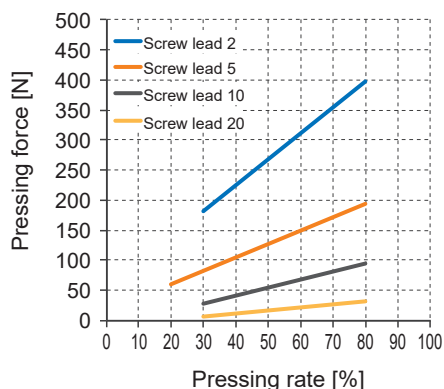
ECR: Page 88

ECG: Page 90

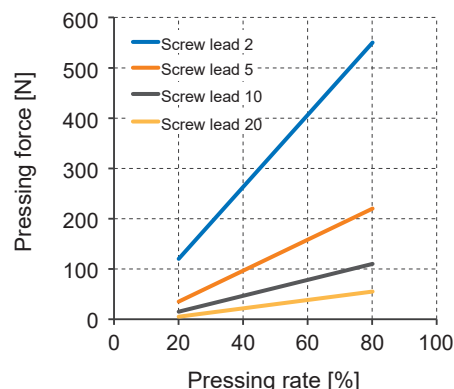
\* Incorrectly applying a 48 VDC power supply could result in damage.

### Pressing force

[EBR-05M (applicable controller ECR)]



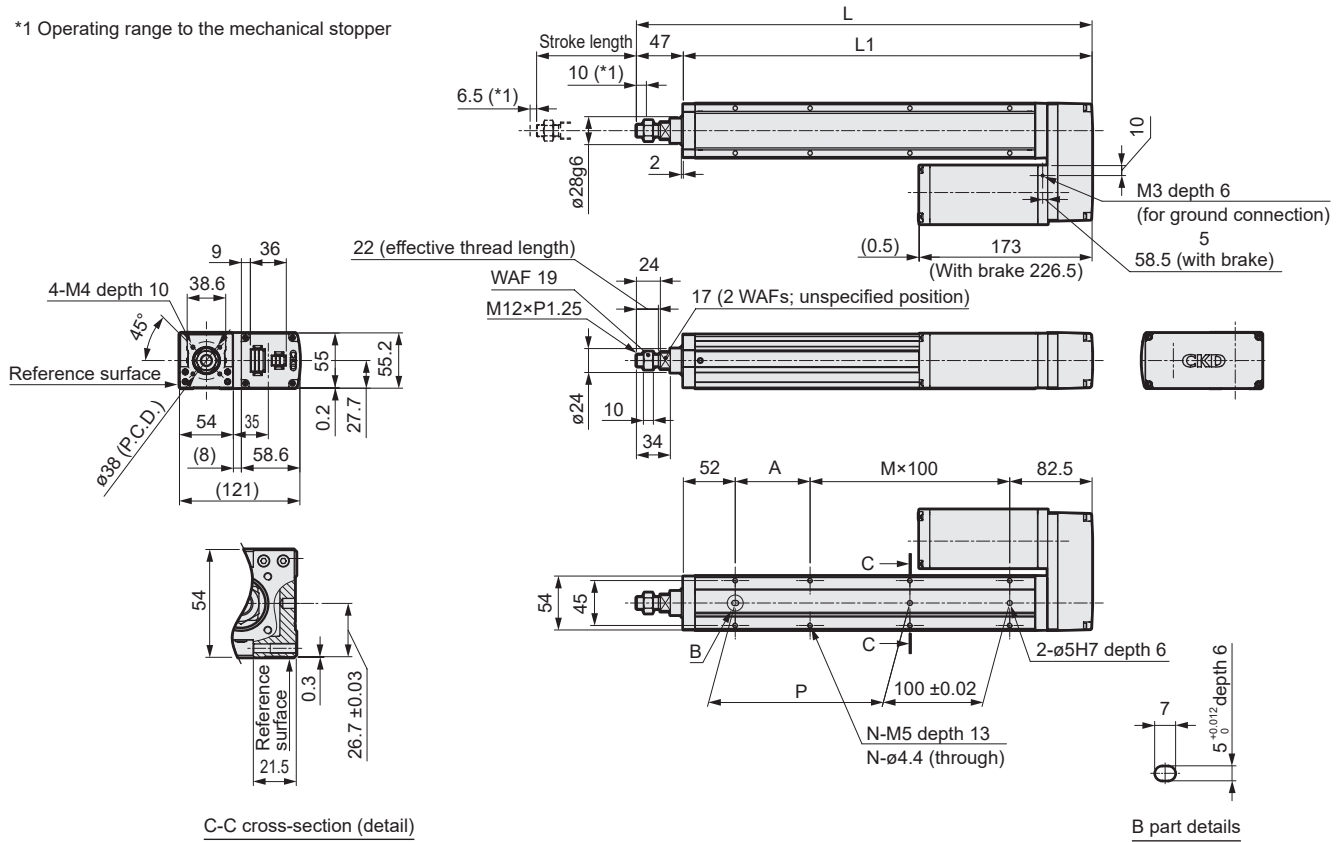
[EBR-05G (applicable controller ECG)]



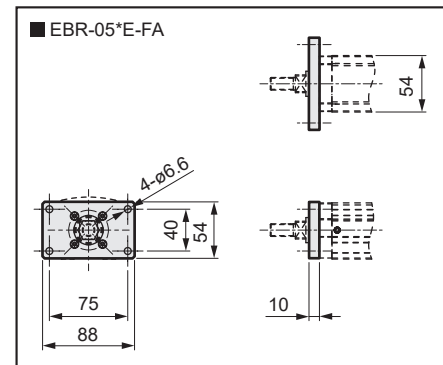
\* The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

### ● EBR-05\*R

\*1 Operating range to the mechanical stopper



| Stroke code        | 0050  | 0100  | 0150  | 0200  | 0250  | 0300  | 0350  | 0400  |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Stroke length (mm) | 50    | 100   | 150   | 200   | 250   | 300   | 350   | 400   |
| L                  | 306.5 | 356.5 | 406.5 | 456.5 | 506.5 | 556.5 | 606.5 | 656.5 |
| L1                 | 259.5 | 309.5 | 359.5 | 409.5 | 459.5 | 509.5 | 559.5 | 609.5 |
| A                  | 25    | 75    | 25    | 75    | 25    | 75    | 25    | 75    |
| M                  | 1     | 1     | 2     | 2     | 3     | 3     | 4     | 4     |
| N                  | 6     | 6     | 8     | 8     | 10    | 10    | 12    | 12    |
| P                  | 25    | 75    | 125   | 175   | 225   | 275   | 325   | 375   |
| Weight (kg)        |       |       |       |       |       |       |       |       |
| Without brake      | 2.4   | 2.5   | 2.6   | 2.8   | 3.1   | 3.2   | 3.2   | 3.5   |
| With brake         | 3.5   | 3.6   | 3.7   | 3.9   | 4.2   | 4.3   | 4.3   | 4.6   |



● EBR-05\*D

Operating range to the mechanical stopper

Stroke length 47

10 (\*1)

6.5 (\*1)

$\phi 28g6$

2

L1

4-M4 depth 10

38.6

$\phi 38$  (P.C.D.)

45°

Reference surface

9

36

54.7 (7.3)

58.6

55

34.3

121

22 (effective thread length)

WAF 19

M12×P1.25

24

17 (2 WAFs; unspecified position)

$\phi 24$

10

34

10

M3 depth 6 (for ground connection)

58.5 (with brake)

5

N-M5 depth 13 (with brake (N-2)-M5 depth 13)

N- $\phi 4.4$  (through) (with brake (N-2)- $\phi 4.4$  (through))

M×100

52

A (With brake (M-1) x 100)

182.5

173 (with brake 226.5)

(0.5)

54

45

C

B

C

P

$\phi 5H7$  depth 6

54

0.3

26.7 ±0.03

Reference surface

21.5

7

5<sup>+0.012</sup><sub>0</sub>

depth 6

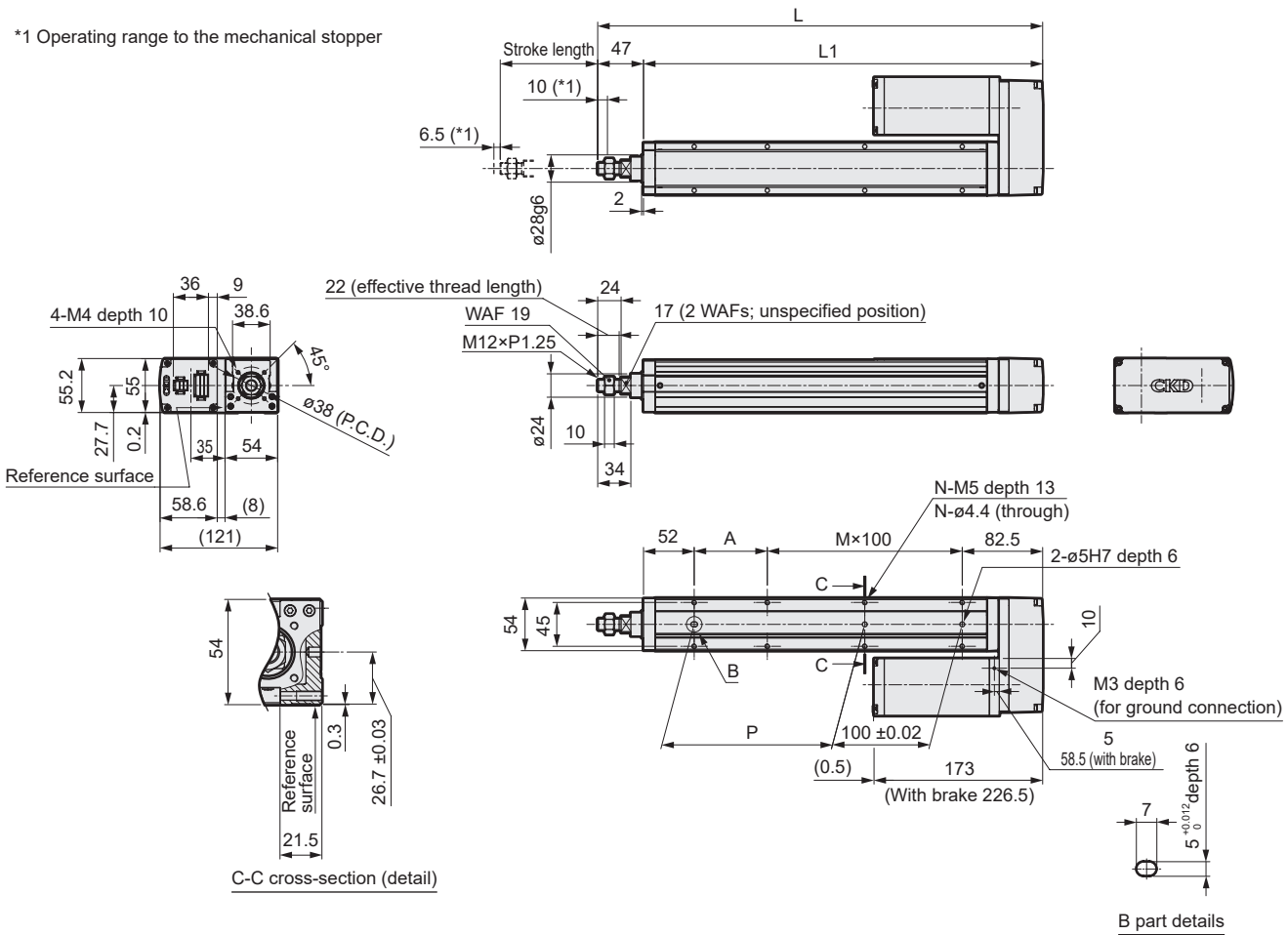
C-C cross-section (detail)

B part details

| Stroke code        |               | 0250  | 0300  | 0350  | 0400  |
|--------------------|---------------|-------|-------|-------|-------|
| Stroke length (mm) |               | 250   | 300   | 350   | 400   |
| L                  |               | 506.5 | 556.5 | 606.5 | 656.5 |
| L1                 |               | 459.5 | 509.5 | 559.5 | 609.5 |
| A                  |               | 25    | 75    | 25    | 75    |
| M                  |               | 2     | 2     | 3     | 3     |
| N                  |               | 8     | 8     | 10    | 10    |
| P                  |               | 225   | 275   | 325   | 375   |
| Weight<br>(kg)     | Without brake | 3.1   | 3.2   | 3.2   | 3.5   |
|                    | With brake    | 4.2   | 4.3   | 4.3   | 4.6   |

EBR-05\*L

\*1 Operating range to the mechanical stopper



| Stroke code        | 0050          | 0100  | 0150  | 0200  | 0250  | 0300  | 0350  | 0400  |
|--------------------|---------------|-------|-------|-------|-------|-------|-------|-------|
| Stroke length (mm) | 50            | 100   | 150   | 200   | 250   | 300   | 350   | 400   |
| L                  | 306.5         | 356.5 | 406.5 | 456.5 | 506.5 | 556.5 | 606.5 | 656.5 |
| L1                 | 259.5         | 309.5 | 359.5 | 409.5 | 459.5 | 509.5 | 559.5 | 609.5 |
| A                  | 25            | 75    | 25    | 75    | 25    | 75    | 25    | 75    |
| M                  | 1             | 1     | 2     | 2     | 3     | 3     | 4     | 4     |
| N                  | 6             | 6     | 8     | 8     | 10    | 10    | 12    | 12    |
| P                  | 25            | 75    | 125   | 175   | 225   | 275   | 325   | 375   |
| Weight (kg)        | Without brake | 2.4   | 2.5   | 2.6   | 2.8   | 3.1   | 3.2   | 3.5   |
|                    | With brake    | 3.5   | 3.6   | 3.7   | 3.9   | 4.2   | 4.3   | 4.6   |

Notes

|                     |                     |                     |                       |                       |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|
| EBS<br>(With motor) | EBR<br>(With motor) | ECR<br>(Controller) | ECG-A<br>(Controller) | Safety<br>precautions |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|



Electric actuator Rod with built-in guide

# EBR-08\*E

Straight motor mounting

□ 56 Stepper motor



## How to order

**EBR** - **08** **M** **E** - **00** - **05** **0300** **N** **A** **N** - **C** **S03**

|                            |
|----------------------------|
| <b>A</b> Body size         |
| <b>08</b> Body width 82 mm |

|                                   |
|-----------------------------------|
| <b>B</b> Applicable controller *1 |
| <b>M</b> ECR                      |
| <b>G</b> ECG                      |

|                                   |
|-----------------------------------|
| <b>C</b> Motor mounting direction |
| <b>E</b> Straight mounting        |

|                     |
|---------------------|
| <b>E</b> Screw lead |
| <b>05</b> 5 mm      |
| <b>10</b> 10 mm     |
| <b>20</b> 20 mm     |

|                                                        |
|--------------------------------------------------------|
| <b>F</b> Stroke                                        |
| <b>0050 to 0700</b> 50 mm (In 50 mm increments) 700 mm |

|                           |
|---------------------------|
| <b>D</b> Mounting         |
| <b>00</b> Basic           |
| <b>FA</b> Rod side flange |

|                                                  |
|--------------------------------------------------|
| <b>H</b> encoder *1                              |
| <b>A</b> Battery-less absolute encoder (for ECR) |
| <b>B</b> Battery-less absolute encoder (for ECG) |
| <b>C</b> Incremental encoder (for ECG)           |

|                   |
|-------------------|
| <b>G</b> Brake *2 |
| <b>N</b> None     |
| <b>B</b> Yes      |

|                               |
|-------------------------------|
| <b>I</b> Relay cable *3       |
| <b>N00</b> None               |
| <b>S01</b> Fixing cable 1 m   |
| <b>S03</b> Fixing cable 3 m   |
| <b>S05</b> Fixing cable 5 m   |
| <b>S10</b> Fixing cable 10 m  |
| <b>R01</b> Movable cable 1 m  |
| <b>R03</b> Movable cable 3 m  |
| <b>R05</b> Movable cable 5 m  |
| <b>R10</b> Movable cable 10 m |

\*1 Select the controller from page 93 or page 105.

Select encoder "A" when an ECR controller is selected and "B" or "C" when an ECG controller is selected.

\*2 Select "Yes" for vertical use.

\*3 Refer to page 103 for ECR and page 116 for ECG relay cable dimensions.

Product subject to the EAR (EAR99)

## Specifications

### [EBR-08M (applicable controller ECR)]

|                                  |                               |                                       |           |
|----------------------------------|-------------------------------|---------------------------------------|-----------|
| Motor                            | □ 56 Stepper motor            |                                       |           |
| Encoder type                     | Battery-less absolute encoder |                                       |           |
| Drive method                     | Ball screw ø16                |                                       |           |
| Stroke length mm                 | 50 to 700                     |                                       |           |
| Screw lead mm                    | 5                             | 10                                    | 20        |
| Max. load capacity kg            | Horizontal                    | 80 (80)                               | 70 (70)   |
| *1 *2                            | Vertical                      | 38.3 (35)                             | 18.3 (15) |
| Operation speed range            | 6 to 225                      | 12 to 450                             | 25 to 900 |
| *3 *4                            | mm/s                          | (150)                                 | (300)     |
| Maximum pressing force N         | 1050                          | 468                                   | 213       |
| Press operation speed range mm/s | 5 to 30                       | 5 to 30                               | 5 to 30   |
| Repeatability mm                 | ±0.01                         |                                       |           |
| Lost motion mm                   | 0.1 or less                   |                                       |           |
| Motor power supply voltage       | 24 VDC ±10% or 48 VDC ±10%    |                                       |           |
| Brake                            | Model, power supply voltage   | Non-excitation operation, 24 VDC ±10% |           |
|                                  | Power consumption W           | 8                                     |           |
|                                  | Holding force N               | 754                                   | 377       |

\*1 The values in ( ) are at 24 VDC.

\*2 Load capacity varies according to acceleration/deceleration and speed. Refer to page 88 for details.

\*3 The maximum speed values in ( ) are at 24 VDC.

\*4 The maximum speed may decrease depending on the conditions.

### [EBR-08G (applicable controller ECG)]

|                                  |                                                      |                                       |           |
|----------------------------------|------------------------------------------------------|---------------------------------------|-----------|
| Motor                            | □ 56 Stepper motor                                   |                                       |           |
| Encoder type                     | Battery-less absolute encoder<br>Incremental encoder |                                       |           |
| Drive method                     | Ball screw ø16                                       |                                       |           |
| Stroke length mm                 | 50 to 700                                            |                                       |           |
| Screw lead mm                    | 5                                                    | 10                                    | 20        |
| Max. load capacity kg            | Horizontal                                           | 80.0                                  | 70.0      |
| *1                               | Vertical                                             | 55.0                                  | 23.3      |
| Operation speed range            | 6 to 125                                             | 12 to 300                             | 25 to 500 |
| *2                               | mm/s                                                 |                                       |           |
| Maximum pressing force N         | 965                                                  | 482                                   | 241       |
| Press operation speed range mm/s | 5 to 20                                              | 5 to 20                               | 5 to 20   |
| Repeatability mm                 | ±0.01                                                |                                       |           |
| Lost motion mm                   | 0.1 or less                                          |                                       |           |
| Motor power supply voltage       | 24 VDC ±10%                                          |                                       |           |
| Brake                            | Model, power supply voltage                          | Non-excitation operation, 24 VDC ±10% |           |
|                                  | Power consumption W                                  | 7.2                                   |           |
|                                  | Holding force N                                      | 768                                   | 384       |

\*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 90 for details.

\*2 The maximum speed may decrease depending on the conditions.

### [Common specifications]

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| Insulation resistance                     | 10MΩ, 500 VDC                                                |
| Withstand voltage                         | 500 VAC for 1 minute                                         |
| Operating ambient temperature, humidity * | 0 to 40 °C (no freezing)<br>35 to 80% RH (no condensation)   |
| Storage ambient temperature, humidity     | -10 to 50 °C (no freezing)<br>35 to 80% RH (no condensation) |
| Atmosphere                                | No corrosive gas, explosive gas, or dust                     |
| Degree of protection                      | IP40                                                         |

\*The operating ambient temperature of EBR-\*\*G is 10°C to 40°C.

### Stroke and max. speed

[EBR-08M (applicable controller ECR)]

| Thread lead | Power supply voltage | Stroke length |     |     |     |     |     |     |     |     |     |     |
|-------------|----------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|             |                      | 50 to 200     | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 |
| 5           | 48 VDC               | 225           | 225 | 225 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
|             | 24 VDC               | 150           | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| 10          | 48 VDC               | 450           | 450 | 450 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
|             | 24 VDC               | 300           | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| 20          | 48 VDC               | 900           | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |
|             | 24 VDC               | 500           | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 |

[EBR-08G (applicable controller ECG)]

| Thread lead | Power supply voltage | Stroke length |
|-------------|----------------------|---------------|
|             |                      | 50 to 700     |
| 5           | 24 VDC               | 125           |
| 10          | 24 VDC               | 300           |
| 20          | 24 VDC               | 500           |

EBS  
(With motor)

EBR  
(With motor)

ECR  
(Controller)

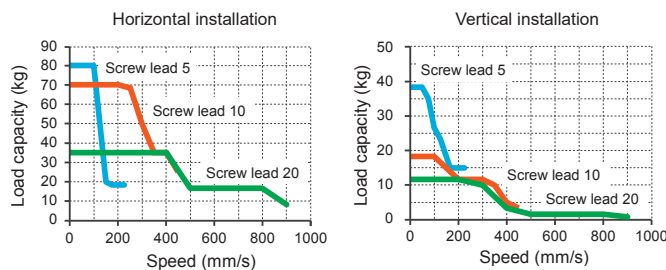
ECG-A  
(Controller)

Safety  
precautions

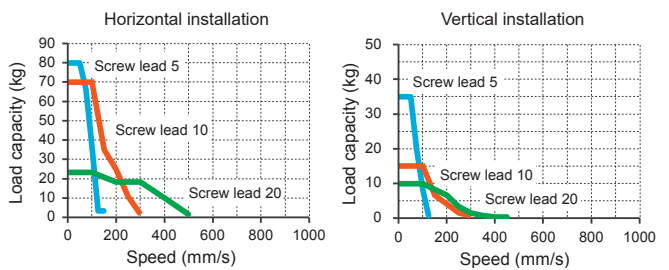
### Speed and load capacity

[EBR-08M (applicable controller ECR)]

· At 48 VDC

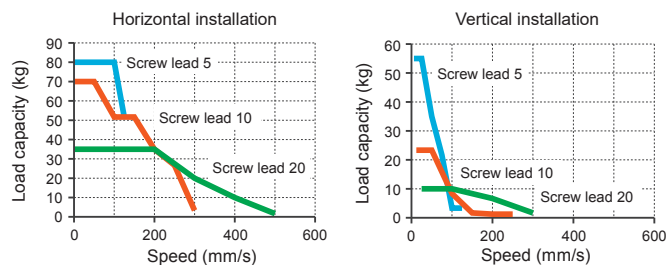


· At 24 VDC



[EBR-08G (applicable controller ECG)]

· At 24 VDC



\* At acceleration of 0.3 G.

\* Confirm each of the pages listed below for details.

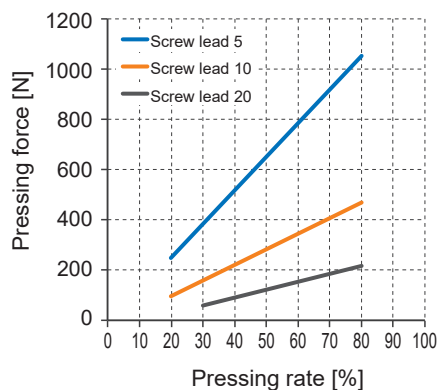
ECR: Page 88

ECG: Page 90

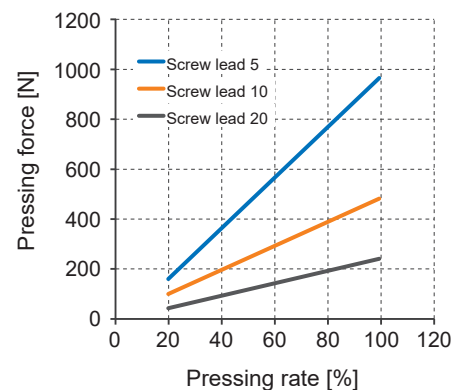
\* Incorrectly applying a 48 VDC power supply could result in damage.

### Pressing force

[EBR-08M (applicable controller ECR)]



[EBR-08G (applicable controller ECG)]



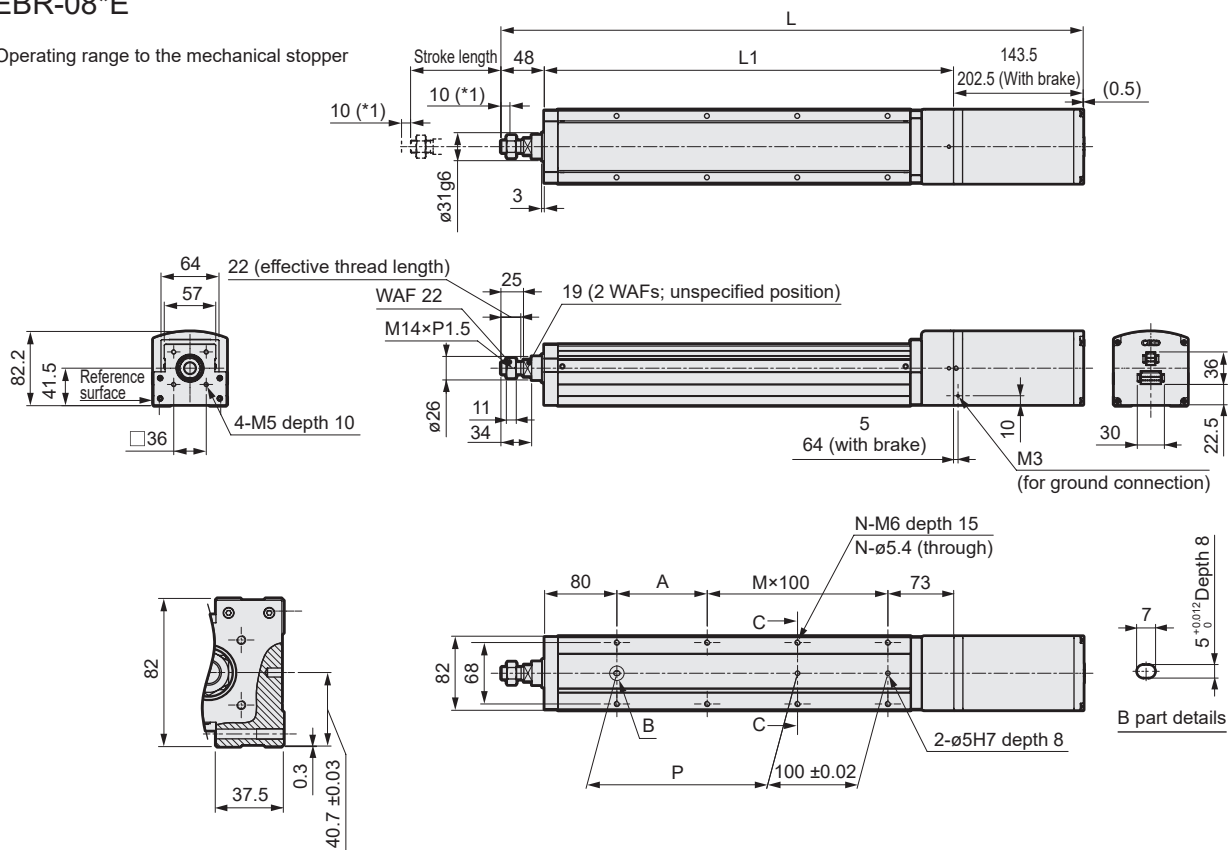
\* The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

**EBR-08\*E**

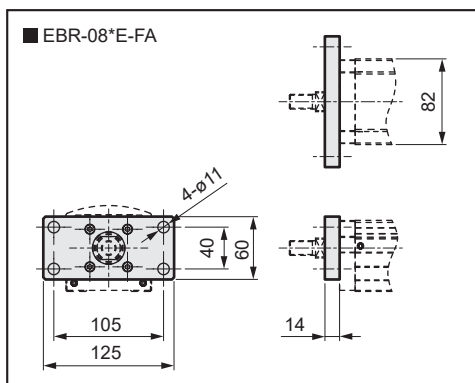
## Dimensions

## ● EBR-08\*E

\*1 Operating range to the mechanical stopper



C-C cross-section (detail)



| Stroke code        |               | 0050  | 0100  | 0150  | 0200  | 0250  | 0300  | 0350  | 0400  | 0450  | 0500   | 0550   | 0600   | 0650   | 0700   |
|--------------------|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| Stroke length (mm) |               | 50    | 100   | 150   | 200   | 250   | 300   | 350   | 400   | 450   | 500    | 550    | 600    | 650    | 700    |
| L                  | Without brake | 494.5 | 544.5 | 594.5 | 644.5 | 694.5 | 744.5 | 794.5 | 844.5 | 894.5 | 944.5  | 994.5  | 1044.5 | 1094.5 | 1144.5 |
|                    | With brake    | 553.5 | 603.5 | 653.5 | 703.5 | 753.5 | 803.5 | 853.5 | 903.5 | 953.5 | 1003.5 | 1053.5 | 1103.5 | 1153.5 | 1203.5 |
| L1                 |               | 303   | 353   | 403   | 453   | 503   | 553   | 603   | 653   | 703   | 753    | 803    | 853    | 903    | 953    |
| A                  |               | 50    | 100   | 50    | 100   | 50    | 100   | 50    | 100   | 50    | 100    | 50     | 100    | 50     | 100    |
| M                  |               | 1     | 1     | 2     | 2     | 3     | 3     | 4     | 4     | 5     | 5      | 6      | 6      | 7      | 7      |
| N                  |               | 6     | 6     | 8     | 8     | 10    | 10    | 12    | 12    | 14    | 14     | 16     | 16     | 18     | 18     |
| P                  |               | 50    | 100   | 150   | 200   | 250   | 300   | 350   | 400   | 450   | 500    | 550    | 600    | 650    | 700    |
| Weight<br>(kg)     | Without brake | 6.2   | 6.6   | 7.0   | 7.3   | 7.7   | 8.1   | 8.5   | 8.8   | 9.2   | 9.6    | 9.9    | 10.3   | 10.7   | 11.0   |
|                    | With brake    | 7.5   | 7.9   | 8.3   | 8.6   | 9.0   | 9.4   | 9.8   | 10.1  | 10.5  | 10.9   | 11.2   | 11.6   | 12.0   | 12.3   |

Notes

|                     |                     |                     |                       |                       |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|
| EBS<br>(With motor) | EBR<br>(With motor) | ECR<br>(Controller) | ECG-A<br>(Controller) | Safety<br>precautions |
|---------------------|---------------------|---------------------|-----------------------|-----------------------|



Electric actuator Rod with built-in guide

# EBR-08\*\*

Motor side mounting (left, right, bottom)

□ 56 Stepper motor



## How to order

**EBR** - **08** **M** **R** - **00** - **05** **0300** **N** **A** **N - C** **S03**

|                            |
|----------------------------|
| <b>A</b> Body size         |
| <b>08</b> Body width 82 mm |

|                                   |
|-----------------------------------|
| <b>B</b> Applicable controller *1 |
| <b>M</b> ECR                      |
| <b>G</b> ECG                      |

|                                      |
|--------------------------------------|
| <b>C</b> Motor mounting direction *2 |
| <b>R</b> Right mounting              |
| <b>D</b> Bottom mounting             |
| <b>L</b> Left mounting               |

|                     |
|---------------------|
| <b>E</b> Screw lead |
| <b>05</b> 5 mm      |
| <b>10</b> 10 mm     |
| <b>20</b> 20 mm     |

|                           |
|---------------------------|
| <b>D</b> Mounting         |
| <b>00</b> Basic           |
| <b>FA</b> Rod side flange |

|                                                        |
|--------------------------------------------------------|
| <b>F</b> Stroke *2                                     |
| <b>0050 to 0700</b> 50 mm (In 50 mm increments) 700 mm |

|                                                  |
|--------------------------------------------------|
| <b>H</b> encoder *1                              |
| <b>A</b> Battery-less absolute encoder (for ECR) |
| <b>B</b> Battery-less absolute encoder (for ECG) |
| <b>C</b> Incremental encoder (for ECG)           |

|                   |
|-------------------|
| <b>G</b> Brake *3 |
| <b>N</b> None     |
| <b>B</b> Yes      |

|                               |
|-------------------------------|
| <b>I</b> Relay cable *4       |
| <b>N00</b> None               |
| <b>S01</b> Fixing cable 1 m   |
| <b>S03</b> Fixing cable 3 m   |
| <b>S05</b> Fixing cable 5 m   |
| <b>S10</b> Fixing cable 10 m  |
| <b>R01</b> Movable cable 1 m  |
| <b>R03</b> Movable cable 3 m  |
| <b>R05</b> Movable cable 5 m  |
| <b>R10</b> Movable cable 10 m |

\*1 Select the controller from page 93 or page 105.

Select encoder "A" when an ECR controller is selected and "B" or "C" when an ECG controller is selected.

\*2 If "D" is selected for the motor mounting direction, select a stroke length from "0250 (250 mm)" to "0700 (700 mm)".

\*3 Select "Yes" for vertical use.

\*4 Refer to page 103 for ECR and page 116 for ECG relay cable dimensions.

Product subject to the EAR (EAR99)

## Specifications

### [EBR-08M (applicable controller ECR)]

|                                  |                               |                                       |                 |
|----------------------------------|-------------------------------|---------------------------------------|-----------------|
| Motor                            | □ 56 Stepper motor            |                                       |                 |
| Encoder type                     | Battery-less absolute encoder |                                       |                 |
| Drive method                     | Ball screw ø16                |                                       |                 |
| Stroke length mm                 | 50 to 700                     |                                       |                 |
| Screw lead mm                    | 5                             | 10                                    | 20              |
| Max. load capacity kg            | Horizontal                    | 80 (80)                               | 70 (70)         |
| *1 *2                            | Vertical                      | 38.3 (35)                             | 18.3 (15)       |
| Operation speed range            | mm/s                          | 6 to 225 (100)                        | 12 to 450 (300) |
| *3 *4                            |                               |                                       | 25 to 700 (500) |
| Maximum pressing force N         |                               | 1050                                  | 468             |
| Press operation speed range mm/s |                               | 5 to 30                               | 5 to 30         |
| Repeatability mm                 |                               | ±0.01                                 |                 |
| Lost motion mm                   |                               | 0.1 or less                           |                 |
| Motor power supply voltage       |                               | 24 VDC ±10% or 48 VDC ±10%            |                 |
| Brake                            | Model, power supply voltage   | Non-excitation operation, 24 VDC ±10% |                 |
|                                  | Power consumption W           | 8                                     |                 |
|                                  | Holding force N               | 754                                   | 377             |
|                                  |                               |                                       | 188             |

\*1 The values in ( ) are at 24 VDC.

\*2 Load capacity varies according to acceleration/deceleration and speed. Refer to page 88 for details.

\*3 The maximum speed values in ( ) are at 24 VDC.

\*4 The maximum speed may decrease depending on the conditions.

### [EBR-08G (applicable controller ECG)]

|                                  |                                                   |                                       |           |
|----------------------------------|---------------------------------------------------|---------------------------------------|-----------|
| Motor                            | □ 56 Stepper motor                                |                                       |           |
| Encoder type                     | Battery-less absolute encoder Incremental encoder |                                       |           |
| Drive method                     | Ball screw ø16                                    |                                       |           |
| Stroke length mm                 | 50 to 700                                         |                                       |           |
| Screw lead mm                    | 5                                                 | 10                                    | 20        |
| Max. load capacity kg            | Horizontal                                        | 80.0                                  | 70.0      |
| *1                               | Vertical                                          | 55.0                                  | 20.0      |
| Operation speed range            | mm/s                                              | 6 to 125                              | 12 to 250 |
| *2                               |                                                   |                                       | 25 to 400 |
| Maximum pressing force N         |                                                   | 965                                   | 482       |
| Press operation speed range mm/s |                                                   | 5 to 20                               | 5 to 20   |
| Repeatability mm                 |                                                   | ±0.01                                 |           |
| Lost motion mm                   |                                                   | 0.1 or less                           |           |
| Motor power supply voltage       |                                                   | 24 VDC ±10%                           |           |
| Brake                            | Model, power supply voltage                       | Non-excitation operation, 24 VDC ±10% |           |
|                                  | Power consumption W                               | 7.2                                   |           |
|                                  | Holding force N                                   | 768                                   | 384       |
|                                  |                                                   |                                       | 192       |

\*1 Load capacity varies according to acceleration/deceleration and speed. Refer to page 90 for details.

\*2 The maximum speed may decrease depending on the conditions.

### [Common specifications]

|                                           |                                                              |
|-------------------------------------------|--------------------------------------------------------------|
| Insulation resistance                     | 10MΩ, 500 VDC                                                |
| Withstand voltage                         | 500 VAC for 1 minute                                         |
| Operating ambient temperature, humidity * | 0 to 40 °C (no freezing)<br>35 to 80% RH (no condensation)   |
| Storage ambient temperature, humidity     | -10 to 50 °C (no freezing)<br>35 to 80% RH (no condensation) |
| Atmosphere                                | No corrosive gas, explosive gas, or dust                     |
| Degree of protection                      | IP40                                                         |

\*The operating ambient temperature for the EBR-\*\*G is 10°C to 40°C.

### Stroke and max. speed

[EBR-08M (applicable controller ECR)]

|             |                      |               |     |     |     |     |     |     |     |     |     | (mm/s) |
|-------------|----------------------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| Thread lead | Power supply voltage | Stroke length |     |     |     |     |     |     |     |     |     |        |
|             |                      | 50 to 200     | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700    |
| 5           | 48 VDC               | 225           | 225 | 225 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200    |
|             | 24 VDC               | 100           | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100    |
| 10          | 48 VDC               | 450           | 450 | 450 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400    |
|             | 24 VDC               | 300           | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300    |
| 20          | 48 VDC               | 700           | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600    |
|             | 24 VDC               | 500           | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500 | 500    |

[EBR-08G (applicable controller ECG)]

| Thread lead | Power supply voltage | Stroke length (mm/s) |
|-------------|----------------------|----------------------|
|             |                      | 50 to 700            |
| 5           | 24 VDC               | 125                  |
| 10          | 24 VDC               | 250                  |
| 20          | 24 VDC               | 400                  |

EBS  
(With motor)

EBR  
(With motor)

ECR  
(Controller)

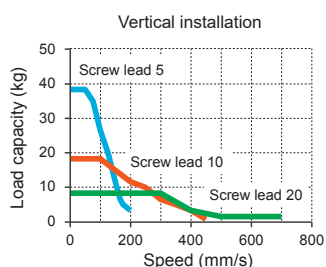
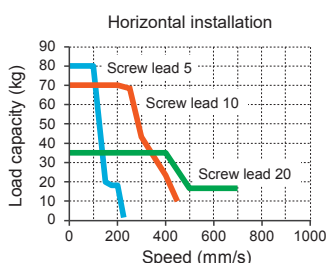
ECG-A  
(Controller)

Safety  
precautions

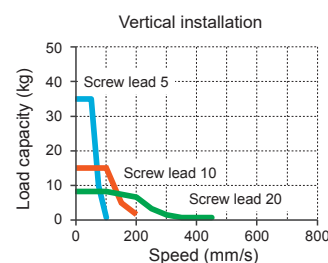
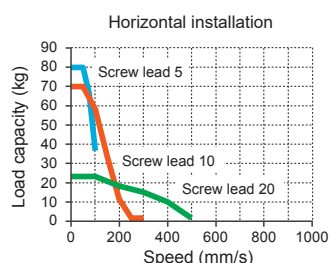
### Speed and load capacity

[EBR-08M (applicable controller ECR)]

· At 48 VDC

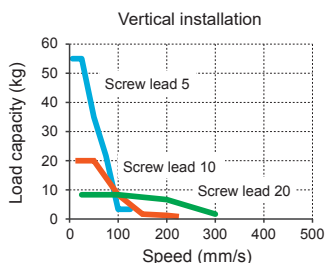
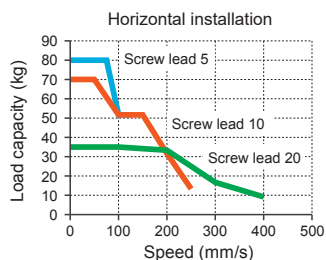


· At 24 VDC



[EBR-08G (applicable controller ECG)]

· At 24 VDC



\* At acceleration of 0.3 G.

\* Confirm each of the pages listed below for details.

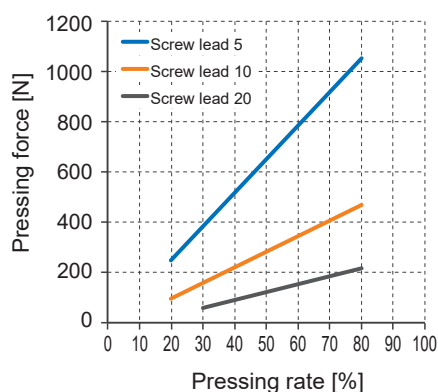
ECR: Page 88

ECG: Page 90

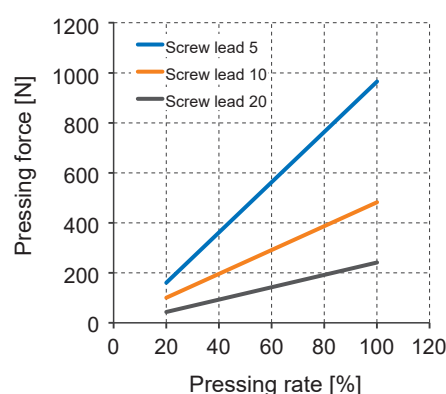
\* Incorrectly applying a 48 VDC power supply could result in damage.

### Pressing force

[EBR-08M (applicable controller ECR)]



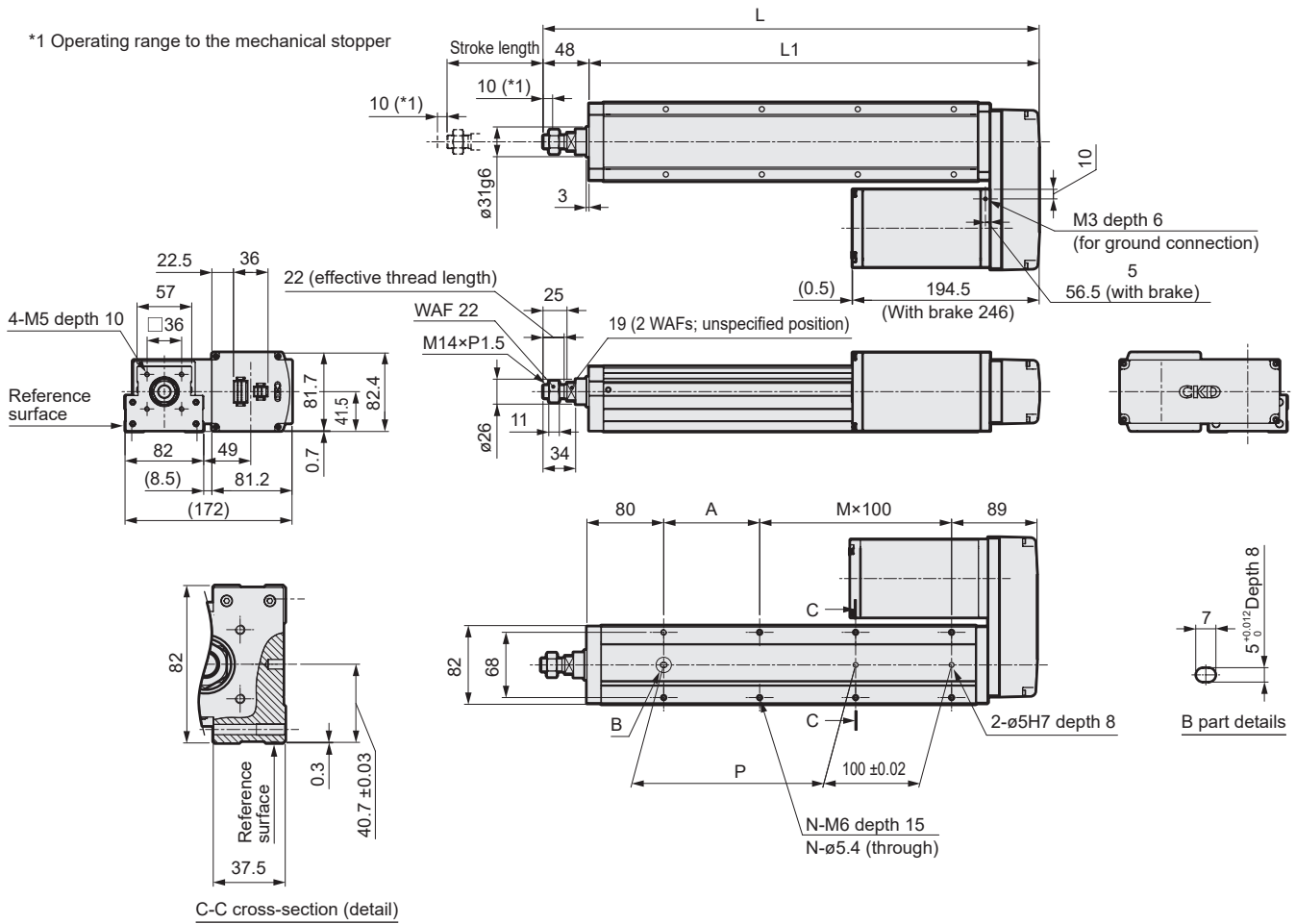
[EBR-08G (applicable controller ECG)]



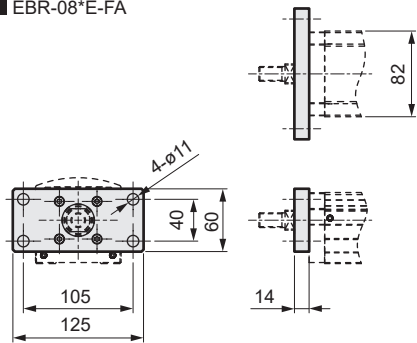
\* The above pressing force is a reference value. Variation may occur according to conditions such as pressing speed.

### EBR-08\*R

\*1 Operating range to the mechanical stopper



### EBR-08\*E-FA

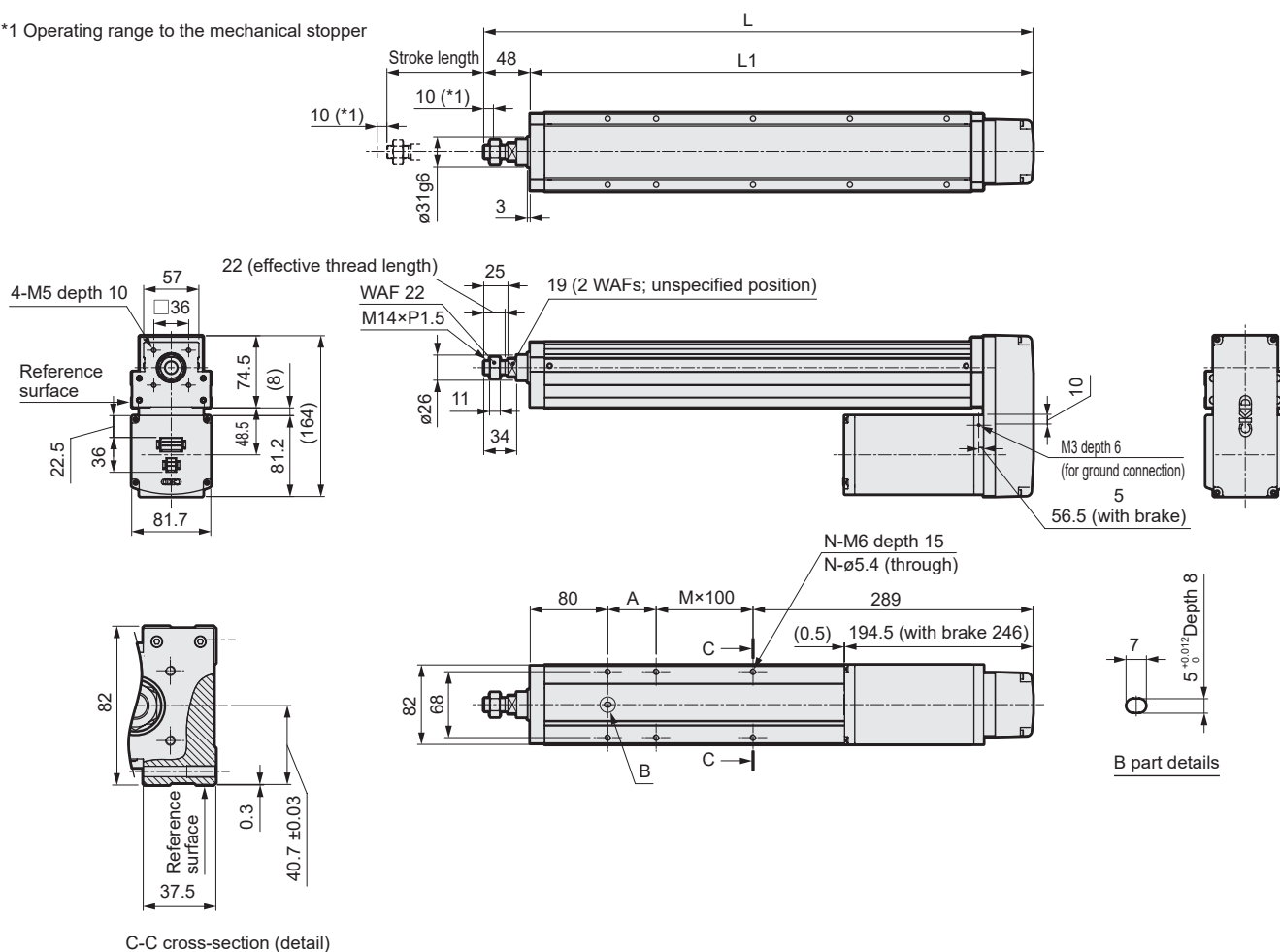


| Stroke code        | 0050          | 0100 | 0150 | 0200 | 0250 | 0300 | 0350 | 0400 | 0450 | 0500 | 0550 | 0600 | 0650 | 0700 |
|--------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Stroke length (mm) | 50            | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  |
| L                  | 367           | 417  | 467  | 517  | 567  | 617  | 667  | 717  | 767  | 817  | 867  | 917  | 967  | 1017 |
| L1                 | 319           | 369  | 419  | 469  | 519  | 569  | 619  | 669  | 719  | 769  | 819  | 869  | 919  | 969  |
| A                  | 50            | 100  | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  |
| M                  | 1             | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 5    | 6    | 6    | 7    | 7    |
| N                  | 6             | 6    | 8    | 8    | 10   | 10   | 12   | 12   | 14   | 14   | 16   | 16   | 18   | 18   |
| P                  | 50            | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  |
| Weight (kg)        | Without brake | 5.9  | 6.3  | 6.7  | 7.0  | 7.3  | 7.7  | 8.0  | 8.3  | 8.6  | 8.9  | 9.4  | 9.7  | 10.1 |
|                    | With brake    | 7.2  | 7.6  | 8.0  | 8.3  | 8.6  | 9.0  | 9.3  | 9.6  | 9.9  | 10.2 | 10.7 | 11.0 | 11.4 |

### Dimensions: Motor bottom mounting

#### ● EBR-08\*D

\*1 Operating range to the mechanical stopper



C-C cross-section (detail)

| Stroke code        |               | 0250 | 0300 | 0350 | 0400 | 0450 | 0500 | 0550 | 0600 | 0650 | 0700 |
|--------------------|---------------|------|------|------|------|------|------|------|------|------|------|
| Stroke length (mm) |               | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  |
| L                  |               | 567  | 617  | 667  | 717  | 767  | 817  | 867  | 917  | 967  | 1017 |
| L1                 |               | 519  | 569  | 619  | 669  | 719  | 769  | 819  | 869  | 919  | 969  |
| A                  |               | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  |
| M                  |               | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 5    |
| N                  |               | 6    | 6    | 8    | 8    | 10   | 10   | 12   | 12   | 14   | 14   |
| Weight (kg)        | Without brake | 7.3  | 7.7  | 8.0  | 8.3  | 8.6  | 8.9  | 9.4  | 9.7  | 10.1 | 10.4 |
|                    | With brake    | 8.6  | 9.0  | 9.3  | 9.6  | 9.9  | 10.2 | 10.7 | 11.0 | 11.4 | 11.7 |

EBS  
(With motor)

EBR  
(With motor)

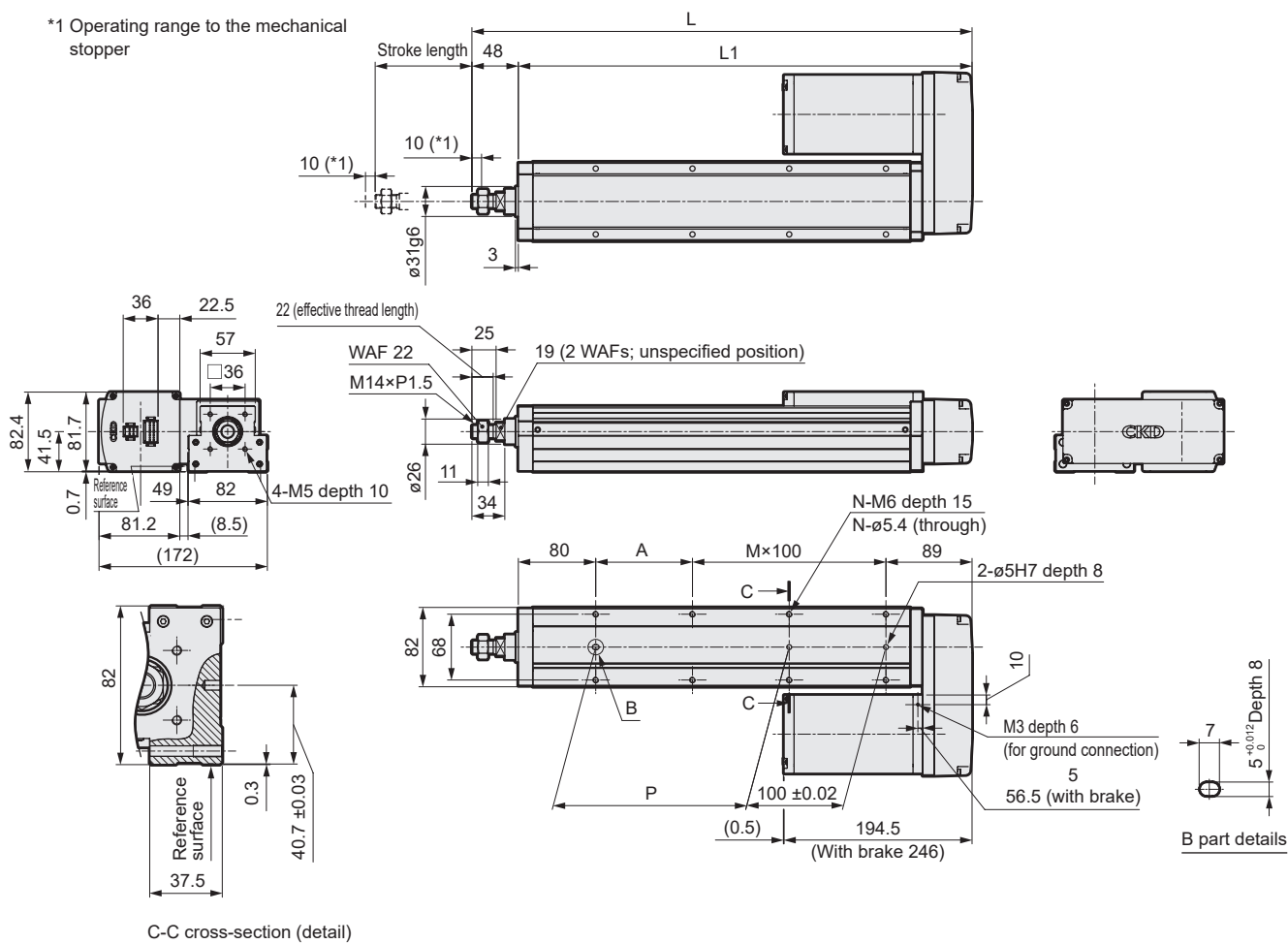
ECR  
(Controller)

ECG-A  
(Controller)

Safety  
precautions

● EBR-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 |
|--------------------|---------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Stroke length (mm) |               | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  |
| L                  |               | 367  | 417  | 467  | 517  | 567  | 617  | 667  | 717  | 767  | 817  | 867  | 917  | 967  | 1017 |
| L1                 |               | 319  | 369  | 419  | 469  | 519  | 569  | 619  | 669  | 719  | 769  | 819  | 869  | 919  | 969  |
| A                  |               | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  | 50   | 100  |
| M                  |               | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5    | 5    | 6    | 6    | 7    | 7    |
| N                  |               | 6    | 6    | 8    | 8    | 10   | 10   | 12   | 12   | 14   | 14   | 16   | 16   | 18   | 18   |
| P                  |               | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  |
| Weight<br>(kg)     | Without brake | 5.9  | 6.3  | 6.7  | 7.0  | 7.3  | 7.7  | 8.0  | 8.3  | 8.6  | 8.9  | 9.4  | 9.7  | 10.1 | 10.4 |
|                    | With brake    | 7.2  | 7.6  | 8.0  | 8.3  | 8.6  | 9.0  | 9.3  | 9.6  | 9.9  | 10.2 | 10.7 | 11.0 | 11.4 | 11.7 |