CKD

Electric Actuators

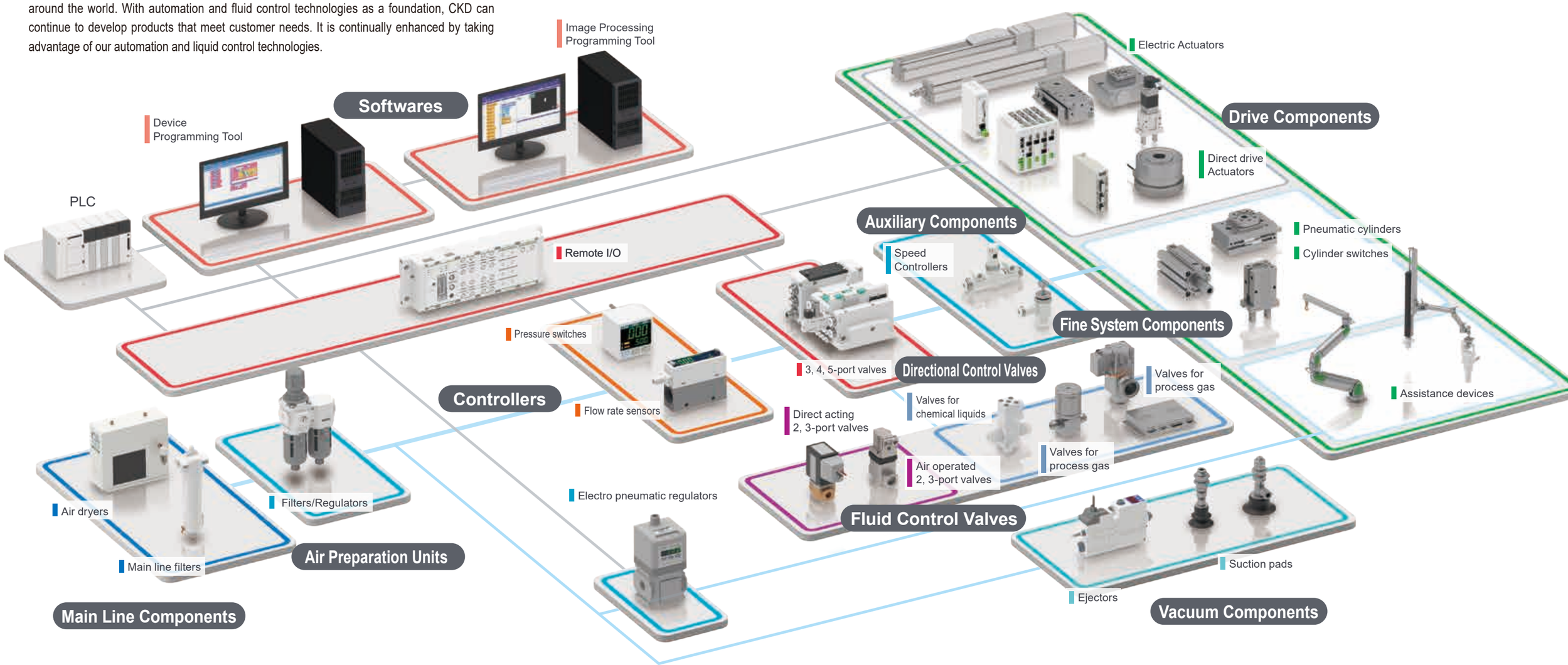
ROBODEX *Std.* **Motorless specifications**

Sliders | Rods | Overhead Transport System

CKD products seen from their configuration images

Both Air and Electric. From software to I/O units

CKD's product lineup has been expanding steadily, contributing to the creation of products around the world. With automation and fluid control technologies as a foundation, CKD can continue to develop products that meet customer needs. It is continually enhanced by taking advantage of our automation and liquid control technologies.



CKD products by application

High Durability Components
HP Series

Long Service Life
Environmental Resistance

HP
HIGH PRODUCTIVITY

CC-1421A

For Food Manufacturing Processes
FP Series

FP Food Process™

CC-1271A

For Outdoor Use WP Series

WEATHER PROOF

CC-1276A

Rechargeable Battery Manufacturing Process P4 Series

Material restrictions
1/5 or less dust generation rate

CC-1226AA

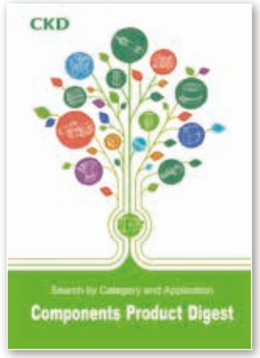
For Clean Components
P5/P7 Series

Low particle generation exhaust port

CB-033SA

Guide to the CKD catalog

Learn more about each product category in the booklet catalog



RJ-001AA

The Digest Catalog allows you to search for components you are looking for by overview

Detailed specifications are available in the respective Booklet and WEB catalogs.

Main Line Component Products
Gas Generators

Air Dryers | Main Line Filters | Condensate Drains | Nitrogen gas extraction units

RJ-009AA

Refining and pressure adjusting components
Auxiliary Components

Filters | Regulators | Pressure gauges | Speed controllers | Silencers | Fittings | Tubes

RJ-007

Sensors/Controllers

Pressure switches | Flow rate sensors | Flow rate controllers | Air sensors

RJ-008AA

Precision / Vacuum Components

Air bearings | Ejector systems | Vacuum pump systems | Suction Pads

RJ-010AA

Fluid Control Valves

Solenoid valves | Air operated valves | Ball valves

RJ-013AA

Wet Fine components

CB-031A

Dry Fine Equipment

components for process gases | High vacuum components

RJ-016AA

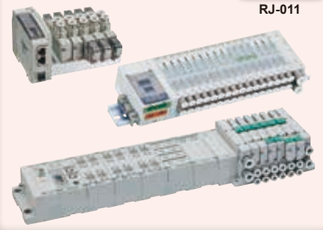
Learn more on the WEB

https://www.ckd.co.jp/kiki/en/

Directional Control Valves (1)

Plug-in Block Manifolds | 3, 4, 5-port valves | Remote I/O

RJ-011



Directional Control Valves (2)

2, 3, 5-port valve | Explosion-proof | Air operated valve | Manual selector valve

RJ-012

Pneumatic Cylinders (1)

Standard

RJ-002AA

Pneumatic Cylinders (2)

Space saving structures

RJ-003AA

Pneumatic Cylinders (3)

With linear guide | With guide

RJ-004AA

Pneumatic Cylinders (4)

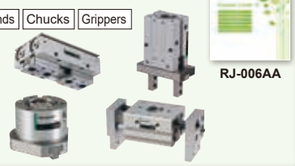
Rodless | With brake | Clamps | Oscillation / Rotation

RJ-005

Pneumatic Cylinders (5)

Hands | Chucks | Grippers

RJ-006AA



Visual Programming Tool for Image Processing

Facilea
CC-1548AA

Facilea AI
CC-1623

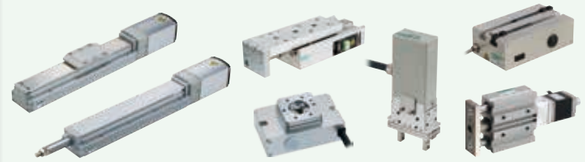
Device Visual Programming Tool

ExiaStudio
CC-1579AA

Electric Actuators

ROBODEX Pulse

RJ-014AA



Electric Actuators

ROBODEX Std.

RJ-015AA

Electric Actuators

ROBODEX Servo
CC-1275AA CC-1436AA

ABSODEX

ABSODEX
CC-1614AA

ROBODEX

Contributing to automation needs.

Motorless specifications **ROBODEX** *Std.*

A wide variety of **ROBODEX** series.

For dusty environments

For low dust environments

For rechargeable battery manufacturing

For food manufacturing

ROBODEX *Std.*

Our Motorless series, allowing you to mount the motor of your choice.

ROBODEX *Pulse*

Space-saving & high-rigidity stepping motor drive

ROBODEX *Servo*

Servo motor drive for a wide range of applications

ROBODEX

Our electric actuators allow you to mount the motor of your choice.

Motorless specifications **ROBODEX** Std.

We provide the actuator body, a bracket, and other mounting parts compatible with the motor from the manufacturer of your choice. This is the Standard ROBODEX model, offering a wide selection to suit your specific needs, such as standardizing motors within your facility, reducing inventory, or for motion control applications.

Motion control **Motor unification** **Reduced inventory**

P4 Series

A series that restricts materials such as copper that are unsuitable for rechargeable battery manufacturing processes.

Compatible models

EBS-L EBR-L ETS ECS EKS-L

Scan

Low Dust Emission Specification

A series that can be used in clean environments, featuring a full cover and suction port to suppress particle generation.

Compatible models

EBS-L ECS ECV

FP Series

A series for food manufacturing processes that uses food-grade (NSF H1) lubricant for its sliding parts.

Compatible models

EBS-L EBR-L ETS ECS ETV ECV EKS-L

Scan

FP Food Process™

Slider Type

EBS-L (ball screw)

- High rigidity & space saving
- Pursuit of maintainability

For rechargeable battery manufacturing / For food manufacturing / For low dust environments

ETS (ball screw)

- Supports transport of high loads
- Wide variations

For rechargeable battery manufacturing / For food manufacturing

ECS (ball screw)

- ETS low dust specifications
- Wide variations

For rechargeable battery manufacturing / For food manufacturing / For low dust environments

ETV (belt)

- Supports long strokes.
- Supports high speed transport

For food manufacturing

Rod Type

ECV (belt)

- ETV low dust specifications
- Supports long strokes.

For food manufacturing / For low dust environments

Ball screw

- Iron body adopted
- Fast tact & high rigidity

For rechargeable battery manufacturing / For food manufacturing

Ball screw

- High rigidity & space saving
- Pursuit of maintainability

For rechargeable battery manufacturing / For food manufacturing

Overhead Transport

ESM (belt)

- An overhead transfer system built by combining rails.
- Supports long strokes.

List of supported motor manufacturers

* Refer to each model page for compatible models and capacity

Servo Motor

Mitsubishi Electric Corporation / Delta Electronics Co., Ltd. / Sanyo Denki Co., Ltd. / Mitsubishi Electric Corporation / Keyence Corporation / Panasonic Corporation / OMRON Corporation / Fuji Electric Corporation / FANUC CORPORATION / Bosch Rexroth AG / Rockwell Automation, Inc. / SIEMENS AG

Stepping motor

* EBS-L, EBR-L, ETS, ECS only

Oriental Motor Co., Ltd. / MinebeaMitsumi Incorporated / Dyadic Systems Co., Ltd.

Model Selection System

To select the ideal model, simply select the working conditions and input the required value.

Scan

[https://sentei.ckd.co.jp/kiki/sentei/electric/en/]

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Servo motor specifications/List of stepping motor specifications

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* For precautions regarding each product, always read the individual precautions for each model series in the main text.

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CKD RoHS Compliance Ending 4

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International System of Units (SI Units)
Circuit Diagram Symbol List

Posted on the CKD website.

https://www.ckd.co.jp/kiki/en/

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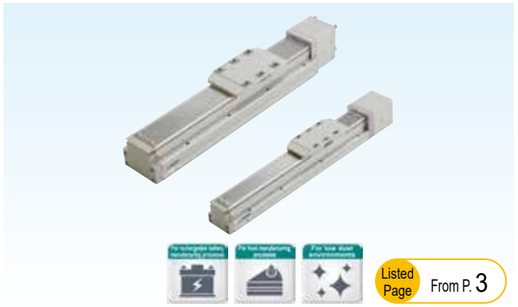
Search by Product System List

You can select by the appearance and product overview of each series.

Servo motor compatible >>> P. 1



Listed Page From P. 3

Slider Type (Ball Screw Driven)

EBS-L

Model No.	Servo motor size (W)	Max. speed *1	Max. Payload (Horizontal)	Page
EBS-04L	50	600 mm/s	20 kg	14
EBS-05L	100	1000 mm/s	30 kg	20
EBS-08L	200	1000 mm/s	50 kg	26
EBS-12L	400	1600 mm/s	110 kg	32
EBS-04L-C	50	600 mm/s	20 kg	44
EBS-05L-C	100	1000 mm/s	30 kg	46
EBS-08L-C	200	1000 mm/s	50 kg	48

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

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Rod type with built-in guide

EBR-L

Model No.	Servo motor size (W)	Max. speed *1	Max. Payload (Horizontal)	Page
EBR-04L	50	600 mm/s	20 kg	78
EBR-05L	100	1000 mm/s	30 kg	84
EBR-08L	200	1000 mm/s	50 kg	90
EBR-12L	400	1600 mm/s	110 kg	96

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

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Slider Type(Ball Screw Driven, Low Dust Generation Specification)

ECS

Model No.	Servo motor size (W)	Max. speed *1	Max. Payload (Horizontal)	Page
ECS-14	200/400	1000 mm/s	110 kg	240
ECS-17	400/750	2000 mm/s	120 kg	248
ECS-22	750	2000 mm/s	150 kg	256

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

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Slider Type (Belt Driven)

ETV

Model No.	Servo motor size (W)	Max. speed *1	Max. Payload (Horizontal)	Page
ETV-14	200	2000 mm/s	25 kg	288
ETV-17	400	2000 mm/s	45 kg	296
ETV-22	750	2000 mm/s	85 kg	304

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

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Slider Type (Ball Screw Driven)

ETS

Model No.	Servo motor size (W)	Max. speed *2	Max. Payload (Horizontal)	Page
ETS-13	100 *1/ 200/400	1000 mm/s	70 kg	124
ETS-14	200/400	1000 mm/s	110 kg	132
ETS-17	400/750	2000 mm/s	120 kg	140
ETS-22	750	2000 mm/s	150 kg	148

*1 ETS-13 100 W is only compatible with metal stopper (ETS-X) specifications.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

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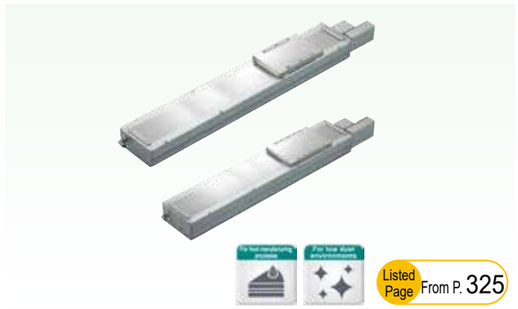
Slider type (ball screw drive) (combination model)

ETS-Multi Axis

Model No.	Axis combination	Servo motor size (W)	Page
ETS-650A	X-Y	X: 400 Y: 200	176
ETS-760A	X-Y	X: 400 Y: 200	182
ETS-870A	X-Y	X: 750 Y: 400	188
ETS-650P	X-Z	X: 400 Y: 200	196
ETS-760P	X-Z	X: 400 Y: 400	200
ETS-880P	X-Z	X: 750 Y: 750	204
ETS-760F	Y-Z	X: 400 Y: 400	208



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Slider type (belt drive low dust specifications)

ECV

Model No.	Servo motor size (W)	Max. speed *1	Max. Payload (Horizontal)	Page
ECV-14	200	2000 mm/s	25 kg	332
ECV-17	400	2000 mm/s	45 kg	340
ECV-22	750	2000 mm/s	85 kg	348

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

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Slider Type (Ball Screw Driven)

EKS-L

Model No.	Servo motor size (W)	Max. speed *1	Max. Payload (horizontal) *2	Page
EKS-04L	50/100	800 mm/s	19 kg	378
EKS-05L	100	1000 mm/s	26 kg	386
EKS-06L	200	1500 mm/s	42 kg	394
EKS-08L	400	2000 mm/s	83.5 kg	402
EKS-10L	750	2500 mm/s	118.5 kg	410

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.
*2 Values for max. payload are at acceleration/deceleration 0.5 G and straight motor mounting. Refer to the Load Capacity by Acceleration/ Deceleration table on the specifications page for each model for details.

Search by Product System List

You can select by the appearance and product overview of each series.

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Electric Shuttle Mover (Belt Driven)

ESM

Model No.	Servo motor size (W)	Max. Payload	Max. Conveyance Distance	Page
ESM	750	4 kg	20 m	438

Stepper motor compatible >>> P. 451

Listed Page From P. 453

Slider Type (Ball Screw Driven)

EBS-L

Model No.	Stepping Motor Size	Max. speed *1	Max. Payload (Horizontal)	Page
EBS-04L	□42	600 mm/s	20 kg	460
EBS-05L	□42	1000 mm/s	30 kg	466
EBS-08L	□56/□60	1000 mm/s	50 kg	472

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

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Rod type with built-in guide

EBR-L

Model No.	Stepping Motor Size	Max. speed *1	Max. Payload (Horizontal)	Page
EBR-04L	□42	600 mm/s	20 kg	500
EBR-05L	□42	1000 mm/s	30 kg	506
EBR-08L	□56/□60	1000 mm/s	50 kg	512

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

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Slider Type (Ball Screw Driven)

ETS

Model No.	Stepping Motor Size	Max. speed *2	Max. Payload (Horizontal)	Page
ETS-13	□56/□60	1000 mm/s	70 kg	540
ETS-14	□56/□60	1000 mm/s	110 kg	546

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

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Slider Type (Ball Screw Driven Low Dust Generation Specification)

ECS

Model No.	Stepping Motor Size	Max. speed *1	Max. Payload (Horizontal)	Page
ECS-14	□56/□60	1000 mm/s	110 kg	570

*1 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not drive at speeds beyond the limit.

Actuator slider/rod types list (servo motor compatible)

EBS-L (ball screw)
- High rigidity & Space saving
- Pursuit of Maintainability

Ball screw
- High rigidity & Space saving
- Pursuit of Maintainability

ETS (ball screw)
- Supports transport of high loads
- Wide variations

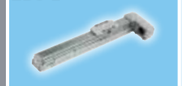
ECS (ball screw)
- ETS low dust specifications
- Wide variations

ETV (belt)
- Compatible with long stroke
- Supports high speed transport

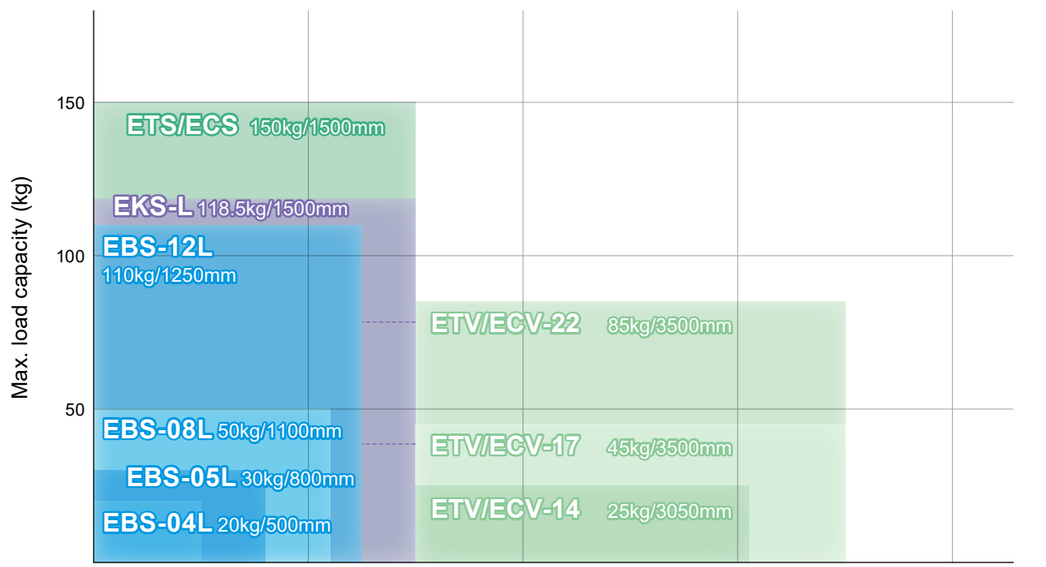
ECV (belt)
- ETV low dust specifications
- Supports long strokes

Ball screw
- Iron body adopted
- Fast tact & High rigidity

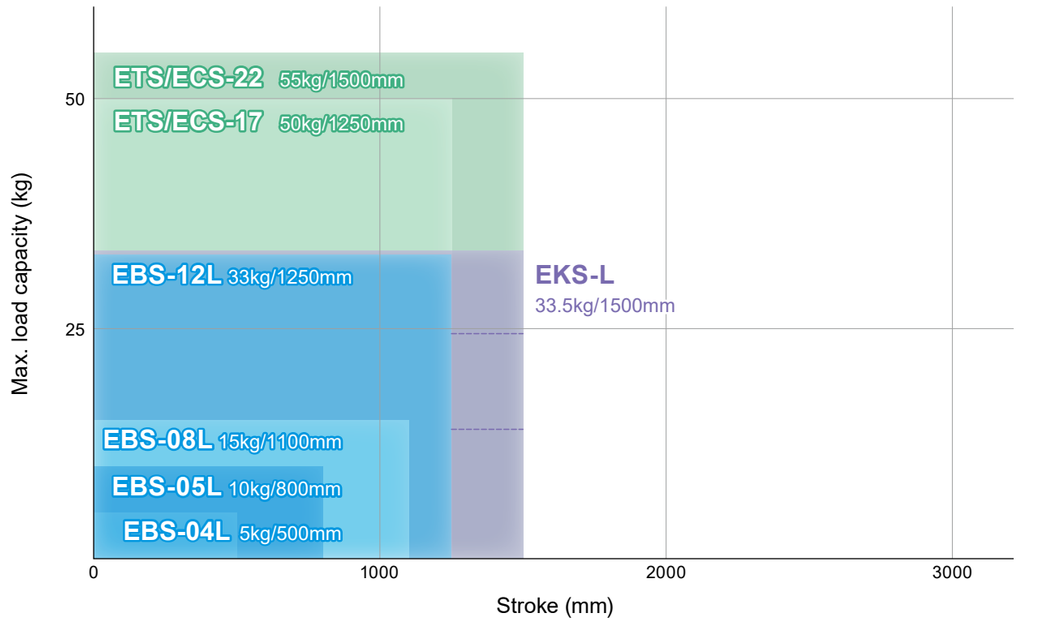
List of specifications by model

Type	Model No.	Drive Method	Servo motor capacity (W)	Body Width (mm)	Max. Payload (kg)			Max. Speed (mm/s)	Max. Stroke (mm)
					Horizontal	Wall-mounted	Vertical		
Slider Type	EBS-L 	Ball screw	50 to 400	44 to 120	110	110	33	1600	1250
	ETS	Ball screw	100 to 750	135 to 220	150	150	55	2,000	1500
	ECS	Ball screw	200 to 750	135 to 220	150	150	55	2,000	1500
	ETV	Belt	200 to 750	135 to 220	85	85	-	2,000	3500
	ECV	Belt	200 to 750	135 to 220	85	85	-	2,000	3500
	EKS-L	Ball screw	50 to 750	43 to 104	118.5	76	33.5	2500	1500
Rod Type	EBR-L	Ball screw	50 to 400	44 to 120	110	110	33	1600	800

During horizontal transport



During vertical transport



* The specification is the max. value. They depend on the motor specification conditions.

Actuator slider/rod types list (stepper motor compatible)

EBS-L (ball screw)

- High rigidity & Space saving
- Pursuit of Maintainability

Ball screw

- High rigidity & Space saving
- Pursuit of Maintainability

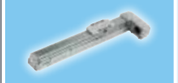
ETS (ball screw)

- Supports transport of high loads
- Wide variations

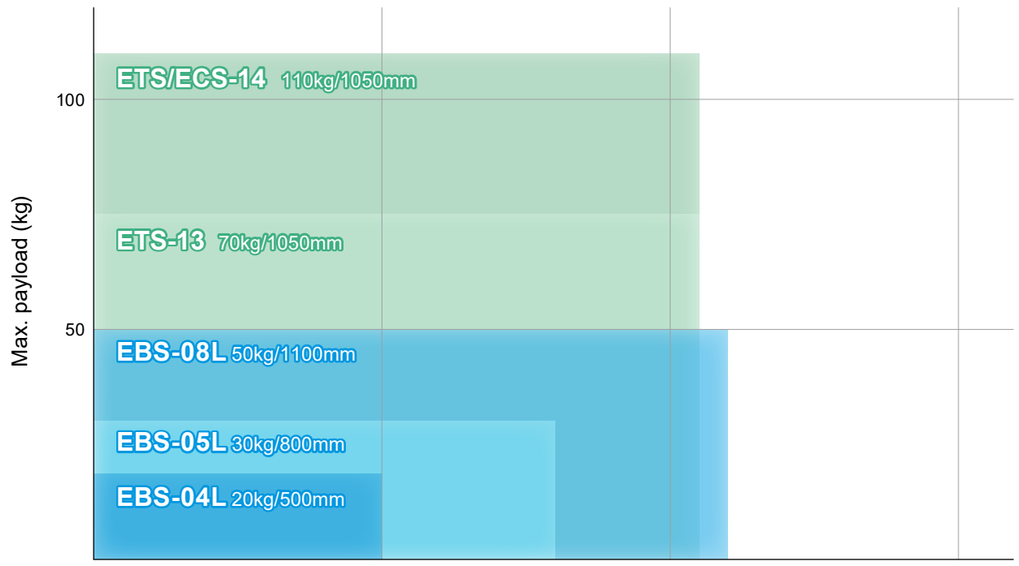
ECS (ball screw)

- ETS low dust specifications
- Wide variations

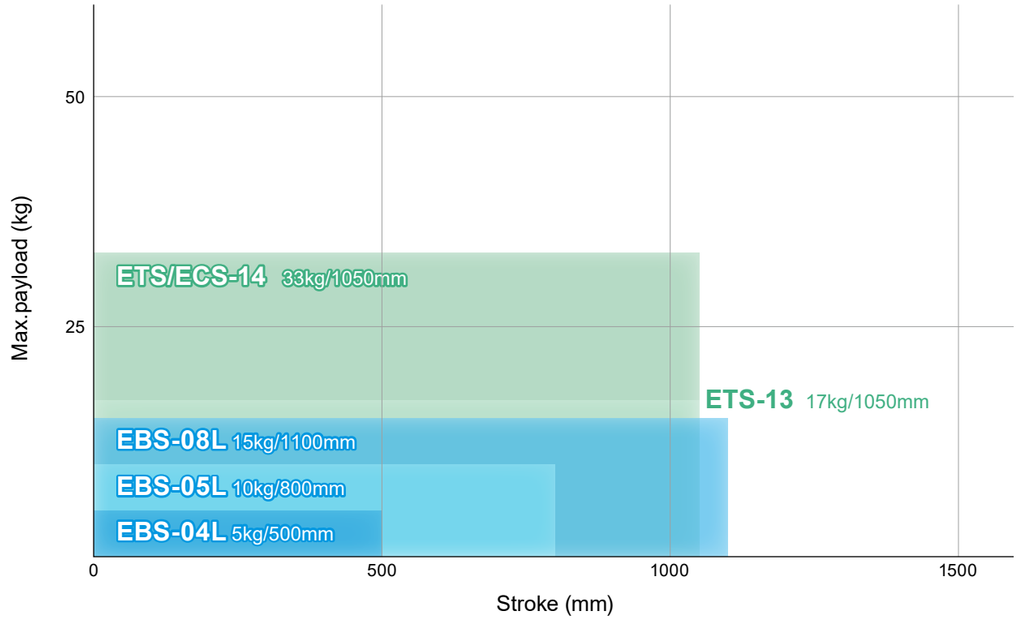
List of specifications by model

Type	Model No.	Drive Method	Stepping Motor Size	Body Width (mm)	Max. Payload (kg)			Max. Speed (mm/s)	Max. Stroke (mm)
					Horizontal	Wall-mounted	Vertical		
Slider Type	EBS-L 	Ball screw	□42 to 60	44 to 82	50	50	15	1,000	1100
Slider Type	ETS	Ball screw	□56 to 60	135	110	110	33	1,000	1050
Slider Type	ECS	Ball screw	□56 to 60	135	110	110	33	1,000	1050
Rod Type	EBR-L	Ball screw	□42 to 60	44 to 82	50	50	15	1,000	700

During horizontal transport



During vertical transport



* The specification is the max. value. They depend on the motor specification conditions.

CKD How to use CAD data

Free download!

This is what makes CKD's CAD great!

Comprehensive list of CKD's leading products

Japanese, English, Chinese (Simplified and Traditional), and Korean are supported.

Simultaneous with new product launch

NEW Model No. AX1R

ABSODEX

Supports various data formats

More than 25 types of 2D and more than 35 types of 3D

Supports PDF and JPEG formats!

*To use 3D CAD, you must register as a CKD plus member.

CKD plus How to register as a member

STEP 1

From the CKD components product top page, click "New member registration"

STEP 2.

Enter your name, company name, contact information, and email address

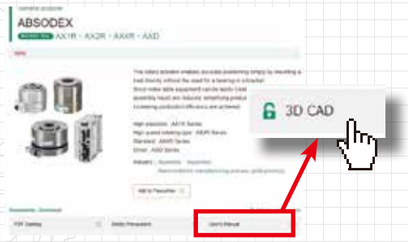
Easy registration in 2 STEPS

Registration complete!

How to download CAD

STEP 1

Click on "3D CAD" from the product detail page



STEP 2.

Select model No.

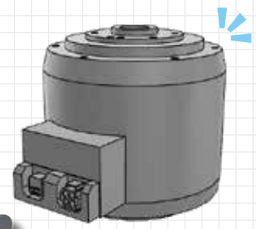
STEP 3

❶ Specify CAD format

❷ Generate CAD data

Download CAD

Download complete!

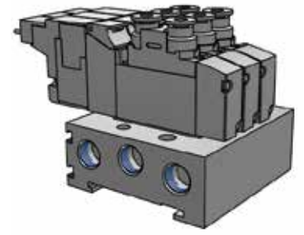


Pneumatic valve manifold specifications and CAD data are easily available on the Web.

Specifications are available

Manifold specifications for pneumatic valves can be prepared and shipped assembled to the customer.

Get CAD data



2D and 3D CAD data available for pneumatic valve manifold assemblies

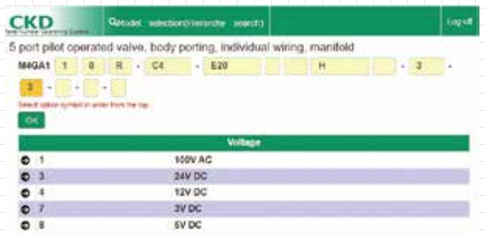
Specifications and download method of CAD data

STEP 1

CKD components product TOP page > Product details page > Click "Manifold specifications sheet"

STEP 2.

Select model No.



STEP 3

Create specifications sheet

STEP 4

Download complete!

●For specifications output, Specification output Click

●If downloading CAD data 2D/3D CAD Click

Significantly reduces work time

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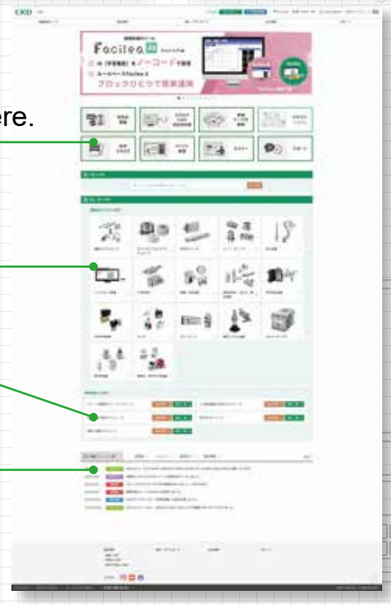
Website Guide

Various information is provided on our website.
Please make use of it.

Catalogs	CAD	Instruction Manuals
Maintenance Parts	Software	Model Selection
FAQ	Technical Information	Standard Compliant Product Information
Columns	Event Information	Seminars



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Model Selection System Guide

About Using the Model Selection System

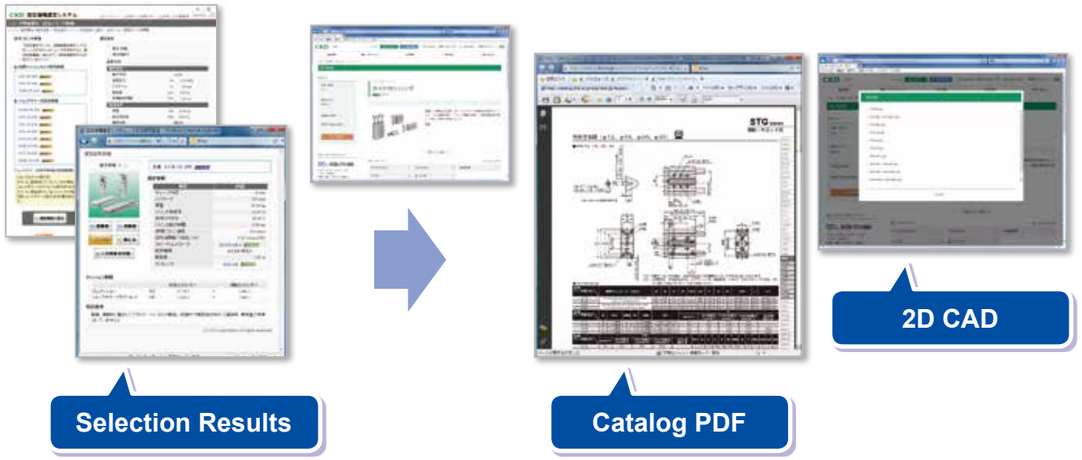
We provide a system that supports the selection of the following items. Please use it when selecting models and designing.

Published on our website

This system is for selecting products according to your application and operating conditions.

*Downloadable software may not be able to be downloaded due to your company's security policy. In that case, please contact us.

Link from selection results to catalog PDFs and CAD data!



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We offer various services for CKD products, including catalogs, PDFs, CAD data, and model selection. Please take a look.

https://www.ckd.co.jp/en/

Safety Precautions

Always read this section before use.

When designing equipment using electric actuators, the manufacturer is obligated to ensure that the safety of the mechanism and the electrically controlled system are secured.
It is important to select, use, handle and maintain CKD products appropriately to ensure their safe usage.
Observe warnings and precautions to ensure device safety.
Check that device safety is ensured and a safe device is manufactured.

WARNING

1 This product is designed and manufactured as a general industrial machine part.
It must be handled by an operator having sufficient knowledge and experience in handling.

2 Use the product within specifications range.

This product must be used within its stated specifications. It must not be modified or machined additionally.
This product is intended for use as a device or part for general-purpose industrial machinery. It is not intended for use outdoors (except for outdoor type) or for use under the following conditions or environment.
(Note that this product can be used under the following conditions only when CKD is consulted prior to use and the customer consents to CKD product specifications. The customer must provide safety measures to avoid risks in the event of problems.)

❶ Use for special applications which require the safety, including nuclear energy, railways, aircrafts, marine vessels, vehicles, medicinal devices, devices or applications coming into contact with beverages or foodstuffs, amusement devices, emergency operations (cutoff circuits, opening etc.) circuits, press machines, brake circuits, or safety devices or applications.
❷ Use for applications where life or assets could be adversely affected and special safety measures are required.

3 Observe organization standards and regulations, etc. related to the safety of device design.

4 Never remove devices before confirming safety.

❶ Inspect and service on the machine and devices after confirming safety of the entire system related to this product.
❷ Note that there may be hot or charged sections even after operation is stopped.
❸ When inspecting or maintaining device, be sure to shut down the power supply of the equipment and the relevant power supply, using caution to avoid electric shock.

5 Observe instruction manual and precautions attached the product surely to prevent accidents.

❶ The product could operate unexpectedly during teaching operation or trial operation. Be especially careful not to touch the actuator. If operating the product from a position where the shaft body cannot be seen, be sure to first confirm that the safety is secured even if the actuator moves.

6 Observe precautions to prevent electric shock.

❶ Do not touch the heat sink, cement friction, or motor inside the controller.
These will heat up, and could cause burns. Wait an appropriate amount of time prior to performing inspections or other tasks.
A high voltage is applied until the electrical load stored in the internal capacitors is discharged after the power is turned OFF.
Do not touch for around three minutes after the power OFF.
❷ Make sure to turn the switch on the controller power supply source OFF, before maintenances and inspections.
There is a danger of high voltage electric shocks.
❸ Do not attach or remove connector, while the power is on. Otherwise, this may cause malfunction, failure, or electric shock.

7 Install an overcurrent protector.

The wiring to the driver should be in accordance with JIS B 9960-1:2019 (IEC 60204-1:2016) Safety of Machinery - Electrical Equipment of Machines - Part 1: General Requirements. Install an overcurrent protector (a circuit breaker or circuit protector for wiring) on the main power, control power, and I/O power.

(Reference: JIS B 9960-1 7.2.1 General description)
If there is a possibility the circuit current may exceed the rated value of the component or the allowable current of the conductor, an overcurrent protection must be provided. The details of the ratings or set values to be selected shall be provided in 7.2.10.

8 Observe precautions below to prevent accidents.

■ The precautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.

DANGER: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, and when there is a high degree of emergency to a warning.
WARNING: When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries.
CAUTION: When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as "CAUTION" may lead to serious results depending on the situation.
Every item provides important information and must be observed.

Warranty

1 Warranty period

The product specified herein is warranted for one (1) year from the date of delivery to the location specified by the customer.

2 Warranty coverage

If the product specified herein fails for reasons attributable to CKD within the warranty period specified above, CKD will promptly provide a replacement for the faulty product or a part thereof or repair the faulty product at one of CKD's facilities free of charge.
However, following failures are excluded from this warranty:
1) Failure caused by handling or use of the product under conditions and in environments not conforming to those stated in the catalog, the Specifications, or the Instruction Manual.
2) Failure caused by use of the product exceeding its durability (cycles, distance, time, etc.) or caused by consumable parts.
3) Failure not caused by the product.
4) Failure caused by use not intended for the product.
5) Failure caused by modifications/alterations or repairs not carried out by CKD.
6) Failure caused by reasons unforeseen at the level of technology available at the time of delivery.
7) Failure caused by acts of nature and disasters beyond control of CKD.
The warranty stated herein covers only the delivered product itself. Any loss or damage induced by failure of the delivered product is excluded from this warranty.
Note: For details on the durability and consumable parts, contact your nearest CKD sales office.

3 Compatibility confirmation

The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

4 Range of service

The delivered product price does not include engineer dispatch service fees. Separate fees will be charged in the following cases.
(1) Instruction of installation and adjustment, and presence on test operation
(2) Maintenance and inspection, adjustment, and repair
(3) Technical instructions and technical education (operation, program, wiring method, safety education, etc.)

Precautions for export

Products and related technologies in this catalog
Those of the products and related technologies in this catalog which are subject to US Export Administration Regulations
(EAR) are marked on the product page as "Product subject to the EAR (EAR99) or (EAR99 and 3A991)". For export or provision of products or related technologies subject to EAR regulations, we request that the US Export Administration Regulations (EAR) be observed appropriately.

Electric Actuators

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■ Slider type (Ball Screw Driven)	EBS-L	3
■ Rod type (with Built-in Guide)	EBR-L	71
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Electric Actuator EBS-L Series

Slider Type (Ball Screw Driven)

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(Ball Screw Driven, Low Dust Generation Specification)

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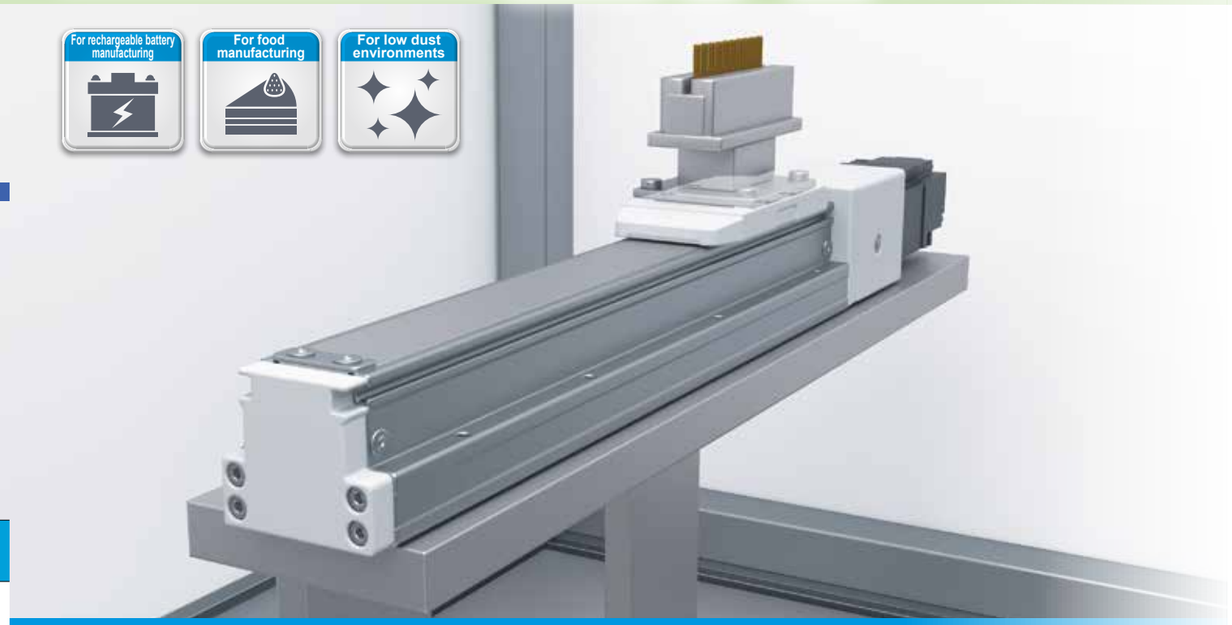
EBS-L Series

For rechargeable battery manufacturing | For food manufacturing | For low dust environments



Compact & High rigidity

Line-up	Body Size / Motor capacity	04 / 50 W	05 / 100 W	08 / 200 W	12 / 400 W	Catalog page
EBS-L		●	●	●	●	9
Metal stopper specifications EBS-L-X		●	●	●		9
Low dust specification EBS-L-C		●	●	●		39
Supports food manufacturing processes EBS-L-P4		●	●	●		CC-1226AA
Supports food manufacturing processes EBS-L-FP1		●	●	●		CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

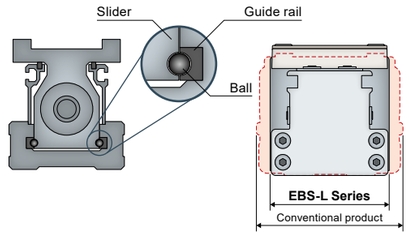
Servo Motor

Mitsubishi Electric Corporation | Delta Electronics Co., Ltd. | Sanyo Denki Co., Ltd. | Mitsubishi Electric Corporation | Keyence Corporation | Panasonic Corporation | OMRON Corporation | Fuji Electric Corporation | FANUC CORPORATION | Bosch Rexroth AG | Rockwell Automation, Inc. | SIEMENS AG

Compact, high-rigidity body

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

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



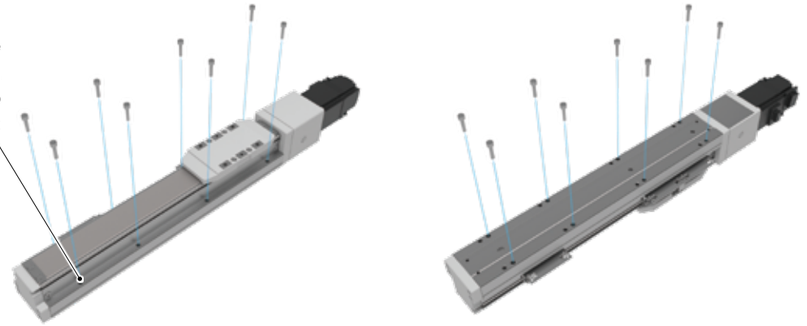
	Body Width	Static Allowable Moment MP	MY	MR
Conventional Product	65 mm	80 N·m	70 N·m	75 N·m
EBS-05L	54 mm	103 N·m	103 N·m	144 N·m
	↓ 11 mm DOWN	↓ 28% UP	↓ 47% UP	↓ 92% UP

Mounting holes provided on top and bottom surfaces

Easy maintenance | Reduced man-hours

The product structure allows installation from the top or bottom, without disassembly. Especially when installing from the top surface, work time can be significantly reduced.

Through holes are located from the top, eliminating the need to disassemble the product

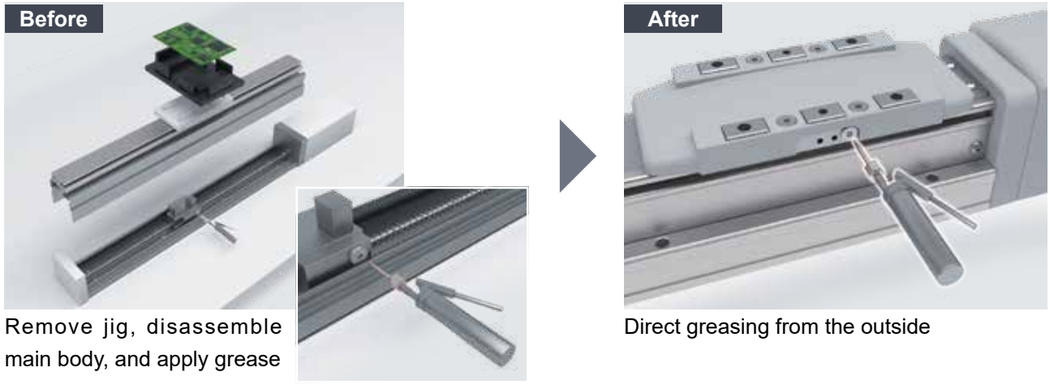


Top mounting without disassembling main body

Equipped with external grease fitting port

Easy maintenance | Reduced man-hours

The product comes equipped with a lubrication port on both sides to allow direct lubrication from the exterior. Maintenance of the guide and ball screw is possible by greasing from one location without disassembling the main body.



Remove jig, disassemble main body, and apply grease

Direct greasing from the outside

Optimal electric actuator for clean environments

EBS-L-C Series (low dust specification)

For low dust environments

Cleanliness of class 2.5 or equivalent (ISO 14644-1 standard) is realized. Contributes to low dust generation by supporting vacuum treatment from the suction port.

Electric actuators ideal for more accurate origin positioning

EBS-L-X Series (metal stopper specifications)

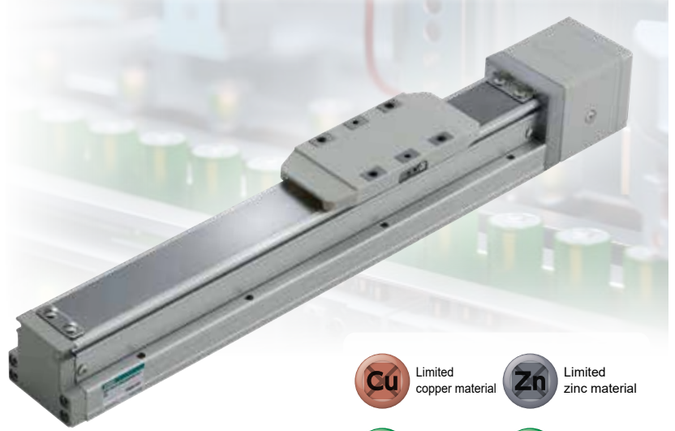
By establishing an accurate zero point in the mechanical standards, it is possible to press it against the mechanical end and position the origin accurately.

Optimal electric actuator for rechargeable battery production processes

EBS-L-P4 Series

For rechargeable battery manufacturing
Material restrictions
Dry environment
DEW POINT -80°C

The use of copper, zinc, nickel-based materials and electrolytic nickel plating is restricted. Grease compatible with ultra-low dew point environments is used, and lubrication of the sliding parts is maintained for long periods, even in dry environments.



Cu Limited copper material
Zn Limited zinc material
Ni Limited nickel-based material
ENi Limited electrolytic nickel plating

Optimal electric actuator for food production processes

EBS-L-FP1 Series

For food manufacturing

Food-grade (NSF H1) lubricants can be used safely and securely. Contributes to low dust generation by supporting vacuum treatment from the suction port.

FP Food Process™

Food Grade (NSF H1) Lubricant Used

EBS-L

Slider Type (Ball Screw Driven)

Electric Actuator
Servo Motor Compatible
Motorless specifications

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• EBS-05L	20
• EBS-08L	26
• EBS-12L	32
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● Technical Data	56
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System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and max. speed (mm/s) *2	Page
Slider Type		EBS-04L□-06	50	44	6	20	5	50 mm: 300 mm/s (⏱ 1.03 secs.) / 100, 150, 200, 250 mm: 300 mm/s (⏱ 1.70 secs.)	14
		EBS-04L□-12			12	12	2	50 mm: 600 (⏱ 0.56 secs.) / 100, 150, 200, 250 mm: 600 (⏱ 0.89 secs.)	
		EBS-05L□-02	100	54	2	30	10	50 mm: 100 (⏱ 3.01 secs.) / 100, 150, 200, 250 mm: 90, 80, 70, 60 (⏱ 6.01 secs. / 13.34 secs.)	20
		EBS-05L□-05			5	30	10	50 mm: 250 (⏱ 1.23 secs.) / 100, 150, 200, 250 mm: 225, 200, 175, 150 (⏱ 2.43 secs. / 5.35 secs.)	
		EBS-05L□-10			10	15	5	50 mm: 500 (⏱ 0.65 secs.) / 100, 150, 200, 250 mm: 450, 400, 350, 300 (⏱ 1.25 secs. / 2.70 secs.)	
		EBS-05L□-20			20	10	2.5	50 mm: 1,000 (⏱ 0.40 secs.) / 100, 150, 200, 250 mm: 900, 800, 700, 600 (⏱ 0.70 secs. / 1.39 secs.)	
		EBS-08L□-05	200	82	5	50	15	50 mm: 250 (⏱ 1.23 secs.) / 100, 150, 200, 250 mm: 225, 200, 175, 150, 125, 100, 75, 50 (⏱ 2.43 secs. / 6.02 secs. / 22.01 secs.)	26
		EBS-08L□-10			10	30	8	50 mm: 500 (⏱ 0.65 secs.) / 100, 150, 200, 250 mm: 450, 400, 350, 300, 250, 200, 150, 100 (⏱ 1.25 secs. / 3.03 secs. / 11.01 secs.)	
		EBS-08L□-20			20	12	2.5	50 mm: 1,000 (⏱ 0.40 secs.) / 100, 150, 200, 250 mm: 900, 800, 700, 600, 500, 400, 300, 200 (⏱ 0.70 secs. / 1.56 secs. / 5.52 secs.)	
		EBS-12L□-05	400	120	5	110	33	50 mm: 250 (⏱ 1.23 secs.) / 100, 150, 200, 250 mm: 225, 200, 175, 150, 140, 130, 120, 110, 100, 90, 80 (⏱ 2.43 secs. / 6.02 secs. / 15.63 secs.)	32
		EBS-12L□-10			10	88	22	50 mm: 500 (⏱ 0.65 secs.) / 100, 150, 200, 250 mm: 450, 400, 350, 325, 300, 275, 250, 225, 200, 175, 150 (⏱ 1.25 secs. / 2.80 secs. / 8.35 secs.)	
		EBS-12L□-20			20	40	10	50 mm: 1,000 (⏱ 0.40 secs.) / 100, 150, 200, 250 mm: 900, 800, 700, 650, 600, 550, 500, 450, 400, 350, 300 (⏱ 0.70 secs. / 1.45 secs. / 4.20 secs.)	
		EBS-12L□-32			32	30	8	50 mm: 1600 (⏱ 0.35 secs.) / 100, 150, 200, 250 mm: 1450, 1300, 1150, 1050, 950, 850, 750, 650, 550, 450, 350 (⏱ 0.54 secs. / 0.96 secs. / 3.61 secs.)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.
*3 ⏱ shows the Positioning time. When a specified stroke is installed horizontally and operated at maximum speed and maximum acceleration/deceleration. Note that this is not the value at maximum payload.

Model No. Configuration

Slider Type

EBS - 05 L E - 02 0300 NNN - M 1 N N - X

❶ Body Size

04	Body width 44 mm
05	Body width 54 mm
08	Body width 82 mm
12	Body width 120 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

02	2 mm
05	5 mm
06	6 mm
10	10 mm
12	12 mm
20	20 mm
32	32 mm

❺ Stroke

0050 to 1250	50 mm (every 50 mm) 1250 mm

❻ Mounting Motor Specifications

M, Y, P, F	Refer to the list on the page at right

❼ Motor Capacity

H	50 W
1	100 W
2	200 W
4	400 W

❽ Origin sensor

N	None
C	Yes

❾ Limit sensor

N	None
B	Yes

❿ Metal stopper specifications (EBS-X) *1

	Standard
X	Adopted

* This product is available only for the actuator (and motor mounting part) and does not include a motor. The user must prepare, mount, and adjust the motor and driver.

*1 ❶Body size "12" cannot be selected.

Screw lead/stroke Compatibility table by body size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	06	0050 to 0500 (50 mm to 500 mm)
	12	
05	02	0050 to 0800 (50 mm to 800 mm)
	05	
	10	
	20	
08	05	0050 to 1100 (50 mm to 1100 mm)
	10	
	20	
12	05	0050 to 1250 (50 mm to 1250 mm)
	10	
	20	
	32	

List of servo motors recommended for mounting

Code	Manufacturer	Series	50 W	100 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR053	HG-KR13
		MELSERVO J5	HK-KT053W	HK-KT13W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C1040F	ECMA-C10401
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□, A04005	R2□, A04010
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-A5	SGM7J-01
		Σ-X	SGMXJ-A5	SGMXJ-01
	Keyence Corporation	SV	SV-□005	SV-□010
		SV2	SV2-□005	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD5A	MSMD01
		MINAS A6	MSMF5A	MSMF01
M	OMRON Corporation	G5	R88M-K05030	R88M-K10030
		1S	R88M-1M05030	R88M-1M10030
	Fuji Electric Corporation	ALPHA7 GYS	–	GYS101D7-□B2□
		ALPHA7 GYB	GYB500D7-□B2□	GYB101D7-□B2□
F	FANUC CORPORATION	βiS-B	A06B-0111-B1	A06B-0112-B1
P	Bosch Rexroth AG	MSM	MSM019A	MSM019B
M	Rockwell Automation, Inc.	TLP	TLP-A046-005-DKA□2	TLP-A046-010-DKA□2
	SIEMENS AG	1FK2 *1	1FK2102-0AG0	1FK2102-1AG0

Code	Manufacturer	Series	200 W	400 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43
		MELSERVO J5	HK-KT23W	HK-KT43W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C10602	ECMA-C10604
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-02	SGM7J-04
		Σ-X	SGMXJ-02	SGMXJ-04
	Keyence Corporation	SV	SV-□020	SV-□040
		SV2	SV2-□020	SV2-□040
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04
		MINAS A6	MSMF02	MSMF04
	OMRON Corporation	G5	R88M-K20030	R88M-K40030
		1S	R88M-1M20030	R88M-1M40030
M	Fuji Electric Corporation	ALPHA7 GYS	GYS201D7-□B2□	GYS401D7-□B2□
		ALPHA7 GYB	GYB201D7-□B2□	GYB401D7-□B2□
F	FANUC CORPORATION	βiS-B	A06B-2115-B1	-
P	Bosch Rexroth AG	MSM	MSM031B	MSM031C
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2
	SIEMENS AG	1FK2 *1	1FK2203-2AG0	1FK2203-4AG0

* Contact CKD for information on mounting motors other than the above and products of other motor manufacturers.

*1 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 1 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (as of January 2021)

Electric Actuator with Motor Specification Slider Type

EBS-04LE

Inline Motor Mount Type

● Servo Motor Capacity: 50 W

RoHS

Model No. Notation Method

EBS - 04 L E - 06 0300 NNN - M H N N - X

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❽ Motor Capacity

H	50 W

Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

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

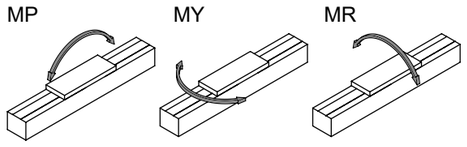
Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92	
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

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

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 500
6	300
12	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

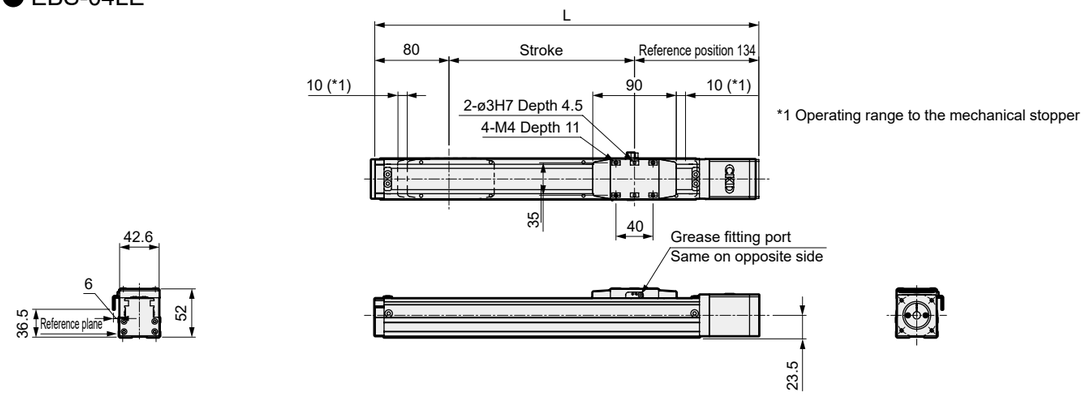
Allowable Overhang Length

* Refer to P. 56 for details.

CKD

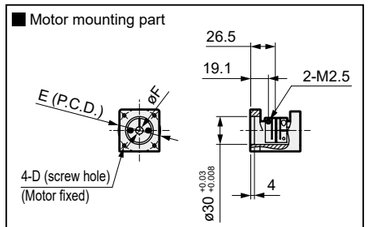
Outline Dimensions, Inline Motor Mount

● EBS-04LE



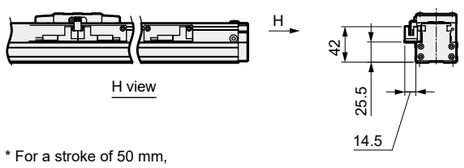
*1 Operating range to the mechanical stopper

■ Motor mounting part



Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

■ When origin/limit sensors are mounted



* For a stroke of 50 mm,
a sensor must be mounted to both sides.
Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	264	314	364	414	464	514	564	614	664	714
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.4	2.6

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-04L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 50 W

RoHS

Model No. Notation Method

EBS - 04 L R - 06 0300 NNN - M H N N - X

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❽ Motor Capacity

H	50 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

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

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

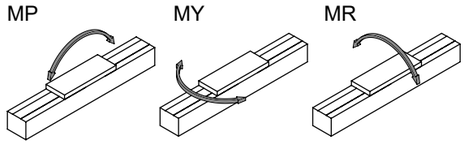
Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92	
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

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

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 600
6	300
12	600

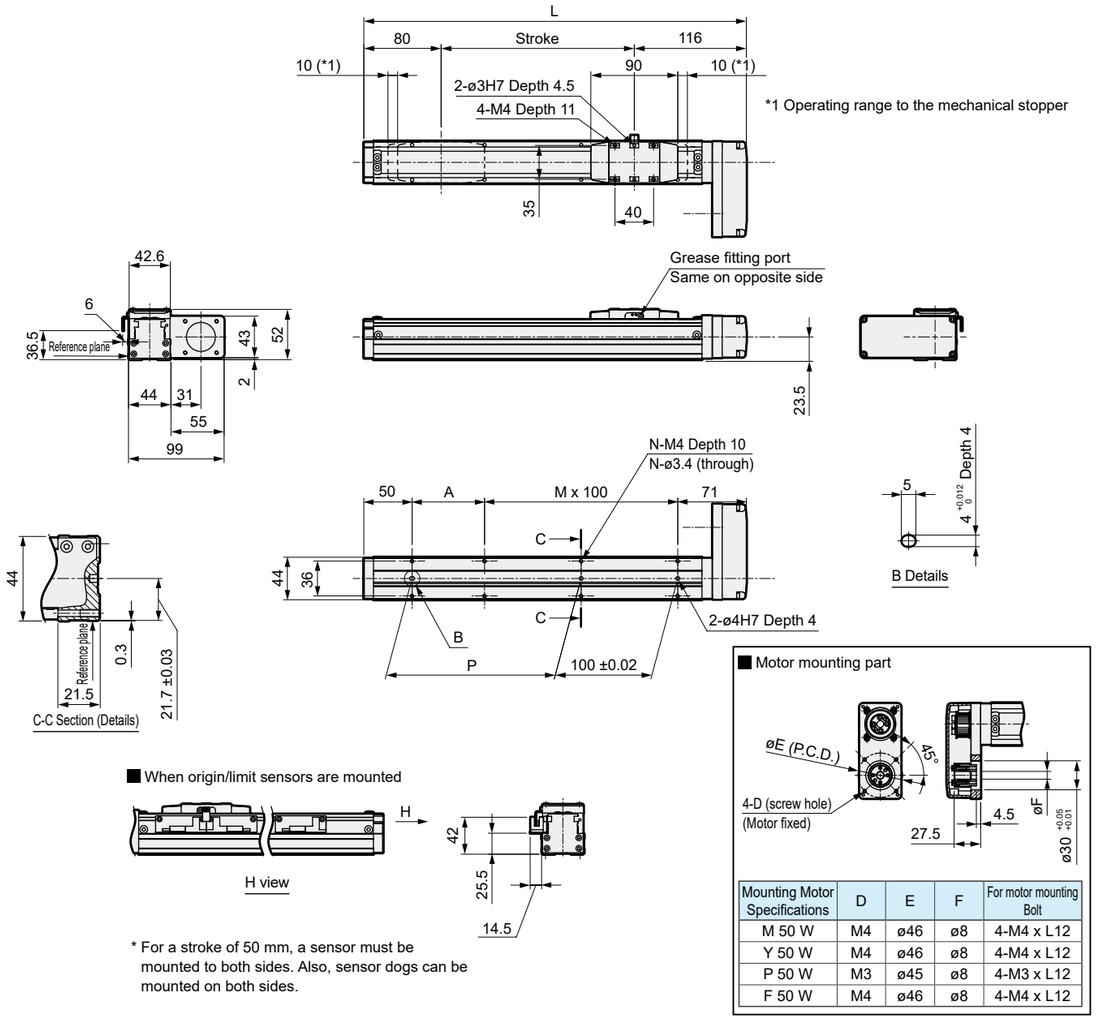
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

External Dimension Drawing Motor Right Side Return Mount

● EBS-04LR



When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

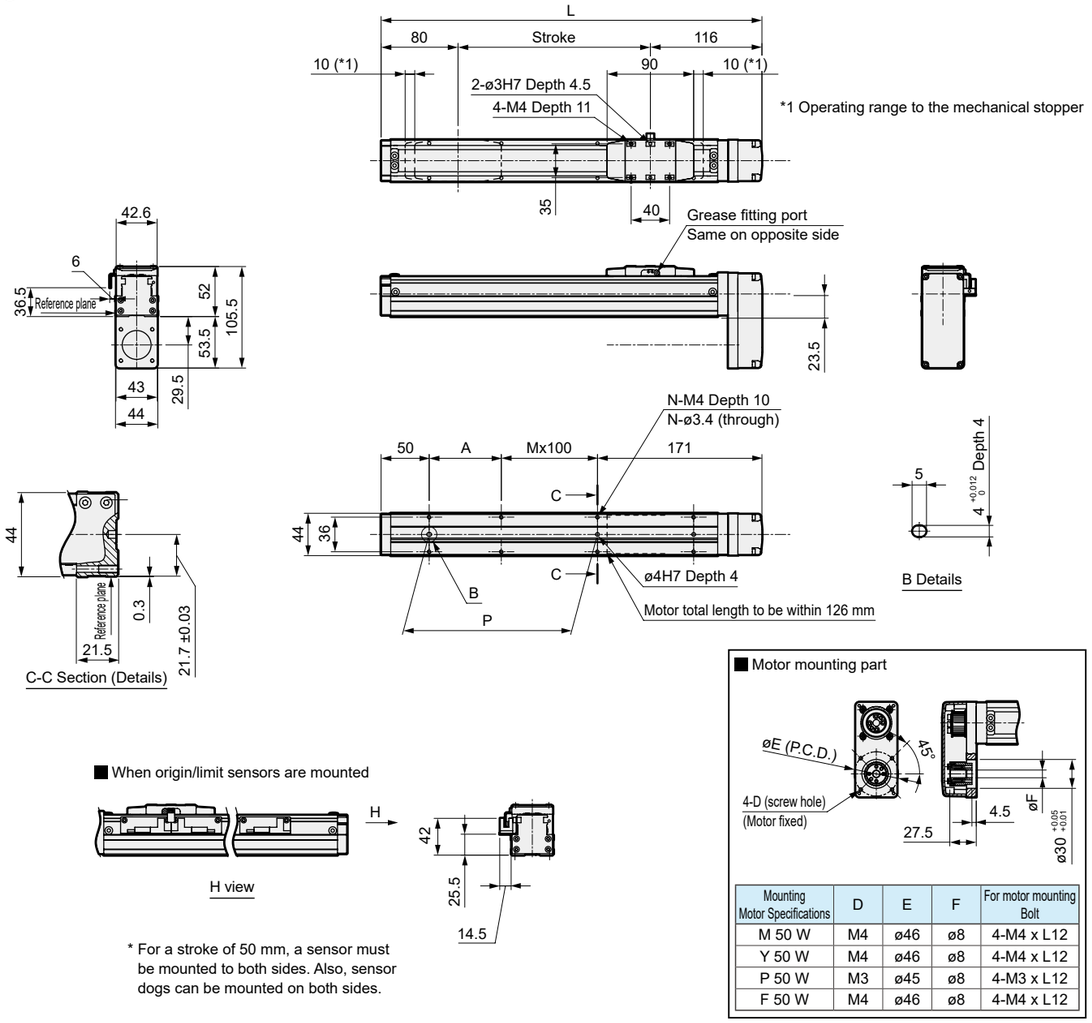
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-04LD



■ When origin/limit sensors are mounted

H view

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part

Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4
N	4	4	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

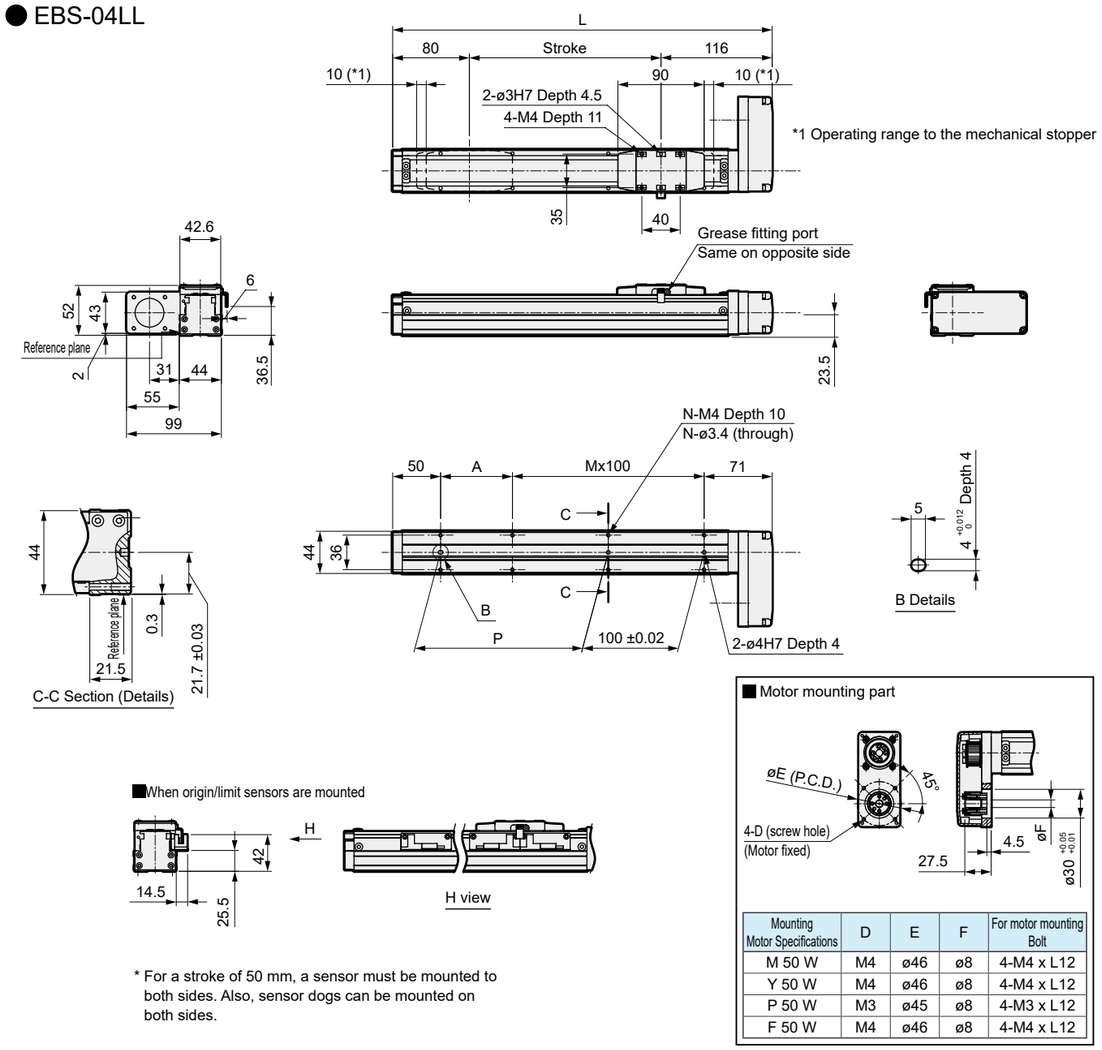
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-04LL



■ When origin/limit sensors are mounted

H view

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part

Mounting Motor Specifications	D	E	F	For motor mounting Bolt
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-05LE

Inline Motor Mount Type

● Servo Motor Capacity: 100 W

RoHS

Model No. Notation Method

EBS - 05 L E - 02 0300 NNN - M 1 N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

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

❺ Stroke

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

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

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

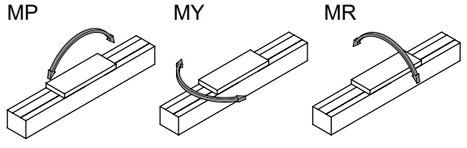
Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw lead	mm	2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP: 103 MY: 103 MR: 144			
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

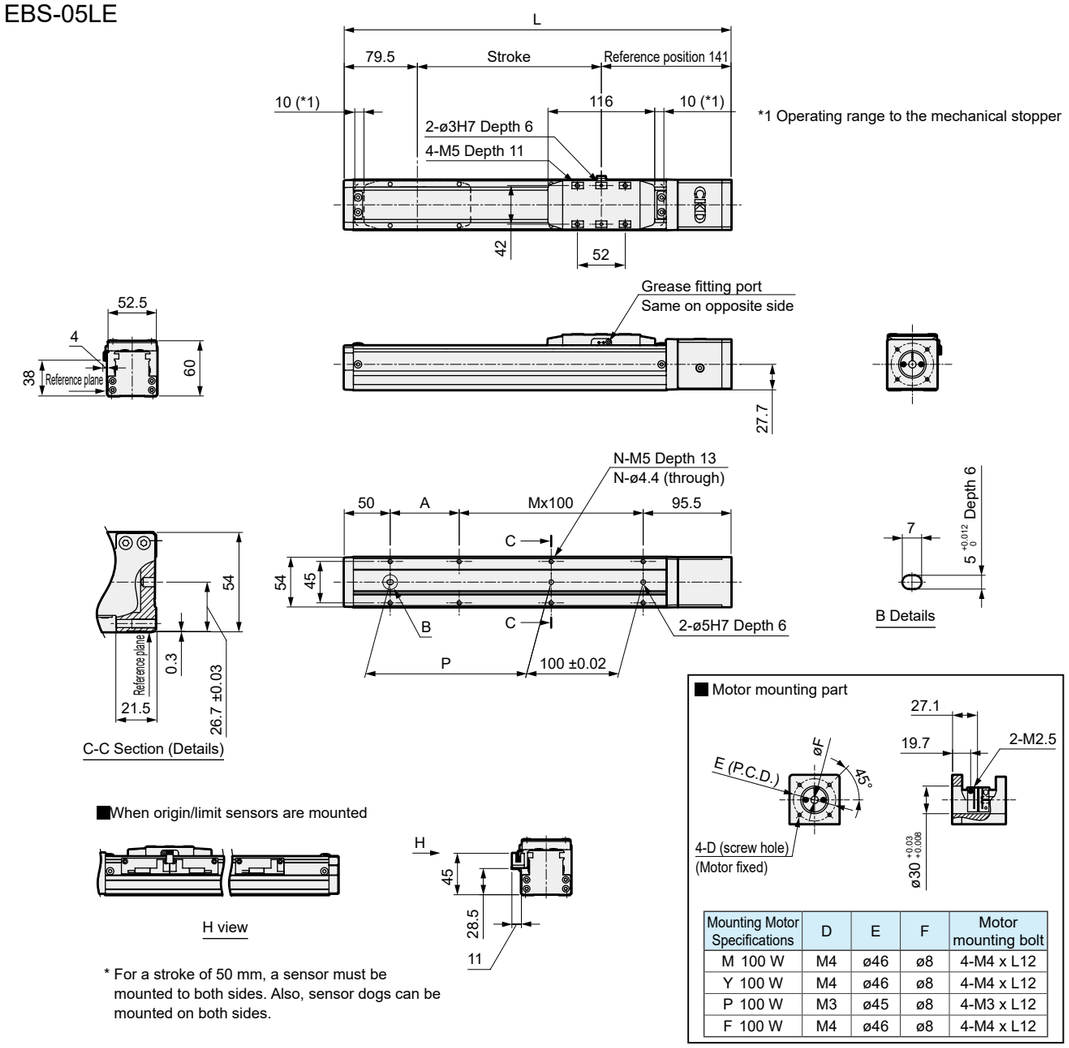
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Outline Dimensions, Inline Motor Mount

● EBS-05LE



■When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor mounting bolt
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	270.5	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.2	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-05L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity: 100 W

RoHS

Model No. Notation Method

EBS - 05 L R - 02 0300 NNN - M 1 N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

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

❺ Stroke

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

❻ Mounting Motor Specifications

M, Y, P, F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X) *1

	Standard
X	Adopted

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

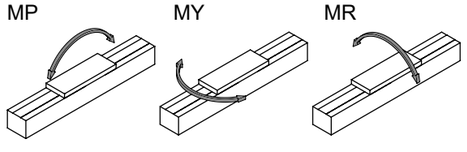
*1 Origin sensor and limit sensor are a set. As it is both-or-nothing, select "None" for both.

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw Lead		2	5	10	20
Max. Payload	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP: 103 MY: 103 MR: 144			
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction



Stroke and Max. Speed

(mm/s)

Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

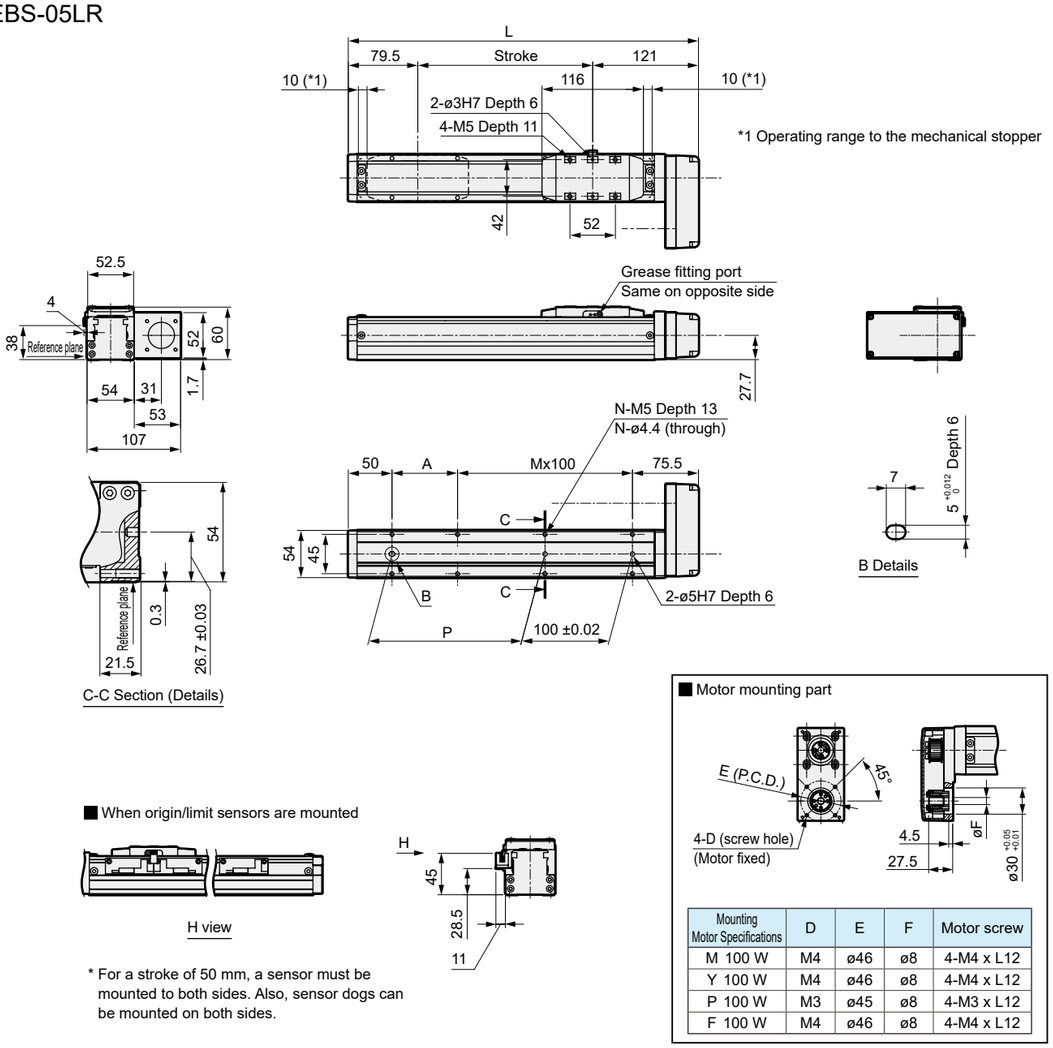
Allowable Overhang Length

* For details, see P. 56.

CKD

External Dimension Drawing Motor Right Side Return Mount

● EBS-05LR



■ When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part

Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

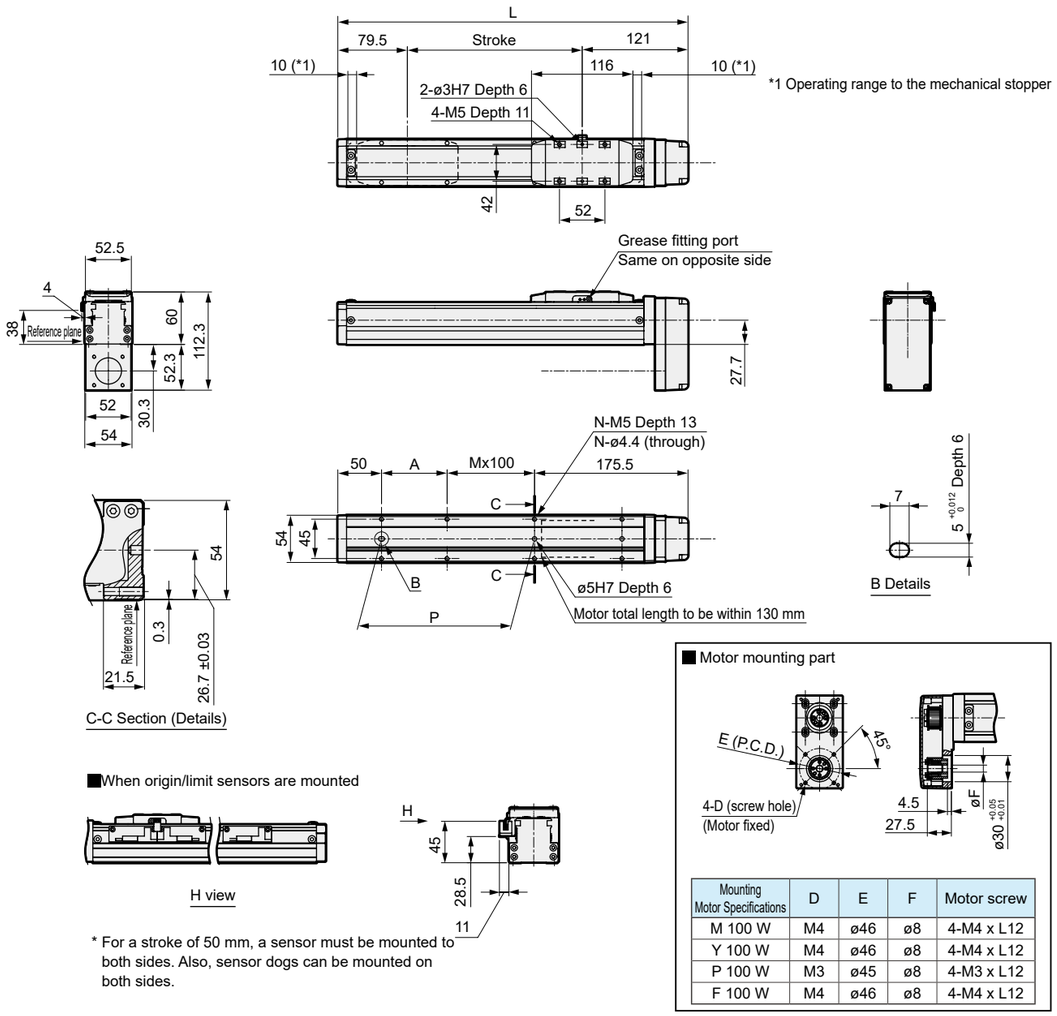
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

CKD

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-05LD



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

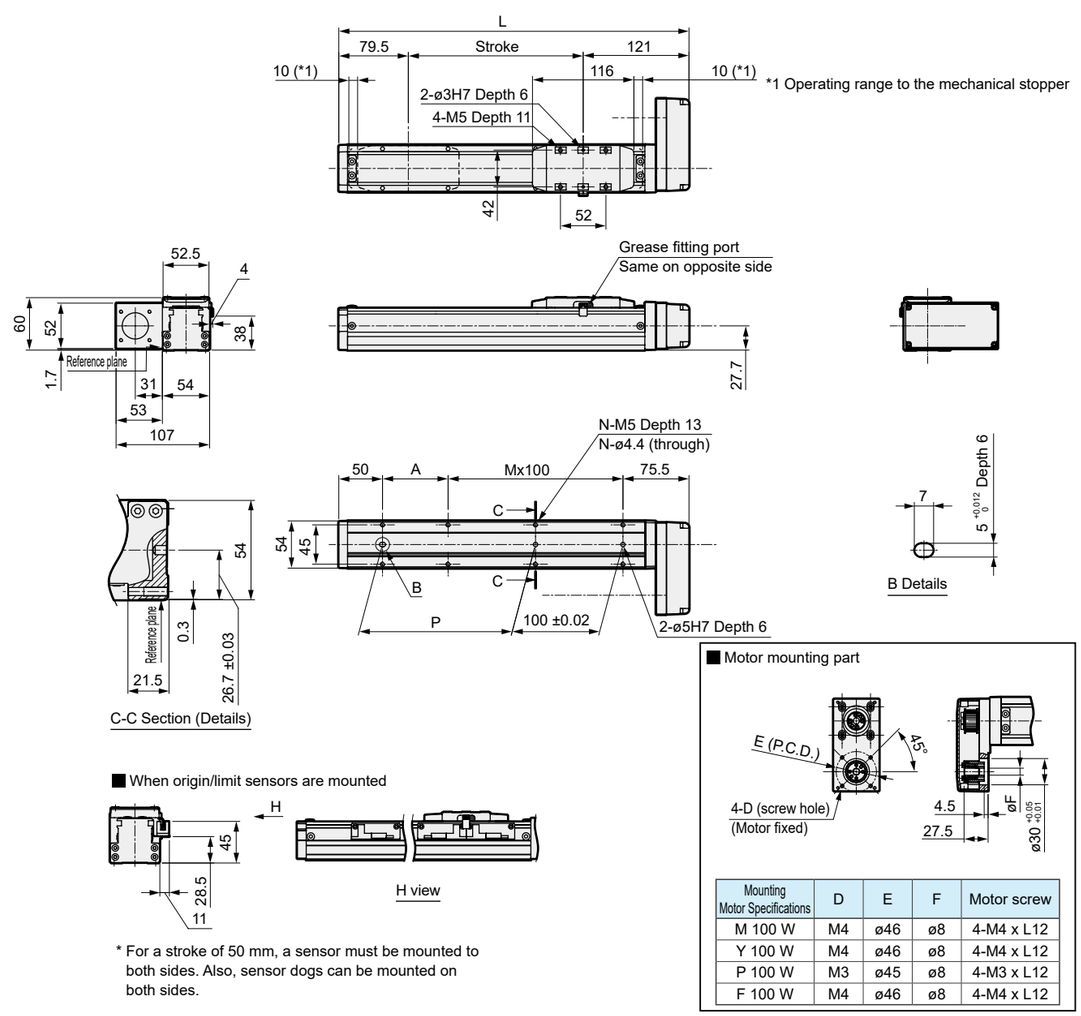
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-05LL



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

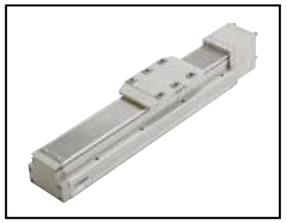
[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.



Electric Actuator with Motor Specification Slider Type

EBS-08LE

Inline Motor Mount Type

● Servo Motor Capacity: 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 ↔ 1100	50 mm (every 50 mm) 1100 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

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

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

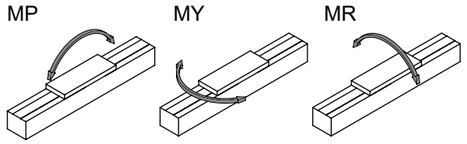
Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. Payload *1	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust *1	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336		
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

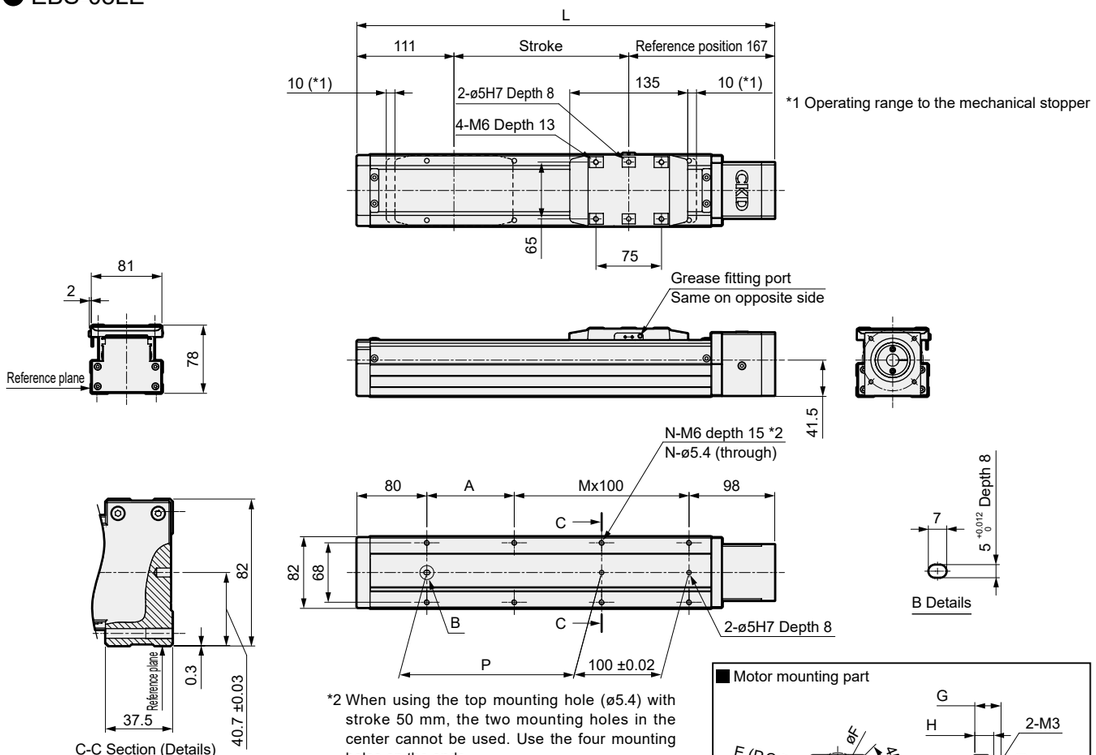
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

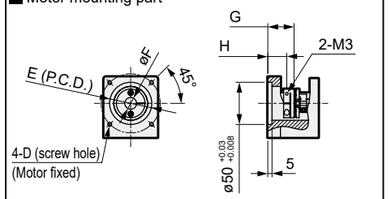
Outline Dimensions, Inline Motor Mount

● EBS-08LE



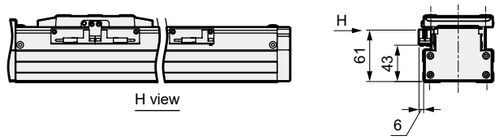
*2 When using the top mounting hole (ø5.4) with stroke 50 mm, the two mounting holes in the center cannot be used. Use the four mounting holes on the ends.

■ Motor mounting part



Mounting Motor Specifications	D	E	F	G	H	Motor mounting bolt
M 200 W	M5	ø70	ø14	31.1	22.5	4-M5 x L18
Y 200 W	M5	ø70	ø14	31.1	22.5	4-M5 x L18
P 200 W	M4	ø70	ø11	31.1	22.5	4-M4 x L18
F 200 W	M5	ø70	ø9	29.1	20.5	4-M5 x L16

■ When origin / limit sensors are mounted



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.3	4.6	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.2	7.5	7.9	8.2	8.5	8.8	9.2	9.5	9.8	10.2	10.5	10.8	11.1

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator with Motor Specification Slider Type

EBS-08L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity: 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

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

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

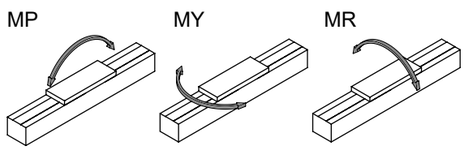
Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw Lead		5	10	20
Max. Payload	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336		
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

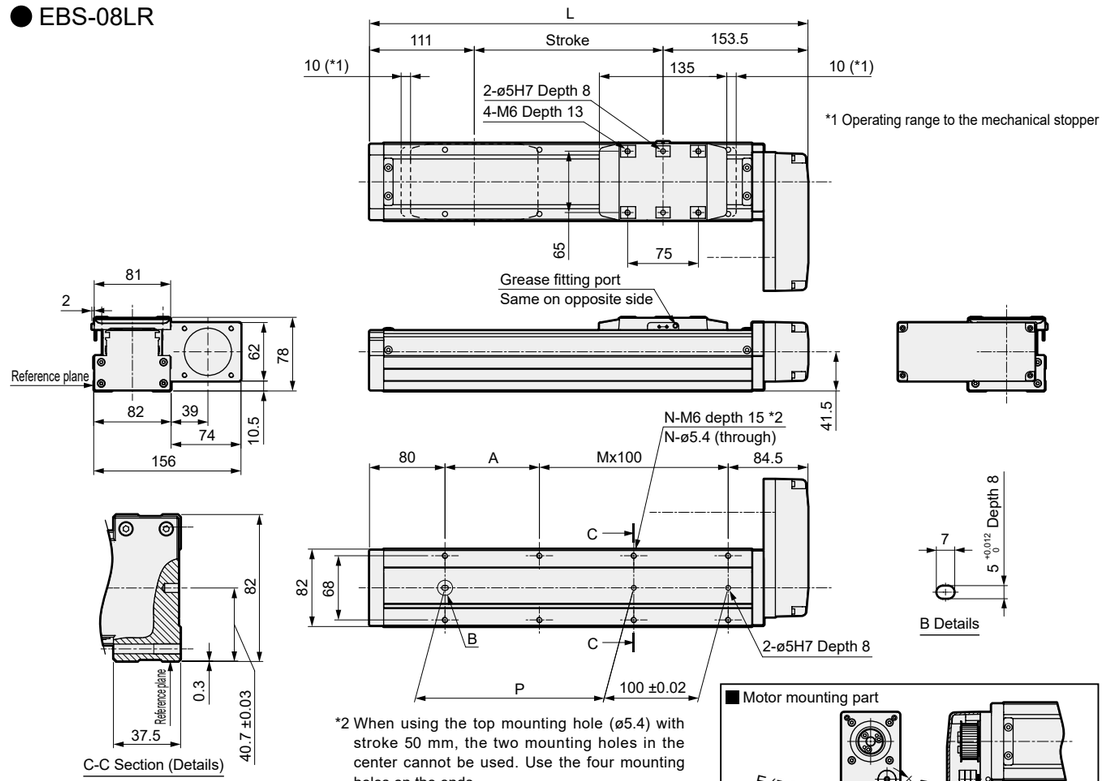
Allowable Overhang Length

* For details, see P. 56.

CKD

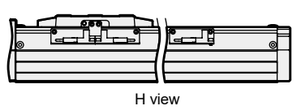
External Dimension Drawing Motor Right Side Return Mount

● EBS-08LR

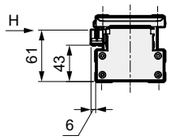


*2 When using the top mounting hole (ø5.4) with stroke 50 mm, the two mounting holes in the center cannot be used. Use the four mounting holes on the ends.

■ When origin/limit sensors are mounted

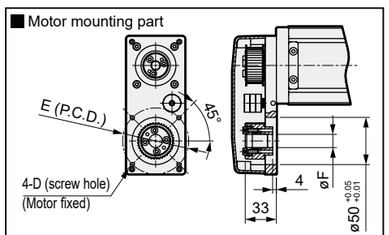


H view



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs can be mounted on both sides.

■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor screw
M 200 W	M5	ø70	ø14	4-M5 x L18
Y 200 W	M5	ø70	ø14	4-M5 x L18
P 200 W	M4	ø70	ø11	4-M4 x L18
F 200 W	M5	ø70	ø9	4-M5 x L16

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

[Origin sensor, limit sensor]

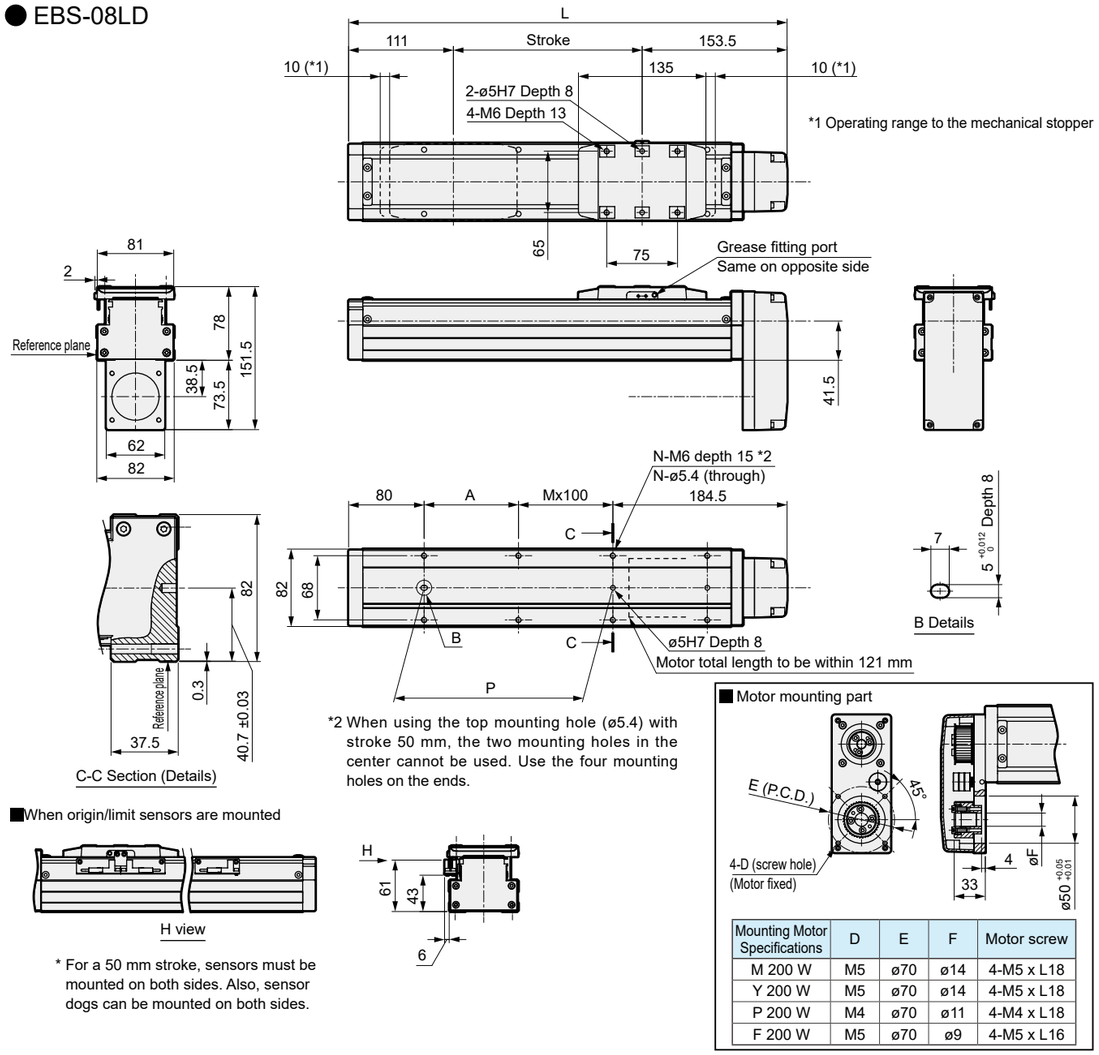
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

CKD

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-08LD



■When origin/limit sensors are mounted

* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 200 W	M5	ø70	ø14	4-M5 x L18
Y 200 W	M5	ø70	ø14	4-M5 x L18
P 200 W	M4	ø70	ø11	4-M4 x L18
F 200 W	M5	ø70	ø9	4-M5 x L16

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

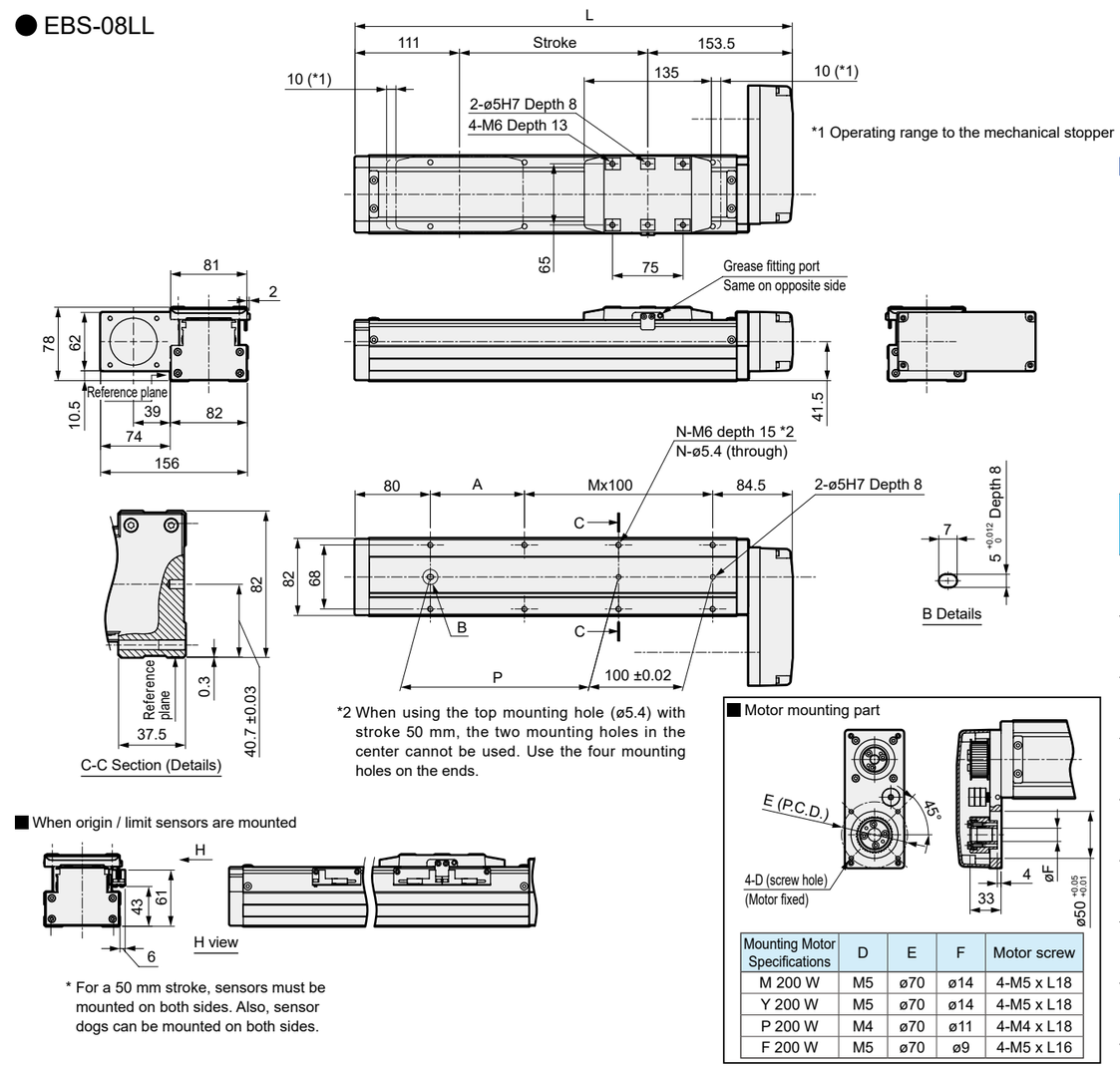
[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-08LL



■When origin / limit sensors are mounted

* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

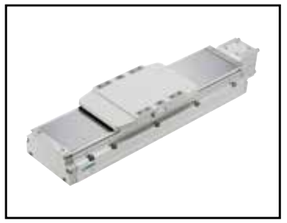
[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4
F		M5	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.



Electric Actuator with Motor Specification Slider Type

EBS-12LE

Inline Motor Mount Type

● Servo Motor Capacity: 400 W

RoHS

Model No. Notation Method

EBS - 12 L E - 05 0300 NNN - M 4 N N

❶ Body Size
12	Body width 120 mm

❷ Motor
L	None

❸ Motor Mounting Direction
E	Inline Mount

❹ Screw Lead
05	5 mm
10	10 mm
20	20 mm
32	32 mm

❺ Stroke
0050 to 1250	50 mm (every 50 mm) 1250 mm

❻ Mounting Motor Specifications
M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Capacity
4	400 W

❽ Origin sensor *1
N	None
C	Yes

❾ Limit sensor *1
N	None
B	Yes

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

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

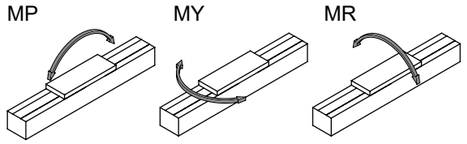
Specifications

Applicable Motor Capacity		400 W Servo Motor			
Drive Method		Ball screw ø16			
Stroke	mm	50 to 1250			
Screw lead	mm	5	10	20	32
Max. Payload *1	kg Horizontal	110	88	40	30
	kg Vertical	33	22	10	8
Max. Speed	mm/s	250	500	1,000	1600
Rated thrust *1	N	1388	694	347	218
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	8310			
Static Allowable Moment	N·m	MP: 606 MY: 606 MR: 1168			
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
5	250	225	200	175	150	140	130	120	110	100	90	80
10	500	450	400	350	325	300	275	250	225	200	175	150
20	1,000	1,000	900	800	700	650	600	550	500	450	400	350
32	1600	1450	1300	1150	1050	950	850	750	650	550	450	350

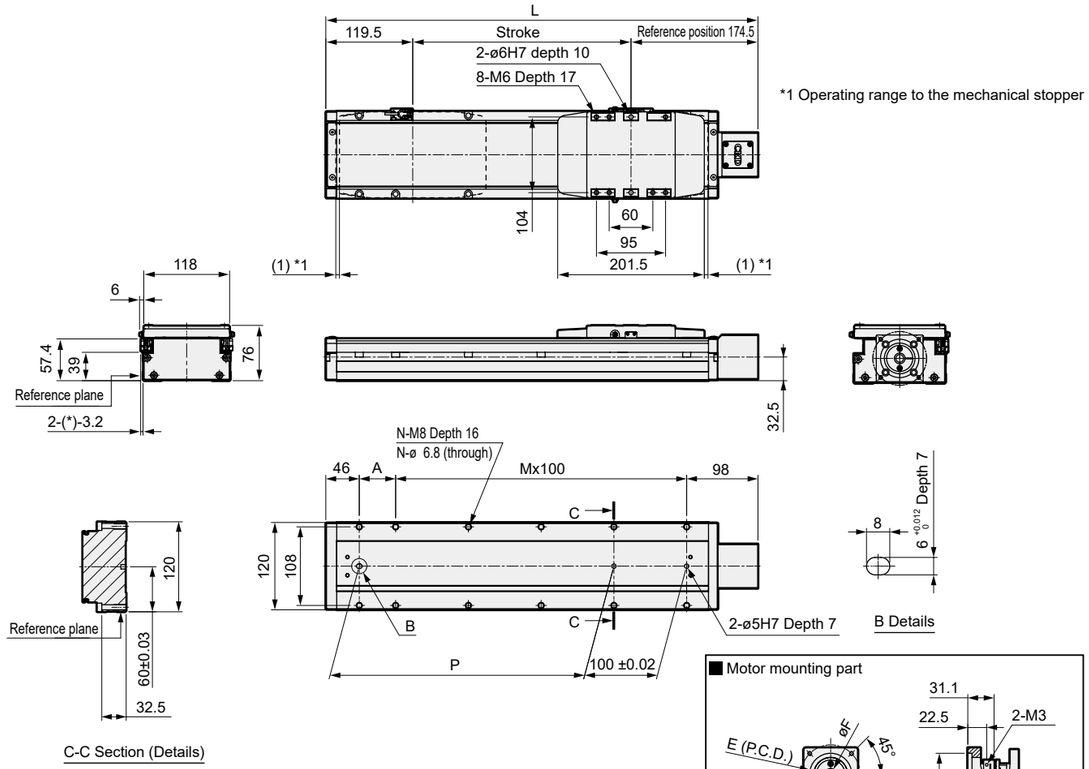
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Outline Dimensions, Inline Motor Mount

● EBS-12LE



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor mounting bolt
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244	1294	1344	1394	1444	1494	1544
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.1	5.4	5.8	6.1	6.5	6.8	7.2	7.5	7.9	8.2	8.6	8.9	9.3	9.6	10.0	10.3	10.7	11.0	11.4	11.7	12.1	12.4	12.8	13.1	13.5

List of Accessories

[Motor mounting parts]

Mounting Motor Specifications	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

[Origin sensor, limit sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, refer to P. 64.

Electric Actuator with Motor Specification Slider Type

EBS-12L□

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 400 W

RoHS

Model No. Notation Method

EBS - 12 L R - 05 0300 NNN - M 4 N N

❶ Body Size

12	Body width 120 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm
32	32 mm

❺ Stroke

0050 to 1250	50 mm (every 50 mm) 1250 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Capacity

4	400 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

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

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

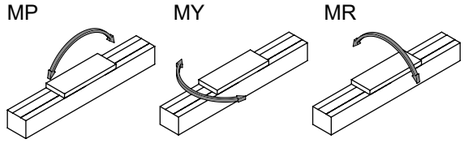
* Refer to P. 13 for motor model No.

Specifications

Applicable Motor Capacity		400 W Servo Motor			
Drive Method		Ball screw ø16			
Stroke	mm	50 to 1250			
Screw lead	mm	5	10	20	32
Max. Payload *1	kg Horizontal	110	88	40	30
	kg Vertical	33	22	10	8
Max. Speed	mm/s	250	500	1,000	1600
Rated thrust *1	N	1388	694	347	218
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	8310			
Static Allowable Moment	N·m	MP: 606 MY: 606 MR: 1168			
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
5	250	225	200	175	150	140	130	120	110	100	90	80
10	500	450	400	350	325	300	275	250	225	200	175	150
20	1,000	1,000	900	800	700	650	600	550	500	450	400	350
32	1600	1450	1300	1150	1050	950	850	750	650	550	450	350

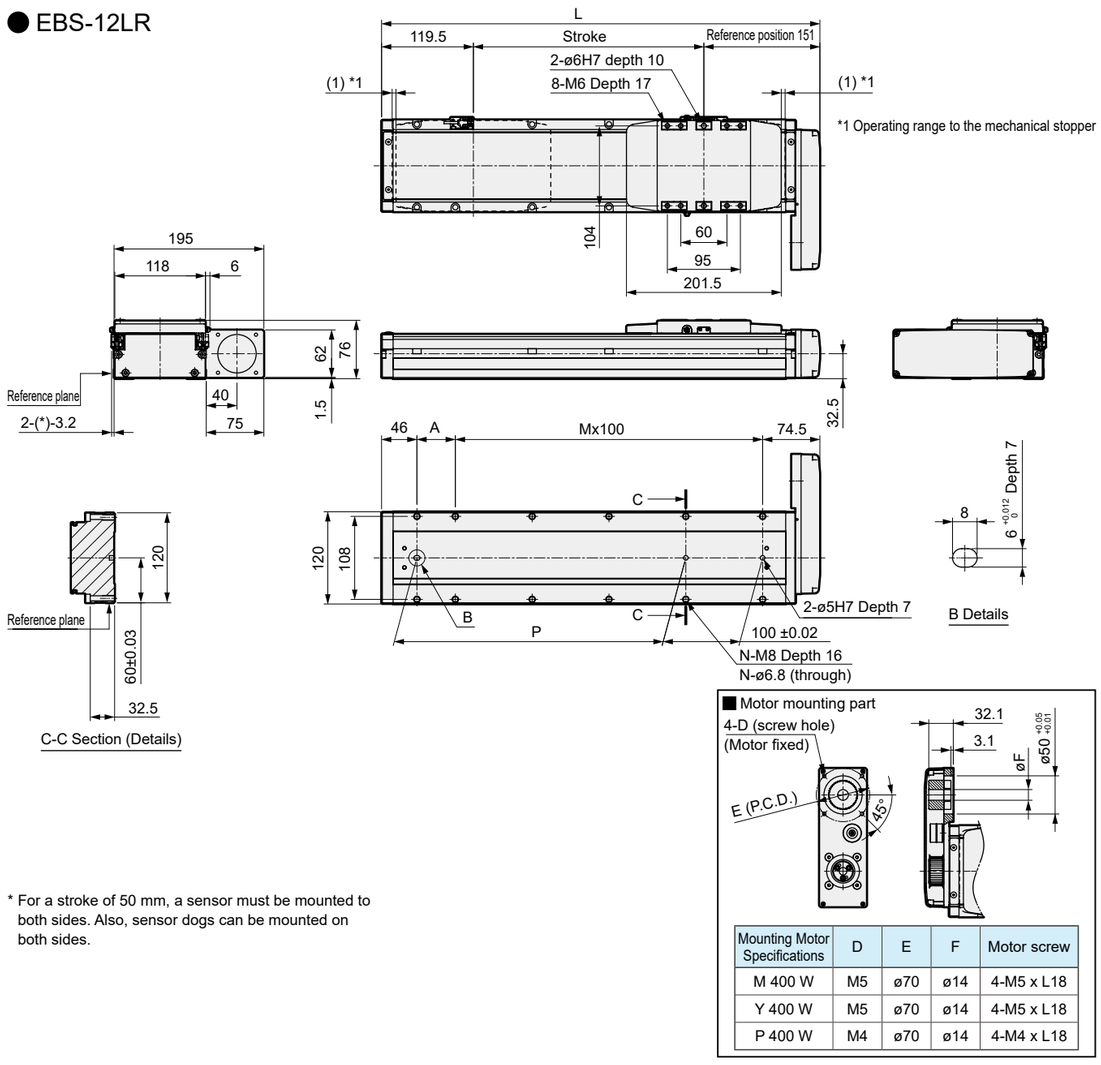
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

External Dimension Drawing Motor Right Side Return Mount

● EBS-12LR



C-C Section (Details)

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.3	5.6	6.0	6.3	6.7	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	10.9	11.2	11.6	11.9	12.3	12.6	12.6	13.0	13.3	13.7

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

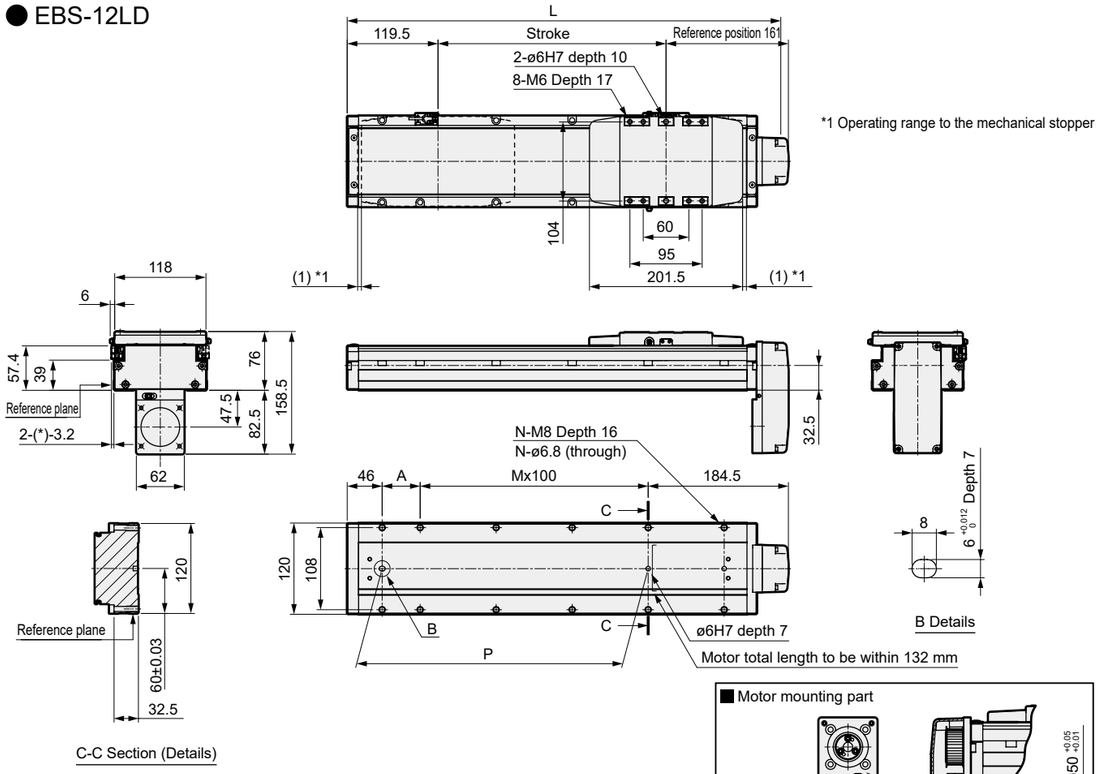
[Origin sensor, limit sensor]

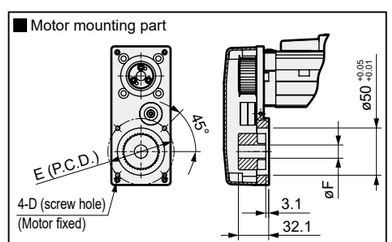
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Bottom Side Return Mount

● EBS-12LD





Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5	980.5	1030.5	1080.5	1130.5	1180.5	1230.5	1280.5	1330.5	1380.5	1430.5	1480.5	1530.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12
N	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.3	5.6	6.0	6.3	6.7	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	10.5	10.9	11.2	11.6	11.9	12.3	12.6	13.0	13.3	13.7

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

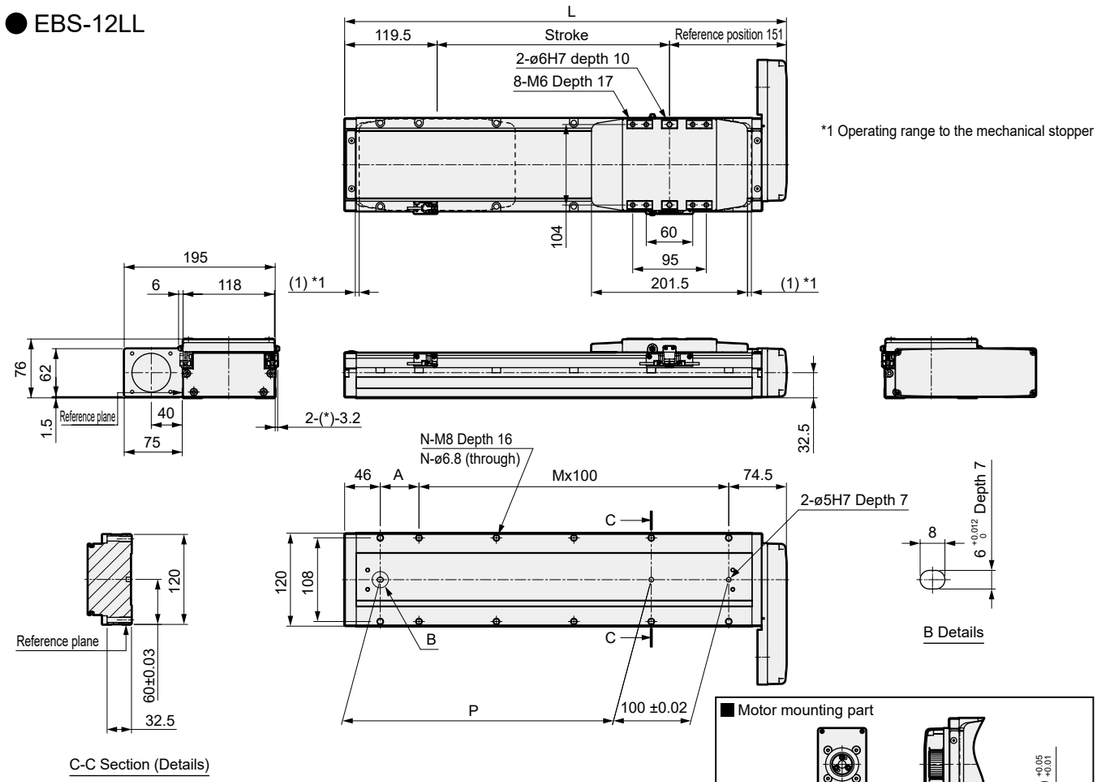
[Origin sensor, limit sensor]

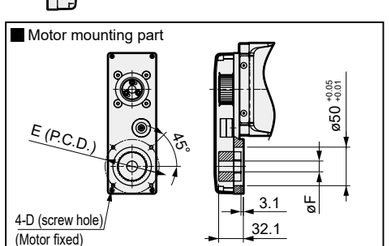
Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

External Dimension Drawing Motor Left Side Return Mount

● EBS-12LL





Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs can be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100	1150	1200	1250
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250
L	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5	1120.5	1170.5	1220.5	1270.5	1320.5	1370.5	1420.5	1470.5	1520.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26	28	28	30	30
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100	1150	1200	1250	1300
Weight (kg)	5.3	5.6	6.0	6.3	6.7	7.0	7.4	7.7	8.1	8.4	8.8	9.1	9.5	9.8	10.2	10.9	11.2	11.6	11.9	12.3	12.6	12.6	13.0	13.3	13.7

List of Accessories

[Motor mounting]

Mounting Motor Specifications	Timing belt, pulley	Motor mounting bolt	
		Size	Included quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

[Origin sensor, limit sensor]

Sensor		
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* Refer to P. 64 for sensor specifications.

Electric Actuator Servo Motor Compatible
Motorless specifications

EBS-L-C

Slider Type Low Dust Emission Specification

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System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and max. speed (mm/s) *2	Listed Page
Slider Type		EBS-04L□-06-C	50	44	6	20	5	50 mm: 300 mm/s (⏱ 1.03 secs.); 100: 300 mm/s; 150: 300 mm/s; 200: 300 mm/s; 250: 300 mm/s (⏱ 1.70 secs.)	44
		EBS-04L□-12-C			12	12	2	50 mm: 600 (⏱ 0.56 secs.); 100: 600; 150: 600; 200: 600; 250: 600 (⏱ 0.89 secs.)	
		EBS-05L□-02-C	100	54	2	30	10	50 mm: 100 (⏱ 3.01 secs.); 100: 100; 150: 100; 200: 100; 250: 100 (⏱ 6.01 secs.); 300: 90; 350: 80; 400: 70; 450: 60 (⏱ 13.34 secs.)	46
		EBS-05L□-05-C			5	30	10	50 mm: 250 (⏱ 1.23 secs.); 100: 250; 150: 250; 200: 250; 250: 250 (⏱ 2.43 secs.); 300: 225; 350: 200; 400: 175; 450: 150 (⏱ 5.35 secs.)	
		EBS-05L□-10-C			10	15	5	50 mm: 500 (⏱ 0.65 secs.); 100: 500; 150: 500; 200: 500; 250: 500 (⏱ 1.25 secs.); 300: 450; 350: 400; 400: 350; 450: 300 (⏱ 2.70 secs.)	
		EBS-05L□-20-C			20	10	2.5	50 mm: 1,000 (⏱ 0.40 secs.); 100: 1,000; 150: 1,000; 200: 1,000; 250: 1,000 (⏱ 0.70 secs.); 300: 900; 350: 800; 400: 700; 450: 600 (⏱ 1.39 secs.)	
		EBS-08L□-05-C	200	82	5	50	15	50 mm: 250 (⏱ 1.23 secs.); 100: 250; 150: 250; 200: 250; 250: 250 (⏱ 2.43 secs.); 300: 225; 350: 200; 400: 175; 450: 150 (⏱ 6.02 secs.); 500: 125; 550: 100; 600: 75; 650: 50 (⏱ 22.01 secs.)	48
		EBS-08L□-10-C			10	30	8	50 mm: 500 (⏱ 0.65 secs.); 100: 500; 150: 500; 200: 500; 250: 500 (⏱ 1.25 secs.); 300: 450; 350: 400; 400: 350; 450: 300; 500: 250; 550: 200; 600: 150; 650: 100 (⏱ 3.03 secs.); 700: 100 (⏱ 11.01 secs.)	
		EBS-08L□-20-C			20	12	2.5	50 mm: 1,000 (⏱ 0.40 secs.); 100: 1,000; 150: 1,000; 200: 1,000; 250: 1,000 (⏱ 0.70 secs.); 300: 900; 350: 800; 400: 700; 450: 600; 500: 500; 550: 400; 600: 300; 650: 200 (⏱ 1.56 secs.); 700: 200 (⏱ 5.52 secs.)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.
*3 ⏱ shows the Positioning time. When a specified stroke is installed horizontally and operated at maximum speed and maximum acceleration/deceleration. Note that this is not the value at maximum payload.

Model No. Configuration

Slider Type　Low Dust Emission Specification

EBS - 05 L E - 02 0300 NNN - M 1 N N - C

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾

❾ Low Dust Emission Specification

❶ Body Size	
04	Body width 44 mm
05	Body width 54 mm
08	Body width 82 mm

❷ Motor	
L	None

❸ Motor Mounting Direction	
E	Inline Mount
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left-Side Reverse Parallel Mount

❹ Screw Lead	
02	2 mm
05	5 mm
06	6 mm
10	10 mm
12	12 mm
20	20 mm

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

❻ Mounting Motor Specifications	
M	Refer to the list on the page at right
Y	
P	
F	

❼ Motor Capacity	
H	50 W
1	100 W
2	200 W

❽ Origin sensor	
N	None
C	Yes

❾ Limit sensor	
N	None
B	Yes

* This product is available only for the actuator (and motor mounting part) and does not include a motor. The user must prepare, mount, and adjust the motor and driver.

Screw lead/stroke　Compatibility table by body size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	06	0050 to 0500 (50 mm to 500 mm)
	12	
05	02	0050 to 0800 (50 mm to 800 mm)
	05	
	10	
	20	
08	05	0050 to 1100 (50 mm to 1100 mm)
	10	
	20	

List of servo motors recommended for mounting

Code	Manufacturer	Series	50 W	100 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR053	HG-KR13
		MELSERVO J5	HK-KT053W	HK-KT13W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C1040F	ECMA-C10401
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A04005	R2□A04010
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-A5	SGM7J-01
		Σ-X	SGMXJ-A5	SGMXJ-01
	Keyence Corporation	SV	SV-□005	SV-□010
		SV2	SV2-□005	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD5A	MSMD01
		MINAS A6	MSMF5A	MSMF01
M	OMRON Corporation	G5	R88M-K05030	R88M-K10030
		1S	R88M-1M05030	R88M-1M10030
	Fuji Electric Corporation	ALPHA7 GYS	GYS500D7-□B2□	GYS101D7-□B2□
		ALPHA7 GYB	-	-
F	FANUC CORPORATION	βiS-B	A06B-0111-B1	A06B-0112-B1
P	Bosch Rexroth AG	MSM	MSM019A	MSM019B
M	Rockwell Automation, Inc.	TLP	TLP-A046-005-DKA□2	TLP-A046-010-DKA□2
	SIEMENS AG	1FK2 *1	1FK2102-0AG0	1FK2102-1AG0

Code	Manufacturer	Series	200 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23
		MELSERVO J5	HK-KT23W
	Delta Electronics Co., Ltd.	ECMA-C	ECMA-C10602
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-02
		Σ-X	SGMXJ-02
	Keyence Corporation	SV	SV-□020
		SV2	SV2-□020
P	Panasonic Corporation	MINAS A5	MSMD02
		MINAS A6	MSMF02
	OMRON Corporation	G5	R88M-K20030
		1S	R88M-1M20030
M	Fuji Electric Corporation	ALPHA7 GYS	GYS201D7-□B2□
		ALPHA7 GYB	GYB201D7-□B2□
F	FANUC CORPORATION	βiS-B	A06B-2115-B1
P	Bosch Rexroth AG	MSM	MSM031B
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2
	SIEMENS AG	1FK2 *1	1FK2203-2AG0

* Contact CKD for information on mounting motors other than the above and products of other motor manufacturers.

*1 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 1 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (as of January 2021)

Electric actuator (motorless specifications) Slider Low dust specifications

EBS-04LE-C

Inline Motor Mount Type

● Servo Motor Capacity : 50 W

RoHS

Model No. Notation Method

EBS - 04 L E - 06 0300 NNN - M H N N - C

Low Dust Emission Specification

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

H	50 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

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

Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92	
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

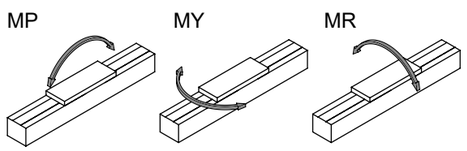
Screw Lead \ Stroke	50 to 500
6	300
12	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* Refer to P. 56 for details.

Moment direction



External Dimension Drawing

For actuator dimensions, please refer to P. 15.
For the dimensions of the fitting, please refer to P. 50.

Electric actuator (motorless specifications) Slider Low dust specifications

EBS-04L□-C

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 50 W

RoHS

Model No. Notation Method

EBS - 04 L R - 06 0300 NNN - M H N N - C

Low Dust Emission Specification

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

H	50 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

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

Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Allowable load	N	1030	
Static Allowable Moment	N·m	MP : 62 MY : 62 MR : 92	
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

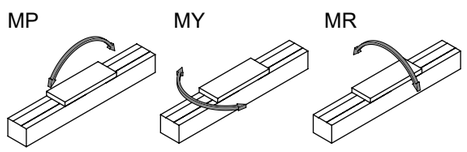
Screw Lead \ Stroke	50 to 600
6	300
12	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Moment direction



External Dimension Drawing

Refer to P. 17 to 19 for actuator dimensions.
For the dimensions of the fitting, please refer to P. 50.

Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-05LE-C

Inline Motor Mount Type

● Servo Motor Capacity : 100 W

RoHS

Model No. Notation Method

EBS - 05 L E - 02 0300 NNN - M 1 N N - C

Low Dust Emission Specification

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

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

❺ Stroke

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

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

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

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw lead	mm	2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP : 103 MY : 103 MR : 144			
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

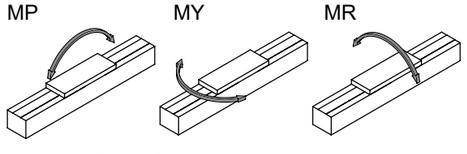
Screw Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Moment direction



External Dimension Drawing

For actuator dimensions, please refer to P. 21.
For the dimensions of the fitting, please refer to P. 50.

Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-05L□-C

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 100 W

RoHS

Model No. Notation Method

EBS - 05 L R - 02 0300 NNN - M 1 N N - C

Low Dust Emission Specification

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

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

❺ Stroke

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

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	
F	

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 13 for motor model No.

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

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw Lead		2	5	10	20
Max. Payload	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Allowable load	N	1168			
Static Allowable Moment	N·m	MP : 103 MY : 103 MR : 144			
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

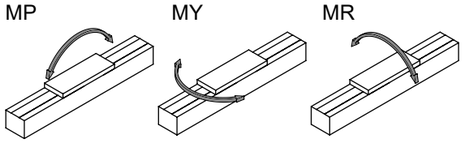
Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1,000	900	800	700	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

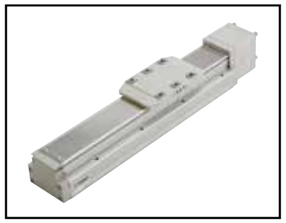
* For details, see P. 56.

Moment direction



External Dimension Drawing

Refer to P. 23 to 25 for actuator dimensions.
For the dimensions of the fitting, please refer to P. 50.



Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-08LE-C

Inline Motor Mount Type

● Servo Motor Capacity : 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - C

Low Dust Emission Specification

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

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

* Refer to P. 13 for motor model No.

Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. Payload *1	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust *1	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP : 203 MY : 203 MR : 336		
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

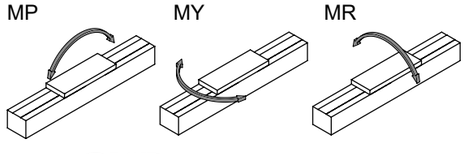
Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

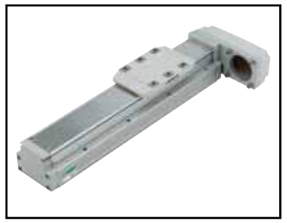
* For details, see P. 56.

Moment direction



External Dimension Drawing

For actuator dimensions, please refer to P. 27.
For the dimensions of the fitting, please refer to P. 50.



Electric actuator (motorless specifications) Slider Type Low dust specifications

EBS-08L□-C

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 200 W

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - M 2 N N - C

Low Dust Emission Specification

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

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

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M Y P F	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics Co., Ltd.	M
Sanyo Denki Co., Ltd.	M
Mitsubishi Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Corporation	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

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

* Refer to P. 13 for motor model No.

Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw Lead		5	10	20
Max. Payload	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Allowable load	N	2781		
Static Allowable Moment	N·m	MP: 203 MY: 203 MR: 336		
Operating Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

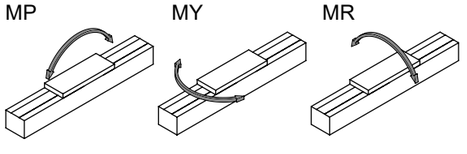
Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1,000	900	800	700	600	500	400	300	200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* For details, see P. 56.

Moment direction

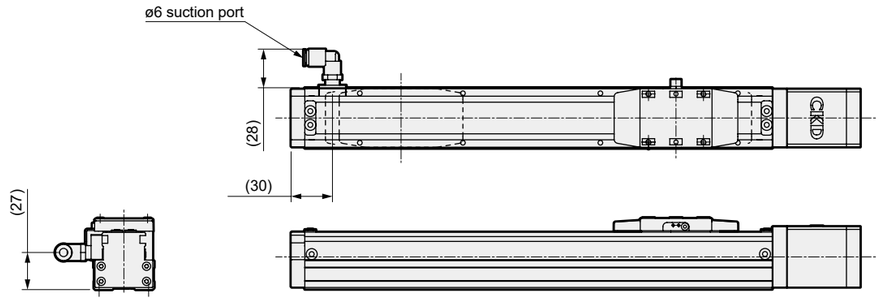


External Dimension Drawing

Refer to P. 29 to 31 for actuator dimensions.
For the dimensions of the fitting, please refer to P. 50.

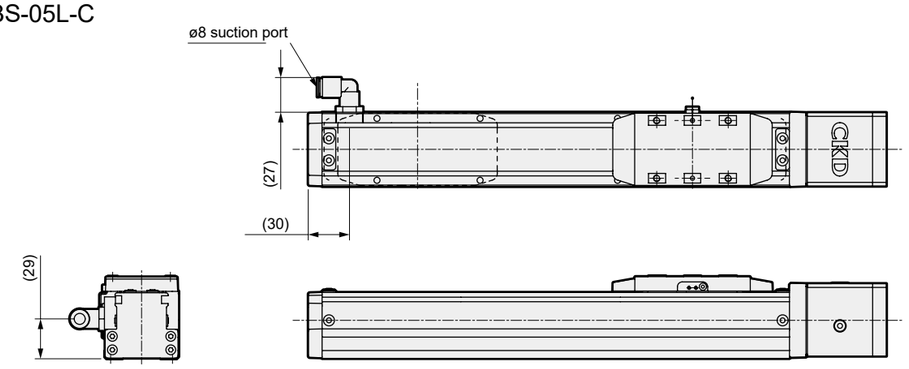
External Dimension Drawing

● EBS-04L-C



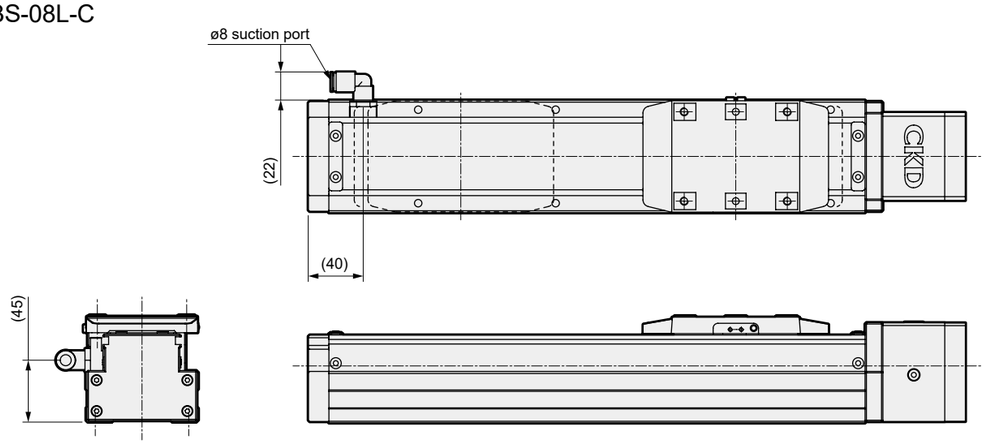
* Refer to P. 15, 17, 19 for actuator dimensions.
* The fitting is included.

● EBS-05L-C



* Refer to P. 21, 23, 25 for actuator dimensions.
* The fitting is included.

● EBS-08L-C

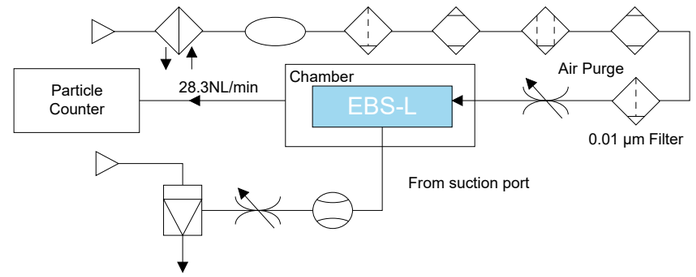


* Refer to P. 27, 29, 31 for actuator dimensions.
* The fitting is included.

* Regardless of the motor mounting direction, the suction port fitting is mounted in the same position.
* Use with a load factor of 30.0 NL/min or less.

Dust Generation Characteristics Reference Data

Test Circuit



Measurement Conditions

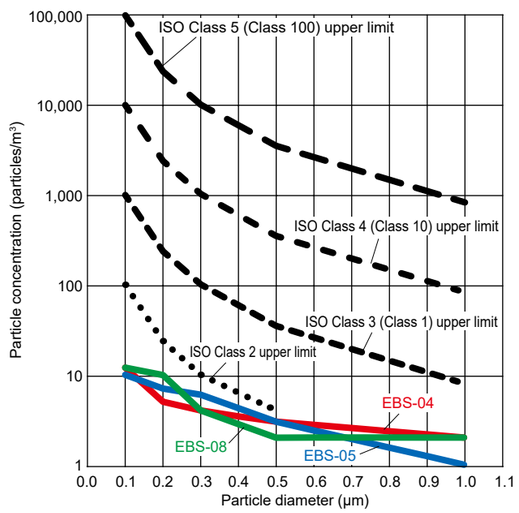
Item		Content
Test Sample	Model No.	Operating speed 100/50 0 mm/sec for EBS-04L□-120400
		Operating speed 100/50 0 mm/sec for EBS-05L□-200400
		Operating speed 100/50 0 mm/sec for EBS-08L□-200400
	Acceleration/deceleration time	0.4 sec
	Air intake volume	30. 0 N L/min for EBS-04L□-120400
		30. 0 N L/min for EBS-05L□-200400
		30. 0 N L/min for EBS-08L-200400
Chamber	Internal Volume	28.3 NL
Particle Counter	Name	Laser dust monitor
	Minimum measurable particle size	0.1 µm
	Suction Flow Rate	28.3 NL/min
Setting conditions	Sampling	10 min
	Interval	40 min
	Measurement time	50 min

Measurement Method

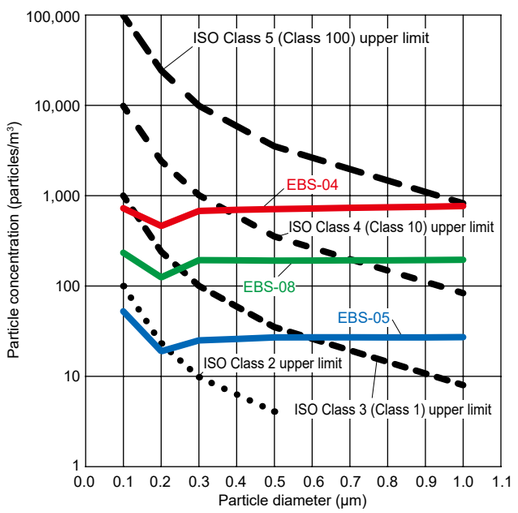
① Set a test sample in the acrylic resin chamber.
② Supply clean air at the same flow rate as the particle counter intake rate (28.3 NL/min).
③ Place the chamber in an ISO class 4 (class 10) clean bench.
④ Activate the test sample and measure changes in particle concentration over time during the specified measurement time.
⑤ Refer to the left for the operation speed of the test sample.

Dust Generation Data

● Operating speed : 100 mm/sec



● operating speed : 500 mm/sec



Model Selection/Technical Data

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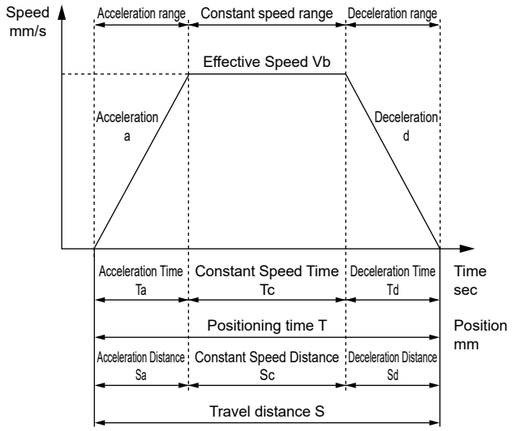
Model Selection

STEP1 Confirmation of Payload

Load capacity varies with mounting orientation and screw lead. Refer to System Table (P.10, P.11, P.40, P.41), the specification table for each model and the thrust table by speed setting to select the size and screw lead.

STEP2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time.
Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$= \{2 \times a \times d \times S / (a + d)\}^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb / a
	Deceleration Time	Td	s	= Vb / d
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	$=(a \times Ta^2) / 2$
	Deceleration Distance	Sd	mm	$=(d \times Td^2) / 2$
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached).
  In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Use at acceleration and deceleration of 1 G or less for horizontal use and 0.5 G or less for vertical use.
* Settling time varies depending on the usage conditions, but it may take about 0.2 s.
* 1 G ≈ 9.8 m/s².

STEP3 Confirmation of Allowable Overhang Length

Make sure that the load overhang length during operation is within the allowable range (P. 56 to 61).

For selection details, refer to the "Model Selection System" on the CKD website or contact your CKD Sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

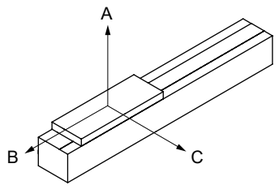
[For confirmation via iPad or smartphone]

* May not display correctly depending on the smartphone's usage environment.

MEMO

Allowable Overhang Length (EBS Series)

[Horizontal Installation]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	6	5	800	160	225
			10	570	70	100
			20	250	30	40
		12	4	800	180	210
			8	380	80	100
			12	230	50	60
	0.5	6	5	800	160	220
			10	400	70	100
			15	240	40	60
		12	4	580	180	200
			8	260	80	90
			12	150	50	50
	1	6	5	520	160	210
			10	240	70	90
			15	140	40	50
		12	4	350	180	180
			8	150	80	80
			12	80	50	40

* The value when the actuator's running life is 5,000 km.
  (Screw lead : 2 mm is the value when the operating life is 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed : The value at 3,000 rpm.
  However, for EBS-12, the value is at 1,800 rpm for 0.3 G acceleration/ deceleration, and 2,400 rpm for 0.5 G.

● EBS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	2	10	1,000	160	225
			20	1,000	75	105
			30	815	45	65
		5	10	1,000	125	170
			20	500	55	75
			30	305	35	45
		10	5	1,000	235	285
			10	580	110	135
			15	360	70	80
		20	2.5	1,000	400	385
			5	615	195	180
			10	265	90	75
	0.5	2	10	1,000	160	225
			20	890	75	105
			30	570	45	65
		5	10	765	125	165
			20	345	55	75
			30	205	35	45
		10	5	875	235	280
			10	405	110	125
			15	245	70	75
		20	2.5	925	400	365
			5	425	195	165
			10	180	90	70
	1	2	10	1,000	160	220
			20	545	75	100
			30	340	45	60
		5	10	465	125	160
			20	200	55	70
			30	115	35	40
		10	5	535	235	255
			10	240	110	115
			15	140	70	65
		20	2.5	565	400	315
			5	250	190	140
			10	95	85	55

Allowable Overhang Length (EBS Series)

● EBS-08

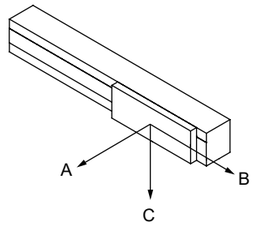
Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	10	1,000	400	620
			25	1,000	150	235
			50	560	65	105
		10	10	1,000	360	480
			20	840	170	230
			30	530	110	140
		20	2.5	1,000	1,000	1,000
			5	1,000	610	670
			10	950	295	315
	0.5	5	10	1,000	400	620
			25	920	150	235
			50	420	65	105
		10	10	1,000	360	480
			20	625	170	225
			30	390	110	140
		20	2.5	1,000	1,000	1,000
			5	1,000	610	620
			10	670	295	290
	1	5	10	1,000	400	600
			25	565	150	220
			50	250	65	95
		10	10	820	360	435
			20	380	170	200
			30	230	110	120
		20	2.5	1,000	1,000	1,000
			5	870	610	520
			10	400	295	240

● EBS-12

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	30	1800	445	730
			60	1800	215	350
			100	1050	120	200
		10	30	1800	400	580
			50	1200	230	335
			80	730	140	195
		20	10	1800	1,000	1150
			20	1600	505	560
			40	775	240	260
		32	10	1800	950	1100
			20	1600	480	540
			30	1,000	315	355
	0.5	5	30	1800	445	720
			60	1300	215	345
			100	755	120	195
		10	30	1450	400	555
			50	865	230	320
			80	510	140	185
		20	10	1800	1,000	1050
			20	1150	505	520
			40	540	240	240
		32	10	1550	800	750
			20	760	400	355
			30	480	260	220
	1	5	30	1650	445	690
			60	800	215	330
			100	460	120	185
		10	30	930	400	500
			50	530	230	285
			80	305	140	160
		20	10	1500	1,000	915
			20	715	500	435
			40	325	240	195
		32	10	725	700	455
			20	325	335	205
			30	195	215	120

Allowable Overhang Length (EBS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	6	5	180	130	800
			10	65	40	470
			15	25	20	240
		12	4	180	150	730
			8	60	50	280
			12	25	20	130
	0.5	6	5	180	130	800
			10	60	40	330
			15	25	20	170
		12	4	170	140	520
			8	60	50	200
			12	25	20	90
	1	6	5	170	130	490
			10	60	40	200
			15	25	20	100
		12	4	150	140	320
			8	50	50	120
			12	20	20	50

* The value when the actuator's running life is 5,000 km.
(Screw Lead: 2 mm is the value for a travel life of 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed: The value at 3,000 rpm.
However, for EBS-12, the value is at 1,800 rpm for 0.3 G acceleration/ deceleration, and 2,400 rpm for 0.5 G.

● EBS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	2	10	175	125	1,000
			20	55	40	1,000
			30	15	10	540
		5	5	310	230	1,000
			10	125	90	965
			20	30	20	335
		10	5	245	200	1,000
			10	90	75	460
			15	40	30	230
		20	2.5	350	355	1,000
			5	145	145	500
			10	45	45	150
	0.5	2	10	175	125	1,000
			20	55	40	775
			30	15	10	385
		5	5	310	230	1,000
			10	120	90	685
			20	30	20	240
		10	5	240	200	805
			10	90	75	330
			15	40	30	160
		20	2.5	330	355	855
			5	135	145	355
			10	40	40	105
	1	2	10	175	125	1,000
			20	55	40	480
			30	15	10	235
		5	5	300	230	955
			10	120	90	425
			20	30	20	145
		10	5	220	200	500
			10	80	75	200
			15	35	30	95
		20	2.5	290	355	530
			5	115	145	220
			10	30	40	60

Allowable Overhang Length (EBS Series)

● EBS-08

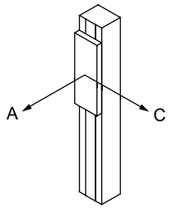
Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	10	580	370	1,000
			25	185	120	1,000
			50	55	35	465
		10	10	450	325	1,000
			20	190	135	795
			30	100	75	455
		20	2.5	1,000	1,000	1,000
			5	630	565	1,000
			10	280	250	850
	0.5	5	10	580	370	1,000
			25	185	120	855
			50	55	35	330
		10	10	445	325	1,000
			20	185	135	565
			30	100	75	325
		20	2.5	1,000	1,000	1,000
			5	585	565	1,000
			10	260	250	605
	1	5	10	555	370	1,000
			25	180	120	530
			50	50	35	200
		10	10	405	325	800
			20	165	135	350
			30	90	70	195
		20	2.5	1,000	1,000	1,000
			5	500	560	845
			10	220	250	370

● EBS-12

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	30	685	415	1800
			60	300	185	1750
			100	150	90	960
		10	30	540	365	1800
			50	290	200	1100
			80	155	105	625
		20	10	1100	980	1800
			20	525	460	1500
			40	225	200	670
		32	10	1085	925	1800
			20	530	425	1455
			30	325	275	950
	0.5	5	30	675	415	1800
			60	300	185	1250
			100	145	90	685
		10	30	515	365	1400
			50	280	200	805
			80	145	105	445
		20	10	1,000	980	1800
			20	490	460	1100
			40	210	195	480
		32	10	700	740	1520
			20	325	350	690
			30	190	210	415
	1	5	30	645	415	1600
			60	285	185	780
			100	140	90	425
		10	30	465	365	900
			50	250	200	500
			80	130	105	270
		20	10	895	980	1450
			20	415	460	685
			40	175	195	295
		32	10	435	630	695
			20	185	270	295
			30	100	150	165

Allowable Overhang Length (EBS Series)

[Vertical Installation]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	6	1	800	780
			3	240	230
			5	120	120
		12	1	690	630
			1.5	440	410
			2	320	300
	0.5	6	1	800	780
			3	240	230
			5	120	120
		12	1	680	620
			1.5	400	440
			2	320	290

* The value when the actuator's running life is 5,000 km.
  (Screw Lead: 2 mm is the value for a travel life of 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed: The value at 3,000 rpm. However, for EBS-12, the value is at 1,800 rpm for 0.3 G acceleration/deceleration, and 2,400 rpm for 0.5 G.

● EBS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	2	2.5	640	640
			5	295	295
			10	120	120
		5	2.5	500	490
			5	225	225
			10	85	85
		10	1	1,000	1,000
			2.5	435	410
			5	195	180
		20	0.5	1,000	1,000
			1	910	760
			2.5	335	280
	0.5	2	2.5	640	640
			5	295	295
			10	120	120
		5	2.5	500	500
			5	225	225
			10	85	85
		10	1	1,000	1,000
			2.5	430	410
			5	190	180
		20	0.5	1,000	1,000
			1	870	740
			2.5	315	275

Allowable Overhang Length (EBS Series)

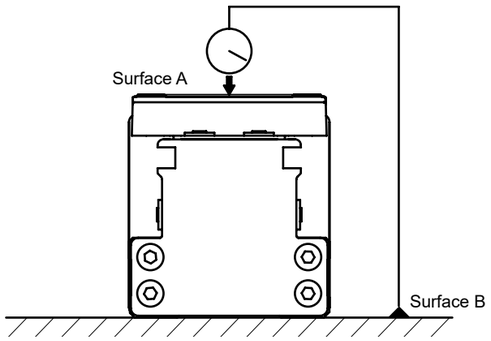
● EBS-08

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	5	5	775	760
			10	360	350
			15	220	220
		10	3	1,000	1,000
			5	680	630
			8	405	375
		20	0.5	1,000	1,000
			1	1,000	1,000
			2.5	1,000	930
	0.5	5	5	775	760
			10	360	350
			15	220	220
		10	3	1,000	1,000
			5	670	630
			8	400	375
		20	0.5	1,000	1,000
			1	1,000	1,000
			2.5	1,000	890

● EBS-12

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.3	5	10	1300	1300
			20	635	625
			30	405	400
		10	10	1150	1100
			15	765	715
			20	560	525
		20	5	1800	1500
			7	1300	1100
			10	910	765
		32	3	1800	1750
			5	1750	1515
			8	1115	950
	0.5	5	10	1300	1250
			20	635	625
			30	405	400
		10	10	1150	1050
			15	750	710
			20	550	520
		20	5	1750	1500
			7	1200	1050
			10	870	740
		32	3	1800	1775
			5	1350	1075
			8	805	680
	1	5	10	1300	1250
			20	630	615
			30	400	395
		10	10	1100	1,000
			15	725	685
			20	530	500
		20	5	1600	1352
			7	1100	995
			10	790	685
		32	3	1550	1250
			5	920	750
			8	555	460

Slider Parallelism (EBS Series) *Reference Value

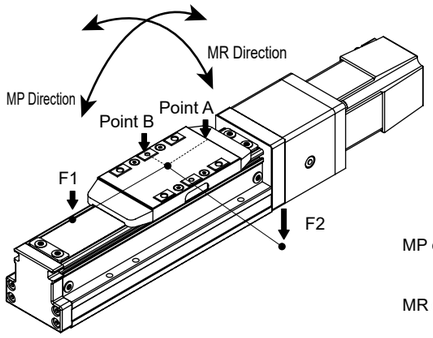


(mm)

	Parallelism
	Surface A with respect to Surface B
EBS-04 Series	0.03
EBS-05 Series	
EBS-08 Series	
EBS-12 Series	

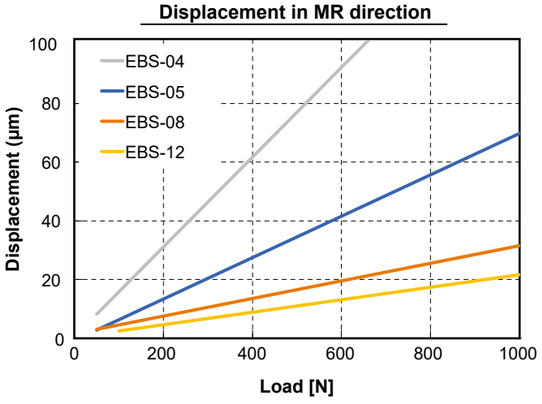
* This is the parallelism when the product is fixed to a surface plate.

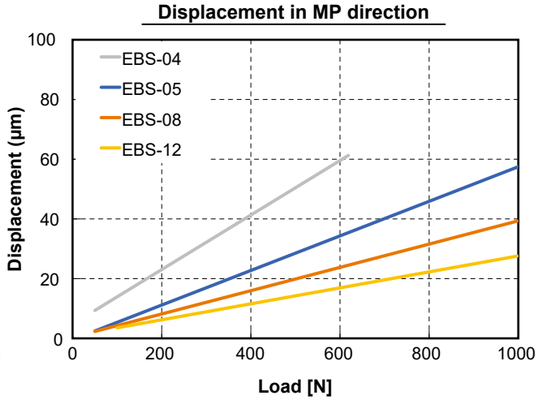
Table Displacement (EBS Series) *Reference Value



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

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





List of Accessories

Motor Mounting Bolts (Common for all motor mounting directions)

Model Number	Mounting Motor Specification	Motor Capacity	Size	Quantity
EBS-04	M	50 W	M4	4
	Y		M4	4
	P		M3	4
	F		M4	4
EBS-05	M	100 W	M4	4
	Y		M4	4
	P		M3	4
	F		M4	4
EBS-08	M	200 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
EBS-12	M	400 W	M5	4
	Y		M5	4
	P		M4	4

Coupling

Model Number	Part Name	Quantity
LE (Motor mounting direction: straight)	Coupling (Shipped Included)	1 pc

Timing belt, pulley (motor side)

Model Number	Shipment Form	Quantity
L☐ (Motor fold-back mounting)	Shipped included *1	1 pc each

*1 The pulley on the main body side is pre-assembled.

Sensor mounting plate

Model Number	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included *1	3 pcs

*1 Screws for the mounting plate are also attached.
The sensor dog is assembled on all products.

Home Sensor, Limit Sensor

Model Number	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included *2	3 pcs. *3

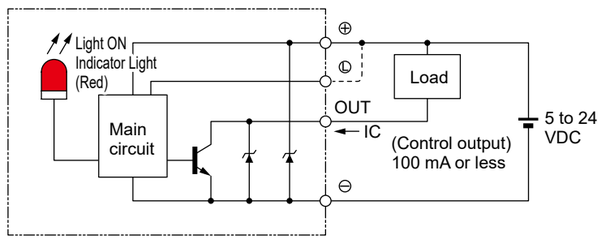
*2 Screws for sensor mounting are also attached.
*3 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None."

Home Sensor, Limit Sensor

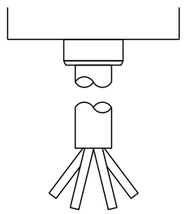
[Specifications]

Item		Specifications
Manufacturer	Manufacturer name	OMRON
	Model	EE-SX674
Hysteresis		0.025 mm or less
Light source (peak emission wavelength)		GaAs infrared emitting diode (940 nm)
Indicator Light		Lights up when light is received (red)
Power Supply Voltage		5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption		12 mA or less (when L terminal is open)
Control output	Type	NPN type (NPN open collector)
	Output	5 to 24 VDC 100 mA or less
	Off-state current	0.5 mA or less
	Residual voltage	0.8 V or less (at 100 mA load current)
		0.4 V or less (at 40 mA load current)
Ambient illuminance		Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1,000 lx or less
Ambient Temperature Range	Operating	-25 to +55°C, however, no freezing or condensation
	Storage	-30 to +80°C, however, no freezing or condensation
Ambient humidity range	Operating	5 to 85%RH, however, no freezing or condensation
	Storage	5 to 95%RH, however, no freezing or condensation
Enclosure		IP50 IEC60529 standard
Cord length		2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Maintenance Parts

Maintenance parts (coupling)

Model Number	Applicable Models	Bore Diameter
EBS-05-COUPLING	EBS-04, EBS-05	ø8
EBS-08-COUPLING-M	EBS-08 (Mounting motor specification: M, Y, F)	ø14
EBS-08-COUPLING-P	EBS-08 (Mounting motor specification: P)	ø11
EBS-12-COUPLING	EBS-12 (Mounting motor specification: M, Y, P)	ø14

Maintenance parts (timing belt, pulley)

Model Number	Applicable Models	Part
EBS-04-BELT-KIT	EBS-04 LR/LD/LL	Timing belt, pulley (motor side) (1 each)
EBS-05-BELT-KIT	EBS-05 LR/LD/LL	
EBS-08-BELT-KIT-M	EBS-08 LR/LD/LL (Mounting motor specification: M, Y, F)	
EBS-08-BELT-KIT-P	EBS-08 LR/LD/LL (Mounting motor specification: P)	
EBS-12-BELT-KIT-LR	EBS-12 LR/LL	
EBS-12-BELT-KIT-LD	EBS-12 LD	

Maintenance parts (origin sensor, limit sensor)

Model Number	Applicable Models	Part
EBS-04-SENSOR-N-KIT	EBS-04	Body, cable, mounting plate (1 piece each) *1
EBS-08-SENSOR-N-KIT	EBS-05, EBS-08	Body, cable, mounting plate (1 piece each) *1
EBS-12-SENSOR-N-KIT	EBS-12	Body, cable, mounting plate (1 piece each) *1

*1 Screws for mounting plate and sensor are also attached.

Maintenance parts (grease nozzle)

Model Number	Applicable Models
EBS-NOZZLE	EBS-04, EBS-05, EBS-08

Maintenance parts (steel belt)

Model Number	Applicable Models
EBS-04-STEELBELT (4-digit stroke code)	EBS-04 (corresponding stroke product)
EBS-05-STEELBELT (4-digit stroke code)	EBS-05 (corresponding stroke product)
EBS-08-STEELBELT (4-digit stroke code)	EBS-08 (corresponding stroke product)
EBS-12-STEELBELT (4-digit stroke code)	EBS-12 (corresponding stroke product)

To Use This Product Safely

Please be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Common Precautions: Electric Actuator EBS-LE Series

During Design and Selection

Danger

■ Do not use in places where dangerous goods such as ignitable substances, inflammable substances or explosives are present.
There is a possibility of ignition, fire, or explosion.

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

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

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (80% humidity or more, with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited.
Use in such environments can cause damage and malfunction.

■ Make sure that the product is D type grounded (ground resistance of 100 Ω or less).
In case of electric leakage, there is a risk of electric shock or malfunction.

■ When installing the actuator in a direction other than horizontal, use a motor with brake.
Without a brake, when the servo is OFF (including emergency stop and alarms) or when the power is OFF, there is a risk of injury or workpiece damage due to the falling of the moving part.

■ When vertically installing the actuator, do everything possible to keep the motor on top.
If the motor is on the lower side, there is no problem in normal operation, but if stopped for a long period, grease may separate and flow into the motor, which may rarely cause a malfunction.

■ Do not use this product in a location where the ambient temperature could suddenly change and cause dew to condense.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Take possibility of power source breakdown into consideration.
Take measures to prevent injury to people or damage to equipment even if the power source fails.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
Design so that restarting does not cause harm to people or damage to the equipment.
Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
Consider the possibility of failure of the installed motor.
Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature: -10 °C to 50 °C, Storage humidity : 35 % to 80 %, Operating temperature: 0 °C to 40 °C, Operating humidity : 35 % to 80 %) This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Indicate the maintenance conditions in the device's instruction manual.
The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products and motors with their systems, machines and equipment.

■ Set up the wiring so as not to apply inductive noise.
Avoid places where large currents or strong magnetic fields are generated. Do not use the same conduit or wiring (with multi-core cables) as the power lines of large motors other than this product. Do not use the same conduit/wiring as the inverter power supply or wiring section used for robots, etc., apply a frame ground to the power supply, and insert a filter at the output section.

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

■ Be sure to separate the power supply of the output of this product and the power supply of inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current may enter the output section and cause damage.
If a separate power supply cannot be used, connect a surge-absorbing element in parallel directly to all inductive loads.

■ When installing an external stopper or retention mechanism (brake, etc.), place it so as not to affect origin position detection.
The home position is detected when the power is turned on. If the detection operation is obstructed by an external stopper or holding mechanism, there is a risk that an unintended position may be recognized as the home position.

For notes on mounting, installation, adjustment, use, and maintenance,
CKD Components Product Site (https://www.ckd.co.jp/kiki/en/) → "Model No." → Instruction Manual.

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

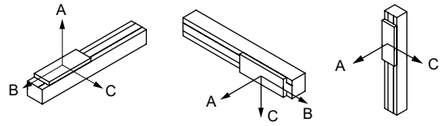
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	EBS-	
Basic Specifications	Max. Stroke :	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s² (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Slider Type	
	Load weight: kg	
	Mounting Orientation: Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

EBR-L

Rod Type with Built-in Guide

Electric Actuator Servo Motor Compatible Motorless Specification

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● Specifications, Model No. Notation, External Dimension Drawings	
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• EBR-08L	90
• EBR-12L	96
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● Technical Data	104
⚠ Precautions for Use	112
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Rod type
Servo motor compatible

EBR-L Series

Built-in guide makes it ideal for press-fitting and lifting / lowering.

Line-up	Body Size / Motor capacity	04 / 50 W	05 / 100 W	08 / 200 W	12 / 400 W	Catalog page
EBR-L		●	●	●	●	74
Metal stopper specifications EBR-L-X		●	●	●		74
Supports food manufacturing processes EBR-L-P4		●	●	●		CC-1226AA
Supports food manufacturing processes EBR-L-FP1		●	●	●		CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

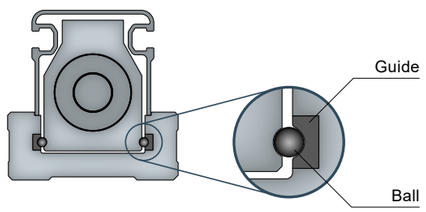
Servo Motor

Mitsubishi Electric Corporation / Delta Electronics Co., Ltd. / Sanyo Denki Co., Ltd. / Mitsubishi Electric Corporation / Keyence Corporation / Panasonic Corporation / OMRON Corporation / Fuji Electric Corporation / FANUC CORPORATION / Bosch Rexroth AG / Rockwell Automation, Inc. / SIEMENS AG

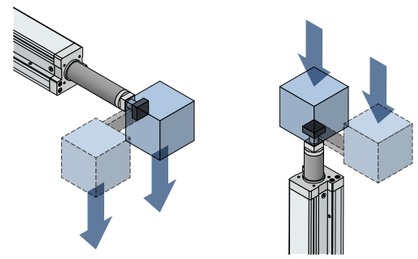
Compact, high-rigidity body

High rigidity / Space saving / Reduced design hours / Reduced number of parts / Reduced man-hours

The guide that supports the load uses an outer rail. The wide guide integrated with the body achieves both high rigidity and space-saving. It has a structure that is strong against offset workpieces and achieves a longer stroke than conventional products.



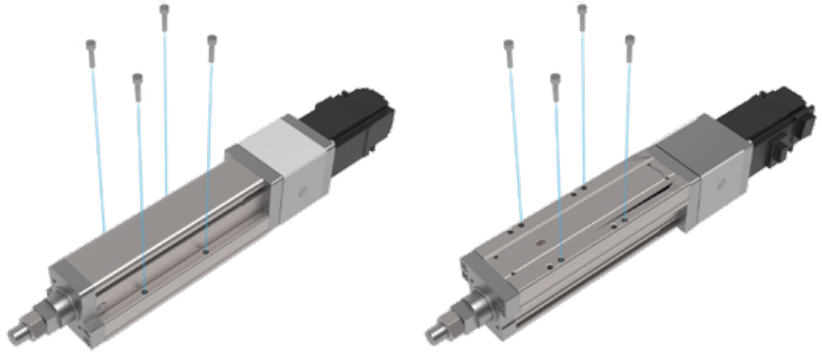
Can handle offset workpieces

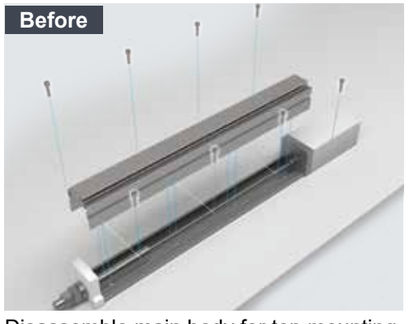


Mounting holes provided on top and bottom surfaces

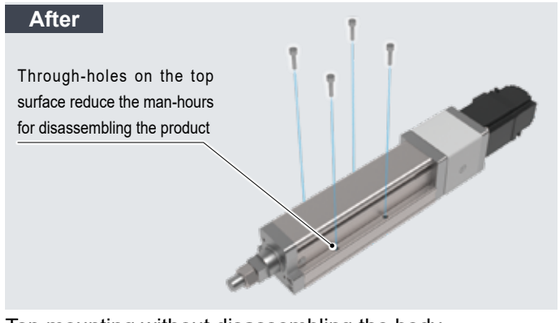
Easy maintenance / Reduced man-hours

It is a structure that allows direct installation from both the top and bottom surfaces without disassembling the product. Especially when installing from the top surface, work time can be significantly reduced.





Disassemble main body for top mounting



Top mounting without disassembling the body

System Table

Type: Rod Type with Built-in Guide

Model No.	Application Motor (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and Max. Speed (mm/s) *2	Listed Page
EBR-04L□-06	50	44	6	20	5	50 mm: 300 mm/s; 100: 300 mm/s; 150: 300 mm/s; 200: 300 mm/s; *3 200: 300 mm/s (⏱ 0.86 sec); 300: 250; 350: 250; *3 400: 250 (⏱ 1.63 sec)	78
EBR-04L□-12			12	12	2	50 mm: 600; 100: 600; 150: 600; 200: 600; *3 200: 600 (⏱ 0.48 sec); 300: 510; 350: 510; *3 400: 510 (⏱ 0.84 sec)	
EBR-05L□-02	100	54	2	30	10	50 mm: 100; 100: 100; 150: 100; 200: 100; *3 200: 100 (⏱ 2.51 sec); 300: 85; 350: 85; *3 400: 85 (⏱ 4.71 sec)	84
EBR-05L□-05			5	30	10	50 mm: 250; 100: 250; 150: 250; 200: 250; *3 200: 250 (⏱ 1.03 sec); 300: 200; 350: 200; *3 400: 200 (⏱ 2.02 sec)	
EBR-05L□-10			10	15	5	50 mm: 500; 100: 500; 150: 500; 200: 500; *3 200: 500 (⏱ 0.55 sec); 300: 400; 350: 400; *3 400: 400 (⏱ 1.04 sec)	
EBR-05L□-20			20	10	2.5	50 mm: 1,000; 100: 1,000; 150: 1,000; 200: 1,000; *3 200: 1,000 (⏱ 0.35 sec); 300: 850; 350: 850; *3 400: 850 (⏱ 0.56 sec)	
EBR-08L□-05	200	82	5	50	15	50 mm: 250; 100: 250; 150: 250; 200: 250; *3 200: 250 (⏱ 1.03 sec); 300: 200; 350: 200; *3 400: 200 (⏱ 2.52 sec); 450: 200; 500: 200; 550: 200; 600: 200; 650: 200; *3 700: 200 (⏱ 3.52 sec)	90
EBR-08L□-10			10	30	8	50 mm: 500; 100: 500; 150: 500; 200: 500; *3 200: 500 (⏱ 0.55 sec); 300: 400; 350: 400; *3 400: 400 (⏱ 1.29 sec); 450: 400; 500: 400; 550: 400; 600: 400; 650: 400; *3 700: 400 (⏱ 1.79 sec)	
EBR-08L□-20			20	12	2.5	50 mm: 1,000; 100: 1,000; 150: 1,000; 200: 1,000; *3 200: 1,000 (⏱ 0.35 sec); 300: 850; 350: 850; *3 400: 850 (⏱ 0.67 sec); 450: 850; 500: 850; 550: 850; 600: 850; 650: 850; *3 700: 850 (⏱ 0.91 sec)	
EBR-12L□-05	400	120	5	110	33	50 mm: 250; 100: 250; 150: 250; 200: 250; *3 200: 250 (⏱ 1.03 sec); 300: 200; 350: 200; *3 400: 200 (⏱ 2.52 sec); 450: 200; 500: 200; 550: 200; 600: 200; 650: 200; *3 700: 200; 750: 200; 800: 200 (⏱ 4.02 sec)	96
EBR-12L□-10			10	88	22	50 mm: 500; 100: 500; 150: 500; 200: 500; *3 200: 500 (⏱ 0.55 sec); 300: 400; 350: 400; *3 400: 400 (⏱ 1.29 sec); 450: 400; 500: 400; 550: 400; 600: 400; 650: 400; *3 700: 400; 750: 400; 800: 400 (⏱ 2.04 sec)	
EBR-12L□-20			20	40	10	50 mm: 1,000; 100: 1,000; 150: 1,000; 200: 1,000; *3 200: 1,000 (⏱ 0.35 sec); 300: 850; 350: 850; *3 400: 850 (⏱ 0.67 sec); 450: 850; 500: 850; 550: 850; 600: 850; 650: 850; *3 700: 850; 750: 850; 800: 850 (⏱ 1.03 sec)	
EBR-12L□-32			32	30	8	50 mm: 1600; 100: 1600; 150: 1600; 200: 1600; *3 200: 1600 (⏱ 0.32 sec); 300: 1350; 350: 1350; *3 400: 1350 (⏱ 0.51 sec); 450: 1350; 500: 1350; 550: 1350; 600: 1350; 650: 1350; *3 700: 1350; 750: 1350; 800: 1350 (⏱ 0.73 sec)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*3 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration. Please note that this is not the value at max. payload.

Model Number Configuration

Rod Type with Built-in Guide

EBR - 05 L E - 00 - 02 0050 NNN - M 1 N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size	
04	Body width 44 mm
05	Body width 54 mm
08	Body width 82 mm
12	Body width 120 mm

❷ Motor	
L	None

❸ Motor Mounting Direction	
E	Inline Mount
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead	
02	2 mm
05	5 mm
06	6 mm
10	10 mm
12	12 mm
20	20 mm
32	32 mm

❺ Stroke	
0050 to 0800	50 mm (in 50 mm increments) 800 mm

❻ Mounting Motor Specifications	
M, Y, P, F	Refer to the list on the page at right

❼ Motor Capacity	
H	50 W
1	100 W
2	200 W
4	400 W

❽ Origin sensor	
N	None
C	Yes

❾ Limit sensor	
N	None
B	Yes

❿ Metal Stopper Specification (EBR-X) *1	
	Standard
X	Adopted

* This product is provided as an actuator (and motor mounting parts) only; the motor is not included. The user must prepare, mount, and adjust the motor and driver.
*1 ❶ Body size "12" cannot be selected.

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	06	0050 to 0400 (50 mm to 400 mm)
	12	
05	02	0050 to 0400 (50 mm to 400 mm)
	05	
	10	
	20	
08	05	0050 to 0700 (50 mm to 700 mm)
	10	
	20	
12	05	0050 to 0800 (50 mm to 800 mm)
	10	
	20	
	32	

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	50 W	100 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR053	HG-KR13
		MELSERVO J5	HG-KT_053W	HK-KT_13W
	Delta Electronics, Inc.	ECMA-C	ECMA-C1040F	ECMA-C10401
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A04005	R2□A04010
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-A5	SGM7J-01
		Σ-X	SGMXJ-A5	SGMXJ-01
	Keyence Corporation	SV	SV-□005	SV-□010
		SV2	SV2-□005	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD5A	MSMD01
		MINAS A6	MSMF5A	MSMF01
M	OMRON Corporation	G5	R88M-K05030	R88M-K10030
		1S	R88M-1M05030	R88M-1M10030
	Fuji Electric Corporation	ALPHA7 GYS	GYS500D7-□B2□	GYS101D7-□B2□
		ALPHA7 GYB	-	-
F	FANUC CORPORATION	βiS-B	A06B-0111-B1	A06B-0112-B1
P	Bosch Rexroth AG	MSM	MSM019A	MSM019B
M	Rockwell Automation, Inc.	TLP	TLP-A046-005-DKA□2	TLP-A046-010-DKA□2
	SIEMENS AG	1FK2 *1	1FK2102-0AG0	1FK2102-1AG0

Code	Manufacturer	Series	200 W	400 W
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43
		MELSERVO J5	HK-KT_23W	HK-KT_43W
	Delta Electronics, Inc.	ECMA-C	ECMA-C10602	ECMA-C10604
	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040
Y	Mitsubishi Electric Corporation	Σ-7	SGM7J-02	SGM7J-04
		Σ-X	SGMXJ-02	SGMXJ-04
	Keyence Corporation	SV	SV-□020	SV-□040
		SV2	SV2-□020	SV2-□040
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04
		MINAS A6	MSMF02	MSMF04
	OMRON Corporation	G5	R88M-K20030	R88M-K40030
		1S	R88M-1M20030	R88M-1M40030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201D7-□B2□	GYS401D7-□B2□
		ALPHA7 GYB	GYB201D7-□B2□	GYB401D7-□B2□
F	FANUC CORPORATION	βiS-B	A06B-2115-B1	-
P	Bosch Rexroth AG	MSM	MSM031B	MSM031C
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2
	SIEMENS AG	1FK2 *1	1FK2203-2AG0	1FK2203-4AG0

* Contact CKD for information on mounting motors other than the above and products of other motor manufacturers.
*1 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 1 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (as of January 2021)

Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-04LE

Motor Straight Mounting Type

● Servo Motor Capacity : 50 W

RoHS

How to Order

EBR - 04 L E - 00 - 06 0050 NNN - M H N N - X

❶ Body Size
04	Body width 44 mm

❷ Motor
L	None

❸ Motor Mounting Direction
E	Straight Mounting

❹ Screw Lead
06	6 mm
12	12 mm

❺ Stroke
0050 to 0400	50 mm (in 50 mm increments) 400 mm

❻ Mounting Motor Specifications
M, Y, P, F	Select the mounting motor specification from the table on the right.

❼ Motor Capacity
H	50 W

❽ Origin sensor *1
N	None
C	Yes

❾ Limit sensor *1
N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)
	Standard
X	Adopted

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 400	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

* For allowable load at overhang, please refer to P. 104, P. 105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

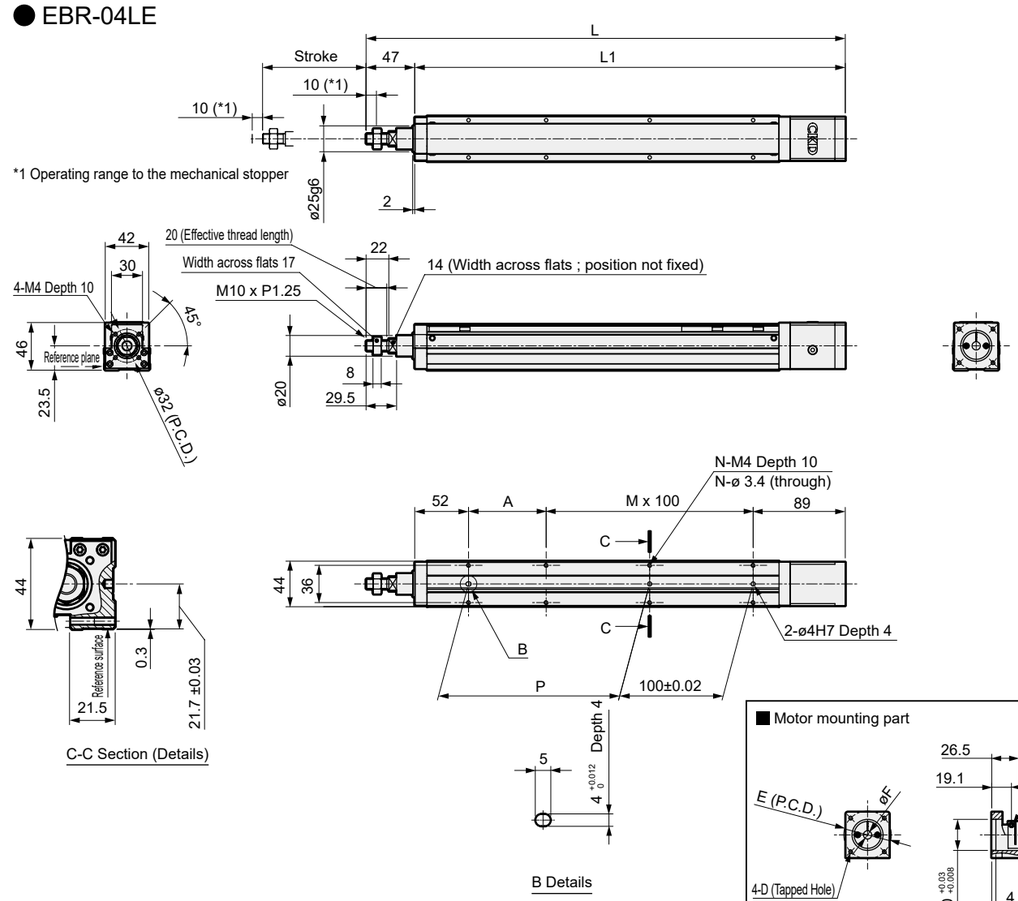
(mm/s)

Screw Lead \ Stroke	50 to 250	300	350	400
6	300	250		
12	600	510		

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Straight Mounting

● EBR-04LE



Mounting Motor Specifications	D	E	F	Motor mounting bolts
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke (mm)	50	100	150	200	250	300	350	400
L	313	363	413	463	513	563	613	663
L1	266	316	366	416	466	516	566	616
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.1	1.2	1.4	1.6	1.7	1.9	2.0	2.2

List of Accessories

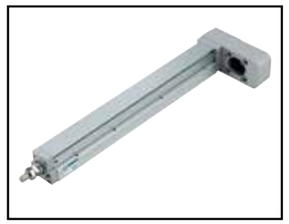
[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.



Electric actuator (motorless specifications) Rod with built-in guide

EBR-04L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 50 W

RoHS

How to Order

EBR - 04 L R - 00 - 06 0050 NNN - M H N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Fold-back Mounting
D	Bottom Side Fold-back Mounting
L	Left Side Fold-back Mounting

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

0050 to 0400	50 mm (in 50 mm increments) 400 mm

❻ Mounting Motor Specifications

M	Select the mounting motor specification from the table on the right.
Y	
P	
F	

❼ Motor Capacity

H	50 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

Manufacturer	50 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		50 W servo motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 400	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

* For allowable load at overhang, please refer to P. 104, P. 105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

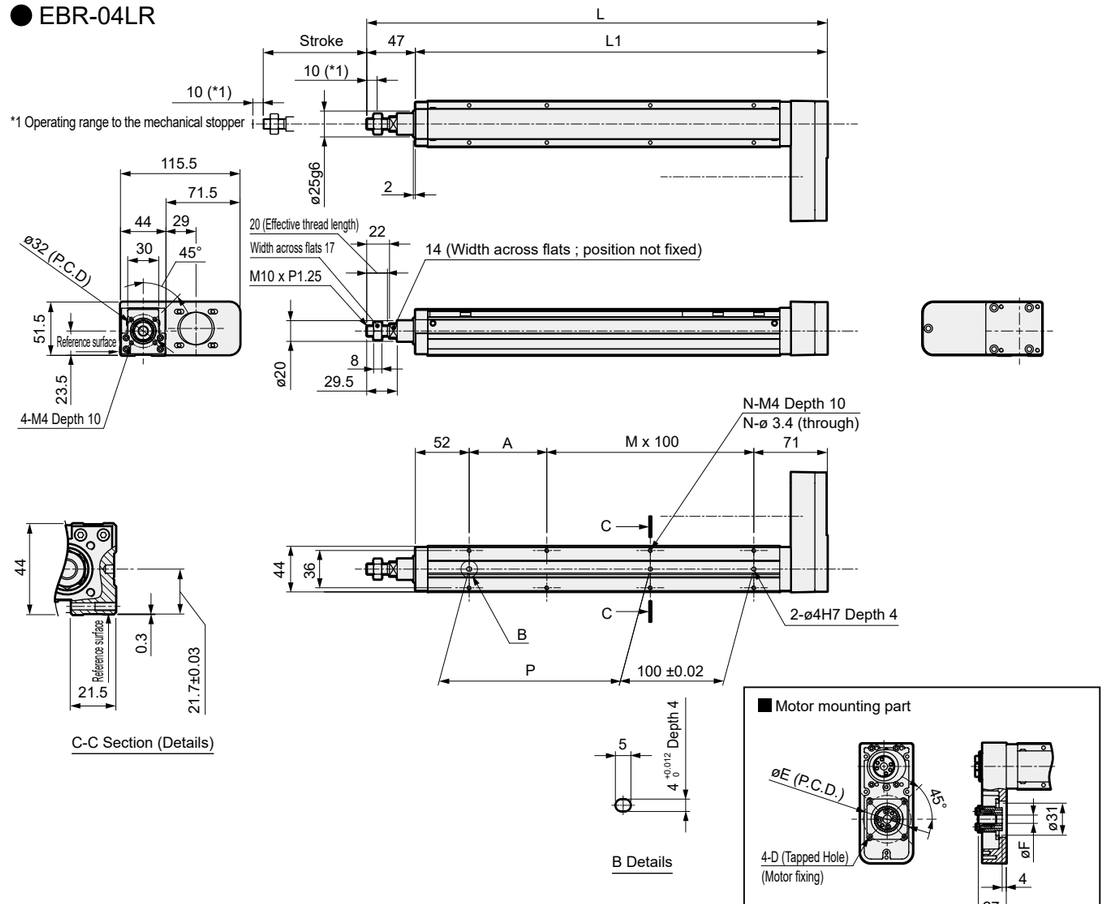
(mm/s)

Screw Lead \ Stroke	50 to 250	300	350	400
6	300	250		
12	600	510		

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EBR-04LR



* For a 50 mm stroke, sensors may need to be mounted on both sides.

Motor Specifications	D	E	F	Motor mounting bolts
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

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

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

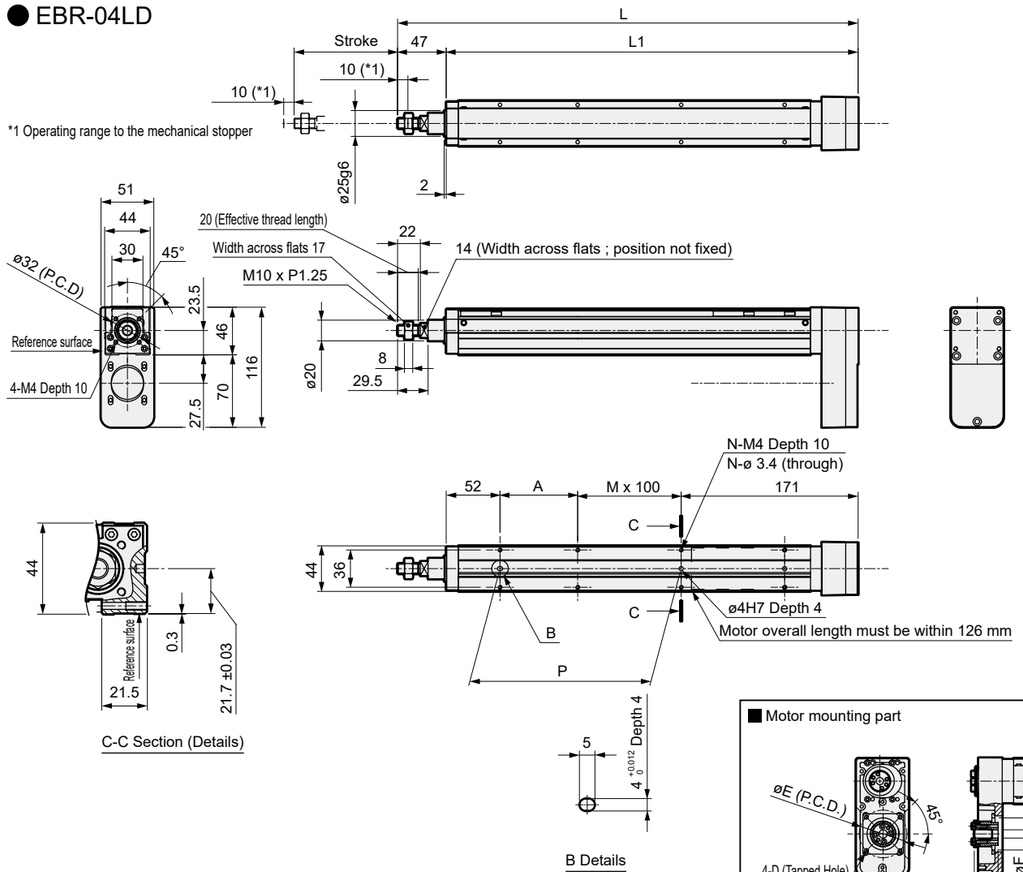
[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

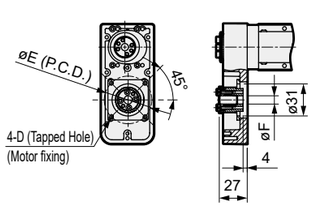
* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBR-04LD



■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor mounting bolts
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

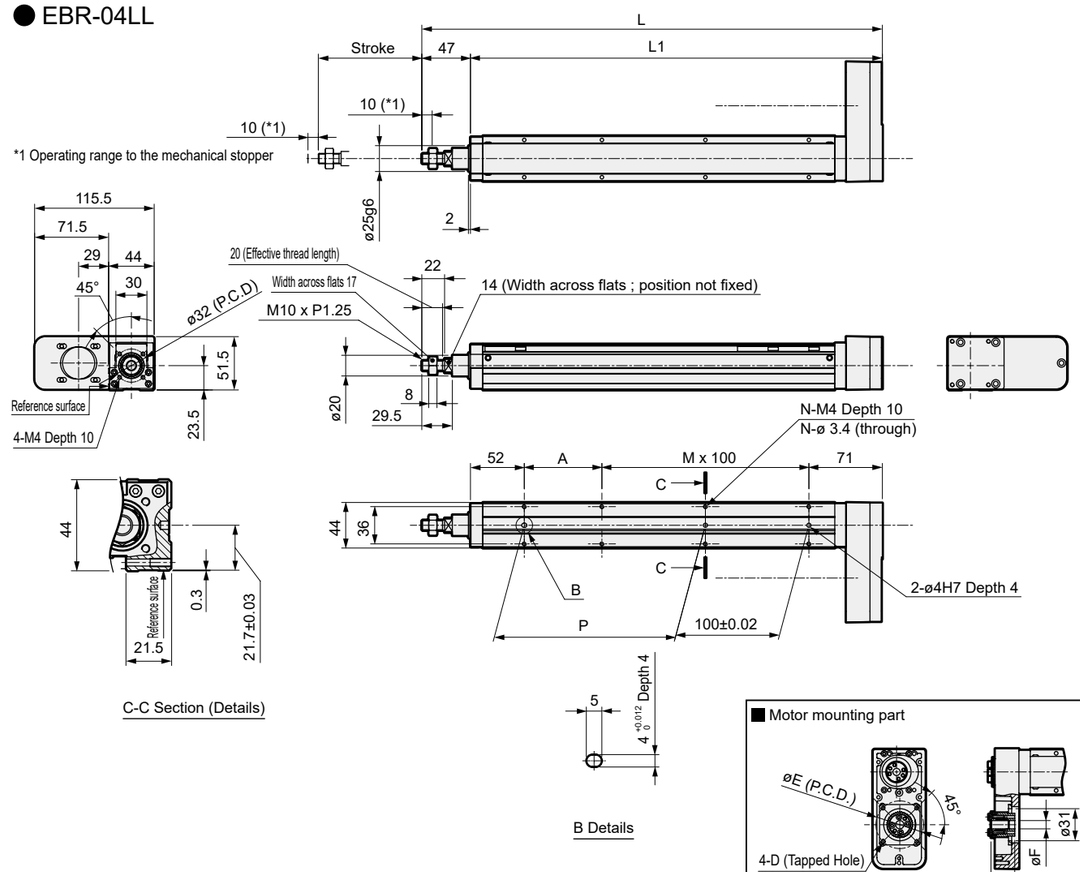
[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

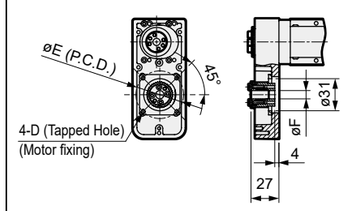
* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBR-04LL



■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor mounting bolts
M 50 W	M4	ø46	ø8	4-M4 x L12
Y 50 W	M4	ø46	ø8	4-M4 x L12
P 50 W	M3	ø45	ø8	4-M3 x L12
F 50 W	M4	ø46	ø8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

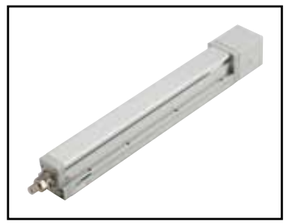
[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.



Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-05LE

Motor Straight Mounting Type

● Servo Motor Capacity : 100 W

RoHS

How to Order

EBR - 05 L E - 00 - 02 0050 NNN - M 1 N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor mounting method

E	Straight Mounting

❹ Screw Lead

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

❺ Stroke

0050 to 0400	50 mm (in 50 mm increments) 400 mm

❻ Mounting Motor Specifications

M	Select the mounting motor specification from the table on the right.
Y	
P	
F	

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 400			
Screw lead	mm	2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

* For allowable load at overhang, please refer to P. 104, P. 105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

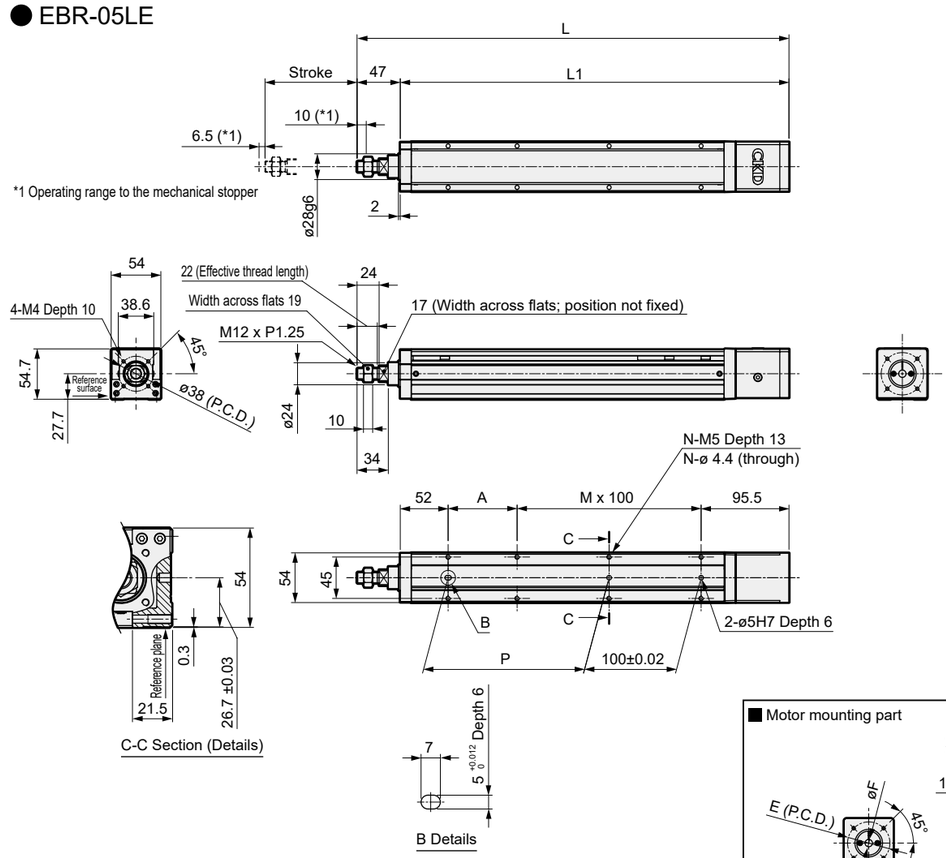
(mm/s)

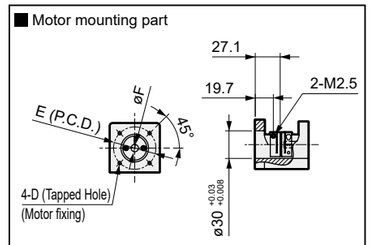
Screw Lead \ Stroke	50 to 250	300 to 400
2	100	85
5	250	200
10	500	400
20	1,000	850

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Straight Mounting

● EBR-05LE





Mounting Motor Specifications	D	E	F	Motor mounting bolts
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke (mm)	50	100	150	200	250	300	350	400
L	319.5	369.5	419.5	469.5	519.5	569.5	619.5	669.5
L1	272.5	322.5	372.5	422.5	472.5	522.5	572.5	622.5
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.0

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.

Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-05L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 100 W

RoHS

How to Order

EBR - 05 L R - 00 - 02 0050 NNN - M 1 N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

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

❺ Stroke

0050 to 0400	50 mm (in 50 mm increments) 400 mm

❻ Mounting Motor Specifications

M, Y, P, F	Select the mounting motor specification from the table on the right.

❼ Motor Capacity

1	100 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		100 W Servo Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 400			
Screw Lead		2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

* For allowable load at overhang, please refer to P. 104, P.105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

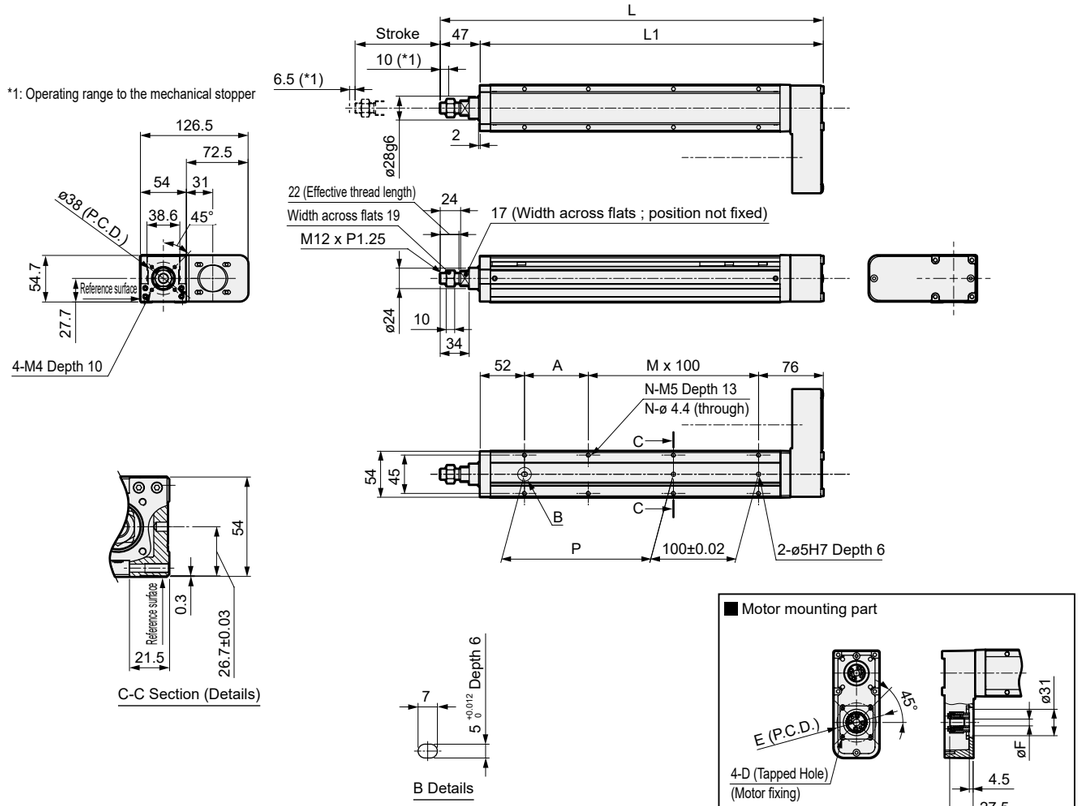
(mm/s)

Lead \ Stroke	50 to 250	300	350	400
2	100	85		
5	250	200		
10	500	400		
20	1,000	850		

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit. Please use lead 2 at 0.5 G or less.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EBR-05LR



Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

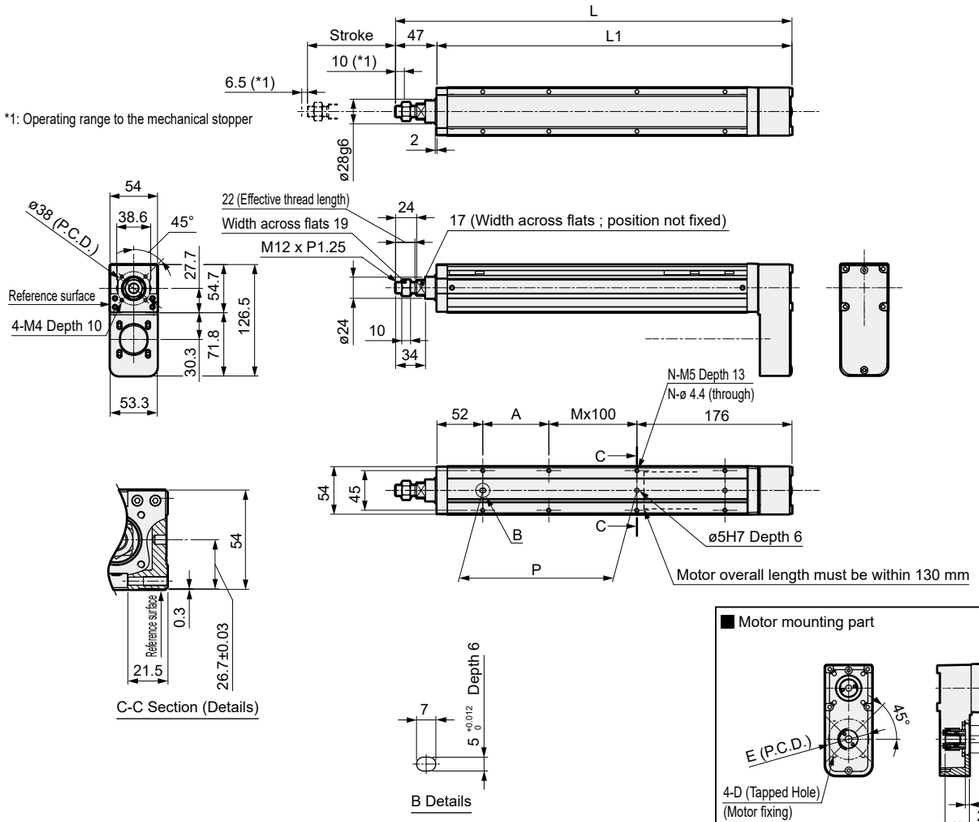
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

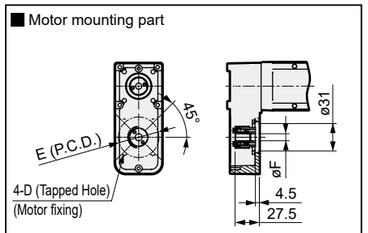
* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBR-05LD



■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

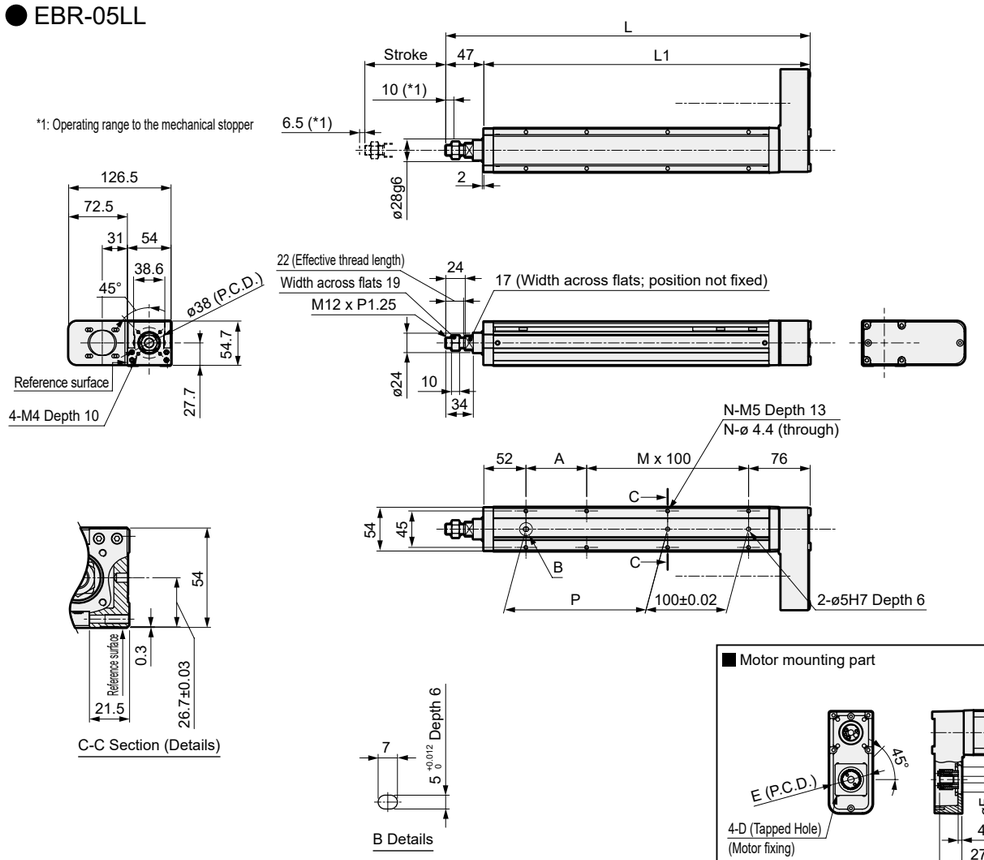
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

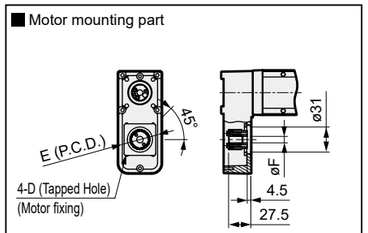
* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBR-05LL



■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor screw
M 100 W	M4	ø46	ø8	4-M4 x L12
Y 100 W	M4	ø46	ø8	4-M4 x L12
P 100 W	M3	ø45	ø8	4-M3 x L12
F 100 W	M4	ø46	ø8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.

Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-08LE

Motor Straight Mounting Type

● Servo Motor Capacity : 200 W

RoHS

How to Order

EBR - 08 L E - 00 - 05 0050 NNN - M 2 N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0700	50 mm (in 50 mm increments) to 700 mm

❻ Mounting Motor Specifications

M	Select the mounting motor specification from the table on the right.
Y	
P	
F	

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 700		
Screw lead	mm	5	10	20
Max. Payload *1	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust *1	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

* For allowable load at overhang, please refer to P. 104, P. 105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

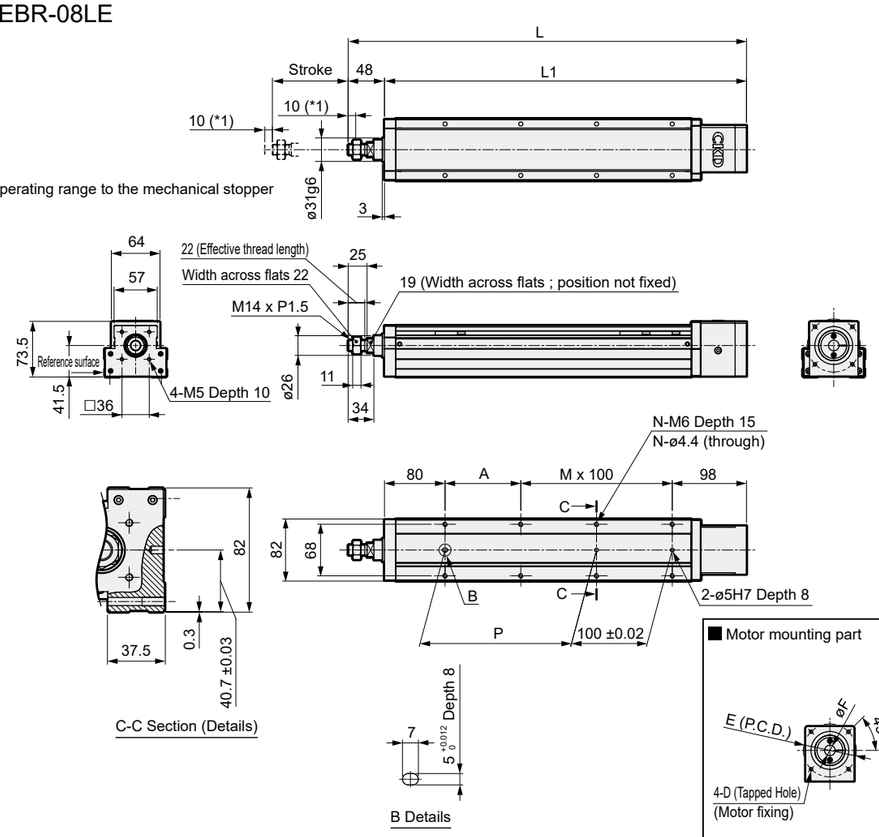
(mm/s)

Screw Lead \ Stroke	50 to 300	350 to 700
5	250	200
10	500	400
20	1,000	850

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Straight Mounting

● EBR-08LE



Mounting Motor Specifications	D	E	F	G	H	Motor mounting bolts
M 200 W	M5	ø70	ø14	31.1	22.5	4-M5 x L18
Y 200 W	M5	ø70	ø14	31.1	22.5	4-M5 x L18
P 200 W	M4	ø70	ø11	31.1	22.5	4-M4 x L18
F 200 W	M5	ø70	ø9	29.1	20.5	4-M5 x L16

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.

Electric actuator (motorless specifications) Rod with built-in guide

EBR-08L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 200 W

RoHS

How to Order

EBR - 08 L R - 00 - 05 0050 NNN - M 2 N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0700	50 mm (in 50 mm increments) 700 mm

❻ Mounting Motor Specifications

M, Y, P, F	Select the mounting motor specification from the table on the right.

❼ Motor Capacity

2	200 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		200 W Servo Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 700		
Screw Lead		5	10	20
Max. Payload	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

* For allowable load at overhang, please refer to P. 104, 105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

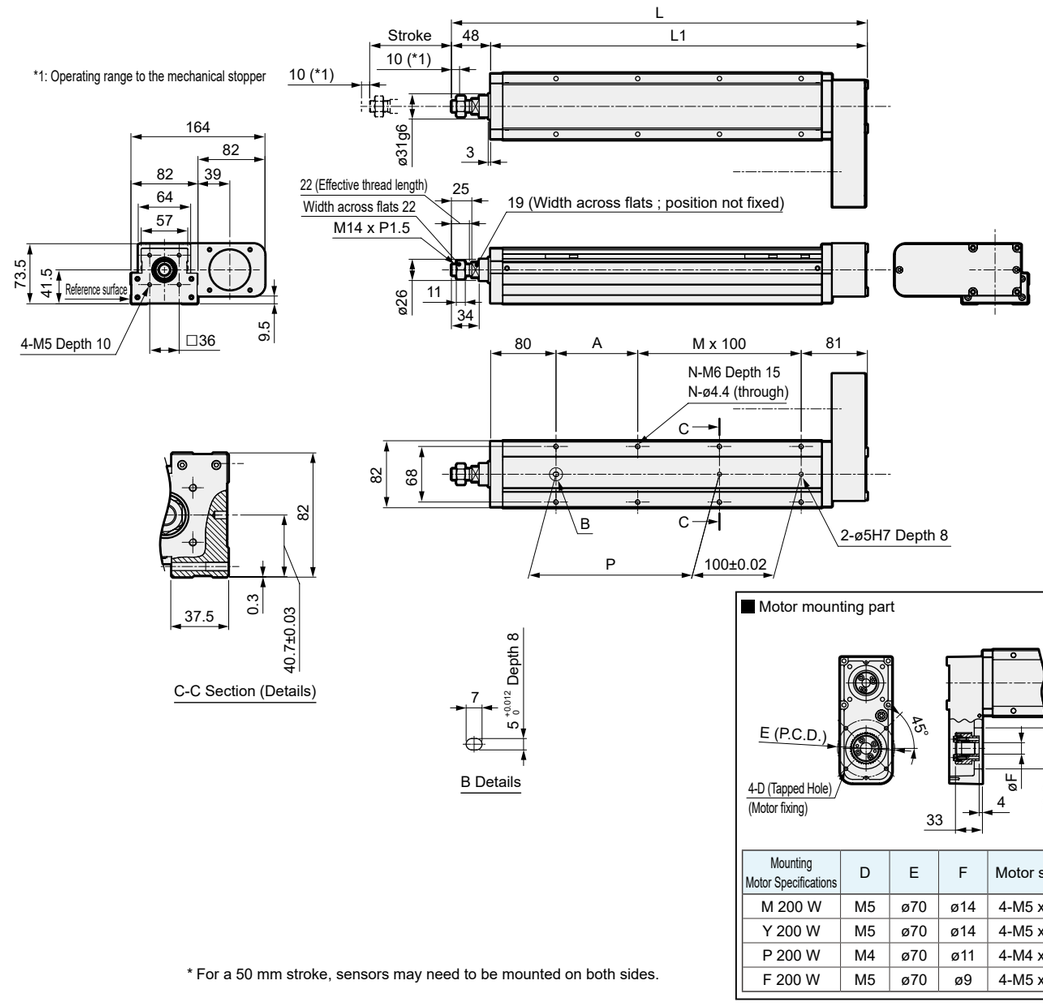
(mm/s)

Screw Lead \ Stroke	50 to 300	350 to 700
5	250	200
10	500	400
20	1,000	850

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EBR-08LR



Mounting Motor Specifications	D	E	F	Motor screw
M 200 W	M5	ø70	ø14	4-M5 x L18
Y 200 W	M5	ø70	ø14	4-M5 x L18
P 200 W	M4	ø70	ø11	4-M4 x L18
F 200 W	M5	ø70	ø9	4-M5 x L16

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

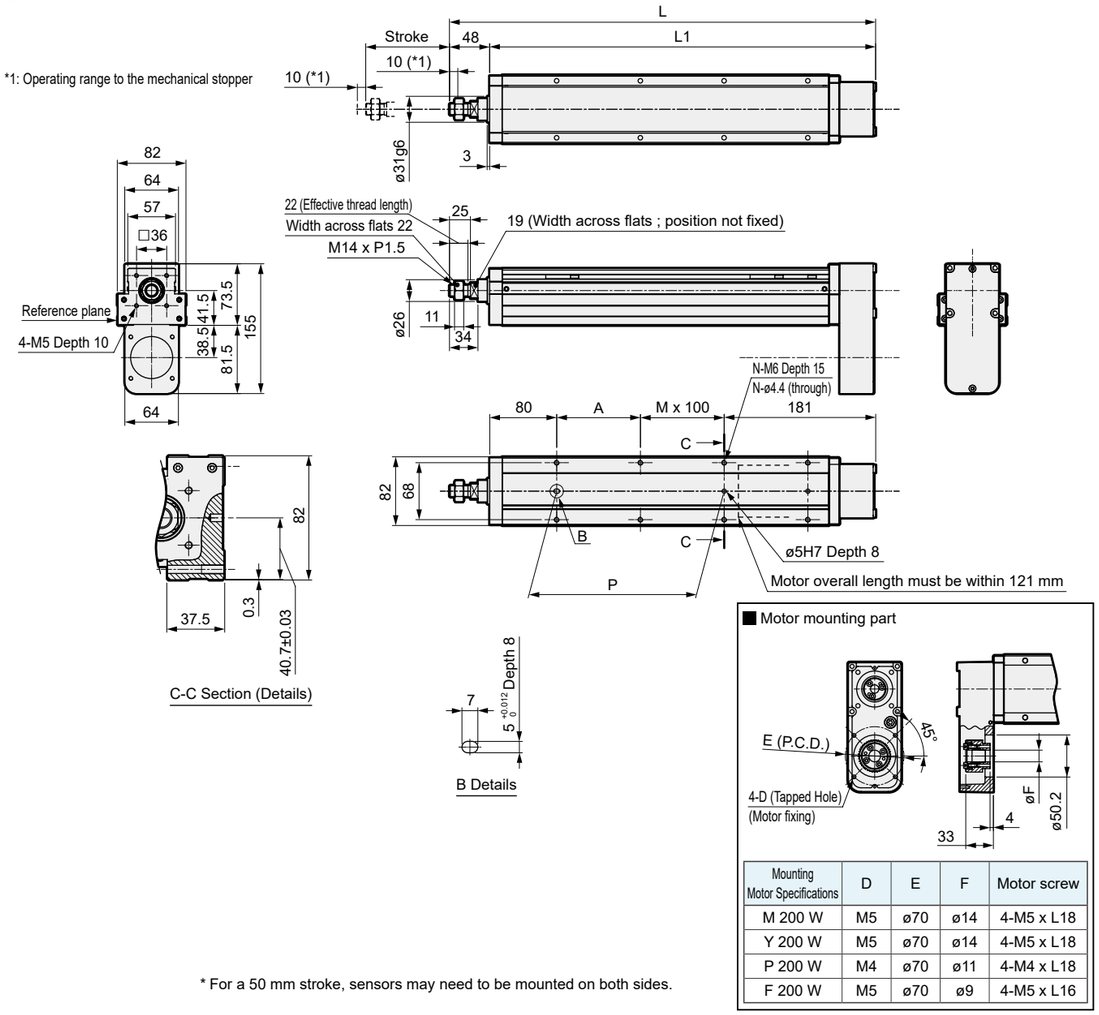
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBR-08LD



Mounting Motor Specifications	D	E	F	Motor screw
M 200 W	M5	ø70	ø14	4-M5 x L18
Y 200 W	M5	ø70	ø14	4-M5 x L18
P 200 W	M4	ø70	ø11	4-M4 x L18
F 200 W	M5	ø70	ø9	4-M5 x L16

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

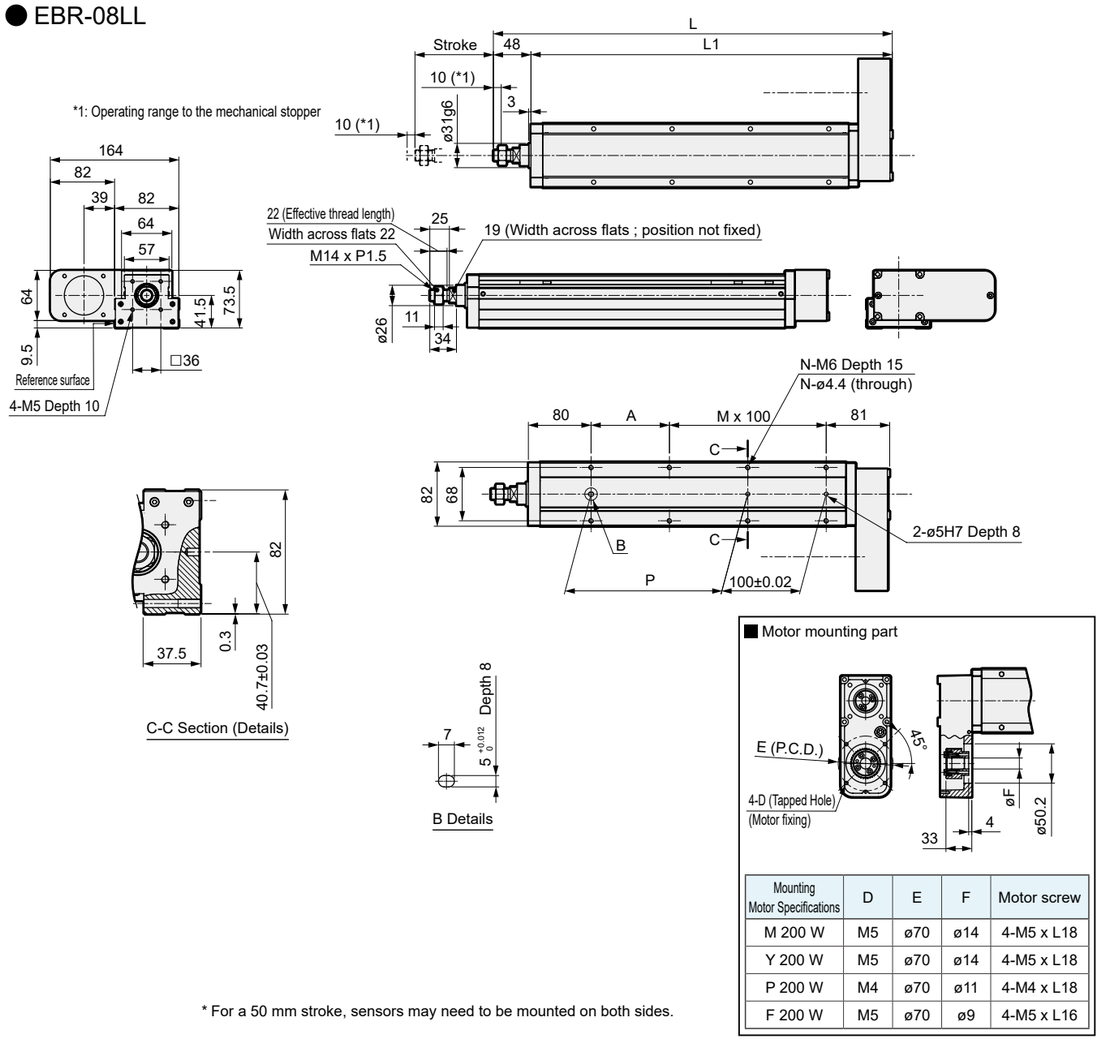
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBR-08LL



Mounting Motor Specifications	D	E	F	Motor screw
M 200 W	M5	ø70	ø14	4-M5 x L18
Y 200 W	M5	ø70	ø14	4-M5 x L18
P 200 W	M4	ø70	ø11	4-M4 x L18
F 200 W	M5	ø70	ø9	4-M5 x L16

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

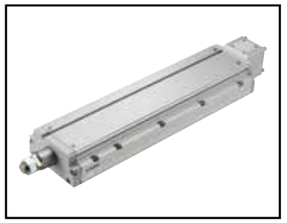
[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M4	4
Y		M4	4
P		M3	4
F		M4	4

[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.



Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-12LE

Motor Straight Mounting Type

● Servo Motor Capacity : 400 W

RoHS

How to Order

EBR - 12 L E - 00 - 05 0050 NNN - M 4 N N

❶ Body Size

12	Body width 120 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm
32	32 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M	Select the mounting motor specification from the table on the right.
Y	
P	

❼ Motor Capacity

4	400 W

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		400 W Servo Motor			
Drive Method		Ball screw ø16			
Stroke	mm	50 to 800			
Screw lead	mm	5	10	20	32
Max. Payload *1	kg Horizontal	110	88	40	30
	kg Vertical	33	22	10	8
Max. Speed	mm/s	250	500	1,000	1600
Rated thrust *1	N	1388	694	347	218
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

* For allowable load at overhang, please refer to P. 104, 105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

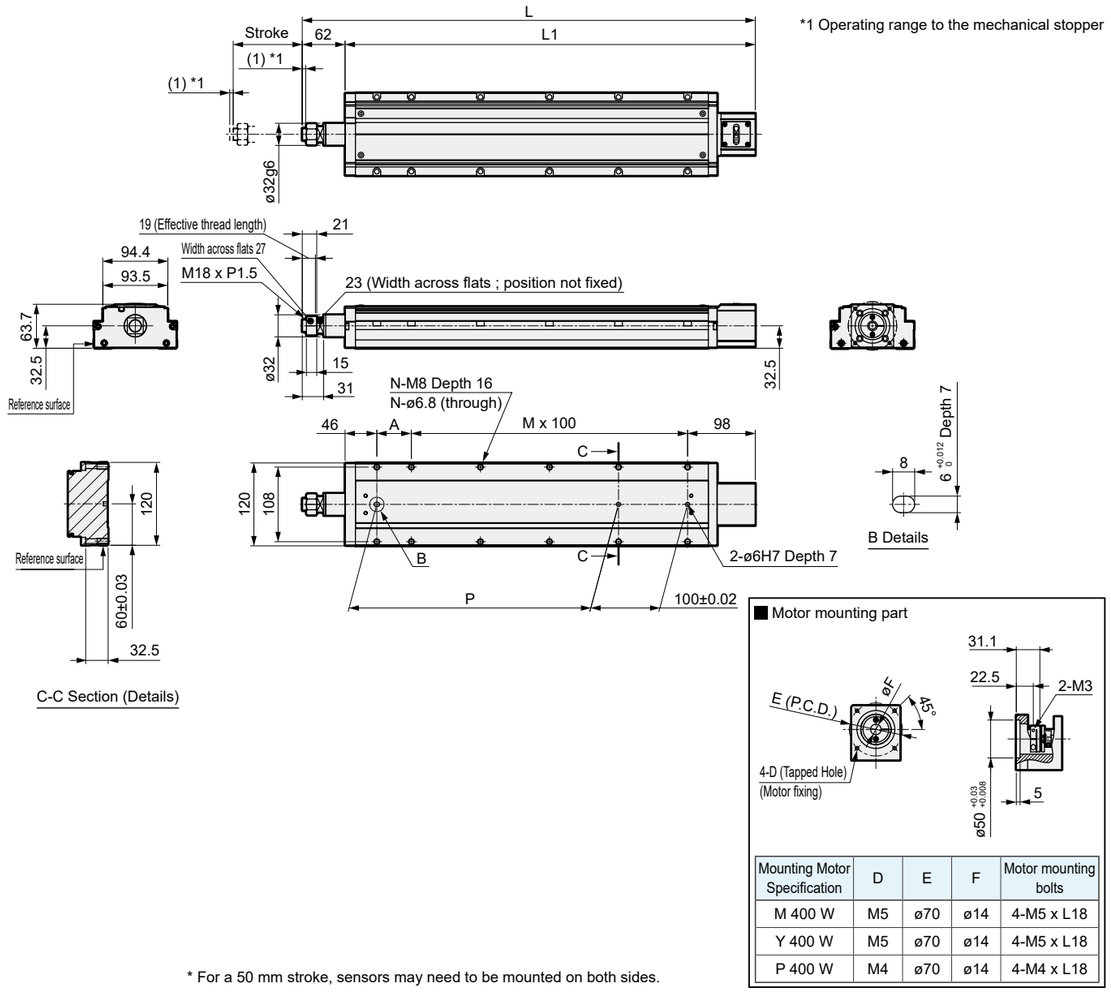
(mm/s)

Screw Lead \ Stroke	50 to 300	350 to 800
5	250	200
10	500	400
20	1,000	850
32	1600	1350

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Straight Mounting

● EBR-12LE



*1 Operating range to the mechanical stopper

* For a 50 mm stroke, sensors may need to be mounted on both sides.

Mounting Motor Specification	D	E	F	Motor mounting bolts
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	406	456	506	556	606	656	706	756	806	856	906	956	1006	1056	1106	1156
L1	344	394	444	494	544	594	644	694	744	794	844	894	944	994	1044	1094
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Weight (kg)	4.9	5.4	5.9	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4	10.9	11.4	11.9	12.4

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
M	Shipped Included	M5	4
Y		M5	4
P		M4	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.

Electric actuator (motorless specifications) Rod with built-in guide

EBR-12L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 400 W

RoHS

How to Order

EBR - 12 L R - 00 - 05 0050 NNN - M 4 N N

❶ Body Size

12	Body width 120 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm
32	32 mm

❺ Stroke

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

❻ Mounting Motor Specifications

M	Select the mounting motor specification from the table on the right.
Y	
P	

❼ Motor Capacity

4	400 W

❽ Origin sensor*1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* For motor model Nos., please refer to P. 77.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		400 W Servo Motor			
Drive Method		Ball screw ø16			
Stroke	mm	50 to 800			
Screw lead	mm	5	10	20	32
Max. Payload *1	kg Horizontal	110	88	40	30
	kg Vertical	33	22	10	8
Max. Speed	mm/s	250	500	1,000	1600
Rated thrust *1	N	1388	694	347	218
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50 °C (no freezing), 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

* For allowable load at overhang, please refer to P. 104, 105.
*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

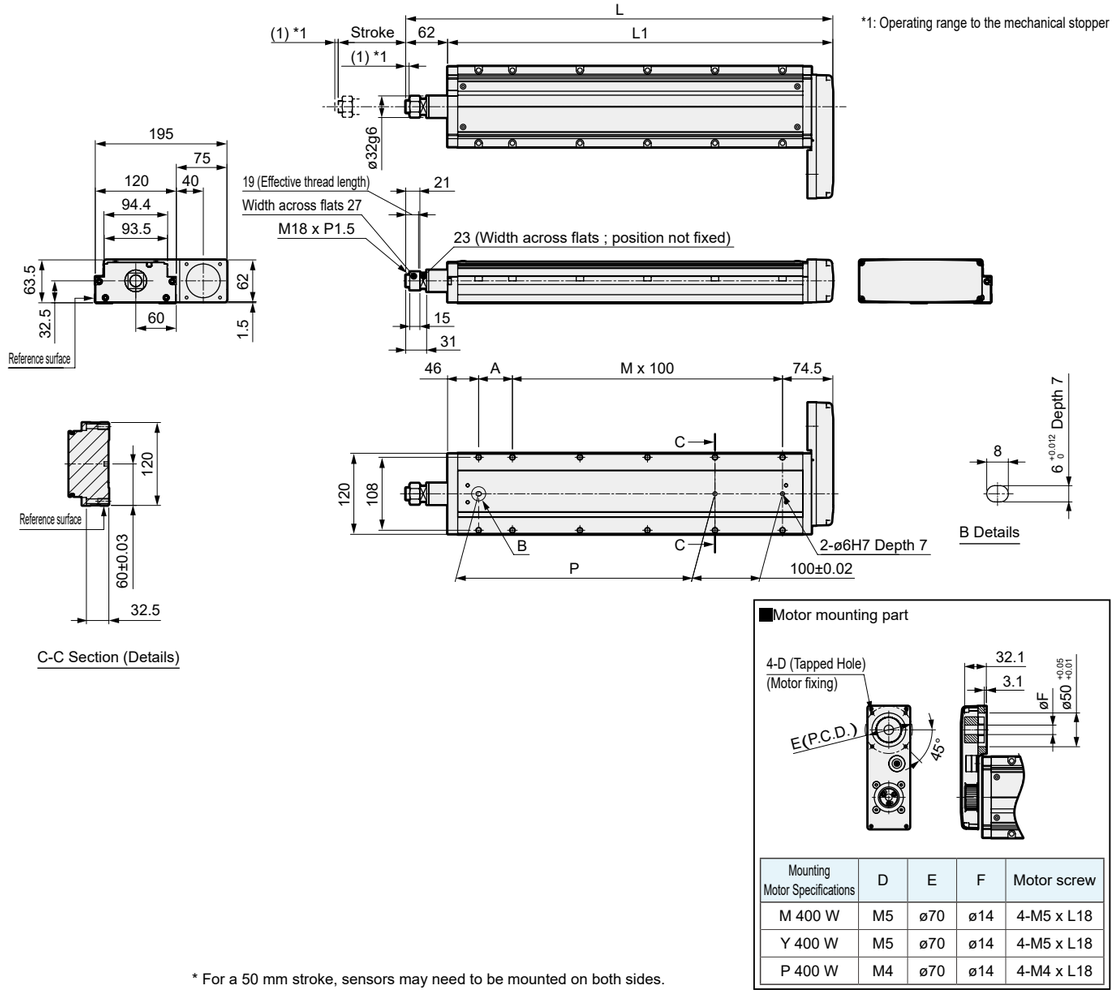
(mm/s)

Screw Lead \ Stroke	50 to 300	350 to 800
5	250	200
10	500	400
20	1,000	850
32	1600	1350

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EBR-12LR



Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

* For a 50 mm stroke, sensors may need to be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	382.5	432.5	482.5	532.5	582.5	632.5	682.5	732.5	782.5	832.5	882.5	932.5	982.5	1032.5	1082.5	1132.5
L1	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Weight (kg)	5.4	5.8	6.3	6.8	7.3	7.8	8.3	8.8	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.6

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

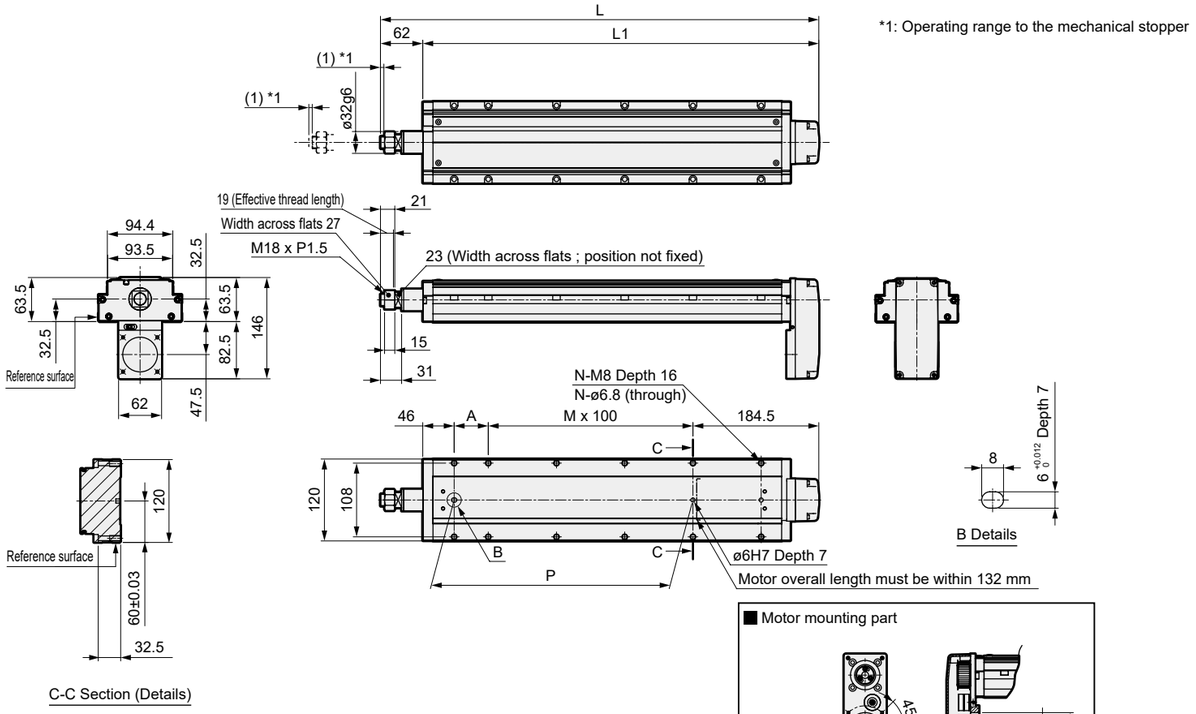
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

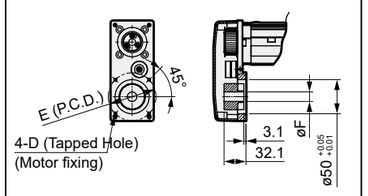
* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBR-12LD



■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

* For a 50 mm stroke, sensors may need to be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5	892.5	942.5	992.5	1042.5	1092.5	1142.5
L1	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	780.5	830.5	880.5	930.5	980.5	1030.5	1080.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
N	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Weight (kg)	5.3	5.8	6.3	6.8	7.3	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.1	11.6	12.1	12.6

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

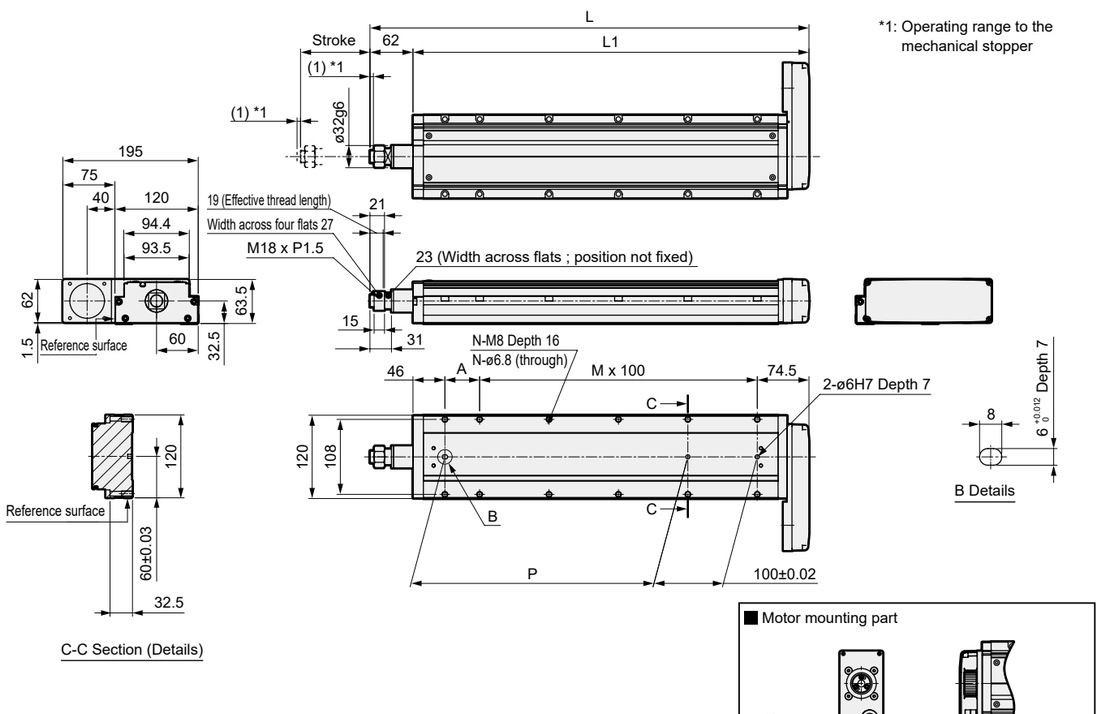
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

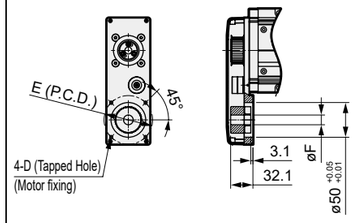
* For sensor specifications, please refer to P. 108.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBR-12LL



■ Motor mounting part



Mounting Motor Specifications	D	E	F	Motor screw
M 400 W	M5	ø70	ø14	4-M5 x L18
Y 400 W	M5	ø70	ø14	4-M5 x L18
P 400 W	M4	ø70	ø14	4-M4 x L18

* For a 50 mm stroke, sensors may need to be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	382.5	432.5	482.5	532.5	582.5	632.5	682.5	732.5	782.5	832.5	882.5	932.5	982.5	1032.5	1082.5	1132.5
L1	320.5	370.5	420.5	470.5	520.5	570.5	620.5	670.5	720.5	770.5	820.5	870.5	920.5	970.5	1020.5	1070.5
A	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50
M	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
N	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850
Weight (kg)	5.4	5.8	6.3	6.8	7.3	7.8	8.3	8.8	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.6

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Attached Quantity
M	Shipped included	M5	4
Y		M5	4
P		M4	4

[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2M	3

* For sensor specifications, please refer to P. 108.

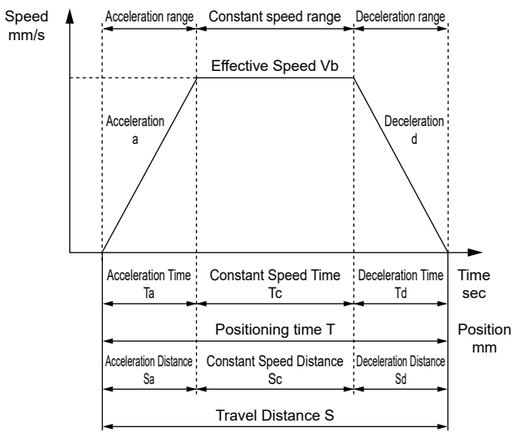
Model Selection

STEP1 Confirmation of Payload

Payload varies depending on the mounting orientation and screw lead. Select the size and screw lead by referring to the System Table (P. 74) and the specification table for each model.

STEP2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time. Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$=\{2 \times a \times d \times S / (a + d)\}^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb / a
	Deceleration Time	Td	s	= Vb / d
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	$= (a \times Ta^2) / 2$
	Deceleration Distance	Sd	mm	$= (d \times Td^2) / 2$
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Use at acceleration and deceleration of 1 G or less for horizontal use and 0.5 G or less for vertical use.
* The settling time varies depending on the operating conditions, but it may take about 0.2 s.
* 1 G ≈ 9.8 m/s².

STEP3 Confirmation of Allowable Load Weight

Confirm that the load weight during operation is within the allowable load weight range (P. 104, P. 105). If the allowable load weight is exceeded, please increase the size or use an external guide in combination.

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

[For confirmation via iPad or smartphone]

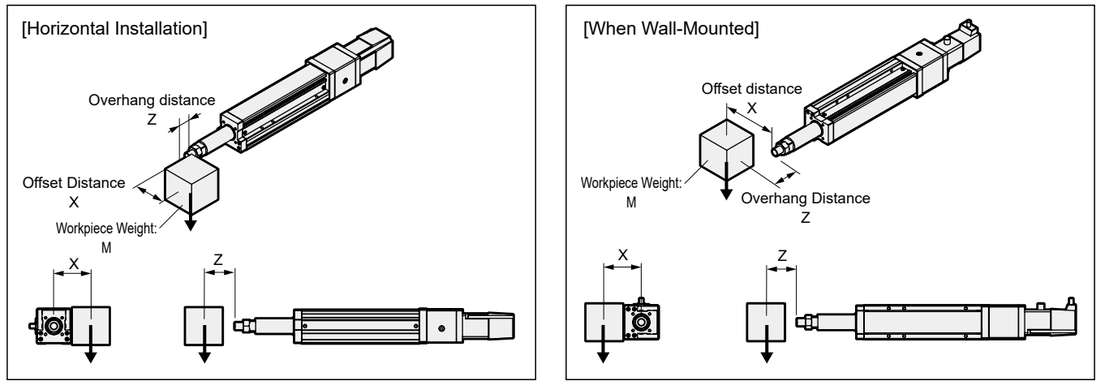
* May not display correctly depending on the smartphone's usage environment.

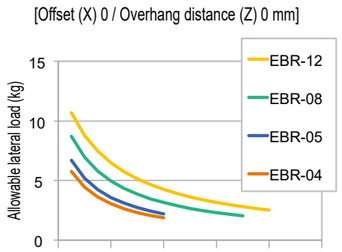
MEMO

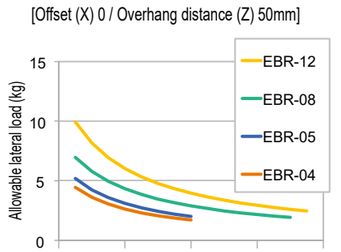
Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

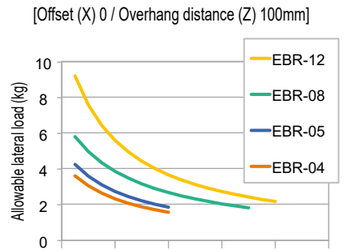
Allowable Load Weight

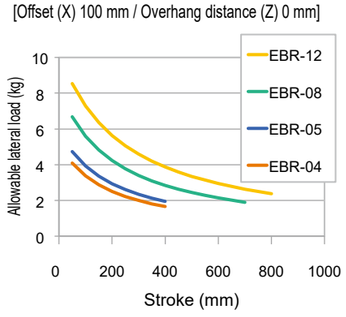
[When mounted horizontally/wall-mounted]

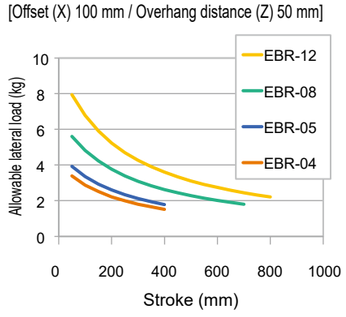


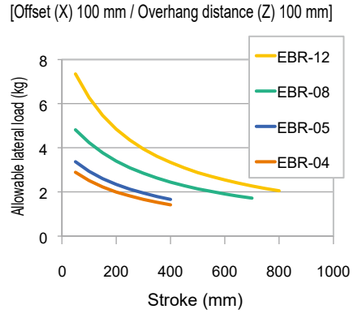








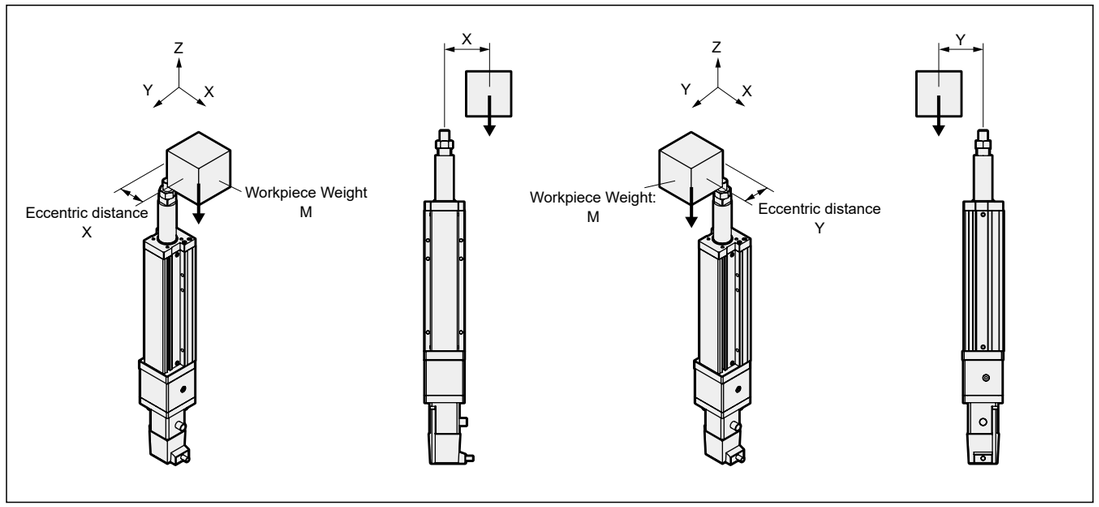


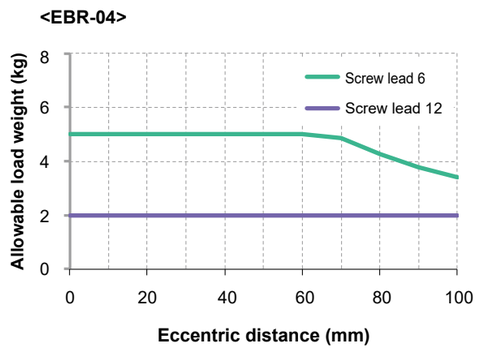


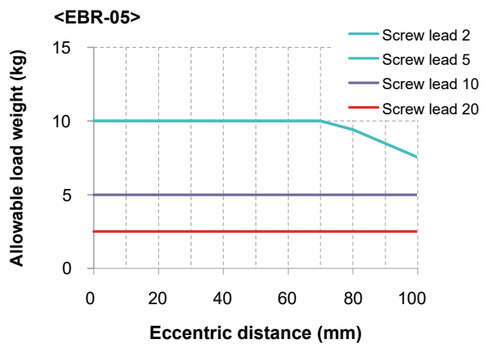
* The value when the actuator's running life is 5,000 km. (Acceleration/deceleration 0.5 G, speed 300 mm/s)
Screw lead : 2 mm is the value when the running life is 1,000 km.

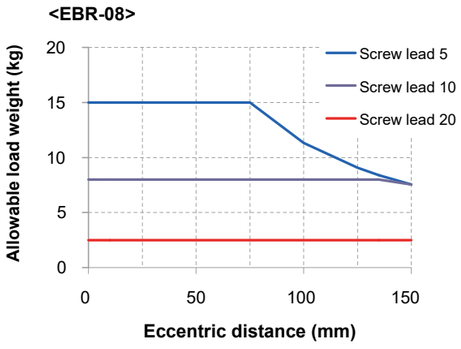
Allowable Load Weight

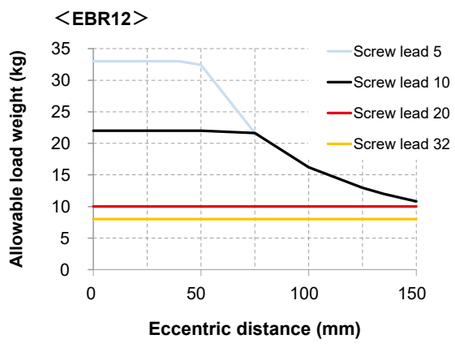
[Vertical Installation]





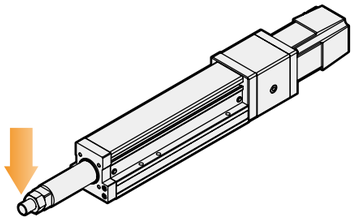




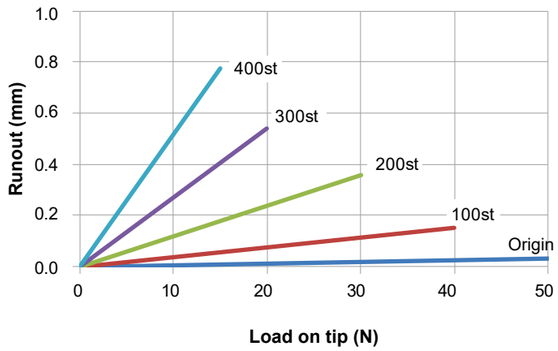


* The value when the actuator's running life is 5,000 km. (Acceleration/deceleration 0.5 G, speed 300 mm/s)
Screw lead: 2 mm is the value when the running life is 1,000 km.

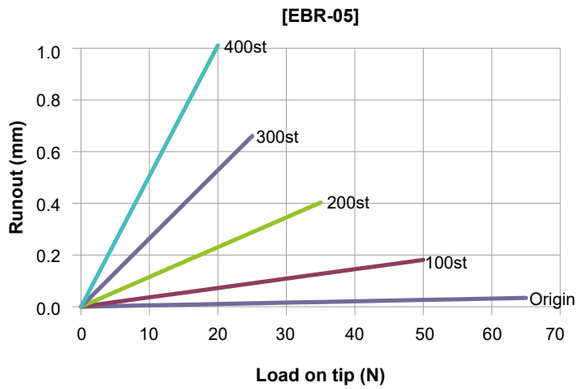
Rod Tip Runout (EBR Series) * Reference Value



[EBR-04]

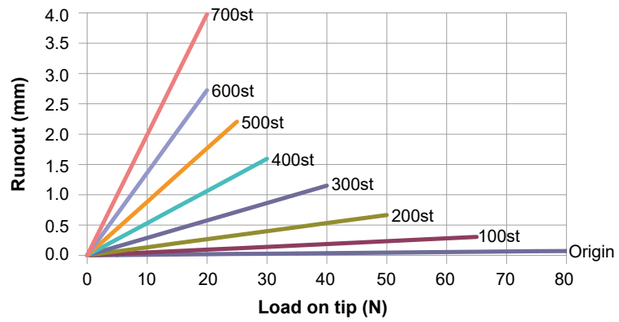


[EBR-05]

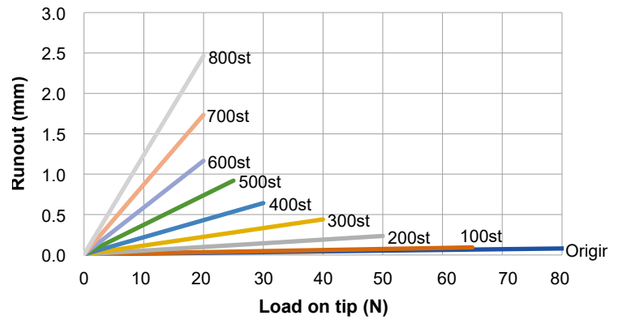


Rod Tip Runout (EBR Series) * Reference Value

[EBR-08]



[EBR-12]

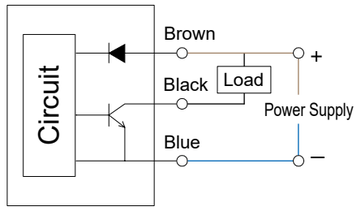


Home Sensor, Limit Sensor

[Specifications]

Item		Specifications
Manufacturer	Manufacturer name	KITA
	Model	KT-32N-2M
Output Method		NPN Output
Load Voltage		10 to 30 VDC
Load Current		100 mA or less
Current Consumption		17 mA at DC24
Internal Voltage Drop		Max 1.5 V
Leakage Current		Max 0.01 mA
Indicator Light		Red
Shock Resistance		50 G
Ambient Temperature		-10 to 70°C
Enclosure		IP67 IEC60529 standard
Cord length		2 m

Output circuit



List of Accessories

Motor Mounting Bolts (Common for all motor mounting directions)

Model No.	Mounting Motor Specification	Motor Capacity	Size	Quantity
EBR-04	M	50 W	M4	4
	Y		M4	4
	P		M3	4
	F		M4	4
EBR-05	M	100 W	M4	4
	Y		M4	4
	P		M3	4
	F		M4	4
EBR-08	M	200 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
EBR-12	M	400 W	M5	4
	Y		M5	4
	P		M4	4

Coupling

Model No.	Attached Part Name	Quantity
LE (Motor mounting direction : straight)	Coupling (Shipped Included)	1 pc

Timing belt, pulley (motor side)

Model No.	Shipment Form	Quantity
L☐ (Motor fold-back mounting)	Shipped included *1	1 pc each

*1 The pulley on the main body side is pre-assembled.

Home Sensor, Limit Sensor

Model No.	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included	3 pcs. *1

*1 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None."

Maintenance Parts

■ Maintenance parts (coupling)

Model Number	Applicable Models	Bore Diameter
EBS-05-COUPLING	EBR-04LE, EBR-05LE	ø8
EBS-08-COUPLING-M	EBR-08LE (Mounting motor specification: M, Y, F)	ø14
EBS-08-COUPLING-P	EBR-08LE (Mounting motor specification: P)	ø11
EBS-12-COUPLING	EBR-12LE (Mounting motor specification: M, Y, P)	ø14

■ Maintenance parts (timing belt, pulley)

Model Number	Applicable Models	Part
EBR-04-BELT-KIT	EBR-04LR/LD/LL	Timing belt, pulley (motor side) (1 each)
EBS-05-BELT-KIT	EBR-05LR/LD/LL	
EBS-08-BELT-KIT-M	EBR-08LR/LD/LL (Mounting motor specification: M, Y, F)	
EBS-08-BELT-KIT-P	EBR-08LR/LD/LL (Mounting motor specification: P)	
EBS-12-BELT-KIT-LR	EBR-12LR/LL	
EBS-12-BELT-KIT-LD	EBR-12LD	

■ Maintenance parts (origin sensor, limit sensor)

Model Number	Applicable Models	Part
EBR-SENSOR-N	All EBR models	Body

■ Maintenance parts (grease nozzle)

Model Number	Applicable Models
EBS-NOZZLE	EBR-04, EBR-05, EBS-08

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

To Use This Product Safely

Please be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Common Precautions: Electric Actuator EBR-LE Series

During Design and Selection

Danger

■ Do not use in places where dangerous goods such as ignitable substances, inflammable substances or explosives are present.
There is a possibility of ignition, fire, or explosion.

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

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

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (80% humidity or more, with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited.
Use in such environments can cause damage and malfunction.

■ Make sure that the product is D type grounded (ground resistance of 100 Ω or less).
In case of electric leakage, there is a risk of electric shock or malfunction.

■ When installing the actuator in a direction other than horizontal, use a motor with brake.
Without a brake, when the servo is OFF (including emergency stop and alarms) or when the power is OFF, there is a risk of injury or workpiece damage due to the falling of the moving part.

■ When vertically installing the actuator, do everything possible to keep the motor on top.
If the motor is on the lower side, there is no problem in normal operation, but if stopped for a long period, grease may separate and flow into the motor, which may rarely cause a malfunction.

■ Do not use this product in a location where the ambient temperature could suddenly change and cause dew to condense.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Take possibility of power source breakdown into consideration.
Take measures to prevent injury to people or damage to equipment even if the power source fails.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
Design so that restarting does not cause harm to people or damage to the equipment.
Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
Consider the possibility of failure of the installed motor.
Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

■ Use and store in accordance with the working / storage temperatures and where there is no condensation.
(Storage temperature: -10 °C to 50 °C, Storage humidity: 35 % to 80 %, Operating temperature: 0 °C to 40 °C, Operating humidity: 35 % to 80 %)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Indicate the maintenance conditions in the device's instruction manual.
The product's functionality may drop too low to maintain an appropriate safety level depending on usage conditions, working environment and maintenance status.Proper maintenance allows the product to fully demonstrate its functions.

■ This product is manufactured in accordance with applicable standards. Do not disassemble or modify the product.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products and motors with their systems, machines and equipment.

■ Set up the wiring so as not to apply inductive noise.
Avoid locations where large currents or strong magnetic fields are generated.
Do not use the same piping and wiring (with multi-conductor cables) as any large motor power lines other than that of this product.
Do not use the same piping and wiring as inverter power supplies used for robots, etc. Apply a frame ground for the power supply and insert the filter to the output part.

■ Do not use this product in an environment where strong magnetic fields are generated.
This could cause improper operation.

■ Be sure to separate the power supply of the output of this product and the power supply of inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current may flow into the output and cause damage.
If a separate power supply cannot be used, connect the surge absorber directly to all inductive loads in parallel.

■ When installing an external stopper or retention mechanism (brake, etc.), place it so as not to affect origin position detection.
When the power supply is turned ON, the origin position will be detected. If the detection is disturbed by an external stopper or retention mechanism, an inappropriate position may be indicated as the origin.

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

EBR Model Selection Checklist → CKD (Contact)

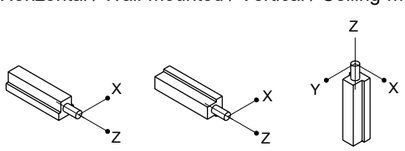
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	(EBR)-
Basic Specifications	Max. Stroke : mm, Ball screw lead : mm
Operating Conditions	Moving stroke : mm, travel time : s
	Set Speed : mm/s
	Set acceleration / deceleration : mm/s² (set acceleration/deceleration time : s)
	Repeatability : ± mm
Load Conditions	Rod Type
	Load weight : kg
	Mounting Orientation : Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 
	Distance from rod center to load's center of gravity
	X direction : mm Y direction mm Z direction : mm
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %
	Atmosphere :
Motor Used	Manufacturer : , Model No.:
	Motor capacity, size :
Special Notes	

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

ETS

Slider Type (Ball Screw Drive)

Electric Actuator
Servo Motor Compatible
Motorless Specification

CONTENTS

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● Model Selection	156
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⚠ Precautions for Use	168
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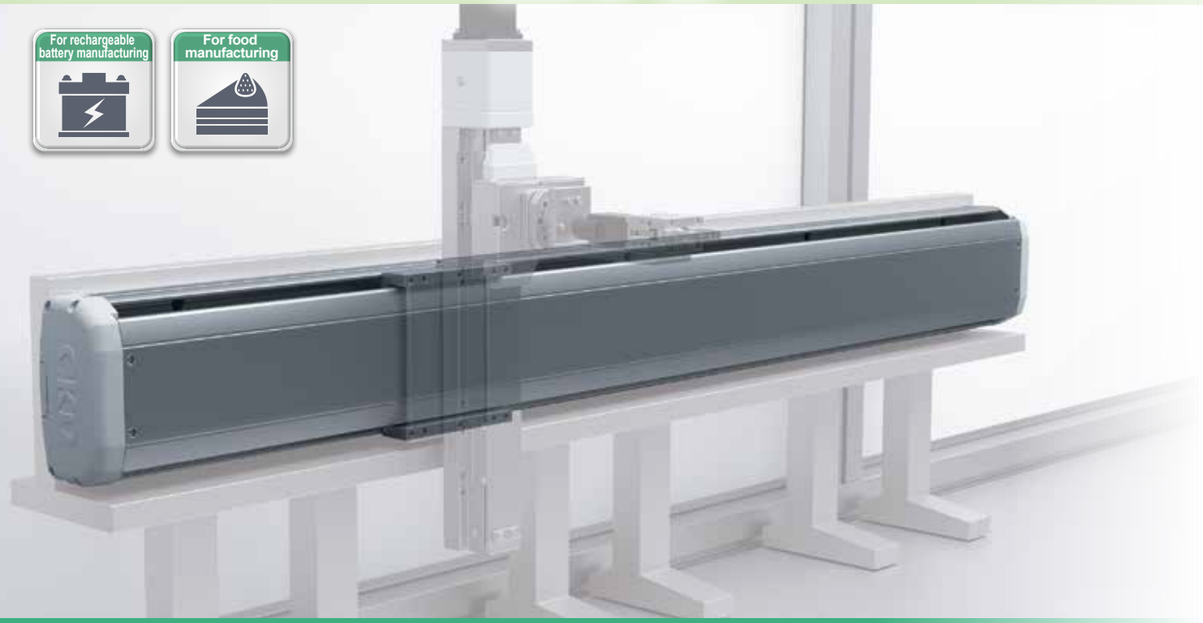
Slider Type (Ball Screw Driven) Servo motor compatible ETS Series



For high-load transfer

Line-up	Body Size	13			14		17		22	Catalog page
	Motor capacity	100 W	200 W	400 W	200 W	400 W	400 W	750 W	750 W	
ETS		●	●	●	●	●	●	●	●	120
Metal stopper specifications ETS-X		●	●	●	●	●	●	●	●	120
Compatible with rechargeable battery manufacturing processes ETS-P4			●	●	●	●	●	●	●	CC-1226AA
Supports food manufacturing processes ETS-FP1			●	●	●	●	●	●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

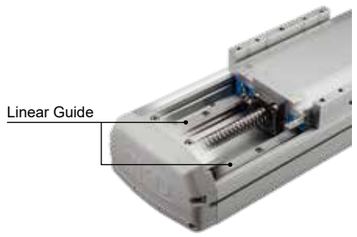
Servo Motor

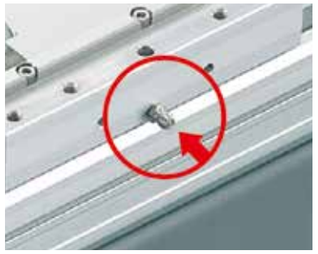
Mitsubishi Electric Corporation / Delta Electronics Co., Ltd. / Sanyo Denki Co., Ltd. / Mitsubishi Electric Corporation / Keyence Corporation / Panasonic Corporation / OMRON Corporation / Fuji Electric Corporation / FANUC CORPORATION / DENSO WAVE INCORPORATED / Bosch Rexroth AG / Rockwell Automation, Inc. / SIEMENS AG

Supports high-load transfer

High rigidity / Reduced man-hours / Easy maintenance

It has a high-rigidity structure with two built-in linear guides to firmly support the load. A grease nipple is equipped on the side of the actuator. It is possible to grease the ball screw and guide all at once from the outside without disassembling the main body. Significantly reduces maintenance man-hours.



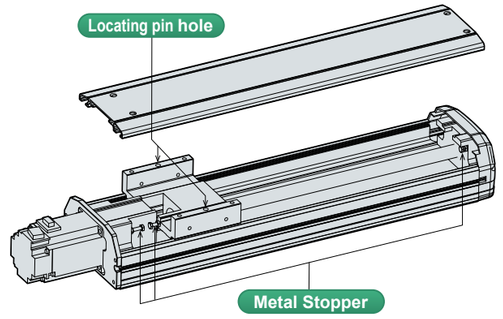


*Select by model No.

Wide Variations

Easy adjustment / High versatility / Reduced man-hours / Productivity improved / Reduced design hours / Reduced number of parts

Multi-axis configurations (orthogonal combinations) are also possible to suit the application. You can choose from 3 types of configurations. In addition, a metal stopper specification is also available. By establishing an accurate zero point based on a mechanical reference, it is possible to perform accurate homing by pushing against the mechanical end.



A-type (X-Y axis)

Max. payload: 50 kg

3 sizes

P-type (X-Z axis)

Max. payload: 35 kg

3 sizes

F-type (Y-Z axis)

Max. payload: 22 kg

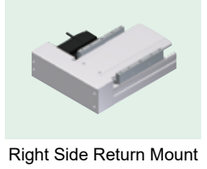
1 size

Motor fold-back variations

High versatility / Space saving / Reduced design hours

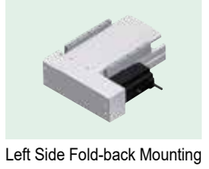
We have prepared a total of 5 motor fold-back variations that can be selected according to the equipment.

Straight Mounting



Right Side Return Mount

Bottom Side Return Mount



Left Side Fold-back Mounting

Built-in Mounting

* Please check the specification page for the conditions under which built-in mounting can be selected.

System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal *2	Max. Payload (kg) Vertical	Stroke (mm) and Max. Speed (mm/s) *6	Page
Slider Type		ETS-13	100 *1	135	5	50 *3	12 *3	50 mm: 250 / 450–1650: 225 200 175 150 125	124
						70	17		
					10	30	8	50 mm: 500 / 450–1650: 450 400 350 300 250	
						47	12	300: 0.80 sec / 600: 1.40 sec / 900: 2.77 sec / 1050: 4.40 sec	
			200		16	22	5	50 mm: 800 / 450–1650: 720 640 560 480 400	
						30	6		
			400		20	18	3	50 mm: 1000 / 450–1650: 900 800 700 600 500	
						24	4	300: 0.50 sec / 600: 0.80 sec / 900: 1.49 sec / 1050: 2.30 sec	
		ETS-14	200	135	5	95 *4	27 *4	50 mm: 250 / 450–1650: 225 200 175 150 125	132
						110	33		
					10	75	18	50 mm: 500 / 450–1650: 450 400 350 300 250	
						88	22	300: 0.80 sec / 600: 1.40 sec / 900: 2.77 sec / 1050: 4.40 sec	
					16	44	7	50 mm: 800 / 450–1650: 720 640 560 480 400	
			400			48	10		
					20	35	6	50 mm: 1000 / 450–1650: 900 800 700 600 500	
						40	8	300: 0.50 sec / 600: 0.80 sec / 900: 1.49 sec / 1050: 2.30 sec	
		ETS-17	400	170	5	120 *5	40 *5	50 mm: 250 / 450–1650: 225 200 175 150	140
						120	50		
					10	110	30	50 mm: 500 / 450–1650: 450 400 350 300	
						120	40	300: 0.80 sec / 600: 1.40 sec / 900: 2.20 sec / 1200: 4.37 sec	
			750		20	75	14	50 mm: 250 / 450–1650: 900 800 700 600	
						83	25		
					40	35	7	50 mm: 2000 / 450–1650: 1800 1600 1400 1200	
						50	10	300: 0.35 sec / 600: 0.50 sec / 900: 0.70 sec / 1200: 1.24 sec	
		ETS-22	750	220	5	150	55	50 mm: 250 / 450–1650: 225 200 175 150 125 100	148
					10	150	45	50 mm: 500 / 450–1650: 450 400 350 300 250 200	
								300: 0.80 sec / 600: 1.40 sec / 900: 2.00 sec / 1200: 3.63 sec / 1650: 7.70 sec	
					25	120	20	50 mm: 1250 / 450–1650: 1125 1000 875 750 625 500	
					40	60	10	50 mm: 2000 / 450–1650: 1800 1600 1400 1200 1000 800 600	
								300: 0.35 sec / 600: 0.50 sec / 900: 0.70 sec / 1200: 1.20 sec / 1650: 2.70 sec	

*1 ETS-13 100 W is only available with the metal stopper (ETS-X) specification.
*2 For wall-mounted installation, the payload is the same as for horizontal installation.
*3 The upper value is the payload for 100 W, and the lower value is the payload for 200/400 W.
*4 The upper value is the payload for 200 W, and the lower value is the payload for 400 W.
*5 The upper value is the payload for 400 W, and the lower value is the payload for 750 W.
*6 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*7 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration. Please note that this is not the value at max. payload.

Model Number Configuration

Model No. Notation Method

ETS - ❶13 - ❷05 ❸040 - ❹E ❺M ❻1 ❼N ❽C ❾B ❿D ⓫P - ⓬X

❶ Body size *1

13	Body width 135 mm
14	Body width 135 mm
17	Body width 170 mm
22	Body width 220 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm
25	25 mm
40	40 mm

❸ Stroke

005 to 150	50 mm (every 50 mm) 1500 mm

❹ Motor mounting direction *2, *3

E	Straight Mounting
B	Built-in Mounting
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M, Y, P, F	Refer to the list on the page at right

❻ Motor Capacity *1

1	100 W
2	200 W
4	400 W
8	750 W

❼ Brake *2

N	None
B	Yes

❽ Origin sensor (1 pc) *4

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side (Shipped included)
D	Outside, opposite motor side (Shipped included)

❾ Limit sensor (2 pcs) *4

N	None
A	Inside
B	Outside

❿ Grease nipple

N	None (Body mounting direction: Standard)
D	None (Body mounting direction: Bottom side)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal stopper specifications (ETS-X) *1, *3

	Standard
X	Adopted

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❷ Screw Lead	❸ Stroke
13	05, 10, 16, 20	005 to 105 (50 mm to 1050 mm)
14	05, 10, 16, 20	005 to 105 (50 mm to 1050 mm)
17	05, 10, 20, 40	005 to 125 (50 mm to 1250 mm)
22	05, 10, 25, 40	005 to 150 (50 mm to 1500 mm)

*1 ETS-13 100 W is only compatible with the metal stopper specification.
*2 Select "Yes" only when the motor mounting direction is "built-in mounting". If selecting other mounting directions, please select "None."
*3 Built-in mounting is not available for metal stopper specifications.
*4 Sensor dogs are assembled at shipment regardless of the presence of the sensor.

Manufacturer	100 W	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M	M
Delta Electronics, Inc.	M	M	M	M
Sanyo Denki Co., Ltd.	M	M	M	-
Yaskawa Electric Corporation	Y	Y	Y	Y
Keyence Corporation	Y	Y	Y	Y
Panasonic Corporation	P	P	P	P
OMRON Corporation	M	P	P	P
Fuji Electric Co., Ltd.	M	M	M	M
FANUC CORPORATION	F	F	F	F
DENSO WAVE INCORPORATED (ETS-X only)	M	M	M	-
Bosch Rexroth AG	P	P	P	P
Rockwell Automation, Inc.	M	M	M	M
SIEMENS AG	M	M	M	M

Model Number Display Example

ETS-13-05040-EM1 NCBNP-X

❶ Body Size : 13 Series
❷ Screw lead : 5 mm
❸ Stroke : 400 mm
❹ Motor Mounting Direction : Straight Mounting
❺ Mounting motor specification : M (Refer to the table on the page at right)
❻ Motor Capacity : 400 W
❼ Brake : None
❽ Origin sensor : External motor side
❾ Limit sensor : Outside
❿ Grease nipple : None
⓫ Locating pin hole : Yes
⓬ Metal Stopper Specification (ETS-X) : Adopted

*This product is available only for the actuator (and motor mounting part) and does not include a motor. The user must prepare, mount, and adjust the motor and driver.

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	100 W *3
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR13
		MELSERVO J5	HK-KT13 W
M	Delta Electronics, Inc.	ECMA-C *2	ECMA-C10401
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A04010
Y	Yaskawa Electric Corporation	Σ-7 *1	SGM7 J-01
		Σ-X *1	SGMXJ-01
Y	Keyence Corporation	SV	SV-□010
		SV2 *1	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD01
		MINAS A6 *1	MSMF01
M	OMRON Corporation	G5	R88 M-K10030
		1 S *1	R88 M-1 M10030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS101 D7-□B2□
		ALPHA7 GYB	-
F	FANUC CORPORATION *1	βiS-B	A06 B-0112-B1
M	DENSO WAVE INCORPORATED	410627	410627-121□
			410627-122□
P	Bosch Rexroth AG	MSM	MSM019 B
M	Rockwell Automation, Inc. *1	TLP	TLP-A046-010-DKA□2
M	SIEMENS AG *1	1 FK2 *5	1 FK2102-1 AG0

Code	Manufacturer	Series	200 W (ETS-13/14 Series)	400 W (ETS-13/14/17 Series)	750 W *4 (ETS-17/22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT23 W	HK-KT43 W	HK-KT7 M3 W
M	Delta Electronics, Inc.	ECMA-C *2	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Yaskawa Electric Corporation	Σ-7 *1	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X *1	SGMXJ-02	SGMXJ-04	SGMXJ-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
		SV2 *1	SV2-□020	SV2-□040	SV2-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
		MINAS A6 *1	MSMF02	MSMF04	MSMF08
P	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030
		1 S *1	R88 M-1 M20030	R88 M-1 M40030	R88 M-1 M75030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201 D7-□B2□	GYS401 D7-□B2□	-
		ALPHA7 GYB	GYB201 D7-□B2□	GYB401 D7-□B2□	GYB751 D7-□B2□
F	FANUC CORPORATION *1	βiS-B	A06 B-2115-B1	A06 B-2116-B1	A06 B-2063-B1
M	DENSO WAVE INCORPORATED	410627	410627-125□	410627-127□	-
			410627-126□	410627-128□	-
P	Bosch Rexroth AG	MSM	MSM031 B	MSM031 C	MSM041 B
M	Rockwell Automation, Inc. *1	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2	TLP-A090-075-DKA□2
M	SIEMENS AG *1	1 FK2 *5	1 FK2203-2 AG0	1 FK2203-4 AG0	1 FK2204-5 AK0

* For mounting motors other than the above and products from other motor manufacturers, please contact us.
*1 "Built-in mounting" is not supported.
*2 The ECMA series (with brake) does not support "built-in mounting".
*3 ETS-13 100 W is only available with the metal stopper specification, and "built-in mounting" cannot be selected.
*4 "Built-in mounting" is not supported for the ETS-17 750 W.
*5 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 5 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (As of January 2021)

Electric Actuator Ball Screw Drive Slider Type

ETS-13 Series

Motor Straight, Built-in Mounting Type

● Servo Motor Capacity: 100 W (metal stopper specifications), 200 W, 400 W

Model No. Notation Method

ETS - 13 - 05 005 - E M 1 N N N N N - X
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬

❶ Body Size

13	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *1, *3

E	Straight Mounting
B	Built-in Mounting

❺ Mounting Motor Specifications

M	Select the mounting motor specification from the table below.
Y	
P	
F	

❻ Motor Capacity *2

1	100 W
2	200 W
4	400 W

❼ Brake *3

N	None
B	Yes

❽ Origin sensor (1 pc) *4, *5, *6

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *4, *5, *6

N	None
A	Inside
B	Outside

❿ Grease nipple *6, *7

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal stopper specifications (ETS-X) *1, *2

	Standard
X	Adopted

Manufacturer	100 W	200 W	400 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	M
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	M	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
DENSO WAVE INCORPORATED (ETS-X only)	M	M	M
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M

* 100 W is only compatible with the metal stopper specification.
* Refer to P. 123 for motor model No.

*1 For the metal stopper specification, "built-in mounting" cannot be selected.
*2 100 W can only be selected when the metal stopper specification is selected.
*3 "Yes" can only be selected when "Built-in mounting" is chosen for the motor mounting direction.
*4 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*5 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*6 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*7 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.

Specifications

Applicable Motor Capacity *1		100 W / 200 W / 400 W Servo Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. payload *1, *2	Horizontal kg 100 W	50	30	22	18
	Horizontal kg 200 W	70	47	30	24
	Horizontal kg 400 W	70	47	30	24
	Vertical kg 100 W	12	8	5	3
	Vertical kg 200 W	17	12	6	4
	Vertical kg 400 W	17	12	6	4
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1, *2	100 W N	341	170	106	85
	200 W N	683	341	213	174
	400 W N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic allowable load	N	4822			
Static Allowable Moment	N·m	MP : 175 MY : 174 MR : 153			
Dynamic allowable moment	N·m	MP : 45.1 MY : 45.1 MR : 191.7			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 100 W can only be selected with the metal stopper (ETS-X) specification.
*2 The rated thrust and max. payload are guide values assuming the mounted motor can output its rated torque.

Stroke and Max. Speed

(mm/s)

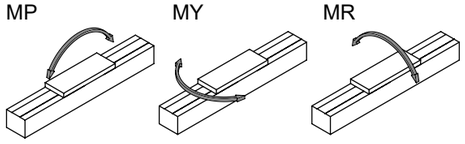
Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

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

Allowable Overhang Length

* Refer to P. 158 for details.

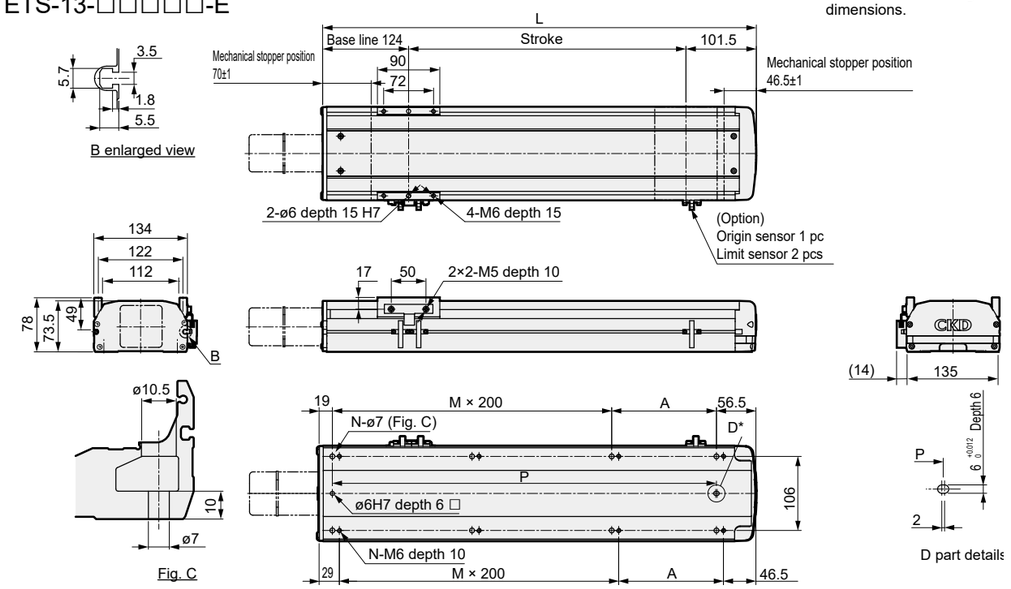
Moment Direction



External Dimension Drawing Motor Straight Mounting

● ETS-13-□□□□□-E

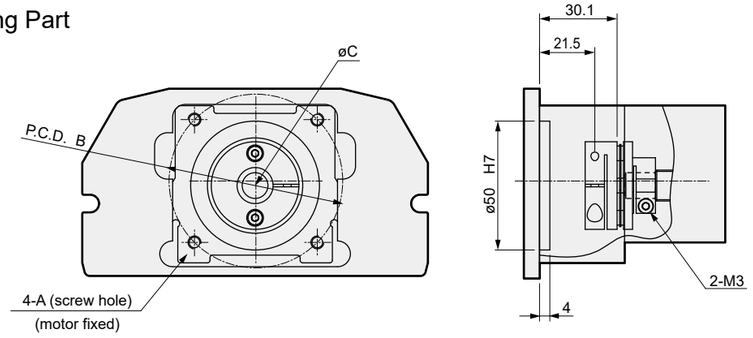
• Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	5.9	6.5	6.9	7.4	7.9	8.4	8.9	9.3	9.9	10.3	10.9	11.3	11.8	12.3	12.8	13.3	13.8	14.3	14.8	15.2	15.8

Motor Mounting Part



Mounting	Motor Specification	A	B	C	Motor mounting bolts
M	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L20
Y	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L20
P	100 W, 200 W, 400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 x L18/4-M4 x L20
F	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 x L18/4-M5 x L20 4-M5 x L20

* 100 W is only compatible with the metal stopper specification.

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts Size	Quantity
M	Shipped Included	100 W/ 200 W/ 400 W	M4/M5/M5	2/4/4
Y			M4/M5/M5	2/4/4
P			M3/M4/M4	4/4/4
F			M4/M5/M5	2/4/4

* 100 W is only compatible with the metal stopper specification.

[Home Sensor / Limit Sensor]

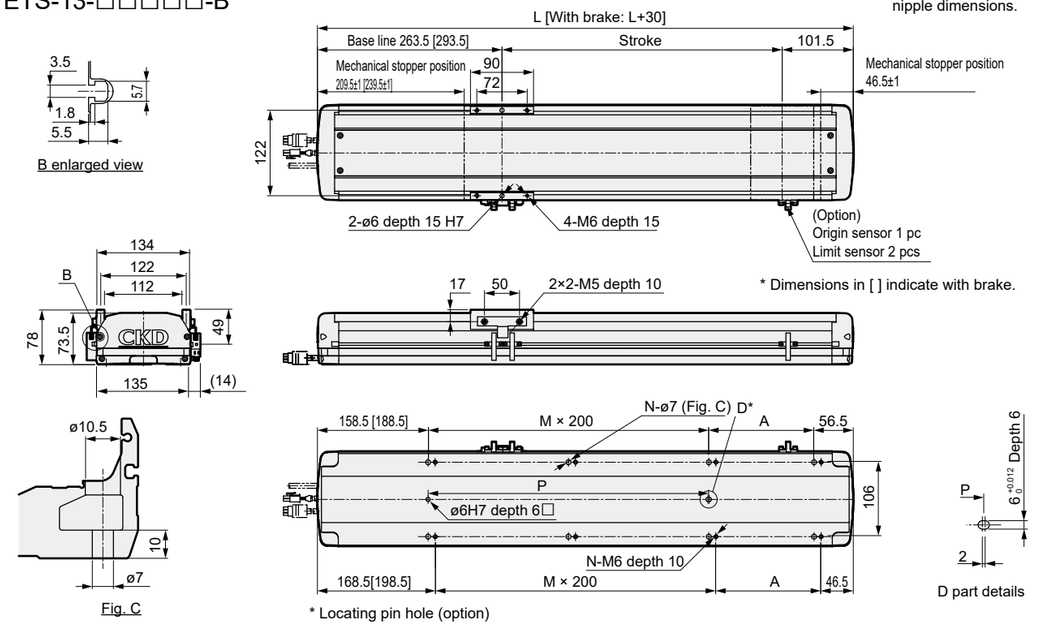
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Built-in Mounting

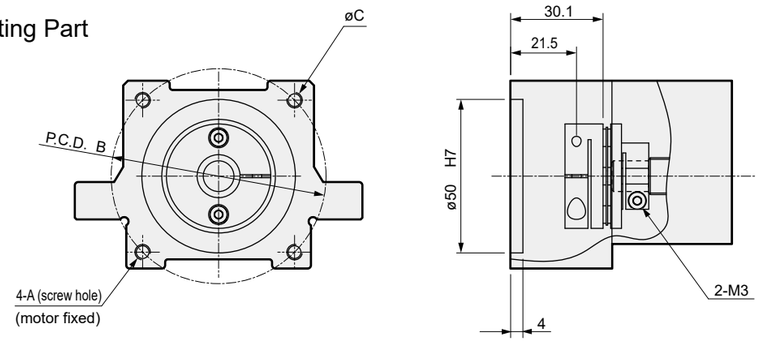
● ETS-13-□□□□□-B

• Refer to P. 164 for grease nipple dimensions.



Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L		415	465	515	565	615	665	715	765	815	865	915	965	1015	1065	1115	1165	1215	1265	1315	1365	1415
A		200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	w/o brake	8.2	9.2	10.2	11.2	12.2	13.2	14.2	15.2	16.2	17.2	18.2	19.2	20.1	21.1	22.1	23.1	24.1	25.1	26.1	27.1	28.1
	With Brake	8.8	9.8	10.8	11.8	12.8	13.8	14.8	15.8	16.8	17.8	18.8	19.7	20.7	21.7	22.7	23.7	24.7	25.7	26.7	27.7	28.7

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L20
Y	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L20
P	100 W, 200 W, 400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 x L18/4-M4 x L20

* 100 W is only compatible with the metal stopper specification.

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped Included	100 W/ 200 W/ 400 W	M4/M5/M5	2/4/4
Y			M4/M5/M5	2/4/4
P			M3/M4/M4	4/4/4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS-13 Series

Reverse Parallel Motor Mount Type

● Servo Motor Capacity : 100 W (metal stopper specifications), 200 W, 400 W

Model No. Notation Method

ETS - 13 - 05 005 - R M 1 N N N N N - X
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬

❶ Body Size

13	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *6

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity *1

1	100 W
2	200 W
4	400 W

❼ Brake

N	None

❽ Origin sensor (1 pc) *2, *3, *4

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *2, *3, *4

N	None
A	Inside
B	Outside

❿ Grease nipple *4, *5, *6

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal stopper specifications (ETS-X) *1

	Standard
X	Adopted

Manufacturer	100 W	200 W	400 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	M
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	M	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
DENSO WAVE INCORPORATED (ETS-X only)	M	M	M
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M

* Refer to P. 123 for motor model No.

*1 100 W can only be selected when the metal stopper specification is selected.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*3 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*4 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*5 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.
*6 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Capacity *1		100 W/200 W/400 W Servo Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. payload *1, *2	Horizontal kg 100 W	50	30	22	18
	Horizontal kg 200 W	70	47	30	24
	Horizontal kg 400 W	70	47	30	24
	Vertical kg 100 W	12	8	5	3
	Vertical kg 200 W	17	12	6	4
	Vertical kg 400 W	17	12	6	4
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1, *2	100 W N	341	170	106	85
	200 W N	683	341	213	174
	400 W N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic allowable load	N	4822			
Static Allowable Moment	N·m	MP: 175 MY: 174 MR: 153			
Dynamic allowable moment	N·m	MP: 45.1 MY: 45.1 MR: 191.7			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 100 W can only be selected with the metal stopper (ETS-X) specification.
*2 The rated thrust and max. payload are guide values assuming the mounted motor can output its rated torque.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

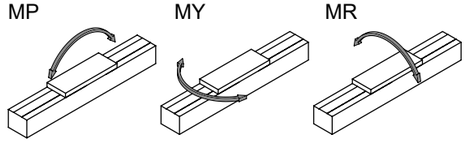
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 158 for details.

Moment Direction

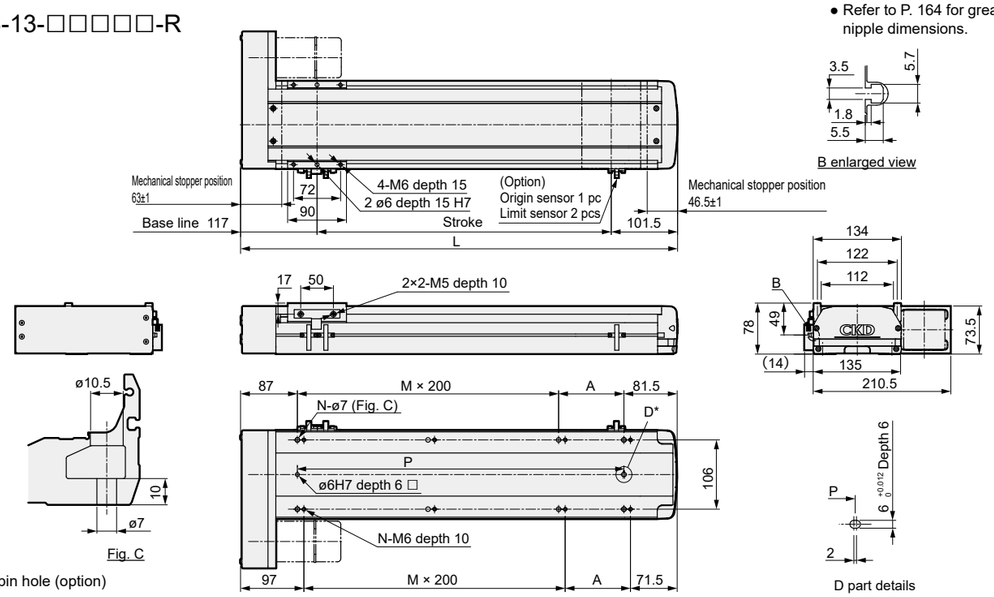
MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● ETS-13-□□□□□-R

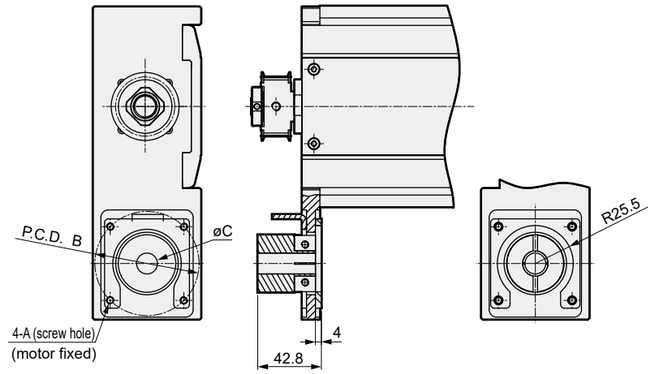
● Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L25
Y	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L25
P	100 W, 200 W, 400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 x L18/4-M4 x L25
F	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 x L18/4-M5 x L25 4-M5 x L18

* 100 W is only compatible with the metal stopper specification.

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	100 W/ 200 W/ 400 W	M4/M5/M5	2/4/4
Y			M4/M5/M5	2/4/4
P			M3/M4/M4	4/4/4
F			M4/M5/M5	2/4/4

* 100 W is only compatible with the metal stopper specification.

[Home Sensor / Limit Sensor]

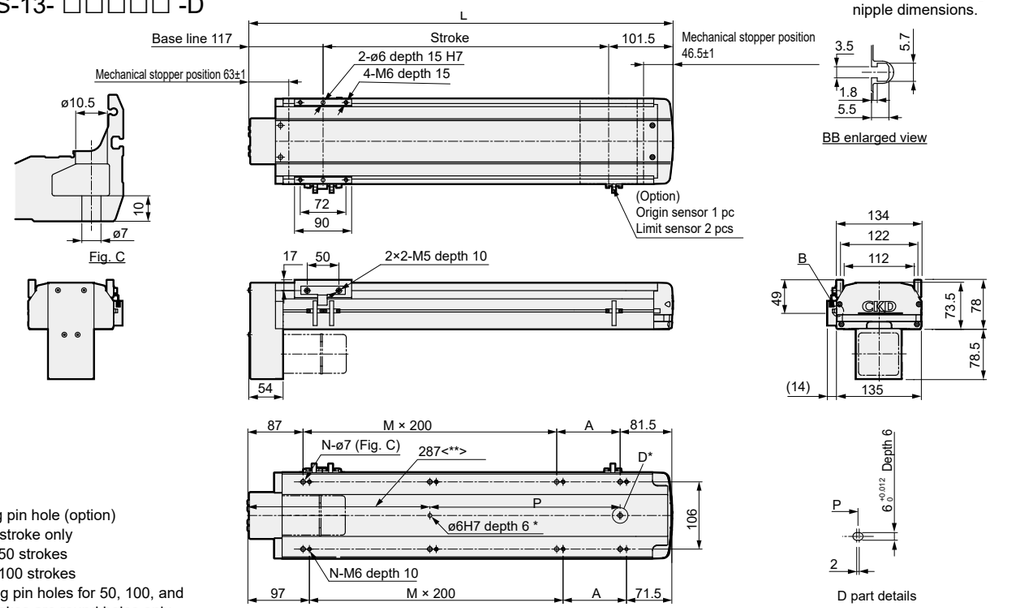
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● ETS-13- □□□□□ -D

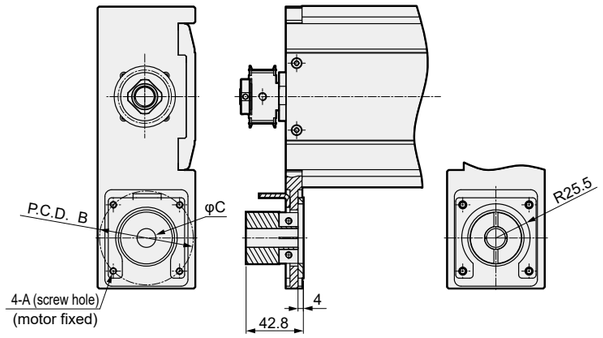
● Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)
** For 50 stroke only
** 187 at 50 strokes
237 at 100 strokes
Locating pin holes for 50, 100, and 150 strokes are round holes only.

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	0	0	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor Mounting Part



Mounting	Motor Specification	A	B	C	Motor mounting bolts
M	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L25
Y	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L25
P	100 W, 200 W, 400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 x L18/4-M4 x L25
F	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 x L18/4-M5 x L25 4-M5 x L18

* 100 W is only compatible with the metal stopper specification.

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	100 W/ 200 W/ 400 W	M4/M5/M5	2/4/4
Y			M4/M5/M5	2/4/4
P			M3/M4/M4	4/4/4
F			M4/M5/M5	2/4/4

* 100 W is only compatible with the metal stopper specification.

[Home Sensor / Limit Sensor]

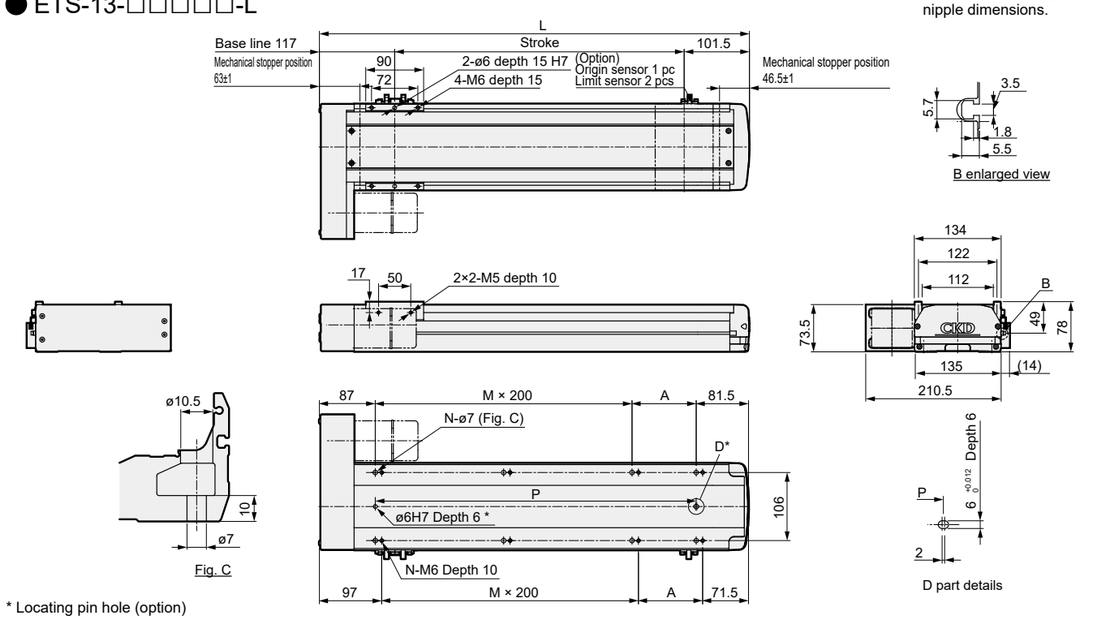
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETS-13-□□□□□-L

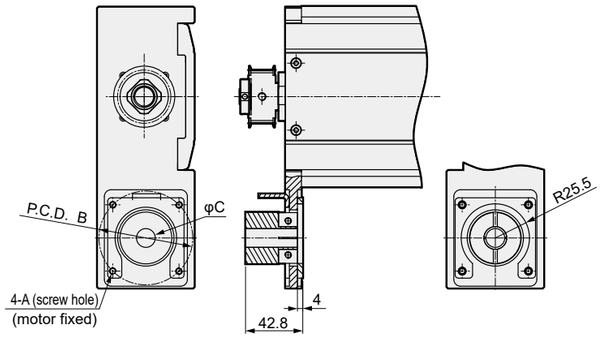
● Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor Mounting Part



Mounting	Motor Specification	A	B	C	Motor mounting bolts
M	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L25
Y	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø14/ø14	4-M5 x L18/4-M5 x L25
P	100 W, 200 W, 400 W	M3/M4/M4	ø45/ø70/ø70	ø8/ø11/ø14	4-M4 x L18/4-M4 x L25
F	100 W, 200 W, 400 W	M4/M5/M5	ø46/ø70/ø70	ø8/ø9/ø14	4-M5 x L18/4-M5 x L25 4-M5 x L18

* 100 W is only compatible with the metal stopper specification.

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	100 W/ 200 W/ 400 W	M4/M5/M5	2/4/4
Y			M4/M5/M5	2/4/4
P			M3/M4/M4	4/4/4
F			M4/M5/M5	2/4/4

* 100 W is only compatible with the metal stopper specification.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

Electric Actuator Ball Screw Drive Slider Type

ETS-14 Series

Motor Straight, Built-in Mounting Type

● Servo Motor Capacity : 200 W / 400 W

Model No. Notation Method

ETS - 14 - 05 - 005 - E M 2 N N N N N - X

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor Mounting Direction *1, *2

E	Straight Mounting
B	Built-in Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

2	200 W
4	400 W

❼ Brake *2

N	None
B	Yes

❽ Origin sensor (1 pc) *3, *4, *5

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *3, *4, *5

N	None
A	Inside
B	Outside

❿ Grease nipple *5, *6

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal stopper specifications (ETS-X) *1

	Standard
X	Adopted

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE INCORPORATED (ETS-X only)	M	M
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

*1 For the metal stopper specification, "built-in mounting" cannot be selected.
*2 "Yes" can only be selected when "Built-in mounting" is chosen for the motor mounting direction.
*3 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*4 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*5 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*6 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.

* Refer to P. 123 for motor model No.

Specifications

Applicable Motor Capacity		200 W/400 W Servo Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke mm		50 to 1050			
Screw lead mm		5	10	16	20
Max. Payload *1	Horizontal 200 W kg	95	75	44	35
	Horizontal 400 W kg	110	88	48	40
	Vertical 200 W kg	27	18	7	6
	Vertical 400 W kg	33	22	10	8
Max. Speed mm/s		250	500	800	1000
Rated thrust *1	200 W N	683	341	213	174
	400 W N	1388	694	433	347
Repeatability mm		±0.01			
Lost Motion mm		0.1 or less			
Dynamic allowable load N		6567			
Static Allowable Moment N·m		MP: 552.0 MY: 551.0 MR: 485.0			
Dynamic allowable moment N·m		MP: 262.7 MY: 262.7 MR: 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

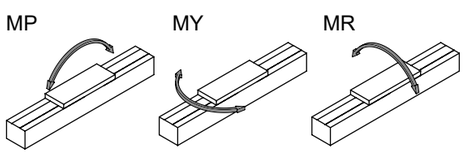
Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

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

Allowable Overhang Length

* Refer to P. 158 for details.

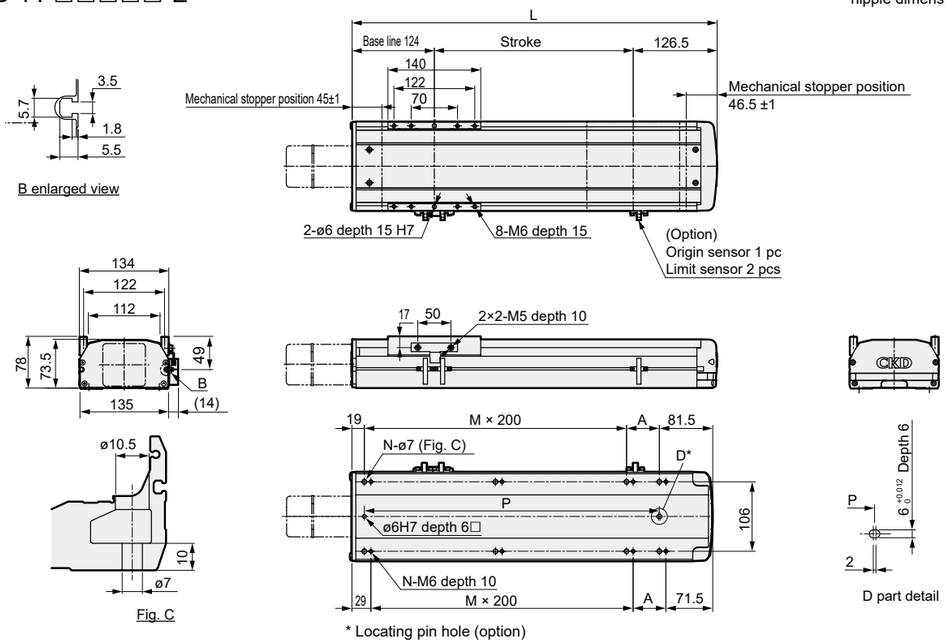
Moment Direction



External Dimension Drawing Motor Straight Mounting

● ETS-14-□□□□□-E

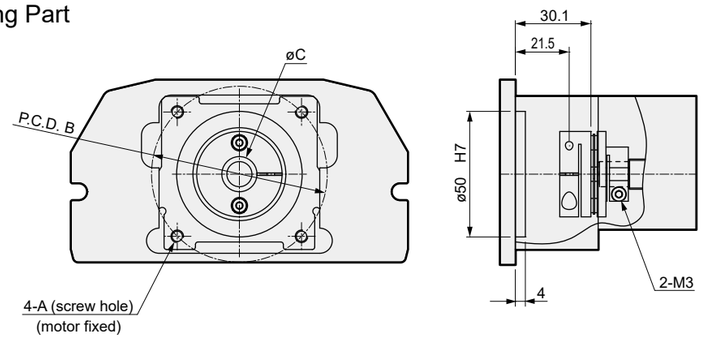
● Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5	1050.5	1100.5	1150.5	1200.5	1250.5	1300.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	6.1	6.7	7.1	7.6	8.1	8.6	9.1	9.5	10.1	10.5	11.1	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.4	16.0

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200W / 400W	M5	ø70	ø14	4-M5 x L18
Y	200W / 400W	M5	ø70	ø14	4-M5 x L18
P	200W / 400W	M4	ø70	ø11/ø14	4-M4 x L18
F	200W / 400W	M5	ø70	ø9/ø14	4-M5 x L16/4-M5 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts Size	Quantity
M	Shipped attached	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

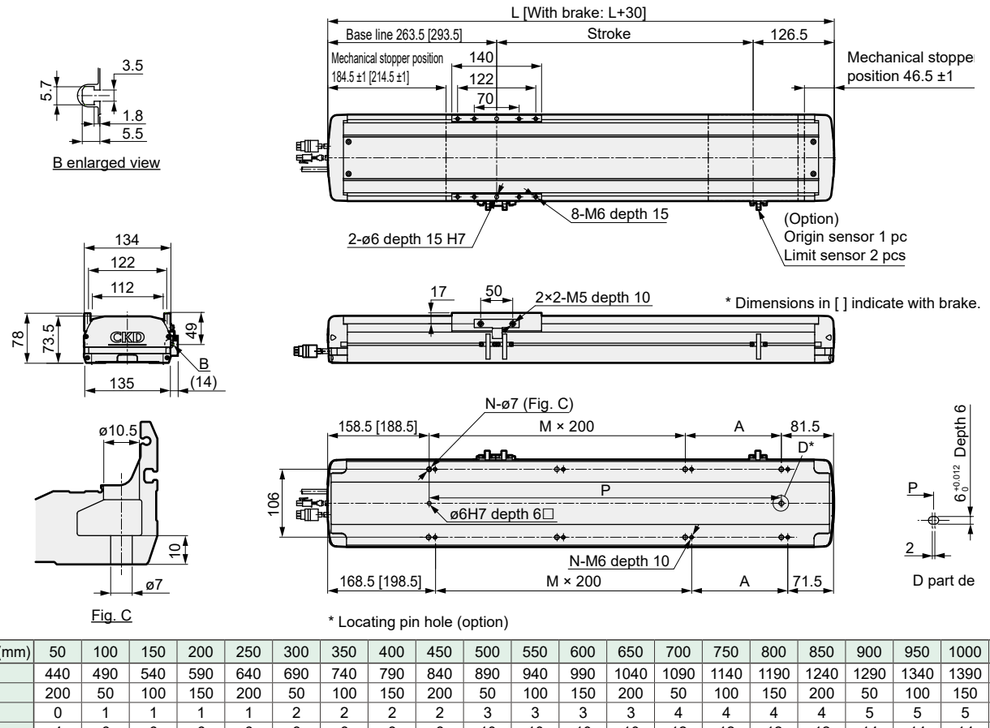
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Built-in Mounting

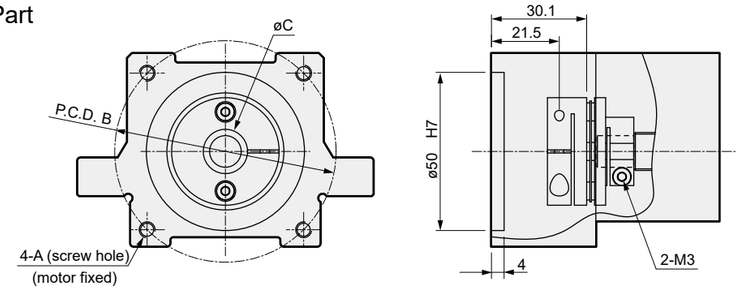
● ETS-14-□□□□□-B

● Refer to P. 164 for grease nipple dimensions.



Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L		440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A		200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	w/o brake	8.3	9.3	10.3	11.2	12.2	13.1	14.1	15.0	16.0	16.9	17.9	18.8	19.8	20.7	21.7	22.6	23.6	24.5	25.5	26.4	27.4
	With Brake	8.9	9.9	10.8	11.8	12.7	13.7	14.6	15.6	16.5	17.5	18.4	19.4	20.3	21.3	22.2	23.2	24.1	25.1	26.0	27.0	27.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200W / 400W	M5	ø70	ø14	4-M5 x L18
Y	200W / 400W	M5	ø70	ø14	4-M5 x L18
P	200W / 400W	M4	ø70	ø11/ø14	4-M4 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped attached	200W/400W	M5	4
Y			M5	4
P			M4	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS-14 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 200 W / 400 W

Model No. Notation Method

ETS - 14 - 05 - 005 - R M 2 N N N N N - X

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *6

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

2	200 W
4	400 W

❼ Brake

N	None

❽ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal Stopper Specification (ETS-X)

	Standard
X	Adopted

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L" is selected, "L" cannot be selected for the grease nipple.

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE INCORPORATED (ETS-X only)	M	M
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 123 for motor model No.

Specifications

Applicable Motor Capacity		200 W/400 W Servo Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke *1	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. Payload *1	Horizontal 200 W kg	95	75	44	35
	Horizontal 400 W kg	110	88	48	40
	Vertical 200 W kg	27	18	7	6
	Vertical 400 W kg	33	22	10	8
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	200 W N	683	341	213	174
	400 W N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic allowable load N		6567			
Static Allowable Moment N·m		MP : 552.0 MY : 551.0 MR : 485.0			
Dynamic allowable moment N·m		MP : 262.7 MY : 262.7 MR : 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

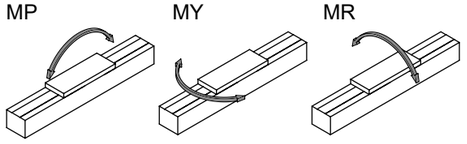
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 158 for details.

Moment Direction

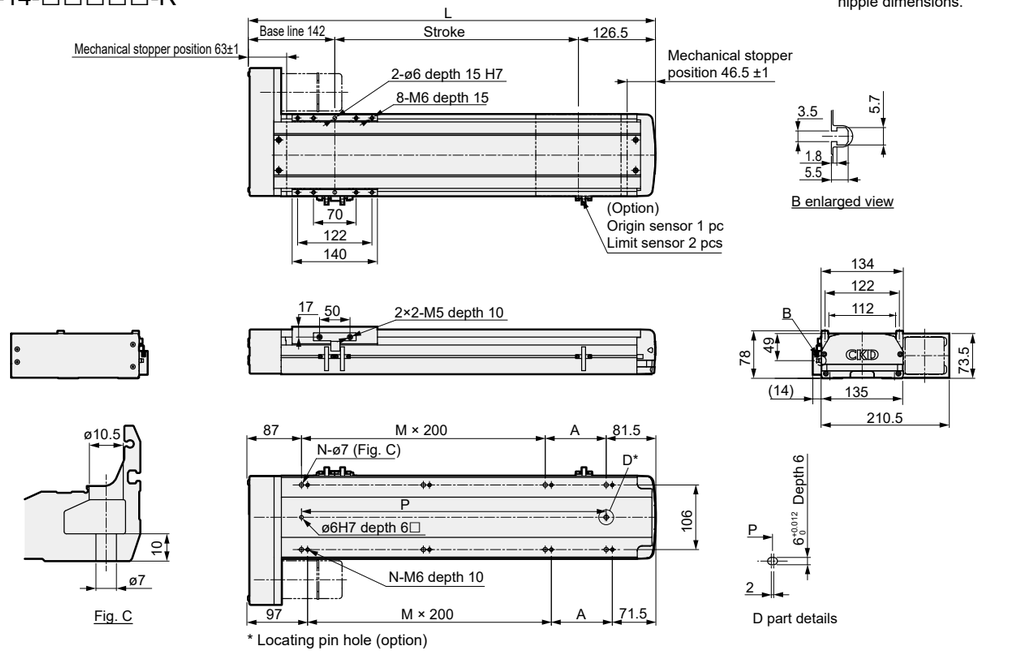
MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

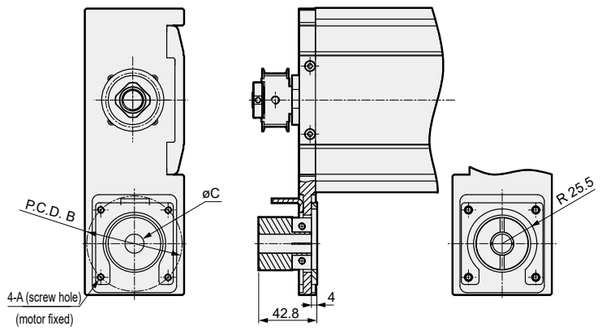
● ETS-14-□□□□□-R

• Refer to P. 164 for grease nipple dimensions.



Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200W / 400W	M5	ø70	ø14	4-M5 x L18
Y	200W / 400W	M5	ø70	ø14	4-M5 x L18
P	200W / 400W	M4	ø70	ø11/ø14	4-M4 x L18
F	200W / 400W	M5	ø70	ø9/ø14	4-M5 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts Size	Quantity
M	Shipped included	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

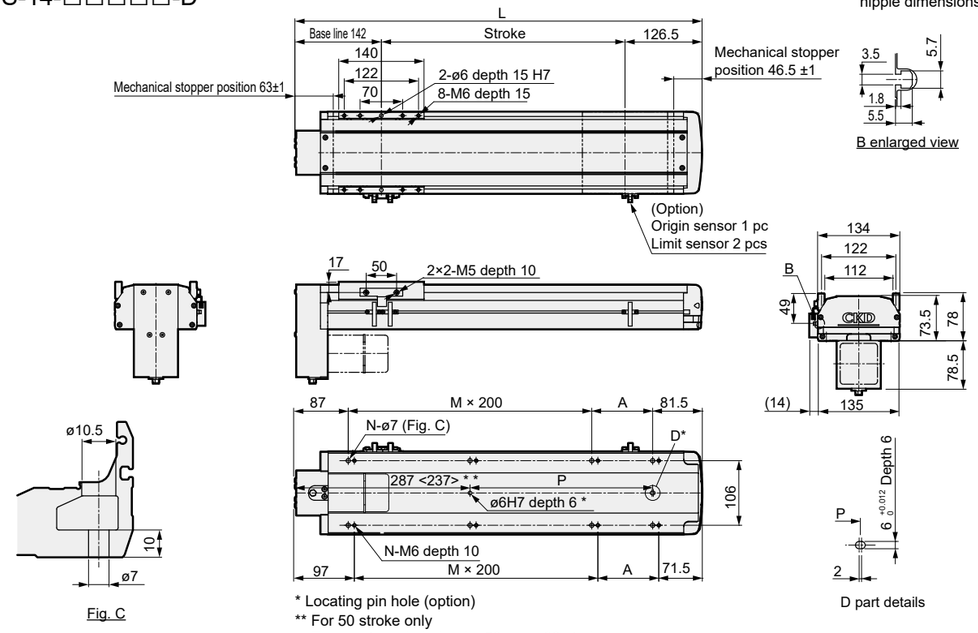
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● ETS-14-□□□□□-D

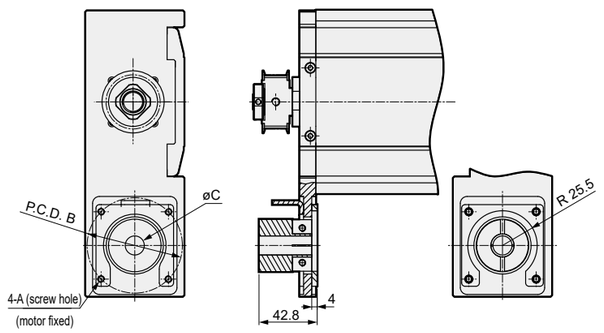
● Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)
** For 50 stroke only
The locating pin holes for 50 and 100 strokes are round holes only.

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	0	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200W / 400W	M5	ø70	ø14	4-M5 x L18
Y	200W / 400W	M5	ø70	ø14	4-M5 x L18
P	200W / 400W	M4	ø70	ø11/ø14	4-M4 x L18
F	200W / 400W	M5	ø70	ø9/ø14	4-M5 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

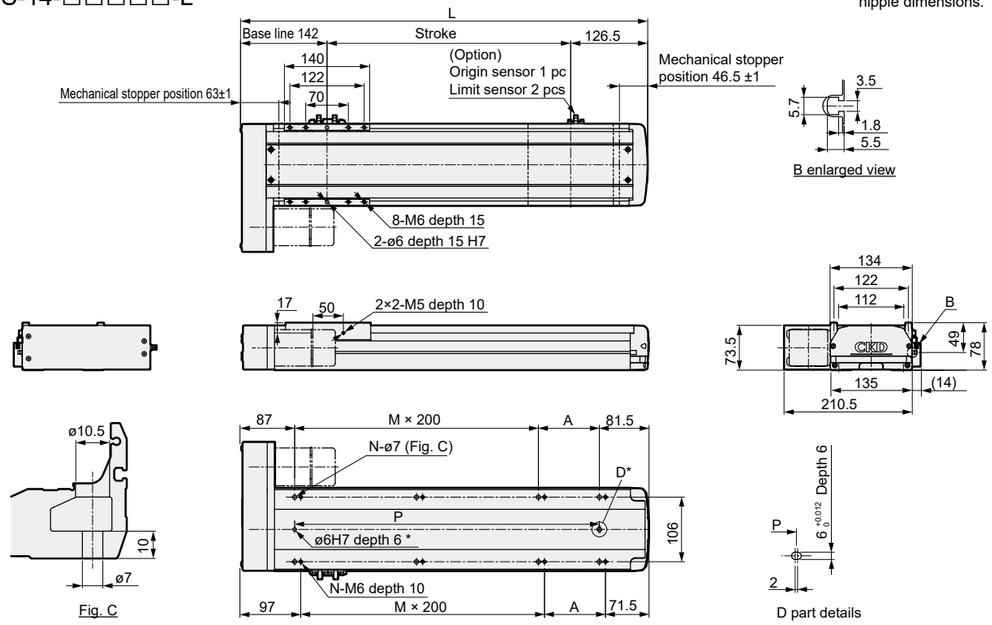
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETS-14-□□□□□-L

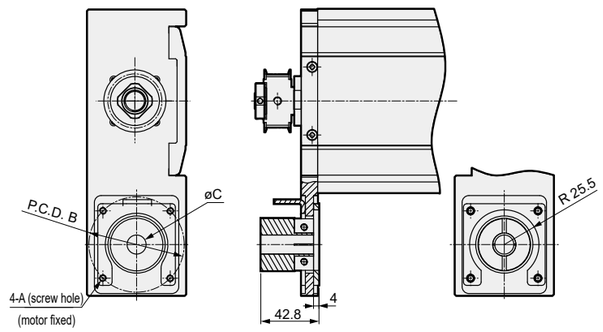
● Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200W / 400W	M5	ø70	ø14	4-M5 x L18
Y	200W / 400W	M5	ø70	ø14	4-M5 x L18
P	200W / 400W	M4	ø70	ø11/ø14	4-M4 x L18
F	200W / 400W	M5	ø70	ø9/ø14	4-M5 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W/400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

Electric Actuator Ball Screw Drive Slider Type

ETS-17 Series

Motor Straight, Built-in Mounting Type

●Servo Motor Capacity: 400 W / 750 W

Model No. Notation Method

ETS - 17 - 05 005 - E M 4 N N N N N N - X

❶ Body Size

17	Body width 170 mm

❷ Screw Lead

05	5 mm
10	10 mm
20	20 mm
40	40 mm

❸ Stroke *1, *2

005 to 125	100 mm (every 50 mm) 1250 mm

❹ Motor mounting direction *1, *2

E	Straight Mounting
B	Built-in Mounting

❺ Mounting Motor Specifications

M	Select the mounting motor specification from the table below.
Y	
P	
F	

❻ Motor Capacity *1

4	400 W
8	750 W

❼ Brake *2

N	None
B	Yes

❽ Origin sensor (1 pc) *3, *4, *5

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *3, *4, *5

N	None
A	Inside
B	Outside

❿ Grease nipple *5, *6

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal stopper specifications (ETS-X) *1

	Standard
X	Adopted

Manufacturer	400 W	750 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	-
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE INCORPORATED (ETS-X only)	M	-
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 123 for motor model No.

*1 Also for the metal stopper specification, "built-in mounting" cannot be selected.
*2 "Yes" can only be selected when "Built-in mounting" is chosen for the motor mounting direction.
*3 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*4 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*5 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*6 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.

Specifications

Applicable Motor Capacity		400 W/750 W Servo Motor			
Drive Method		Ball Screw ø20			
Ball Screw Accuracy Grade		C7			
Stroke mm		50 to 1250			
Screw lead mm		5	10	20	40
Max. Payload *1	Horizontal 400 W kg	120	110	75	35
	Horizontal 750 W kg	120	120	83	50
	Vertical 400 W kg	40	30	14	7
	Vertical 750 W kg	50	40	25	10
Max. Speed mm/s		250	500	1000	2000
Rated thrust *1	400 W N	1388	694	347	174
	750 W N	2100	1050	525	260
Repeatability mm		±0.01			
Lost motion		0.1 or less			
Dynamic allowable load N		10102			
Static Allowable Moment N·m		MP : 1034.0 MY : 1032.0 MR : 908.0			
Dynamic allowable moment N·m		MP : 424.3 MY : 424.3 MR : 520.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 850	950	1050	1150	1250
5	250	225	200	175	150
10	500	450	400	350	300
20	1000	900	800	700	600
40	2000	1800	1600	1400	1200

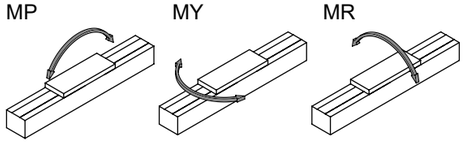
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 158 for details.

Moment Direction

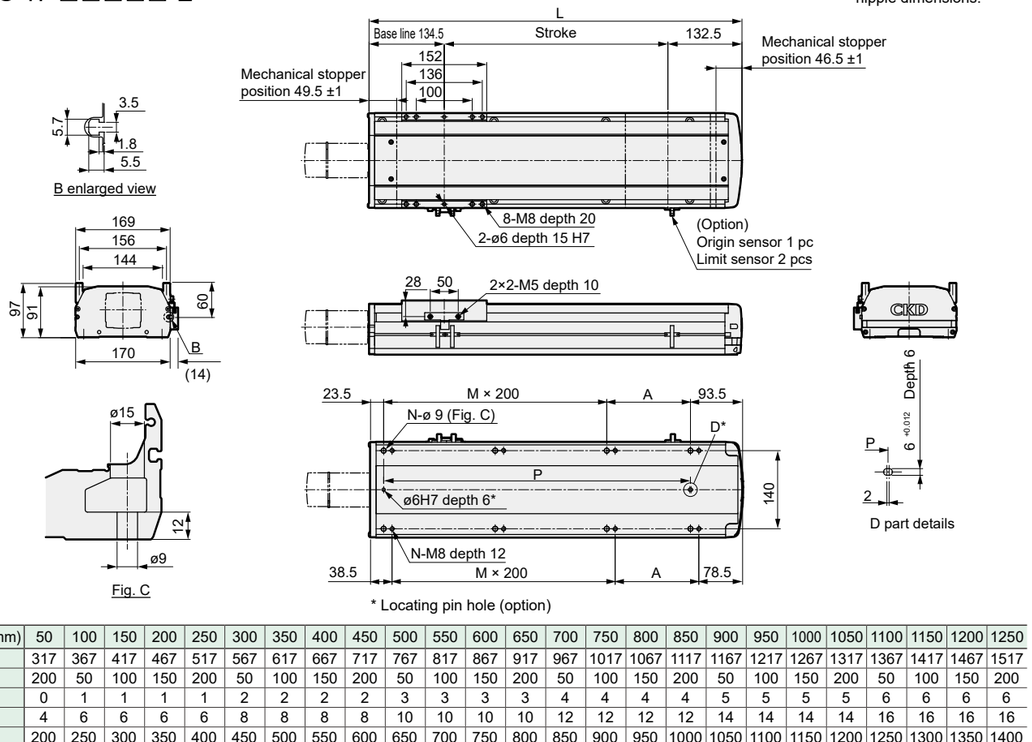
MP MY MR



External Dimension Drawing Motor Straight Mounting

● ETS-17-□□□□□-E

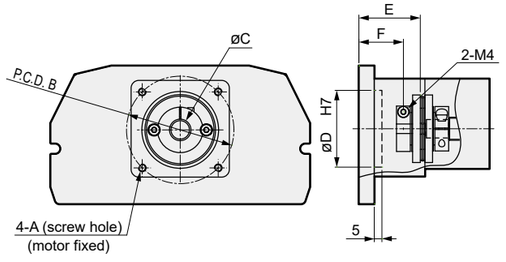
● Refer to P. 164 for grease nipple dimensions.



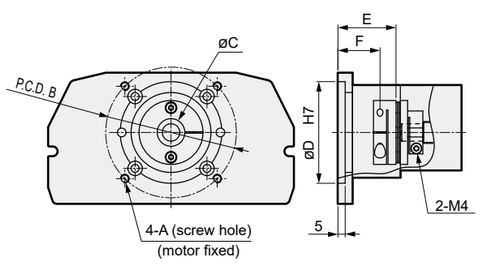
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	317	367	417	467	517	567	617	667	717	767	817	867	917	967	1017	1067	1117	1167	1217	1267	1317	1367	1417	1467	1517
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	9.5	10.3	11.1	11.9	12.7	13.4	14.2	15.0	15.8	16.5	17.3	18.1	18.9	19.6	20.4	21.2	22.0	22.7	23.5	24.3	25.1	25.9	26.7	27.5	28.3

Motor Mounting Part

● ETS-17-400W



● ETS-17-750W



Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolts
M	400W/750W	M5/M6	ø70/ø90	ø14/ø19	50/70	40	29	4-M5 x L18/4-M6 x L16
Y	400W/750W	M5/M6	ø70/ø90	ø14/ø19	50/70	40	29	4-M5 x L18/4-M6 x L16
P	400W/750W	M4/M5	ø70/ø90	ø14/ø19	50/70	40	29	4-M4 x L18/4-M5 x L16
F	400W/750W	M5/M6	ø70/ø100	ø14/ø14	50/80	40/26	29/15	4-M5 x L18/4-M6 x L16

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped Included	400W/750W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

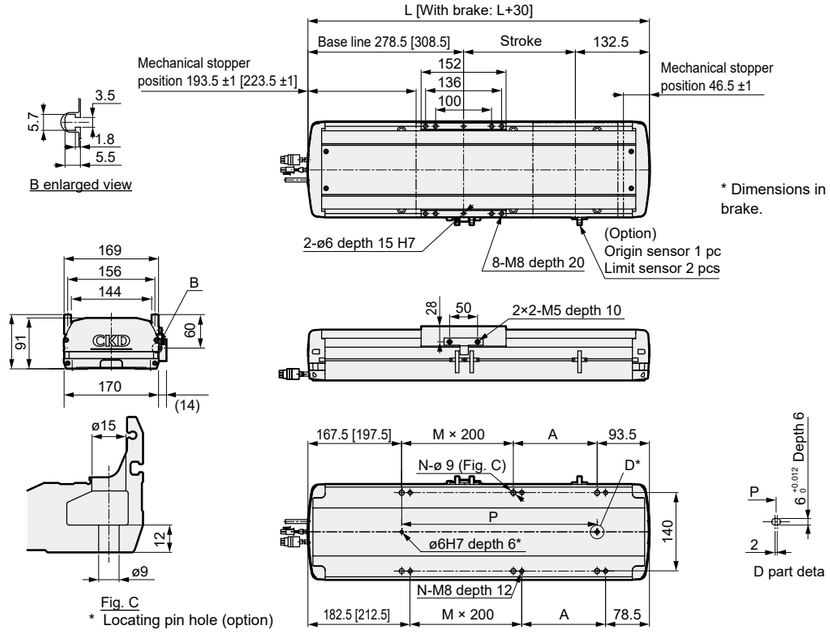
* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Built-in Mounting

● ETS-17-□□□□□-B

* 750 W type is not compatible with the built-in type.

● Refer to P. 164 for grease nipple dimensions.

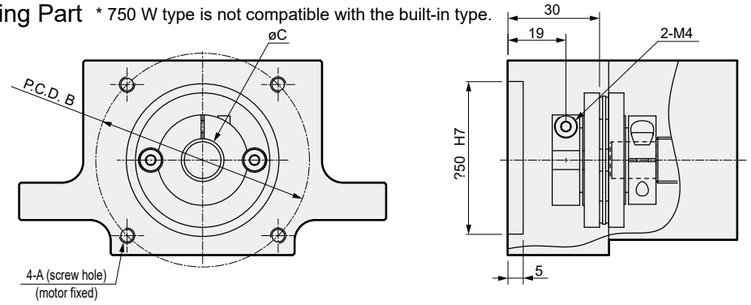


* Dimensions in [ ] indicate with brake.

Stroke (mm)		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L		461	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A		200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M		0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N		4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P		200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	Without brake	12.9	14.3	15.7	17.1	18.6	20.0	21.4	22.8	24.2	25.6	27.0	28.4	29.8	31.2	32.6	34.0	35.4	36.8	38.2	39.6	41.0	42.4	43.8	45.2	46.6
	With Brake	13.8	15.2	16.6	18.0	19.4	20.8	22.2	23.6	25.0	26.4	27.8	29.2	30.6	32.0	33.4	34.8	36.2	37.6	39.0	40.4	41.8	43.2	44.7	46.1	47.5

Motor Mounting Part

* 750 W type is not compatible with the built-in type.



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	400 W	M5	ø70	ø14	4-M5 x L18
Y	400 W	M5	ø70	ø14	4-M5 x L18
P	400 W	M4	ø70	ø14	4-M4 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped Included	400 W	M5	4
Y			M5	4
P			M4	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS-17 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 400 W / 750 W

Model No. Notation Method

ETS - 17 - 05 - 005 - R M 4 N N N N N - X

❶ Body Size

17	Body width 170 mm

❷ Screw Lead

05	5 mm
10	10 mm
20	20 mm
40	40 mm

❸ Stroke

005 to 125	100 mm (every 50 mm) 1250 mm

❹ Motor mounting direction *5

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

❺ Mounting Motor Specifications

M	Select the mounting motor specification from the table below.
Y	
P	
F	

❻ Motor Capacity

4	400 W
8	750 W

❼ Brake

N	None

❽ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal Stopper Specification (ETS-X)

	Standard
X	Adopted

Manufacturer	400 W	750 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	-
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
DENSO WAVE INCORPORATED (ETS-X only)	M	-
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 123 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Capacity			400 W/750 W Servo Motor			
Drive Method			Ball Screw ø20			
Ball Screw Accuracy Grade			C7			
Stroke		mm	50 to 1250			
Screw lead		mm	5	10	20	40
Max. Payload *1	Horizontal	400 W kg	120	110	75	35
		750 W kg	120	120	83	50
	Vertical	400 W kg	40	30	14	7
		750 W kg	50	40	25	10
Max. Speed		mm/s	250	500	1000	2000
Rated thrust *1	400 W	N	1388	694	347	174
	750 W	N	2100	1050	525	260
Repeatability		mm	±0.01			
Lost motion			0.1 or less			
Dynamic allowable load		N	10102			
Static Allowable Moment		N·m	MP : 1034.0 MY : 1032.0 MR : 908.0			
Dynamic allowable moment		N·m	MP : 424.3 MY : 424.3 MR : 520.3			
Operating ambient temperature, humidity			0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity			-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere			No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

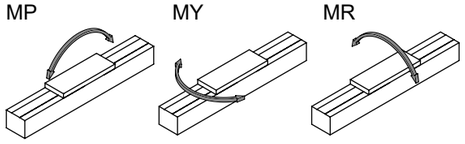
Screw Lead \ Stroke	100 to 850	950	1050	1150	1250
5	250	225	200	175	150
10	500	450	400	350	300
20	1000	900	800	700	600
40	2000	1800	1600	1400	1200

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

Allowable Overhang Length

* Refer to P. 158 for details.

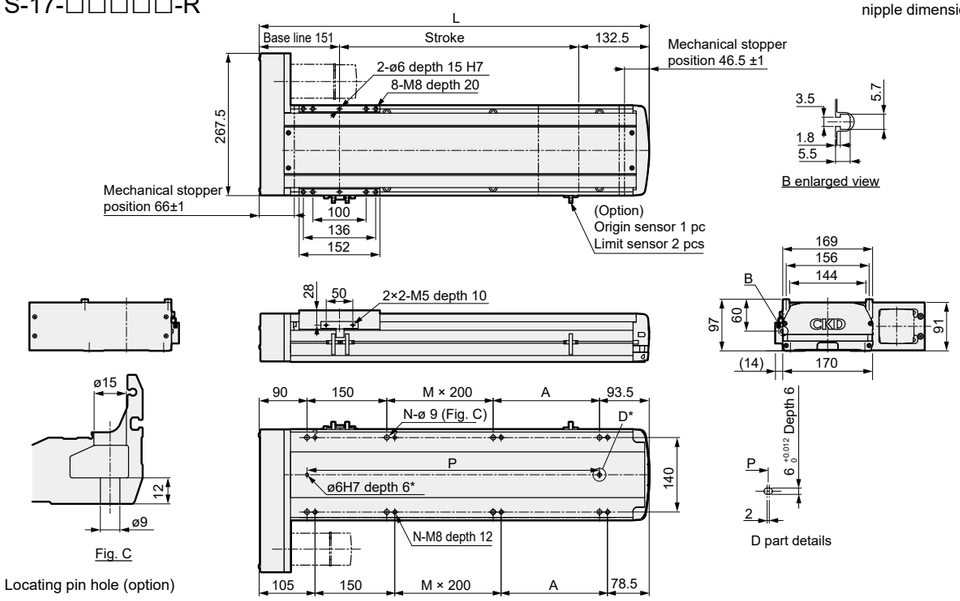
Moment Direction



External Dimension Drawing Motor Right Side Fold-back Mounting

● ETS-17-□□□□□-R

● Refer to P. 164 for grease nipple dimensions.

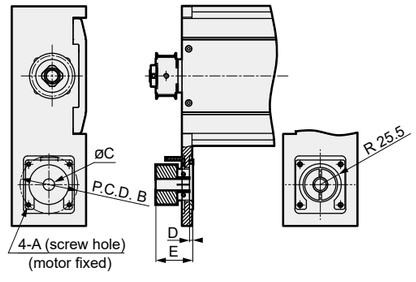


* Locating pin hole (option)

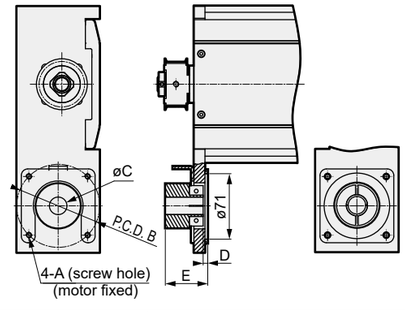
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	333.5	383.5	433.5	483.5	533.5	583.5	633.5	683.5	733.5	783.5	833.5	883.5	933.5	983.5	1033.5	1083.5	1133.5	1183.5	1233.5	1283.5	1333.5	1383.5	1433.5	1483.5	1533.5
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	10.8	11.6	12.4	13.2	14.0	14.7	15.5	16.3	17.1	17.8	18.6	19.4	20.2	20.9	21.7	22.5	23.3	24.0	24.8	25.6	26.4	27.2	28.0	28.8	29.6

Motor Mounting Part

● ETS-17-400W



● ETS-17-750W



Mounting Motor Specification		A	B	C	D	E	Motor mounting bolts
M	400W / 750W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
Y	400W / 750W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
P	400W / 750W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 x L18/4-M5 x L24
F	400W / 750W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 x L18/4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	400W/750W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

[Home Sensor / Limit Sensor]

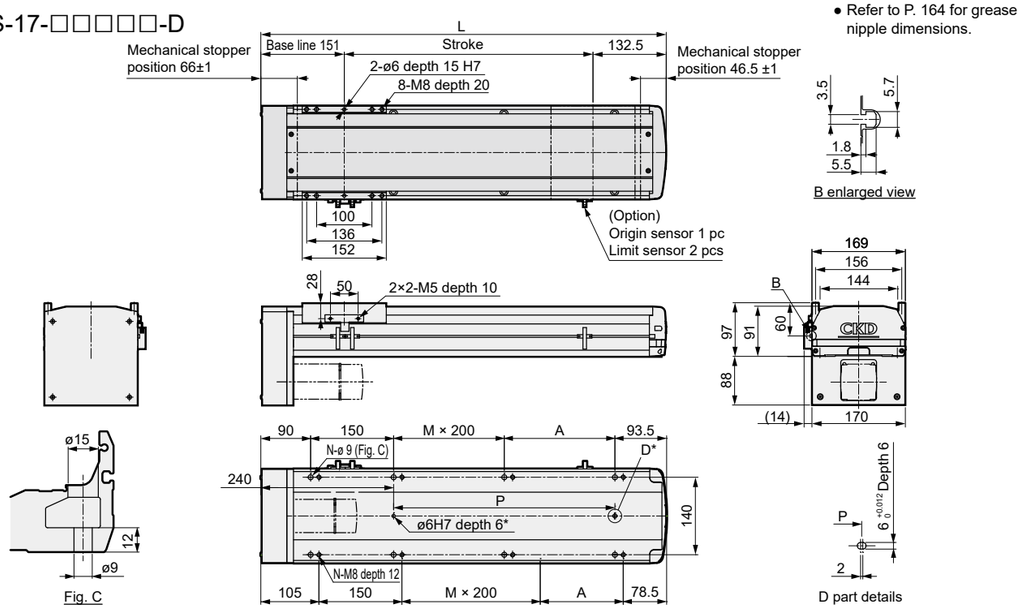
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● ETS-17-□□□□□-D

● Refer to P. 164 for grease nipple dimensions.

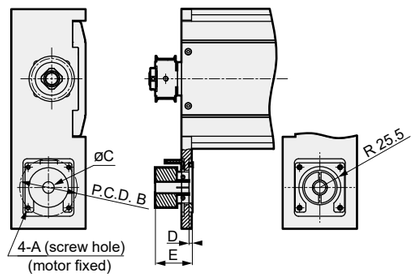


* Locating pin hole (option)
The locating pin hole for 50 stroke

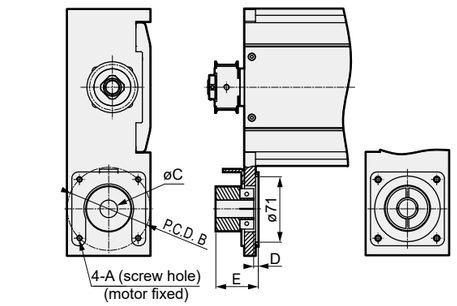
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	333.5	383.5	433.5	483.5	533.5	583.5	633.5	683.5	733.5	783.5	833.5	883.5	933.5	983.5	1033.5	1083.5	1133.5	1183.5	1233.5	1283.5	1333.5	1383.5	1433.5	1483.5	1533.5
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	11.1	11.9	12.7	13.5	14.3	15.0	15.8	16.6	17.4	18.1	18.9	19.7	20.5	21.2	22.0	22.8	23.6	24.3	25.1	25.9	26.7	27.5	28.3	29.1	29.9

Motor Mounting Part

● ETS-17-400W



● ETS-17-750W



Mounting Motor Specification		A	B	C	D	E	Motor mounting bolts
M	400W / 750W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
Y	400W / 750W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
P	400W / 750W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 x L18/4-M5 x L24
F	400W / 750W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 x L18/4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	400W/750W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

[Home Sensor / Limit Sensor]

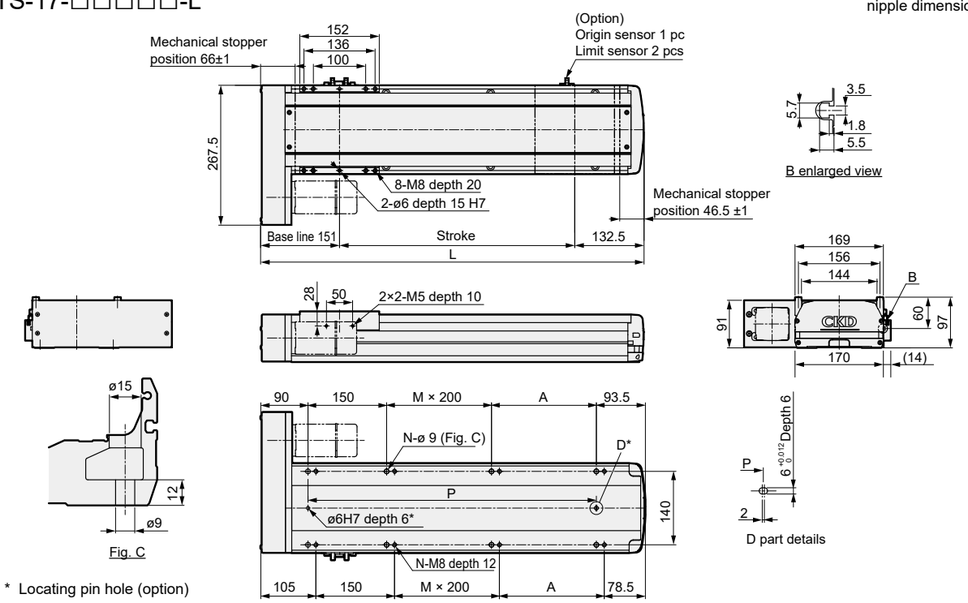
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETS-17-□□□□□-L

● Refer to P. 164 for grease nipple dimensions.

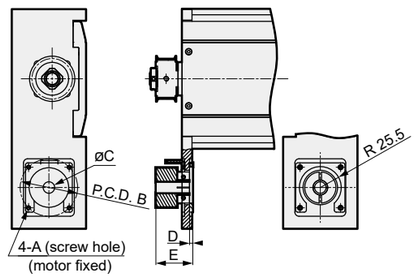


* Locating pin hole (option)

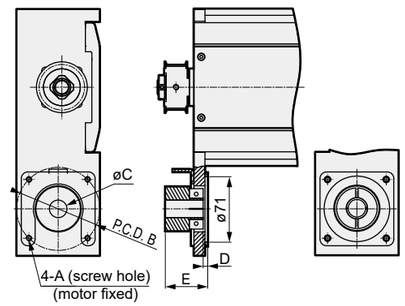
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	333.5	383.5	433.5	483.5	533.5	583.5	633.5	683.5	733.5	783.5	833.5	883.5	933.5	983.5	1033.5	1083.5	1133.5	1183.5	1233.5	1283.5	1333.5	1383.5	1433.5	1483.5	1533.5
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	10.8	11.6	12.4	13.2	14.0	14.7	15.5	16.3	17.1	17.8	18.6	19.4	20.2	20.9	21.7	22.5	23.3	24.0	24.8	25.6	26.4	27.2	28.0	28.8	29.6

Motor Mounting Part

● ETS-17-400W



● ETS-17-750W



Mounting Motor Specification		A	B	C	D	E	Motor mounting bolts
M	400W / 750W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
Y	400W / 750W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
P	400W / 750W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 x L18/4-M5 x L24
F	400W / 750W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 x L18/4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	400W/750W	M5/M6	4
Y			M5/M6	4
P			M4/M5	4
F			M5/M6	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

Electric Actuator Ball Screw Drive Slider Type

ETS-22 Series

Motor Straight, Built-in Mounting Type

● Servo Motor Capacity : 750 W

Model No. Notation Method

ETS - 22 - 05 - 005 - E M 8 N N N N N - X

❶ Body Size

22	Body width 220 mm

❷ Screw Lead

05	5 mm
10	10 mm
25	25 mm
40	40 mm

❸ Stroke

005 to 150	100 mm (every 50 mm) 1500 mm

❹ Motor mounting direction *1, *2

E	Straight Mounting
B	Built-in Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

8	750 W

❼ Brake *2

N	None
B	Yes

❽ Origin sensor (1 pc) *3, *4, *5

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *3, *4, *5

N	None
A	Inside
B	Outside

❿ Grease nipple *5, *6

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal stopper specifications (ETS-X) *1

	Standard
X	Adopted

*1 For the metal stopper specification, "built-in mounting" cannot be selected.
*2 "Yes" can only be selected when "Built-in mounting" is chosen for the motor mounting direction.
*3 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*4 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*5 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*6 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	-
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
DENSO WAVE INCORPORATED (ETS-X only)	-
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

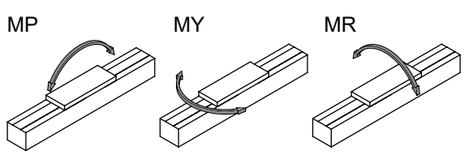
* Refer to P. 123 for motor model No.

Specifications

Applicable Motor Capacity		750 W Servo Motor			
Drive Method		Ball Screw ø25			ø20
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1500			
Screw lead	mm	5	10	25	40
Max. payload *1	Horizontal kg	150	150	120	60
	Vertical kg	55	45	20	10
Max. Speed	mm/s	250	500	1250	2000
Rated thrust *1	N	2100	1050	420	260
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic allowable load	N	14174			
Static Allowable Moment	N·m	MP : 2052.0 MY : 2052.0 MR : 1810.0			
Dynamic allowable moment	N·m	MP : 1098.5 MY : 1098.5 MR : 999.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 900	1000	1100	1200	1300	1400	1500
5	250	225	200	175	150	125	100
10	500	450	400	350	300	250	200
25	1250	1125	1000	875	750	625	500

Screw Lead \ Stroke	100 to 850	950	1050	1150	1250	1350	1450	1500
40	2000	1800	1600	1400	1200	1000	800	600

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

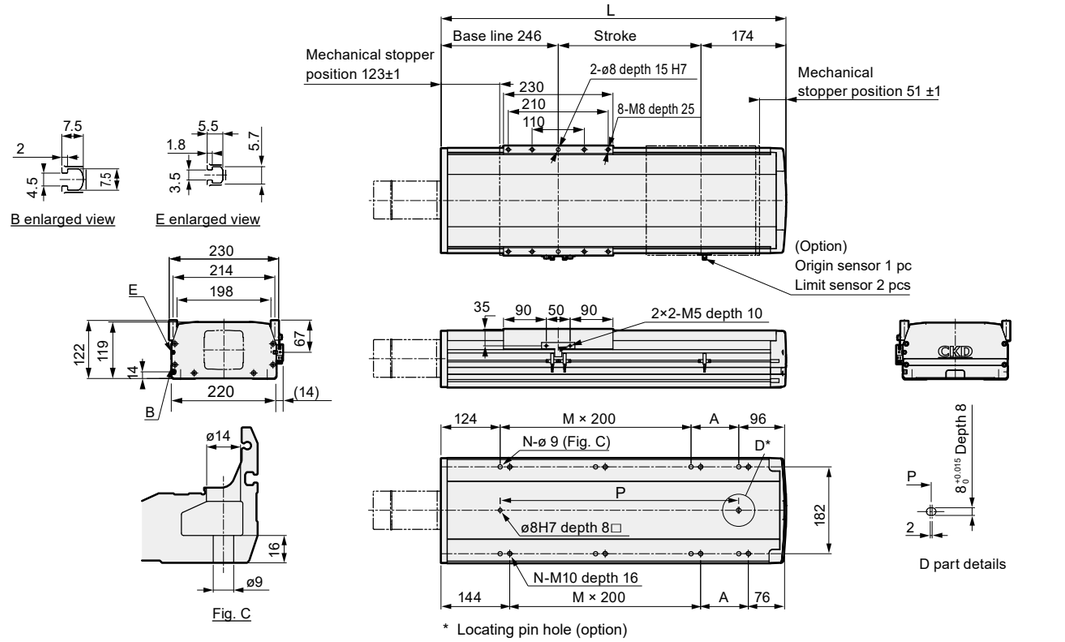
Allowable Overhang Length

* Refer to P. 158 for details.

External Dimension Drawing Motor Straight Mounting

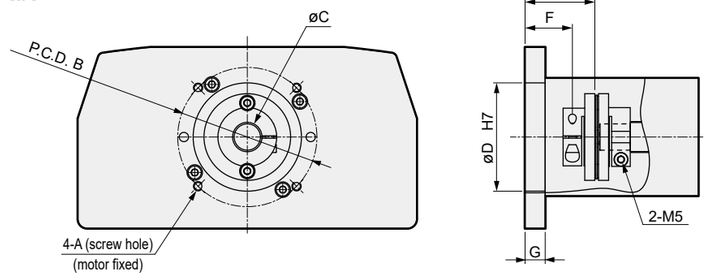
● ETS-22-□□□□□-E

• Refer to P. 164 for grease nipple dimensions.



Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470	1520	1570	1620	1670	1720	1770	1820	1870	1920
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	20.0	21.2	22.4	23.7	24.9	26.1	27.3	28.5	29.8	31.0	32.2	33.4	34.6	35.9	37.1	38.3	39.5	40.7	42	43.2	44.4	45.6	46.8	48.1	49.3	50.5	51.7	52.9	54.1	55.3

Motor Mounting Part



Mounting Motor Specification		A	B	C	D	E	F	G	Motor mounting bolts
M	750 W	M6	ø90	ø19	70	45.1	30.6	13	4-M6 x L16
Y	750 W	M6	ø90	ø19	70	45.1	30.6	13	4-M6 x L16
P	750 W	M5	ø90	ø19	70	45.1	30.6	13	4-M5 x L16
F	750 W	M6	ø100	ø14	80	28.7	14.2	5	4-M6 x L16

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped Included	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

[Home Sensor / Limit Sensor]

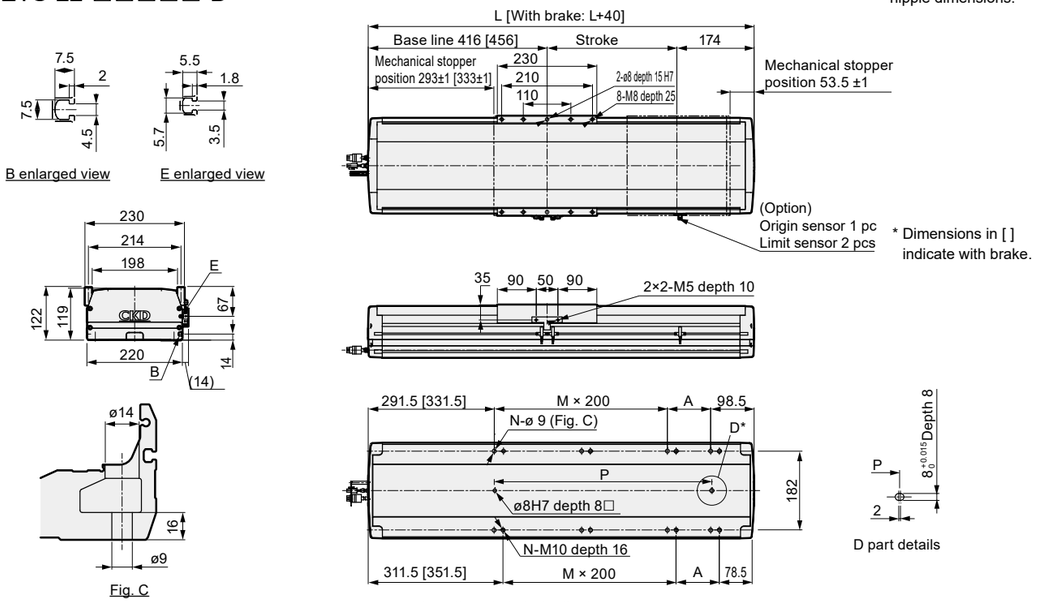
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Built-in Mounting

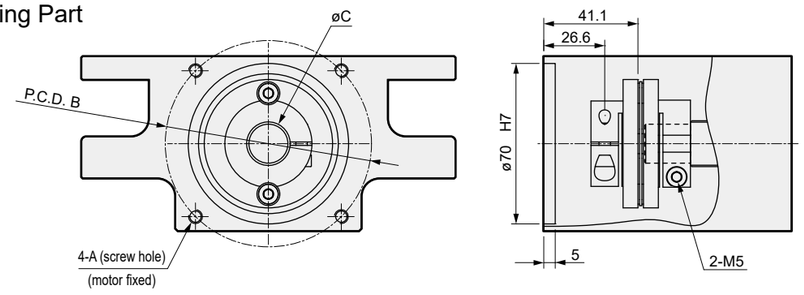
● ETS-22-□□□□□-B

• Refer to P. 164 for grease nipple dimensions.



Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg) w/o brake	26.1	28.1	30.2	32.2	34.2	36.3	38.3	40.4	42.4	44.4	46.5	48.5	50.6	52.6	54.6	56.7	58.7	60.7	62.8	64.8	66.9	68.9	70.9	73.0	75.0	77.1	79.1	81.1	83.2	85.2
Weight (kg) With Brake	27.4	29.4	31.4	33.4	35.5	37.5	39.5	41.6	43.6	45.7	47.7	49.7	51.8	53.8	55.9	57.9	59.9	62.0	64.0	66.0	68.1	70.1	72.2	74.2	76.2	78.3	80.3	82.4	84.4	86.4

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	750 W	M6	ø90	ø19	4-M6 x L16
Y	750 W	M6	ø90	ø19	4-M6 x L16
P	750 W	M5	ø90	ø19	4-M5 x L16

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped Included	750 W	M6	4
Y			M6	4
P			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS-22 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 750 W

Model No. Notation Method

ETS - 22 - 05 - 005 - R M 8 N N N N N - X
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫ ⓬

❶ Body Size

22	Body width 220 mm

❷ Screw Lead

05	5 mm
10	10 mm
25	25 mm
40	40 mm

❸ Stroke

005 to 150	100 mm (every 50 mm) 1500 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

8	750 W

❼ Brake

N	None

❽ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

⓬ Metal Stopper Specification (ETS-X)

	Standard
X	Adopted

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	-
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
DENSO WAVE INCORPORATED (ETS-X only)	-
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 123 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Capacity		750 W Servo Motor			
Drive Method		Ball Screw ø25			ø20
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1500			
Screw lead	mm	5	10	25	40
Max. payload *1	Horizontal kg	150	150	120	60
	Vertical kg	55	45	20	10
Max. Speed	mm/s	250	500	1250	2000
Rated thrust *1	N	2100	1050	420	260
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic allowable load	N	14174			
Static Allowable Moment	N·m	MP : 2052.0 MY : 2052.0 MR: 1810.0			
Dynamic allowable moment	N·m	MP : 1098.5 MY : 1098.5 MR : 999.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 900	1000	1100	1200	1300	1400	1500
5	250	225	200	175	150	125	100
10	500	450	400	350	300	250	200
25	1250	1125	1000	875	750	625	500

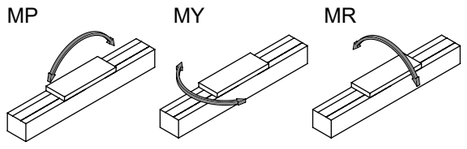
Screw Lead \ Stroke	100 to 850	900	950	1000	1050	1100	1150	1200
40	2000	1800	1600	1400	1200	1000	800	600

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

Allowable Overhang Length

* Refer to P. 158 for details.

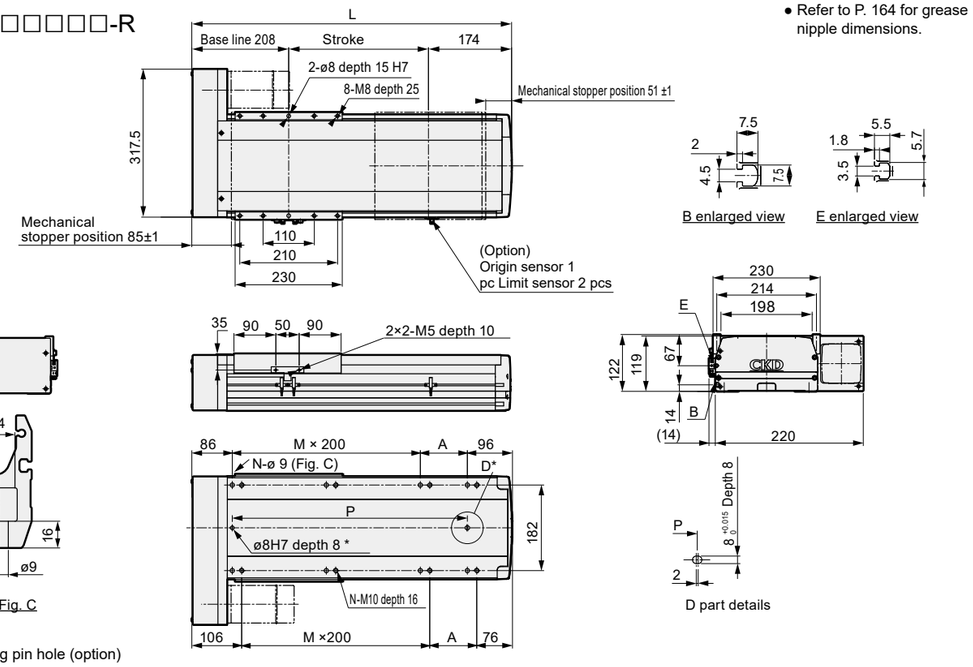
Moment Direction



External Dimension Drawing Motor Right Side Fold-back Mounting

● ETS-22-□□□□□-R

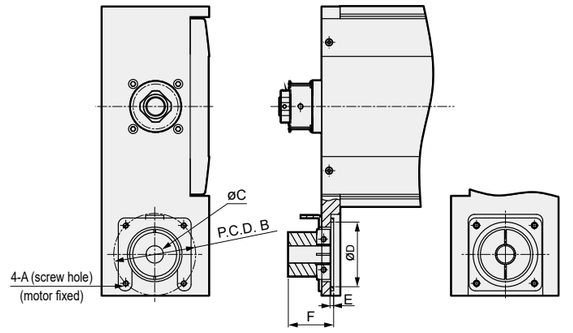
● Refer to P. 164 for grease nipple dimensions.



* Locating pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532	1582	1632	1682	1732	1782	1832	1882
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	22.5	23.7	24.9	26.2	27.4	28.6	29.8	31.0	32.3	33.5	34.7	35.9	37.1	38.4	39.6	40.8	42.0	43.2	44.5	45.7	46.9	48.1	49.3	50.6	51.8	53.0	54.2	55.4	56.6	57.8

Motor Mounting Part



Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolts
M	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 x L16
Y	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 x L16
P	750 W	M5	ø90	ø19	ø71	4	49.8	4-M5 x L16
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

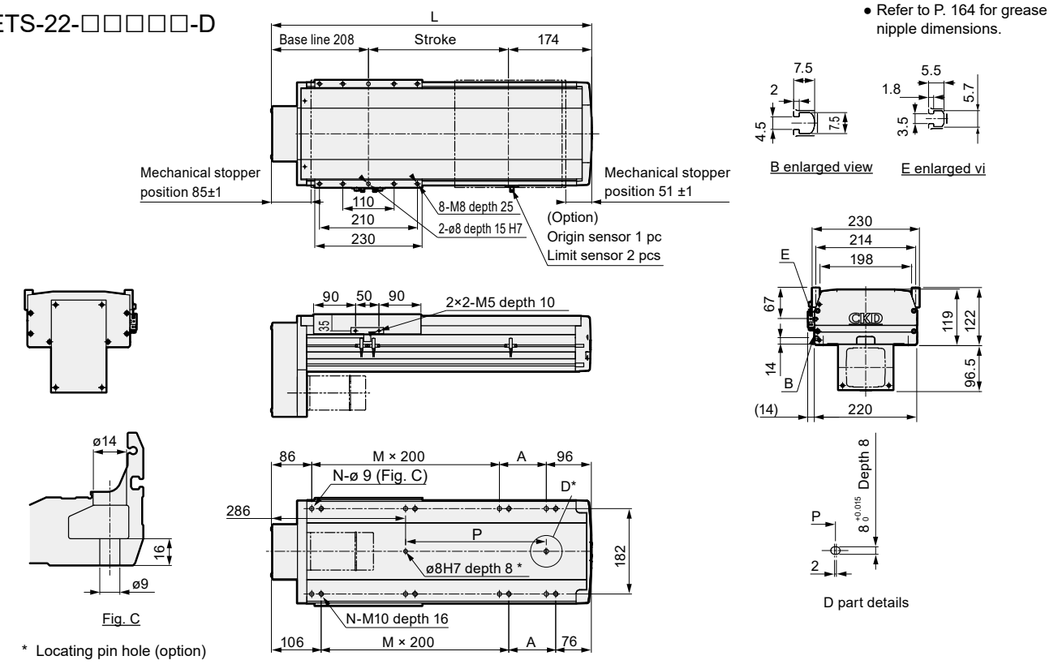
[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

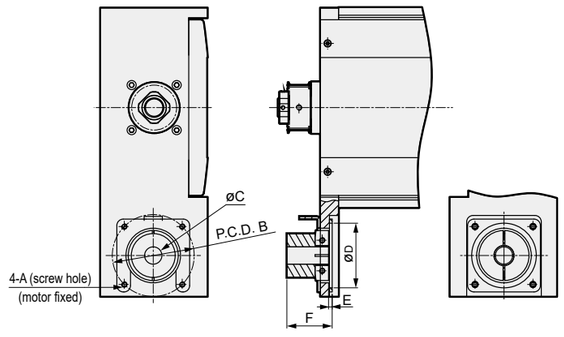
● ETS-22-□□□□□-D



● Refer to P. 164 for grease nipple dimensions.

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532	1582	1632	1682	1732	1782	1832	1882
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
Weight (kg)	22.4	23.6	24.8	26.1	27.3	28.5	29.7	30.9	32.2	33.4	34.6	35.8	37.0	38.3	39.5	40.7	41.9	43.1	44.4	45.6	46.8	48.0	49.2	50.5	51.7	52.9	54.1	55.3	56.5	57.7

Motor Mounting Part



Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolts
M	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 x L16
Y	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 x L16
P	750 W	M5	ø90	ø19	ø71	4	49.8	4-M5 x L16
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

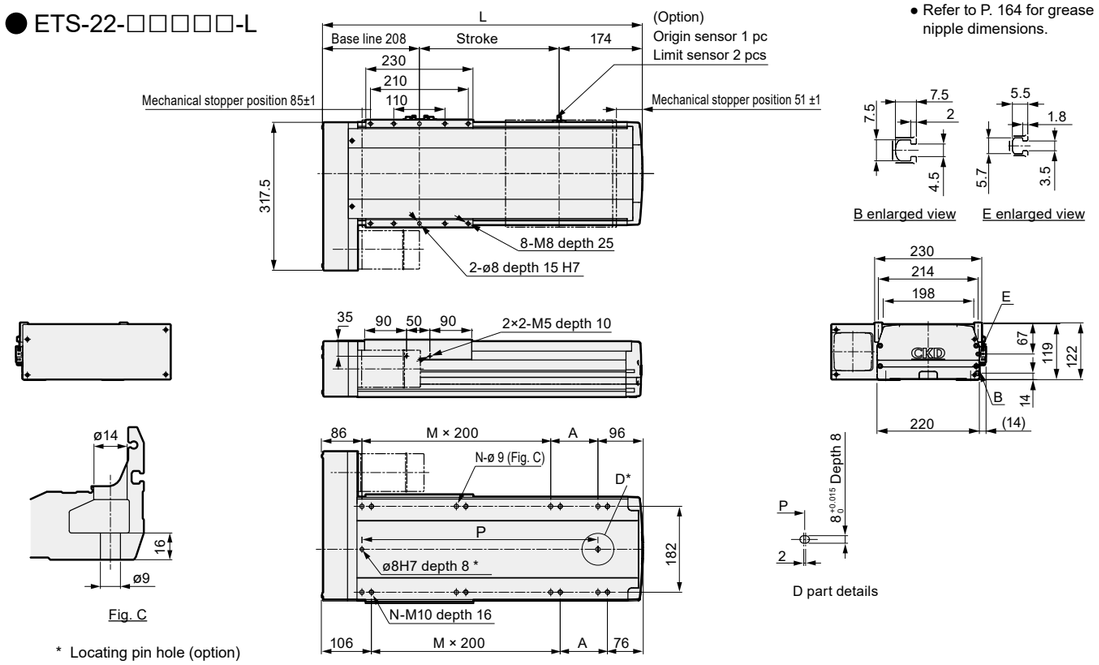
[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

External Dimension Drawing Motor Left Side Fold-back Mounting

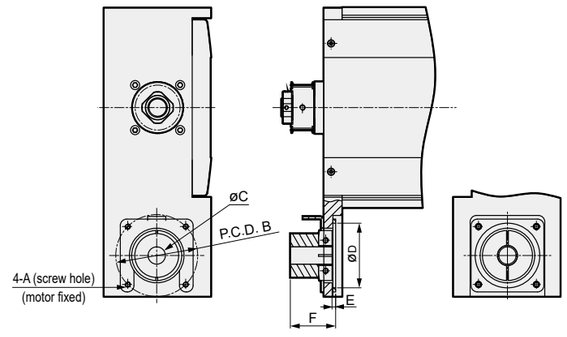
● ETS-22-□□□□□-L



● Refer to P. 164 for grease nipple dimensions.

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532	1582	1632	1682	1732	1782	1832	1882
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	22.5	23.7	24.9	26.2	27.4	28.6	29.8	31.0	32.3	33.5	34.7	35.9	37.1	38.4	39.6	40.8	42.0	43.2	44.5	45.7	46.9	48.1	49.3	50.6	51.8	53.0	54.2	55.4	56.6	57.8

Motor Mounting Part



Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolts
M	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 x L16
Y	750 W	M6	ø90	ø19	ø71	4	49.8	4-M6 x L16
P	750 W	M5	ø90	ø19	ø71	4	49.8	4-M5 x L16
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 162.

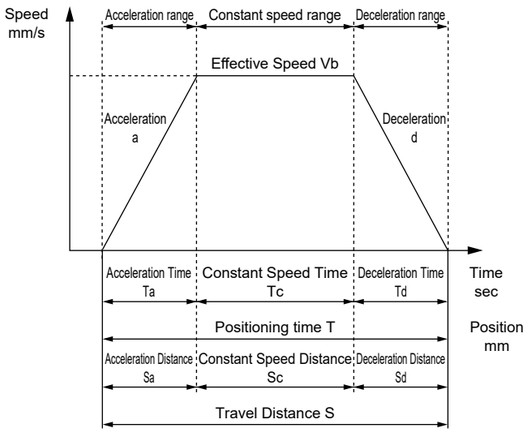
Model Selection

STEP-1 Confirmation of Payload

Payload varies depending on the mounting orientation and screw lead. Select the size and screw lead by referring to the selection table (P. 120) and the specification table for each model.

STEP-2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time.
Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	= {2 x a x d x S / (a + d)} ^ (1 / 2)
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb/a [0.2 sec or more]
	Deceleration Time	Td	s	= Vb/d [0.2 sec or more]
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	= (a x Ta²) / 2
	Deceleration Distance	Sd	mm	= (d x Td²) / 2
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* The setting of acceleration/deceleration by acceleration / deceleration time varies depending on the set speed and stroke.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform
may not be formed (the set speed may not be reached).
In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Please use an acceleration/deceleration time of 0.2 sec or more.
* 1 G ≈ 9.8 m/s².

STEP-3 Confirmation of Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 158 to 160).

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

[For confirmation via iPad or smartphone]

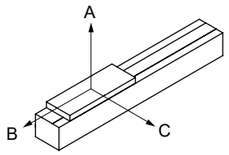
* May not display correctly depending on the smartphone's usage environment.

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Allowable Overhang Length (ETS Series)

[Horizontal Installation]



[Allowable Overhang Length]

● ETS-13 *1

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	40	800	65	230
			55	560	45	160
			70	430	34	120
		10	25	600	100	280
			35	420	70	195
			47	300	50	145
		16	10	900	230	520
			20	440	115	250
			30	280	75	170
		20	5	1200	430	850
			15	400	140	270
			24	250	85	160

● ETS-17 400 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	2950	400	475
			100	2000	220	265
			110	1850	200	240
		10	60	1600	350	400
			75	1350	270	320
			90	1050	220	230
		20	30	1850	650	650
			50	1100	380	380
			75	700	240	240
		40	10	1700	1150	900
			20	850	550	430
			35	450	300	240

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

*1 ETS-13 400 W will have the same values.

● ETS-14 200 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	2300	250	240
			80	1600	180	170
			95	1150	145	140
		10	30	2000	500	450
			50	1400	280	250
			75	1000	170	160
		16	10	2200	1200	1000
			20	1600	600	500
			44	800	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			35	1000	330	290

● ETS-17 750 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	3300	410	470
			100	2000	230	260
			120	1700	180	210
		10	60	2300	400	440
			75	1850	310	350
			95	1450	230	270
		20	30	2000	650	620
			50	1150	370	370
			83	650	210	210
		40	10	1650	1150	850
			20	530	350	270
			50	300	190	150

● ETS-14 400 W

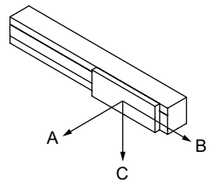
Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	2300	250	240
			80	1600	180	170
			110	1150	120	115
		10	30	2000	500	450
			50	1400	280	250
			88	700	140	125
		16	10	2200	1200	1000
			20	1600	600	500
			48	900	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			40	850	280	230

● ETS-22

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	3600	650	650
			100	2800	350	340
			150	2300	260	230
		10	60	2850	960	810
			100	2000	570	460
			150	1450	340	310
		25	50	2000	850	610
			80	1200	500	360
			120	770	300	220
		40	10	4200	2850	1850
			30	1400	900	600
			60	650	420	270

Allowable Overhang Length (ETS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

● ETS-13 *1

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	40	240	70	850
			55	170	50	600
			70	125	35	450
		10	25	300	100	620
			35	210	70	420
			47	150	50	300
		16	10	530	230	900
			20	250	110	430
			30	170	70	280
		20	5	900	450	1300
			15	290	150	420
			24	170	90	260

● ETS-17 400 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	500	420	2450
			100	280	240	1600
			110	250	215	1400
		10	60	420	380	1950
			75	330	300	1500
			90	270	240	1200
		20	30	650	650	1600
			50	375	380	900
			75	245	240	600
		40	10	900	1100	1750
			20	450	550	850
			35	240	300	470

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

*1 ETS-13 400 W will have the same values.

● ETS-14 200 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	240	250	1600
			80	170	180	1200
			95	140	145	1050
		10	30	420	460	1500
			50	240	250	1000
			75	150	160	700
		16	10	1050	1200	2650
			20	500	620	1450
			44	230	270	800
		20	10	1000	1200	1900
			20	500	600	1000
			35	270	300	600

● ETS-17 750 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	500	430	2700
			100	280	240	1650
			120	230	200	1350
		10	60	420	380	2300
			75	330	300	1800
			95	250	230	1400
		20	30	640	650	1700
			50	370	380	1000
			83	210	210	560
		40	10	900	1150	1700
			20	280	350	550
			50	160	195	310

● ETS-14 400 W

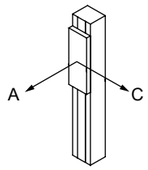
Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	240	250	1600
			80	170	180	1200
			110	115	120	1050
		10	30	420	460	1500
			50	240	250	1000
			88	120	130	700
		16	10	1050	1200	2650
			20	500	620	1450
			48	200	230	800
		20	10	1000	1200	1900
			20	500	600	1000
			40	230	290	600

● ETS-22

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	940	1100	3850
			100	540	620	2450
			150	340	400	2150
		10	60	800	980	3700
			100	460	540	2200
			150	280	350	1450
		25	50	600	790	1950
			80	360	480	1200
			120	220	290	750
		40	10	1950	2900	3500
			30	620	950	1400
			60	290	430	650

Allowable Overhang Length (ETS Series)

[Vertical Installation]



[Allowable Overhang Length]

● ETS-13 *1

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	5	600	600
			10	300	300
			12	250	250
		10	4	650	650
			6	430	430
			8	320	320
		16	1	1350	1350
			2	900	900
			6	350	350
		20	1	1050	1050
			2	900	900
			4	550	550

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

*1 ETS-13 400 W will have the same values.

● ETS-14 200 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	755	755
			25	605	605
			27	560	560
		10	10	1350	1350
			15	900	900
			18	750	750
		16	2	2400	2400
			4	1700	1700
			7	1300	1300
		20	6	1700	1700

● ETS-14 400 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	755	755
			25	605	605
			33	455	455
		10	10	1350	1350
			15	900	900
			22	650	650
		16	2	2400	2400
			4	1700	1700
			10	1000	1000
		20	4	1800	1800
			6	1200	1200
			8	900	900

● ETS-17 400 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	1400	1400
			30	950	950
			40	700	700
		10	15	1700	1700
			25	1000	1000
			30	850	850
		20	5	2000	2000
			10	1800	1800
			14	1400	1400
		40	7	650	650

● ETS-17 750 W

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	1500	1500
			30	1000	1000
			50	600	600
		10	15	1700	1700
			25	1000	1000
			40	620	620
		20	5	2200	2200
			10	1900	1900
			25	730	730
		40	10	700	700

● ETS-22

Motor Mounting	Acceleration/Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	30	2400	2400
			50	1450	1450
			55	1050	1050
		10	20	3,000	3,000
			30	2000	2000
			45	1350	1350
		25	15	2600	2600
			20	1950	1950
			25	1550	1550
		40	5	2600	2600
			10	1950	1950

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

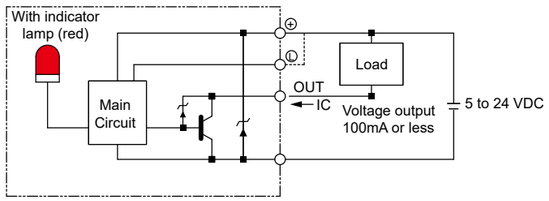
Home Sensor, Limit Sensor

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

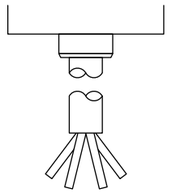
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared emitting diode (940 nm)
Indicator Light	Lights up when light is received (red)
Power Supply Voltage	5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption	35 mA or less (NPN type)
Control output	NPN type : NPN open collector Output 5 to 24 VDC 100 mA or less Off-state current 0.5 mA or less Residual voltage 0.8 V or less (at 100 mA load current) Residual voltage 0.4 V or less (at 40 mA load current)
Ambient illuminance	Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1000 lx or less
Ambient Temperature Range	Operating : -25 to +55°C Storage : -30 to +80 °C (however, no freezing or condensation)
Ambient humidity range	Operating : 5 to 85 %RH Storage : 5 to 95 %RH (however, no freezing or condensation)
Enclosure	IP50 IEC60529 standard
Cord length	2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Sensor Dog External Dimension Drawing

Body Size	E/D/B	Motor Mounting Direction			
		R		L	
		Without grease nipple	With grease nipple	Without grease nipple	With grease nipple
ETS-13	Fig. 1	Fig. 1	Fig. 2	Fig. 1	Fig. 2
ETS-14	Fig. 1	Fig. 1	Fig. 3	Fig. 1	Fig. 4
ETS-17	Fig. 1	Fig. 1	Fig. 3	Fig. 1	Fig. 4
ETS-22	Fig. 5	Fig. 5	Fig. 6	Fig. 5	Fig. 6

Fig. 1

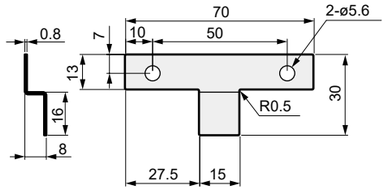


Fig. 2

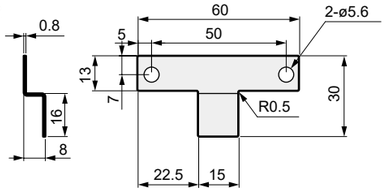


Fig. 3

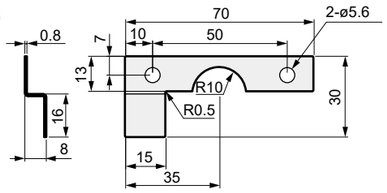


Fig. 4

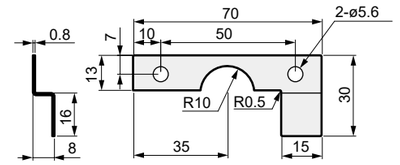


Fig. 5

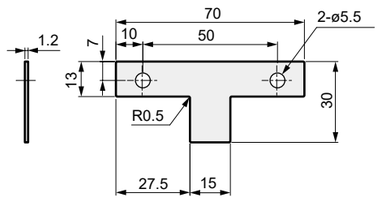
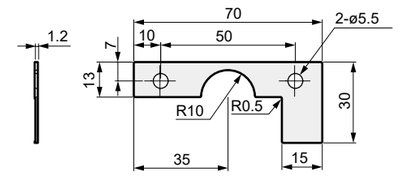


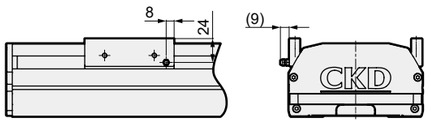
Fig. 6



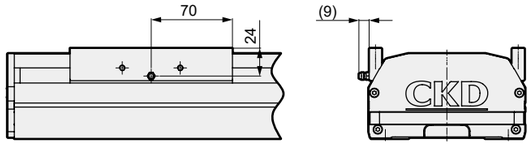
Grease Nipple Dimension Drawing

* Symmetrical with respect to the actuator.

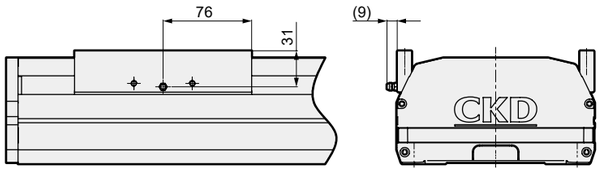
● ETS-13



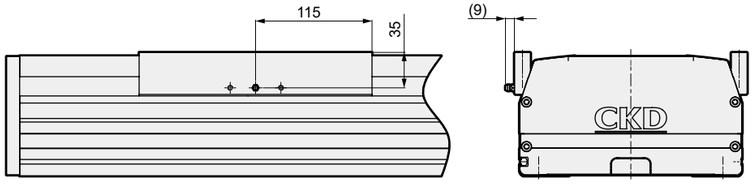
● ETS-14



● ETS-17



● ETS-22



MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

List of Accessories

Basic Type

Motor Mounting Bolts (Common for all motor mounting directions)

Model No.	Mounting Motor Specification	Motor Capacity	Size	Quantity
ETS-13	M	100 W/200 W/400 W	M4/M5/M5	2/4/4
	Y		M4/M5/M5	2/4/4
	P		M3/M4/M4	4
	F		M4/M5/M5	2/4/4
ETS-14	M	200 W/400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ETS-17	M	400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4
ETS-22	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4

By Motor Mounting Direction

Model No.	Attached Part Name	Quantity
E (External direct mounting) B (Built-in)	Coupling (Shipped Included)	1 pc
R (Right fold-back mounting) L (Left fold-back mounting) D (Bottom fold-back mounting)	Timing Belt	1 pc.
	Pulley	1 pc

When home/limit sensor is selected *1

Sensor mounting direction	Shipment Form	Quantity
Inner sensor	Shipped assembled in fixed position	3 pcs. *2
Outer sensor	Shipped included *3	

*1 The shipping form for the home and limit sensors varies depending on whether they are mounted inside or outside.
*2 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None".
*3 Sensor mounting screws are also attached.

Maintenance Parts

● Maintenance Parts Set

Model Number	Applicable Models	Component Parts ① Timing Belt	② Pulley	③ Sensor Dog	④ Photoelectric Bracket
ETS-08 JP002-0005	ETS-13, 14	○ (2 pcs)	○ (4 pcs)	○ (1 pc)	-
ETS-08 JP002-0007	ETS-17	○ (4 pcs)	○ (2 pcs)	○ (1 pc)	-
ETS-08 JP002-0008	ETS-22	○ (3 pcs)	○ (2 pcs)	○ (1 pc)	-

* For sensor dogs (P. 163), body sizes 13/14/17 are Fig. 1, and body size 22 is Fig. 5.
  For other sensor dogs, please contact us.
* For maintenance parts for the metal stopper specification (ETS-X), please contact us.

● Maintenance parts (coupling)

Model Number	Applicable Models	Motor Capacity	Bore Diameter
ETS-22007-000289	ETS-13,14 (Mounting motor specification : F)	200 W	ø9
ETS-22007-000016	ETS-13,14 (Mounting motor specification : P)	200 W	ø11
ETS-22007-000017	ETS-13,14 (Mounting motor specification : M, Y)	200 W/400 W	ø14
ETS-22007-000022	ETS-17 (Mounting motor specification : P)	400 W	ø14
ETS-22007-000358	ETS-17 (Mounting motor specification : F)	750 W	ø14
ETS-22007-000397	ETS-22 (Mounting motor specification : F)	750 W	ø14
ETS-22007-000024	ETS-17 (Mounting motor specification : M, Y)	750 W	ø19
ETS-22007-000029	ETS-22 (Mounting motor specification : M, Y, P)	750 W	ø19

● Maintenance parts (external mounted sensor)

Basic Price Model Number	Applicable Models	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Individual Precautions: Electric Actuator ETS Series

During Design and Selection

Danger

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

■ Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.

■ When mounting the product, be sure to securely hold and fix it (including the workpiece).
There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
● If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
● Use in such environments can cause damage and malfunction.

■ Use and store in accordance with the working / storage temperatures and where there is no condensation.
(Storage temperature: -10°C to 50°C, Storage humidity: 35% to 80%, Operating Temperature: 0°C to 40°C, Operating humidity: 35% to 80%)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

■ Install in a location free from direct sunlight, dust, and corrosive gas / explosive gas/inflammable gas / combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Consider the possibility of power source failure.
● In case of breakdown in the power source, take countermeasures without causing trouble or damage to the operator or equipment.

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

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Clearly state the maintenance conditions in the equipment's instruction manual.
● The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ Regarding installing, setting up, and/or adjusting the actuator, read through the instruction manual and operate correctly.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

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

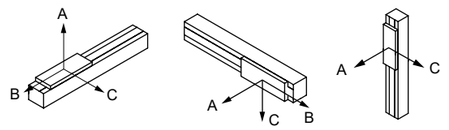
ETSModel Selection Check Sheet → CKD (Contact)

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

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	ETS-	
Basic Specifications	Max. Stroke :	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s² (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Slider Type	
	Load weight :	kg
	Mounting Orientation : Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature :	°C, Ambient Humidity : %
	Atmosphere :	
Motor Used	Manufacturer :	, Model No. :
	Motor capacity, size :	
Special Notes		

ETS Multi Axis

Ball Screw Drive

Electric Actuator Servo Motor Compatible Motorless Specification

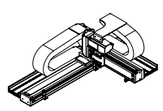
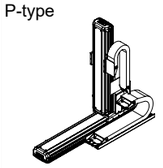
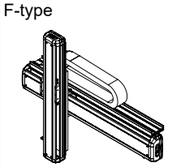
CONTENTS

Product Introduction	118
● 2-axis combination	172
● 2-axis combination load capacity table	173
● X-Y axis (A type)	174
● X-Z axis (P type)	194
● Y-Z axis (F type)	208
● Combination parts	214
⚠ Precautions for Use	168
Model Selection Checklist	230

System Table

Combination of multiple axes *This will be a set model No. Please check the table below for the axis combination.

[2-Axis Combination]

Specifications		Set Model Number	Combination method	1st Axis	2nd Axis	1st Axis Stroke	2nd Axis Stroke	Page
X-Y	A-type 	**ETS-650**	A	ETS-14-20	ETS-13-20	100 to 1050	50 to 650	174
		ETS-760	A	ETS-17-20	ETS-14-20	100 to 1250	50 to 650	
		ETS-870	A	ETS-22-25	ETS-17-20	100 to 1500	50 to 750	
X-Z	P-type 	**ETS-650**	P	ETS-14-20	ETS-13-10	100 to 1050	50 to 550	194
		ETS-760	P	ETS-17-20	ETS-14-10	100 to 1250	50 to 650	
		ETS-880	P	ETS-22-25	ETS-22-05	100 to 1500	50 to 950	
Y-Z	F-type 	**ETS-760**	F	ETS-17-20	ETS-14-10	100 to 1250	50 to 550	208

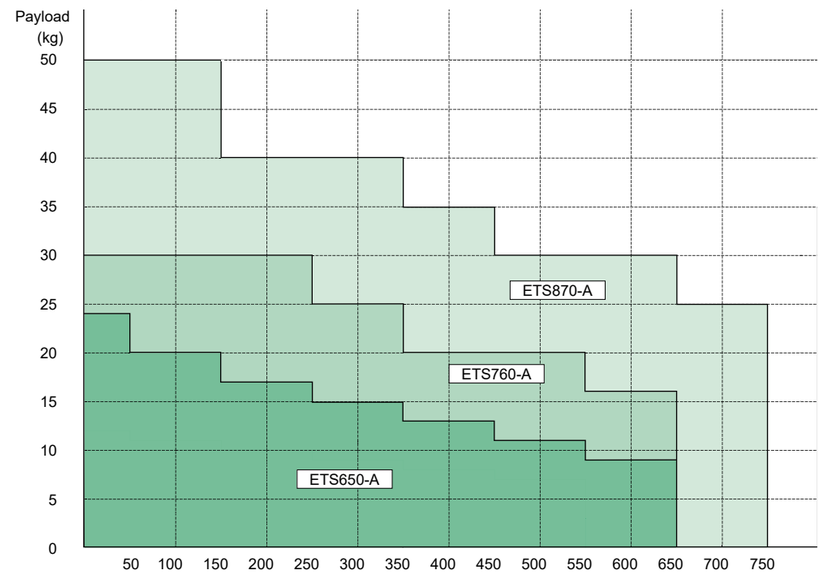
Recommended Servo Motor Mounting List

Code	Manufacturer	Series	200 W (ETS-13/14 Series)	400 W (ETS-13/14/17 Series)	750 W *3 (ETS-17/22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT_23 W	HK-KT_43 W	HK-KT_7 M3 W
M	Delta Electronics, Inc.	ECMA-C *2	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Yaskawa Electric Corporation	Σ-7 *1	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X *1	SGMXJ-02	SGMXJ-04	SGMXJ-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
O	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030

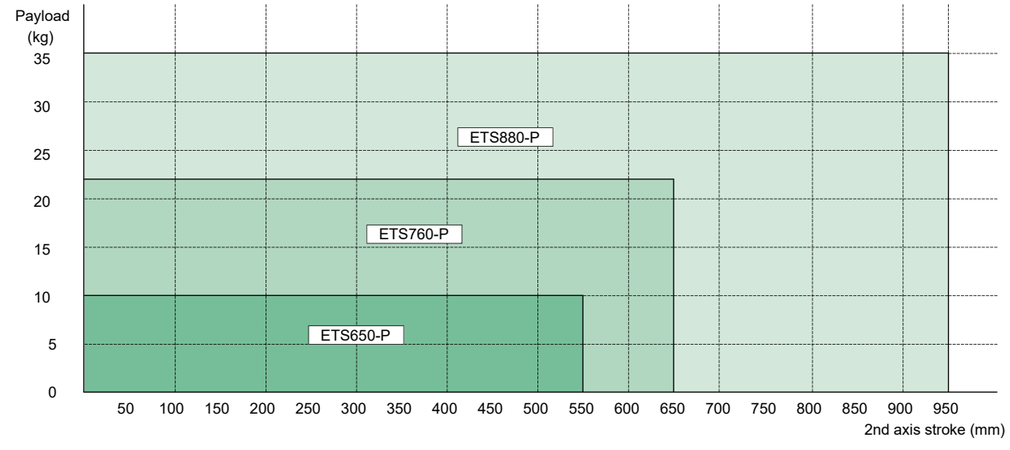
* For mounting motors other than the above and products from other motor manufacturers, please contact us.
*1 "Built-in mounting" is not supported.
*2 The ECMA series (with brake) does not support "built-in mounting".
*3 "Built-in mounting" is not supported for the ETS-17 750 W.

2-Axis Combination Payload

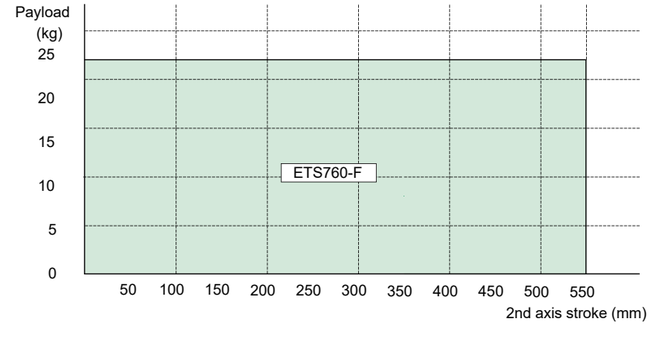
X-Y axis (A type)



X-Z axis (P type)



Y-Z axis (F type)



Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 200 W / 400 W / 750 W
- 2-Axis Combination X-Y Axis (A-type)

RoHS

Model No. Notation Method

ETS - 650 A 1 - 040 030 - M N W

❶ Combination Axis

650	ETS-14 x ETS-13
760	ETS-17 x ETS-14
870	ETS-22 x ETS-17

❷ Combination method

A	X-Y-axis

❸ Combination Direction

1 to 4	Please see the table below.

❹ 1st Axis Stroke

010 to 150	100 mm to (in 50 mm pitch) 1500 mm

❺ 2nd Axis Stroke

005 to 075	50 mm to (in 50 mm pitch) 750 mm

❻ Mounted motor specification*3

M Y P O	Select the mounting motor specification from the table below.

❼ Brake *1

N	None

❽ Origin/limit sensor (3 pcsx2 axes) *2

N	None
W	Yes

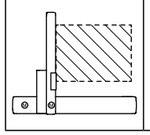
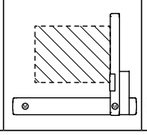
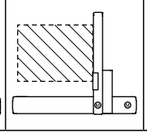
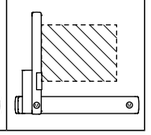
❻ Mounting Motor Specifications

Manufacturer	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	-
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	O	O	O

* Refer to P. 172 for motor model No.

*1 The brake is applicable to the 2nd axis.
*2 The position of the sensor can be adjusted by the user. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❸ Combination direction

A1	A2	A3	A4
			

Axis Combination Specifications

❸ Combination direction and motor mounting direction

Combination Axis	Combination System	Combination Direction	Motor Mounting Direction and Motor Capacity					
			1st Axis			2nd Axis		
			Model	400 W	750 W	Model	200 W	400 W
ETS-650	A	1 to 4	ETS-14	B	-	ETS-13	B	-
ETS-760	A	1 to 4	ETS-17	B	-	ETS-14	B	-
ETS-870	A	1 to 4	ETS-22	-	B	ETS-17	-	B

* B: Built-in Mounting
* The motor mounting direction is determined by the combination direction.

❹❺ Stroke

Combination Axis	Combination System	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-650	A	ETS-14	20	100 to 1050	ETS-13	20	50 to 650
ETS-760		ETS-17	20	100 to 1250	ETS-14	20	50 to 650
ETS-870		ETS-22	25	100 to 1500	ETS-17	20	50 to 750

About Grease Nipples

Combination Axis	Combination System	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	A	1	ETS-14	L	ETS-13	R
		2		L		L
		3		R		L
		4		R		R
ETS-760	A	1	ETS-17	L	ETS-14	R
		2		L		L
		3		R		L
		4		R		R
ETS-870	A	1	ETS-22	L	ETS-17	R
		2		L		L
		3		R		L
		4		R		R

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W / 200 W
- 2-axis combination X-Y axes (A type)

RoHS

Model No. Notation Method

ETS - 650 ❶ A ❷ 1 ❸ - 040 ❹ 030 ❺ - M ❻ N ❼ W ❽

❶ Combination Axis
650	ETS-14 x ETS-13

❷ Combination method
A	X-Y-axis

❸ Combination Direction
1 to 4	Please see the table below.

❹ 1st Axis Stroke
010 to 105	100 mm to (50 mm pitch) 1050 mm

❺ 2nd Axis Stroke
005 to 065	50 mm to (50 mm pitch) 650 mm

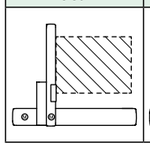
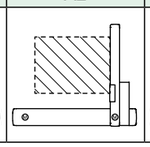
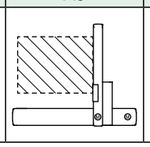
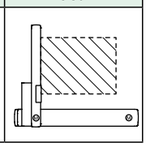
❻ Mounted motor specification*3
M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1
N	None

❽ Origin/limit sensor (3 pcsx2 axes) *2
N	None
W	Yes

*1 The brake is applicable to the 2nd axis.
*2 The position of the sensor can be adjusted by the user. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❸ Combination direction

A1	A2	A3	A4
			

❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	200 W
ETS-650	A	1	ETS-14	B	ETS-13	B
		2		B		B
		3		B		B
		4		B		B

* B : Built-in Mounting

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-650	A	ETS-14	20	100 to 1050	ETS-13	20	50 to 650

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	A	1	ETS-14	L	ETS-13	R
		2		L		L
		3		R		L
		4		R		R

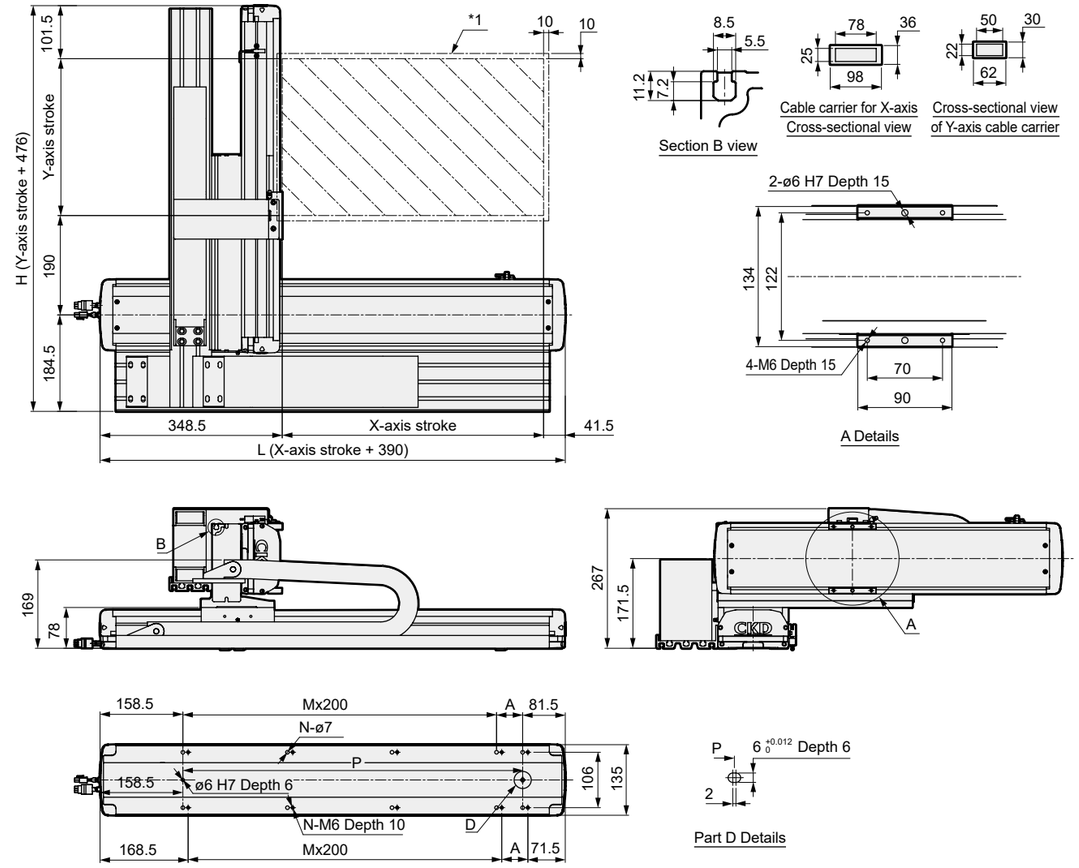
❻ Mounting Motor Specification

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

* For recommended motor model Nos., please refer to P. 172.

External Dimension Drawings

ETS-650 A1



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000														900	800	700	600	500	400

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	24	20		17		15		13		11		9	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-14	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-13	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

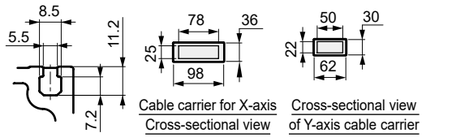
* For sensor specifications, please refer to P. 162.

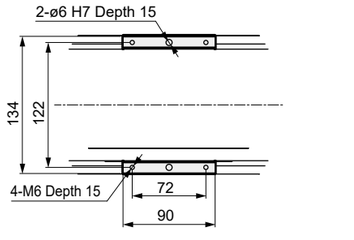
[Other attached parts for axis combination]

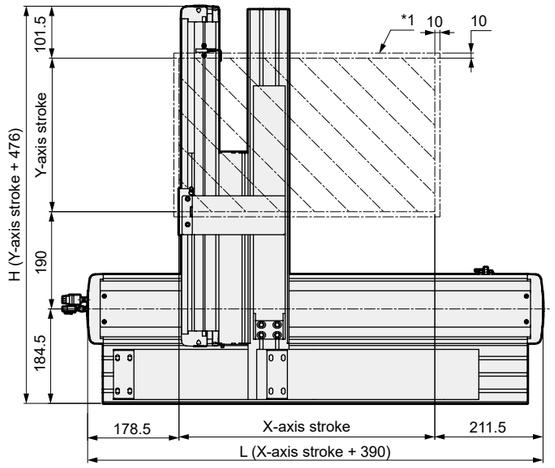
Cable carrier, bracket for axis combination

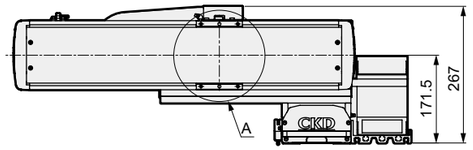
External Dimension Drawings

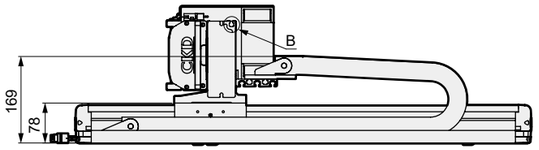
● ETS-650 A2

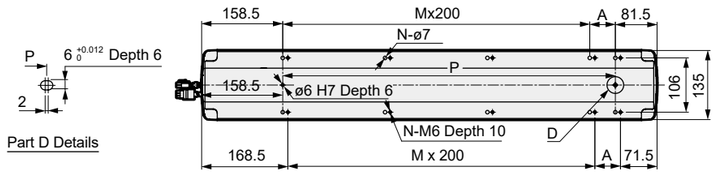












*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000														900	800	700	600	500	400

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	24	20		17		15		13		11		9	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-14	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-13	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

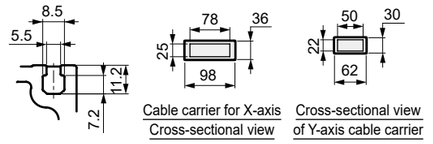
* For sensor specifications, please refer to P. 162.

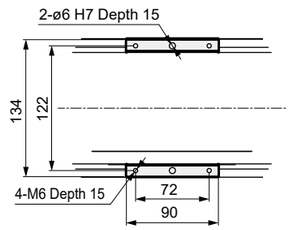
[Other attached parts for axis combination]

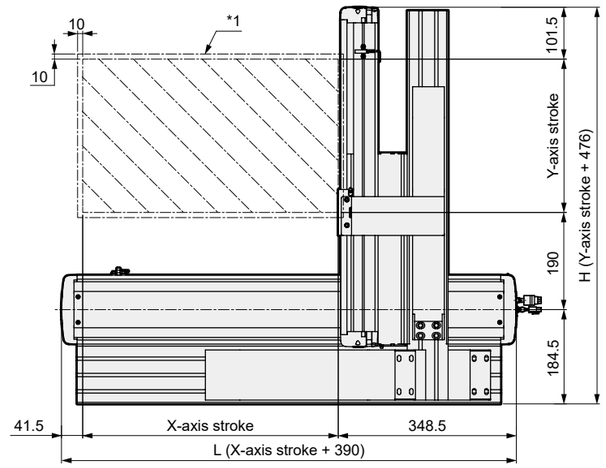
Cable carrier, bracket for axis combination

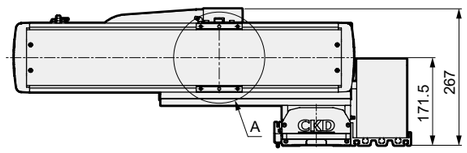
External Dimension Drawings

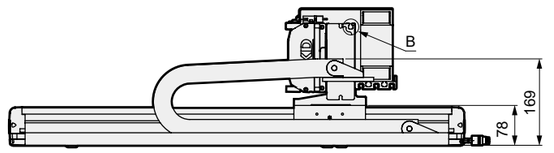
● ETS-650 A3

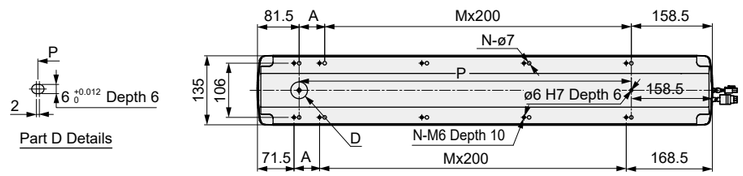












*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000														900	800	700	600	500	400

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	24	20		17		15		13		11		9	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-14	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-13	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

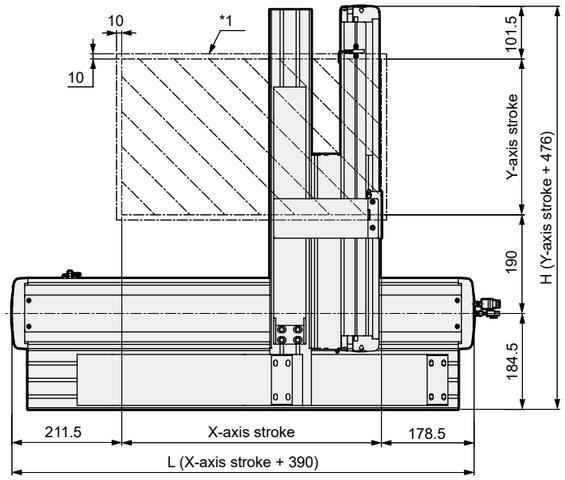
* For sensor specifications, please refer to P. 162.

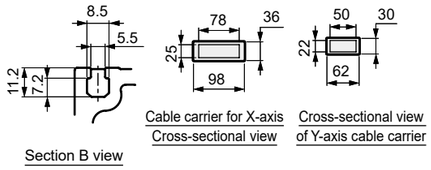
[Other attached parts for axis combination]

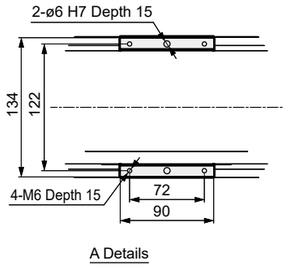
Cable carrier, bracket for axis combination

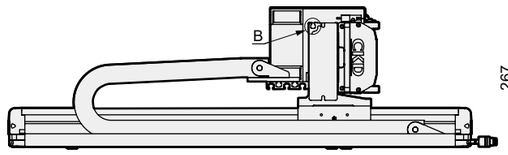
External Dimension Drawings

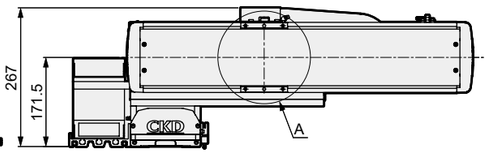
● ETS-650 A4

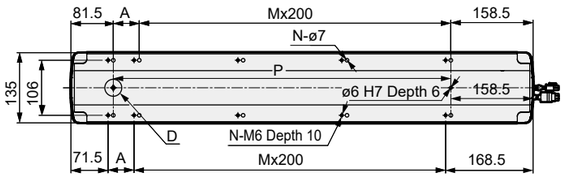












*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000														900	800	700	600	500	400

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	526	576	626	676	726	776	826	876	926	976	1026	1076	1126
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	24	20		17		15		13		11		9	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-14	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-13	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W, 200 W
- 2-axis combination X-Y axes (A type)

RoHS

Model No. Notation Method

ETS - 760 ❶ A ❷ 1 ❸ - 040 ❹ 030 ❺ - M ❻ N ❼ W ❽

❶ Combination Axis

760	ETS-17 x ETS-14

❷ Combination method

A	X-Y-axis

❸ Combination Direction

1 to 4	Please see the table below.

❹ 1st Axis Stroke

010 to 125	100 mm to (in 50 mm pitch) 1250 mm

❺ 2nd Axis Stroke

005 to 065	50 mm to (in 50 mm pitch) 650 mm

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake*1

N	None

❽ Origin/limit sensor (3 pcsx2 axes)*2

N	None
W	Yes

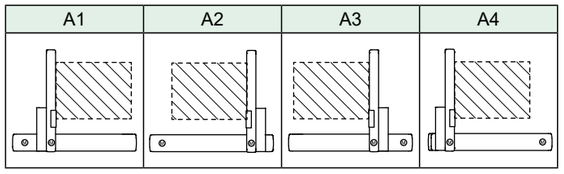
*1 The brake is applicable to the 2nd axis.
*2 The position of the sensor can be adjusted by the user. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❻ Mounting Motor Specifications

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

* For recommended motor model Nos., please refer to P. 172.

❸ Combination direction



❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	200 W
ETS-760	A	1	ETS-17	B	ETS-14	B
		2		B		B
		3		B		B
		4		B		B

* B : Built-in Mounting

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-760	A	ETS-17	20	100 to 1250	ETS-14	20	50 to 650

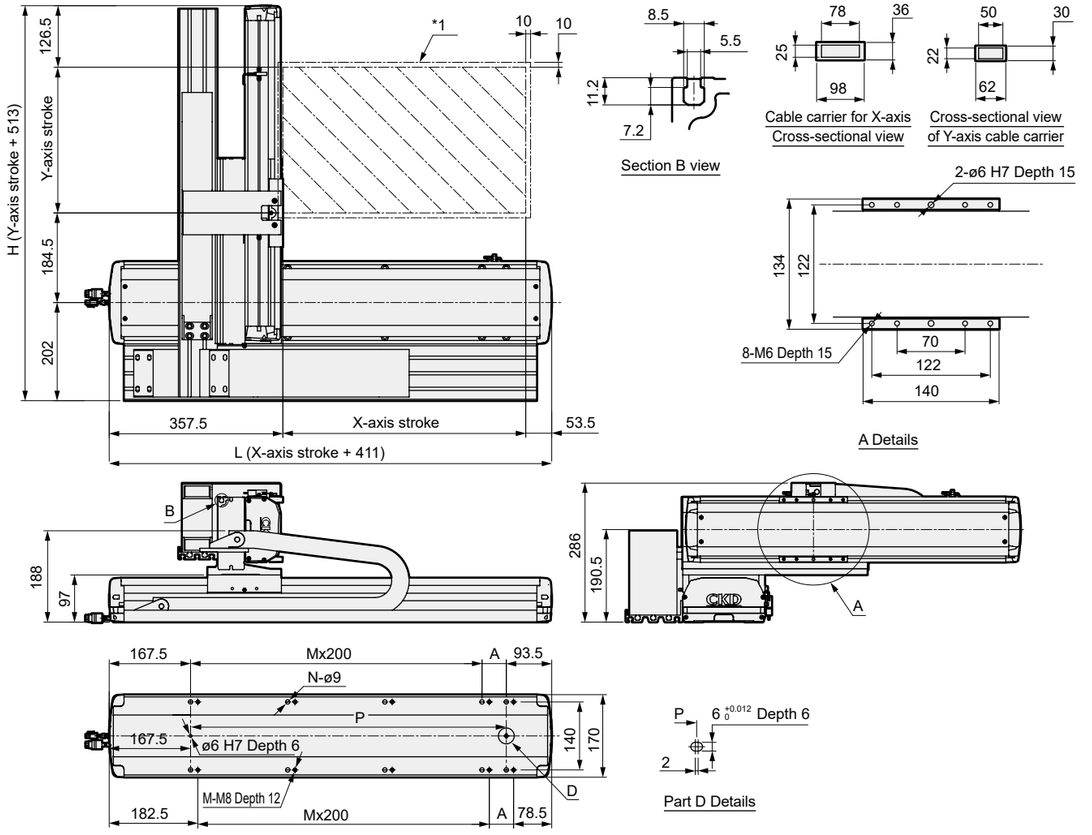
About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	A	1	ETS-17	L	ETS-14	R
		2		L		L
		3		R		L
		4		R		R

* R : Right side L : Left side

External Dimension Drawings

● ETS-760 A1



*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250
L	1511	1561	1611	1661
A	50	100	150	200
M	6	6	6	6
N	16	16	16	16
P	1250	1300	1350	1400
Max. operating speed (mm/s)	700		600	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	30				25		20					16	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-14	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

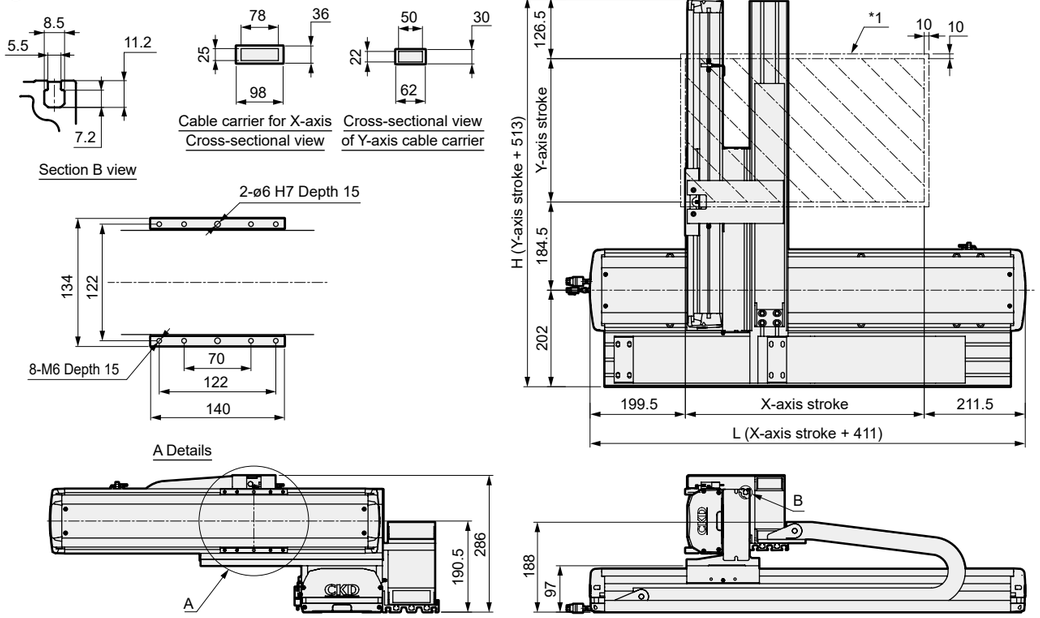
* For sensor specifications, please refer to P. 162.

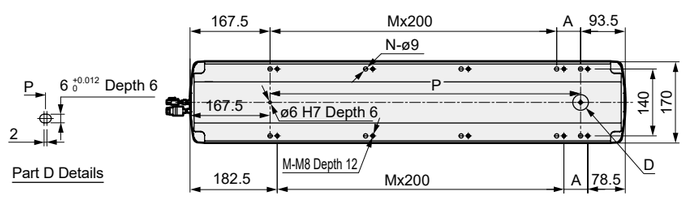
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

External Dimension Drawings

ETS-760 A2





*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250
L	1511	1561	1611	1661
A	50	100	150	200
M	6	6	6	6
N	16	16	16	16
P	1250	1300	1350	1400
Max. operating speed (mm/s)	700		600	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	30					25		20				16	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-14	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

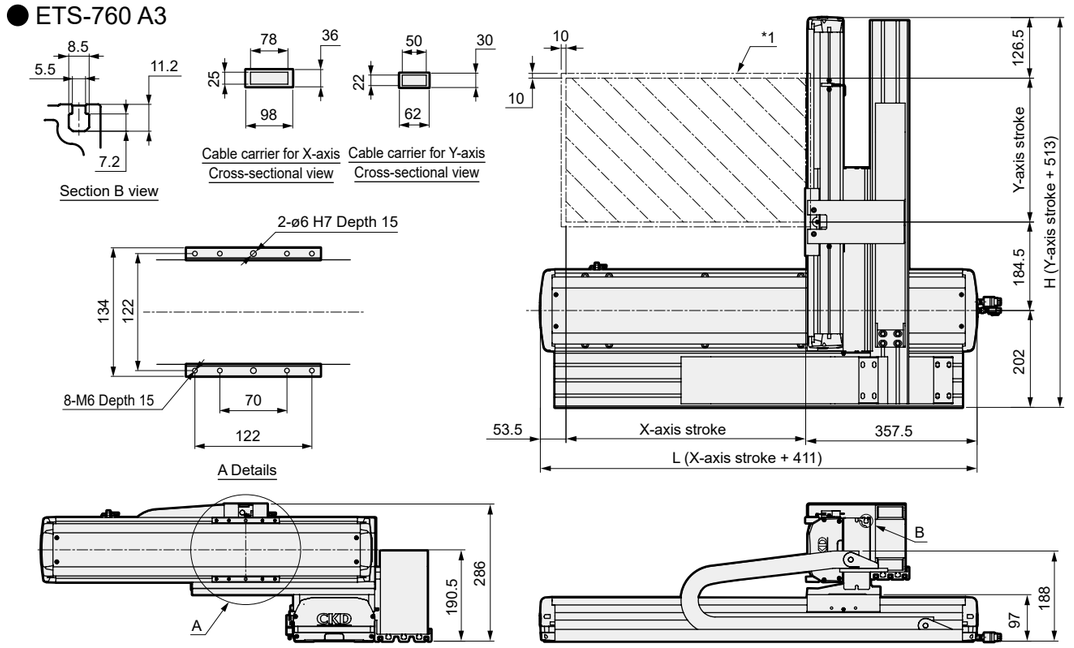
* For sensor specifications, please refer to P. 162.

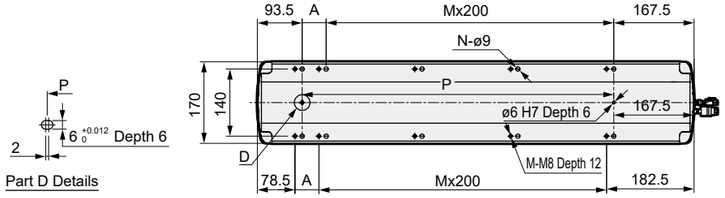
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

External Dimension Drawings

ETS-760 A3





*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250
L	1511	1561	1611	1661
A	50	100	150	200
M	6	6	6	6
N	16	16	16	16
P	1250	1300	1350	1400
Max. operating speed (mm/s)	700		600	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	30					25		20				16	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-14	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

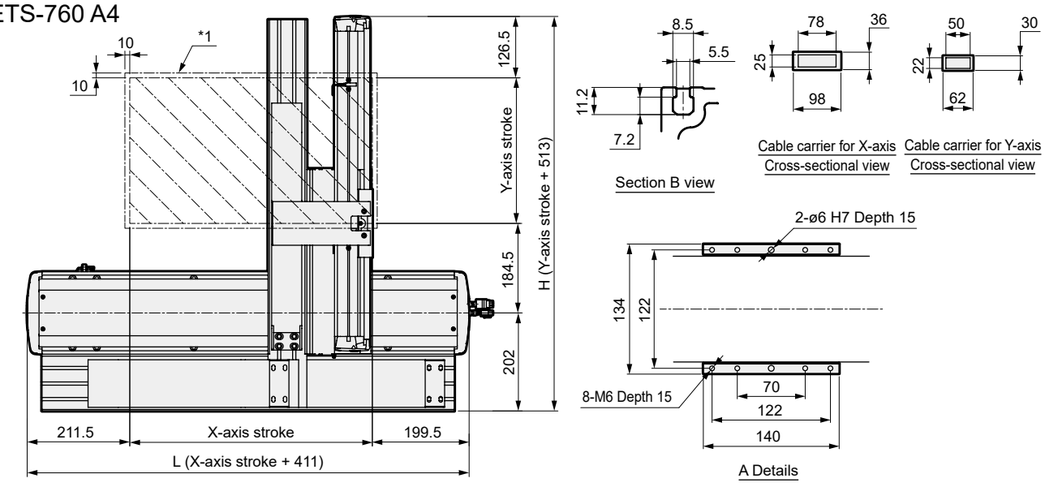
* For sensor specifications, please refer to P. 162.

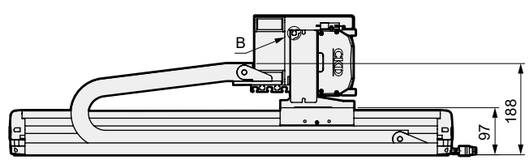
[Other attached parts for axis combination]

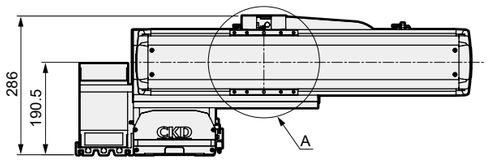
Cable carrier, bracket for axis combination

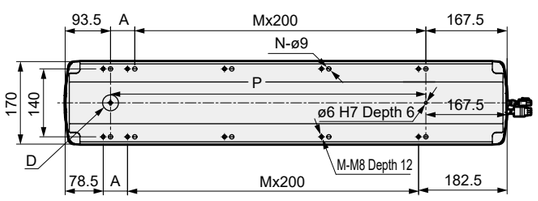
External Dimension Drawings

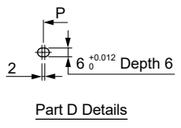
● ETS-760 A4











*1 Stops within this range and the movement range during homing.

* This drawing shows the external dimensions when combined.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000																900		800	

X-axis stroke (mm)	1100	1150	1200	1250
L	1511	1561	1611	1661
A	50	100	150	200
M	6	6	6	6
N	16	16	16	16
P	1250	1300	1350	1400
Max. operating speed (mm/s)	700		600	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	563	613	663	713	763	813	863	913	963	1013	1063	1113	1163
Max. operating speed (mm/s)	1000												
Max. Payload (kg)	30					25		20				16	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped attached	400 W	M5	4
	Y					M5	4
ETS-14	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity: 750 W, 400 W
- 2-axis combination X-Y axes (A type)

RoHS

Model No. Notation Method

ETS - 870 ❶ A ❷ 1 ❸ - 040 ❹ 030 ❺ - M ❻ N ❼ W ❽

❶ Combination Axis

870	ETS-22 x ETS-17

❷ Combination method

A	X-Y-axis

❸ Combination Direction

1 to 4	Please see the table below.

❹ 1st Axis Stroke

010 to 150	100 mm to 1500 mm (in 50 mm pitch)

❺ 2nd Axis Stroke

005 to 075	50 mm to 750 mm (50 mm pitch)

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1

N	None

❽ Origin/limit sensor (3 pcsx2 axes) *2

N	None
W	Yes

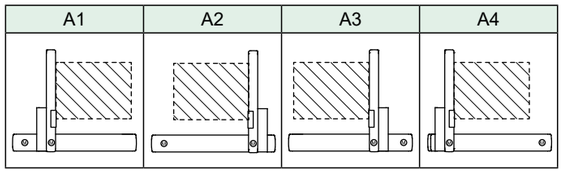
*1 The brake is applicable to the 2nd axis.
*2 The position of the sensor can be adjusted by the user. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❻ Mounting Motor Specifications

Manufacturer	400 W	750 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	-
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

* For recommended motor model Nos., please refer to P. 172.

❸ Combination direction



❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	750 W	Model	400 W
ETS-870	A	1	ETS-22	B	ETS-17	B
		2		B		B
		3		B		B
		4		B		B

* B: Built-in Mounting

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-870	A	ETS-22	25	100 to 1500	ETS-17	20	50 to 750

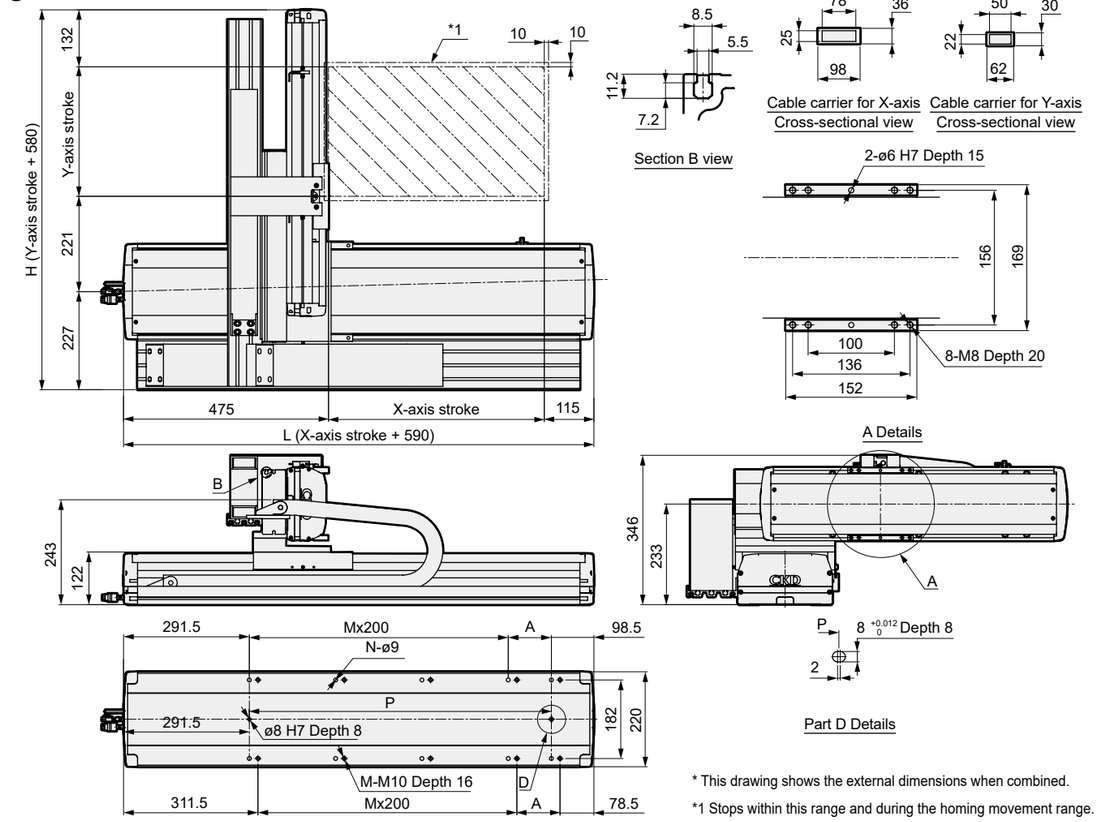
About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-870	A	1	ETS-22	L	ETS-17	R
		2		L		L
		3		R		L
		4		R		R

* R : Right side L : Left side

External Dimension Drawings

ETS-870 A1



* This drawing shows the external dimensions when combined.
*1 Stops within this range and during the homing movement range.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1250																	1125	

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1000		875		750		625		500	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. operating speed (mm/s)	1000														
Max. Payload (kg)	50				40			35			30			25	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-22	M	B	Coupling	Shipped attached	750 W	M6/M5	4
	Y					M6/M5	4
ETS-17	P				400 W	M5/M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

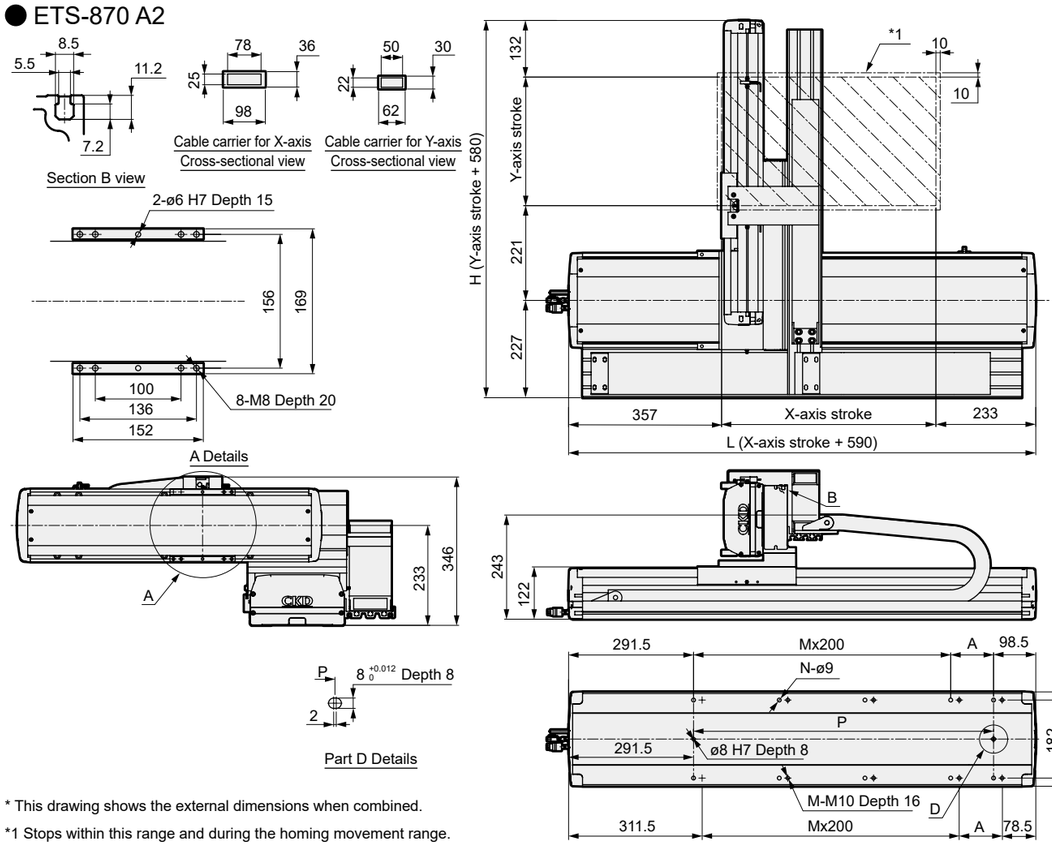
* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

External Dimension Drawings

ETS-870 A2



* This drawing shows the external dimensions when combined.

*1 Stops within this range and during the homing movement range.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1250																	1125	

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1000		875		750		625		500	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. operating speed (mm/s)	1000														
Max. Payload (kg)	50				40			35			30			25	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-22	M	B	Coupling	Shipped attached	750 W	M6/M5	4
	Y					M6/M5	4
ETS-17	P				400 W	M5/M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

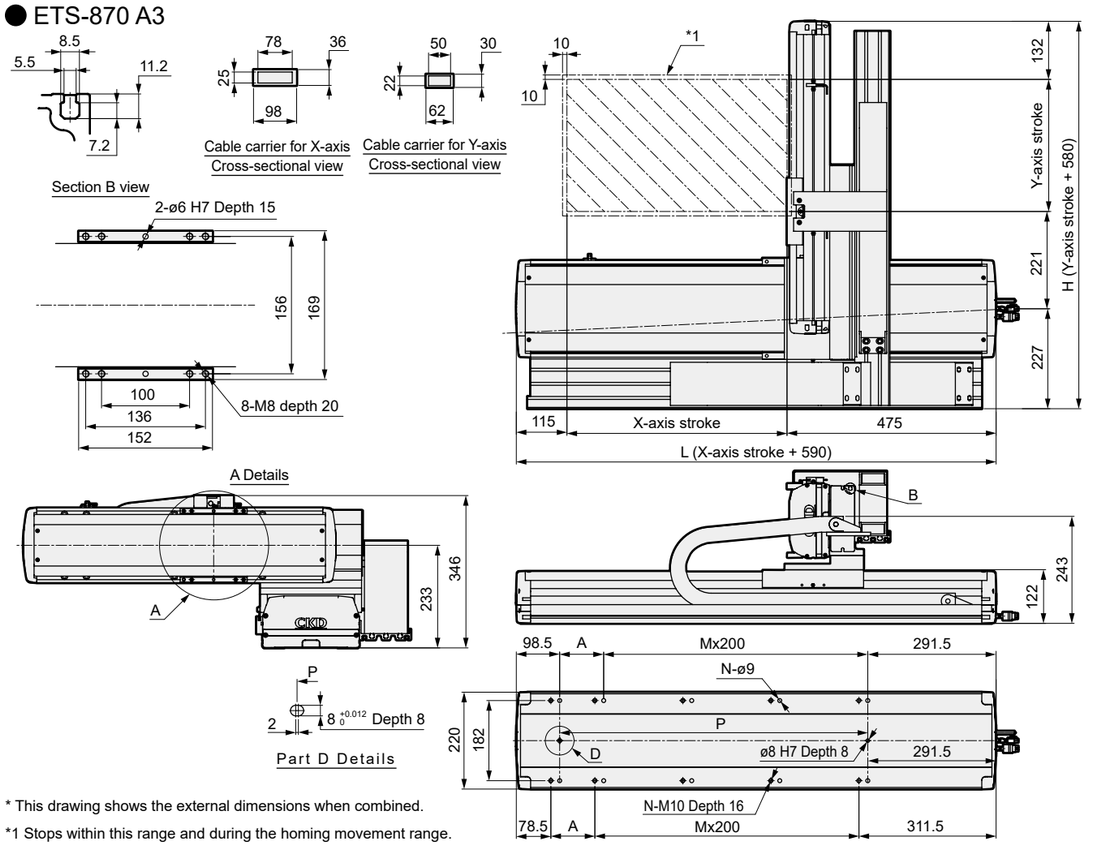
[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

External Dimension Drawings

ETS-870 A3



* This drawing shows the external dimensions when combined.

*1 Stops within this range and during the homing movement range.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1250																	1125	

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1000		875		750		625		500	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. operating speed (mm/s)	1000														
Max. Payload (kg)	50				40			35			30			25	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-22	M	B	Coupling	Shipped attached	750 W	M6/M5	4
	Y					M6/M5	4
ETS-17	P				400 W	M5/M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

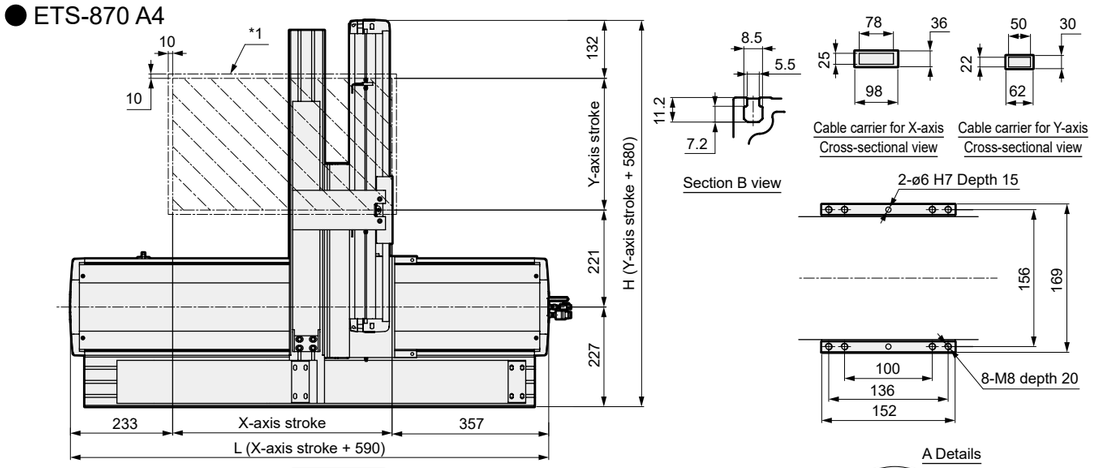
* For sensor specifications, please refer to P. 162.

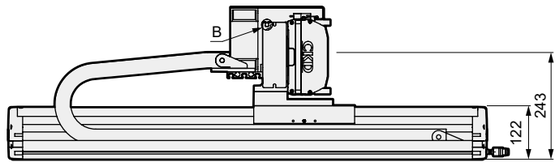
[Other attached parts for axis combination]

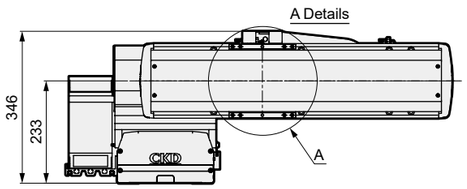
Cable carrier, bracket for axis combination

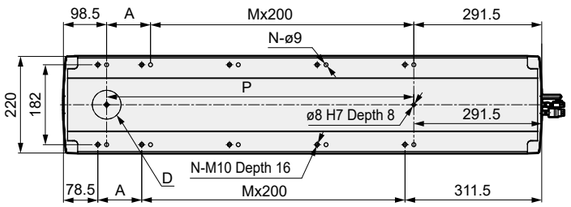
External Dimension Drawings

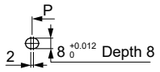
● ETS-870 A4











Part D Details

* This drawing shows the external dimensions when combined.

*1 Stops within this range and during the homing movement range.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1250																	1125	

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	50	100	150	200	50	100	150	200	50	100
M	6	6	6	6	7	7	7	7	8	8
N	16	16	16	16	18	18	18	18	20	20
P	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1000		875		750		625		500	

Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
H	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280	1330
Max. operating speed (mm/s)	1000														
Max. Payload (kg)	50			40				35		30				25	

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-22	M	B	Coupling	Shipped attached	750 W	M6/M5	4
	Y					M6/M5	4
ETS-17	P				400 W	M5/M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 200 W, 400 W, 750 W
- 2-axis combination X-Z axes (P type)

RoHS

Model No. Notation Method

ETS - 650 P 1 - 040 030 - M B W

❶ Combination Axis

650	ETS-14 x ETS-13
760	ETS-17 x ETS-14
880	ETS-22 x ETS-22

❷ Combination method

P	X-Z Axis

❸ Combination Direction

1, 2	Please see the table below.

❹ 1st Axis Stroke

010 to 150	100 mm to 1500 mm (in 50 mm pitch)

❺ 2nd Axis Stroke

005 to 095	50 mm to 950 mm (in 50 mm pitch)

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1

B	Yes

❽ Origin/Limit sensor (3 pcs.x2 axes min.) *2

N	None
W	Yes

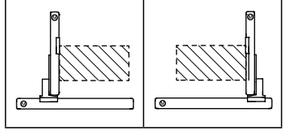
*1 The brake applies to the 2nd axis.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❻ Mounting Motor Specifications

Manufacturer	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	-
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	O	O	O

* For recommended motor model Nos., please refer to P. 172.

❸ Combination direction

P1	P2
	

Axis Combination Specifications

❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity							
			1st Axis				2nd Axis			
			Model	200 W	400 W	750 W	Model	200 W	400 W	750 W
ETS-650	P	1,2	ETS-14	-	B	-	ETS-13	B (With brake)	-	-
ETS-760	P	1,2	ETS-17	-	B	-	ETS-14	-	B (With brake)	-
ETS-880	P	1,2	ETS-22	-	-	B	ETS-22	-	-	B (With brake)

* B: Built-in Mounting

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-650	P	ETS-14	20	100 to 1050	ETS-13	10	50 to 550
ETS-760		ETS-17	20	100 to 1250	ETS-14	10	50 to 650
ETS-880		ETS-22	25	100 to 1500	ETS-22	15	50 to 950

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	P	1	ETS-14	L	ETS-13	L
		2		R		L
ETS-760	P	1	ETS-17	L	ETS-14	L
		2		R		L
ETS-880	P	1	ETS-22	L	ETS-22	L
		2		R		L

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W, 200 W
- 2-axis combination X-Z axes (P type)

RoHS

Model No. Notation Method

ETS - 650 P 1 - 040 030 - M B W

❶ Combination Axis

650	ETS-14 x ETS-13

❷ Combination method

P	X-Z Axis

❸ Combination Direction

1, 2	Please see the table below.

❹ 1st Axis Stroke

010 to 105	100 mm to (in 50 mm pitch) 1050 mm

❺ 2nd Axis Stroke

005 to 055	50 mm to (in 50 mm pitch) 550 mm

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1

B	Yes

❽ Origin/limit sensor (3 pcsx2 axes) *2

N	None
W	Yes

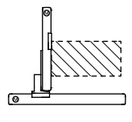
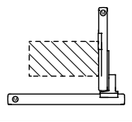
*1 The brake applies to the 2nd axis.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❻ Mounting Motor Specifications

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	O	O

* For recommended motor model Nos., please refer to P. 172.

❸ Combination direction

P1	P2
	

❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	200 W
ETS-650	P	1	ETS-14	B	ETS-13	B (With brake)
		2		B		B (With brake)

* B : Built-in Mounting

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-650	P	ETS-14	20	100 to 1050	ETS-13	10	50 to 550

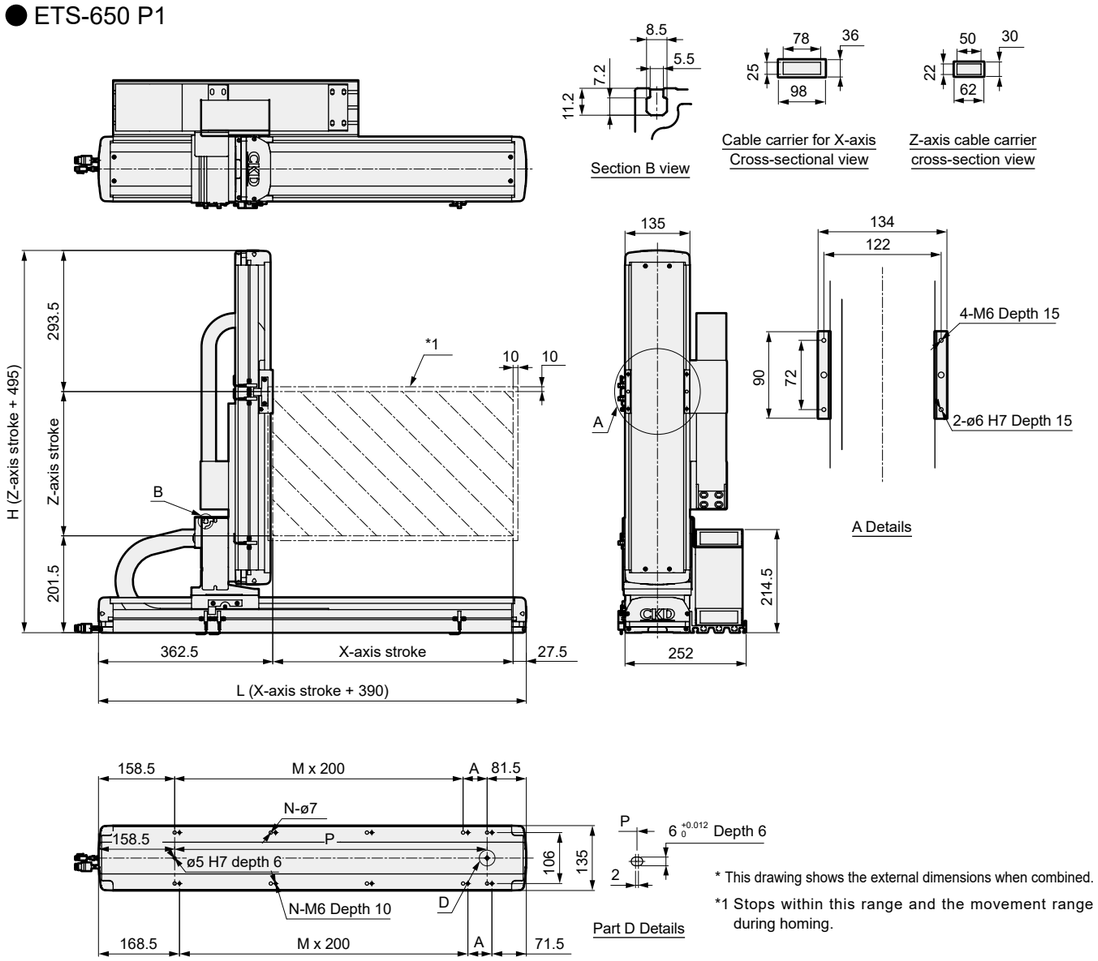
About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-650	P	1	ETS-14	L	ETS-13	L
		2		R		L

* R : Right side L : Left side

External Dimension Drawings

● ETS-650 P1



* This drawing shows the external dimensions when combined.
*1 Stops within this range and the movement range during homing.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000														900	800	700	600	500	400

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	545	595	645	695	745	795	845	895	945	995	1045
Max. operating speed (mm/s)	500										
Max. Payload (kg)	10										

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-14	M	B	Coupling	Shipped Included	400 W	M5	4
	Y					M5	4
ETS-13	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

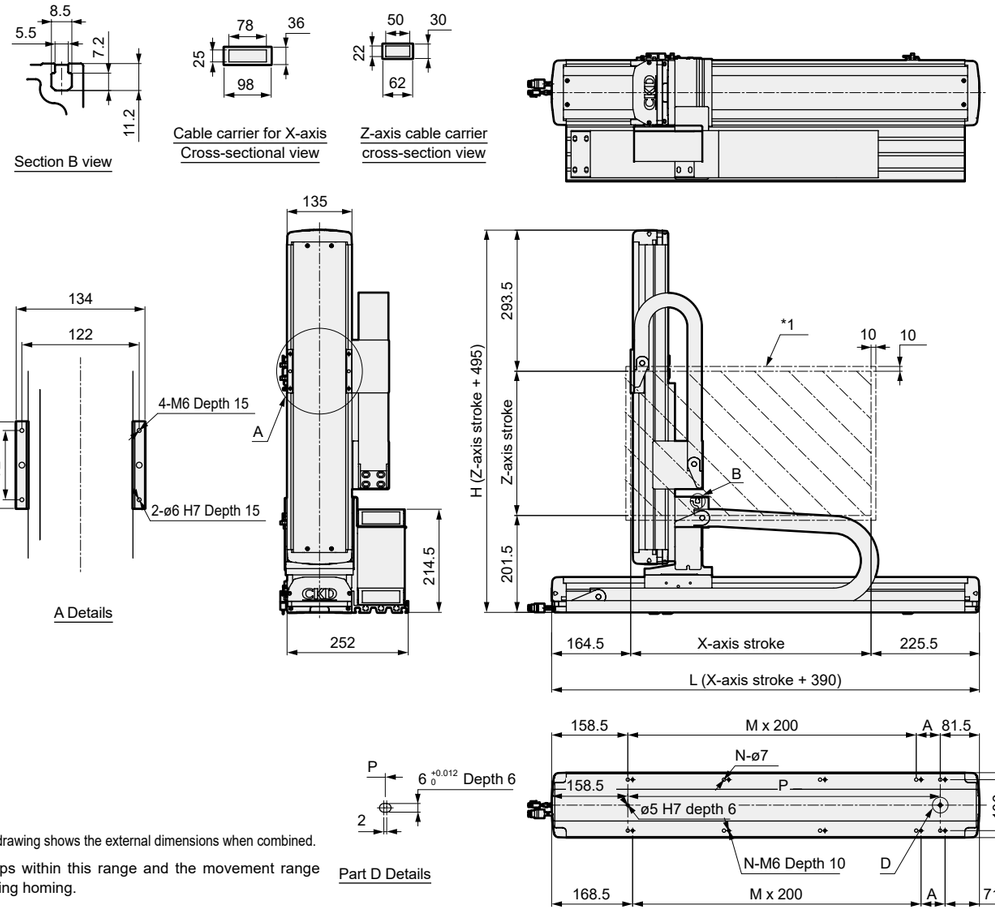
* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

External Dimension Drawings

ETS-650 P2



* This drawing shows the external dimensions when combined.

*1 Stops within this range and the movement range during homing.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Max. operating speed (mm/s)	1000														900	800	700	600	500	400

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	545	595	645	695	745	795	845	895	945	995	1045
Max. operating speed (mm/s)	500										
Max. Payload (kg)	10										

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-14	M	B	Coupling	Shipped Included	400 W	M5	4
	Y					M5	4
ETS-13	P				200 W	M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W
- 2-axis combination X-Z axes (P type)

RoHS

Model No. Notation Method

ETS - 760 ❶ P ❷ 1 ❸ - 040 ❹ 030 ❺ - M ❻ B ❼ W ❽

❶ Combination Axis

760	ETS-17 x ETS-14

❷ Combination method

P	X-Z Axis

❸ Combination Direction

1, 2	Please see the table below.

❹ 1st Axis Stroke

010 to 125	100 mm to (50 mm pitch) 1250 mm

❺ 2nd Axis Stroke

005 to 065	50 mm to (50 mm pitch) 650 mm

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1

B	Yes

❽ Origin/limit sensor (3 pcsx2 axes) *2

N	None
W	Yes

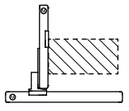
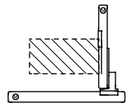
*1 The brake applies to the 2nd axis.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❻ Mounting Motor Specifications

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	O

* For recommended motor model Nos., please refer to P. 172.

❸ Combination direction

P1	P2
	

❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	400 W
ETS-760	P	1	ETS-17	B	ETS-14	B (With brake)
		2		B		B (With brake)

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-760	P	ETS-17	20	100 to 1250	ETS-14	10	50 to 650

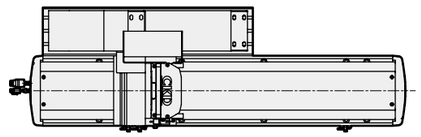
About Grease Nipples

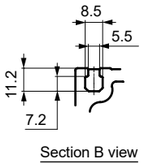
Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	P	1	ETS-17	L	ETS-14	L
		2		R		L

* R : Right side L : Left side

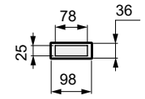
External Dimension Drawings

● ETS-760 P1

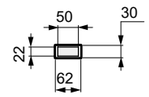




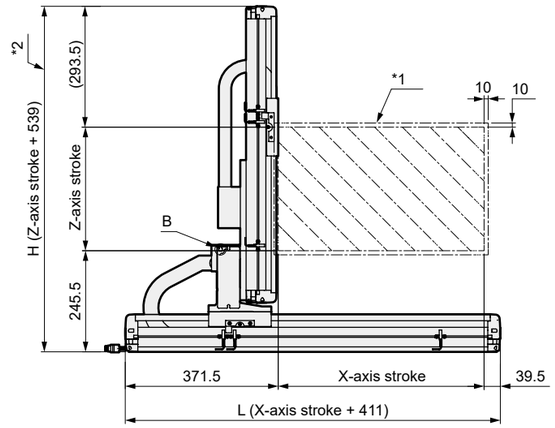
Section B view

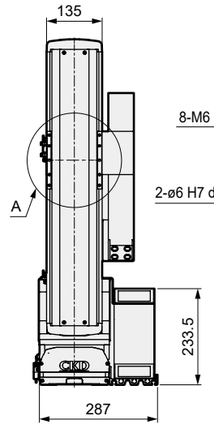


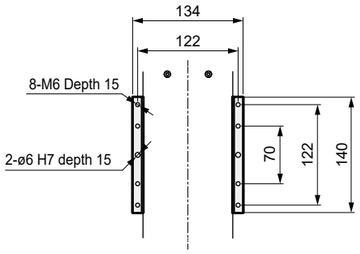
Cable carrier for X-axis
Cross-sectional view



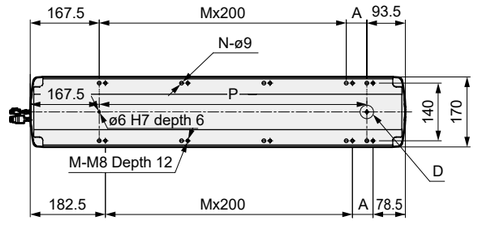
Z-axis cable carrier
cross-section view

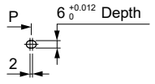






A Details





Part D Details

* This drawing shows the external dimensions when combined.
*1 Stops within this range and the movement range during homing.
*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Max. operating speed (mm/s)	1000																900		800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189
Max. operating speed (mm/s)	500												
Max. Payload (kg)	22												

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped Included	400 W	M5	4
	Y					M5	4
ETS-14	P					M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

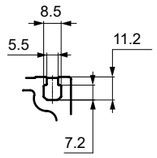
* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

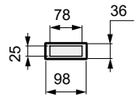
Cable carrier, bracket for axis combination

External Dimension Drawings

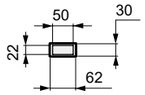
ETS-760 P2



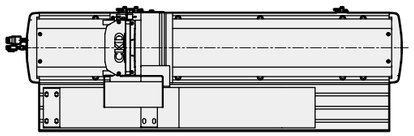
Section B view

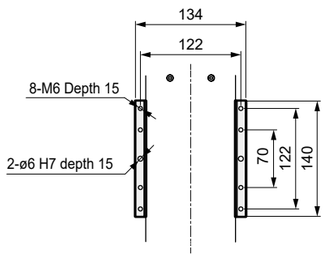


Cable carrier for X-axis
Cross-sectional view

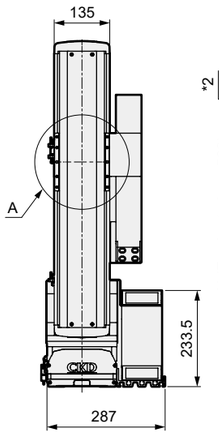


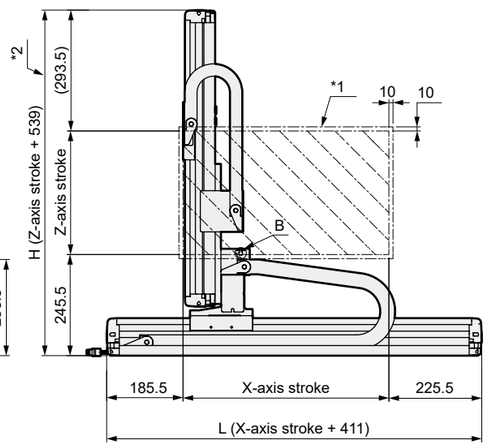
Z-axis cable carrier
cross-section view

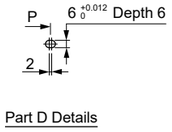




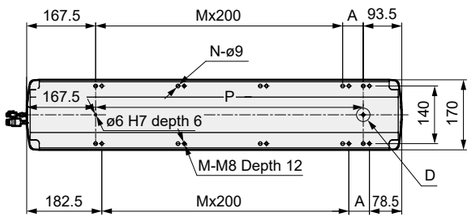
A Details







Part D Details



* This drawing shows the external dimensions when combined.

*1 Stops within this range and the movement range during homing.

*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Max. operating speed (mm/s)	1000																900		800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
H	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189
Max. operating speed (mm/s)	500												
Max. Payload (kg)	22												

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped Included	400 W	M5	4
	Y					M5	4
ETS-14	P					M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 750 W
- 2-axis combination X-Z axes (P type)

RoHS

Model No. Notation Method

ETS - 880 P 1 - 040 030 - M B W

❶ Combination Axis

880	ETS-22 x ETS-22

❷ Combination method

P	X-Z Axis

❸ Combination Direction

1, 2	Please see the table below.

❹ 1st Axis Stroke

010 to 150	100 mm to (in 50 mm pitch) 1500 mm

❺ 2nd Axis Stroke

005 to 095	50 mm to (in 50 mm pitch) 950 mm

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1

B	Yes

❽ Origin/limit sensor (3 pcsx2 axes) *2

N	None
W	Yes

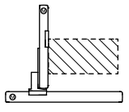
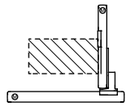
*1 The brake applies to the 2nd axis.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❻ Mounting Motor Specifications

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	-
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	O

* For recommended motor model Nos., please refer to P. 172.

❸ Combination direction

P1	P2
	

❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	750 W	Model	750 W
ETS-880	P	1	ETS-22	B	ETS-22	B (With brake)
		2		B		B (With brake)

* B : Built-in Mounting

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-880	P	ETS-22	25	100 to 1500	ETS-22	5	50 to 950

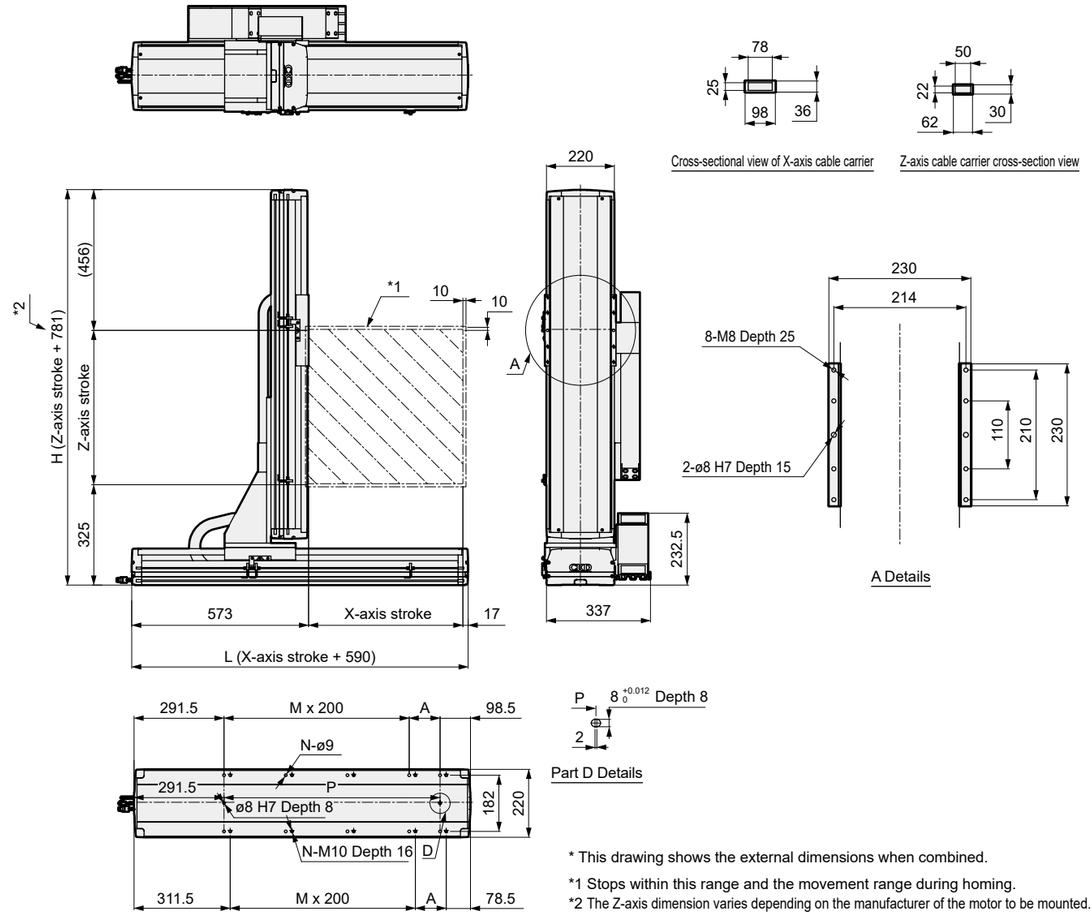
About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-880	P	1	ETS-22	L	ETS-22	L
		2		R		L

* R : Right side L : Left side

External Dimension Drawings

● ETS-880 P1



* This drawing shows the external dimensions when combined.
*1 Stops within this range and the movement range during homing.
*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1250																	1125		1000		875		750		625		500	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
H	831	881	931	981	1031	1081	1131	1181	1231	1281	1331	1381	1431	1481	1531	1581	1631	1681	1731
Max. operating speed (mm/s)	250																		
Max. Payload (kg)	35																		

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-22	M	B	Coupling	Shipped Included	750 W	M6	4
	Y					M6	4
	P					M5	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

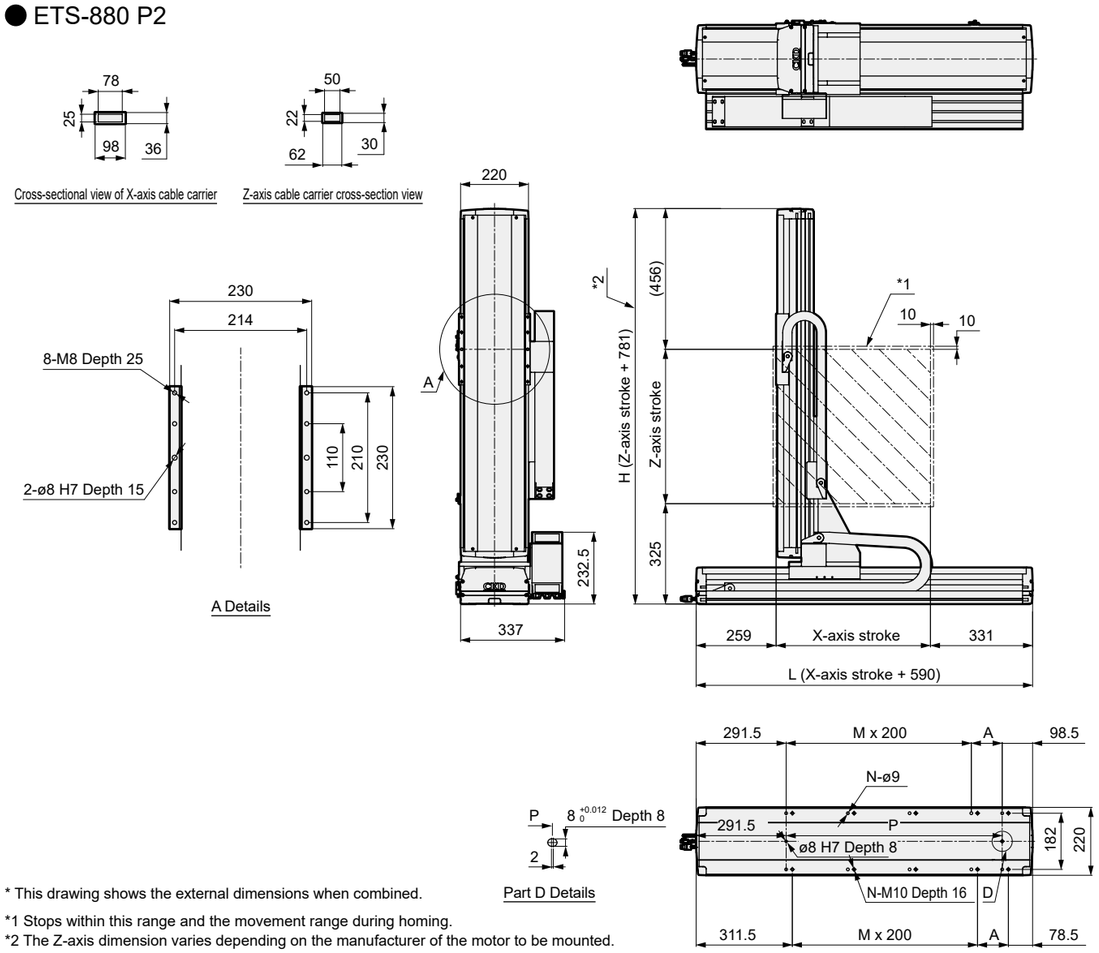
* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

External Dimension Drawings

● ETS-880 P2



* This drawing shows the external dimensions when combined.

*1 Stops within this range and the movement range during homing.

*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290	1340	1390	1440	1490	1540	1590	1640	1690	1740	1790	1840	1890	1940	1990	2040	2090
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Max. operating speed (mm/s)	1250																	1125		1000		875		750		625		500	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
H	831	881	931	981	1031	1081	1131	1181	1231	1281	1331	1381	1431	1481	1531	1581	1631	1681	1731
Max. operating speed (mm/s)	250																		
Max. Payload (kg)	35																		

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-22	M	B	Coupling	Shipped Included	750 W	M6	4
	Y					M6	4
	P					M5	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W
- 2-axis combination Y-Z axes (F type)

RoHS

Model No. Notation Method

ETS - 760 F 1 - 040 030 - M B W

❶ Combination Axis

760	ETS-17 x ETS-14

❷ Combination method

F	Y-Z Axis

❸ Combination Direction

1, 3	Please see the table below.

❹ 1st Axis Stroke

010 to 125	100 mm to (50 mm pitch) 1250 mm

❺ 2nd Axis Stroke

005 to 055	50 mm to (50 mm pitch) 550 mm

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1

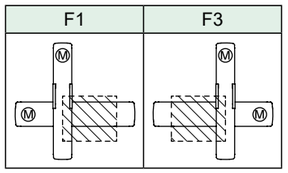
B	Yes

❽ Origin/limit sensor (3 pcsx2 axes) *2

N	None
W	Yes

*1 The brake applies to the 2nd axis.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❸ Combination direction

F1	F3
	

❻ Mounting Motor Specifications

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	O

* For recommended motor model Nos., please refer to P. 172.

Axis Combination Specifications

❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity							
			1st Axis				2nd Axis *1			
			Model	100 W	200 W	400 W	Model	100 W	200 W	400 W
ETS-760	F	1,3	ETS-17	-	-	B	ETS-14	-	-	B (With brake)

* E: Straight mounting B: Built-in Mounting
* Please contact us if you are using an OMRON motor.

❹❺ Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw Lead (mm)	Stroke (mm)	Model	Screw Lead (mm)	Stroke (mm)
ETS-760	F	ETS-17	25	100 to 1250	ETS-14	10	50 to 550

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	F	1	ETS-17	R	ETS-14	R
		3		L		L

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

- Servo Motor Capacity : 400 W
- 2-axis combination Y-Z axes (F type)

RoHS

Model No. Notation Method

ETS - 760 F 1 - 040 030 - M B W

❶ Combination Axis

760	ETS-17 x ETS-14

❷ Combination method

F	Y-Z Axis

❸ Combination Direction

1, 3	Please see the table below.

❹ 1st Axis Stroke

010 to 125	100 mm to (50 mm pitch) 1250 mm

❺ 2nd Axis Stroke

005 to 055	50 mm to (50 mm pitch) 550 mm

❻ Mounted motor specification*3

M, Y, P, O	Select the mounting motor specification from the table below.

❼ Brake *1

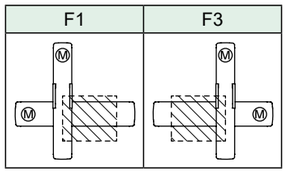
B	Yes

❽ Origin/limit sensor (3 pcsx2 axes) *2

N	None
W	Yes

*1 The brake applies to the 2nd axis.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P".

❸ Combination direction

F1	F3
	

❸ Combination direction and motor mounting direction

Combination Axis	Combination method	Combination Direction	Motor Mounting Direction and Motor Capacity			
			1st Axis		2nd Axis	
			Model	400 W	Model	400 W
ETS-760	F	1	ETS-17	B	ETS-14	B (With brake)
		3		B		B (With brake)

* B: Built-in Mounting

❹❺ About Stroke

Combination Axis	Combination method	1st Axis			2nd Axis		
		Model	Screw lead (mm)	Stroke (mm)	Model	Screw lead (mm)	Stroke (mm)
ETS-760	F	ETS-17	20	100 to 1250	ETS-14	10	50 to 550

About Grease Nipples

Combination Axis	Combination method	Combination Direction	1st Axis		2nd Axis	
			Model	Grease Nipple Position	Model	Grease Nipple Position
ETS-760	F	1	ETS-17	R	ETS-14	R
		3		L		L

* R: Right side L: Left side

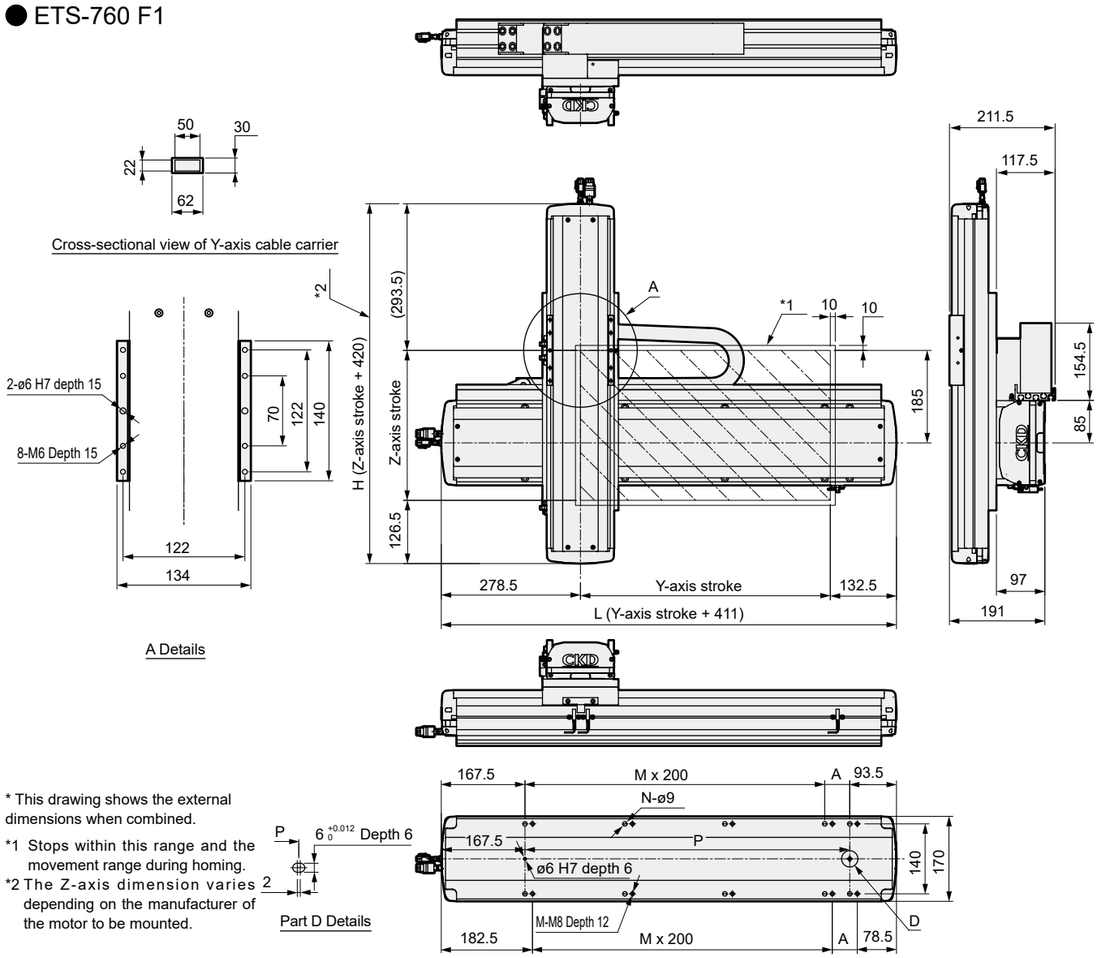
❻ Mounting Motor Specifications

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	O

* For recommended motor model Nos., please refer to P. 172.

External Dimension Drawings

● ETS-760 F1



* This drawing shows the external dimensions when combined.
*1 Stops within this range and the movement range during homing.
*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Max. operating speed (mm/s)	1000																900		800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	470	520	570	620	670	720	770	820	870	920	970
Max. operating speed (mm/s)	500										
Max. Payload (kg)	22										

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped Included	400 W	M5	4
	Y					M5	4
ETS-14	P					M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

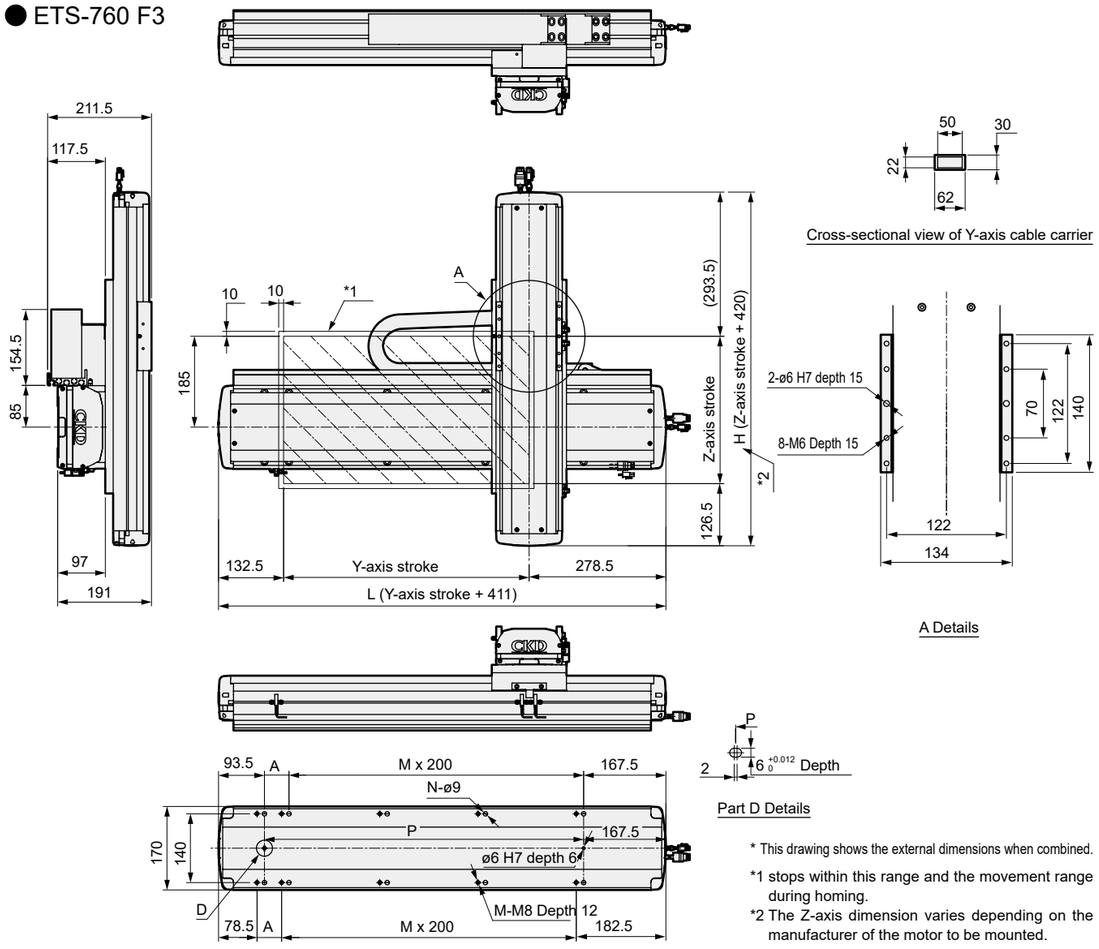
* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

External Dimension Drawings

● ETS-760 F3



* This drawing shows the external dimensions when combined.

*1 stops within this range and the movement range during homing.

*2 The Z-axis dimension varies depending on the manufacturer of the motor to be mounted.

Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	511	561	611	661	711	761	811	861	911	961	1011	1061	1111	1161	1211	1261	1311	1361	1411	1461	1511	1561	1611	1661
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Max. operating speed (mm/s)	1000																900		800		700		600	

Z-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550
H	470	520	570	620	670	720	770	820	870	920	970
Max. operating speed (mm/s)	500										
Max. Payload (kg)	22										

List of Accessories

[Motor Mounting Parts]

Model No.	Mounting Motor Specification	Motor Mounting Direction	Mounting parts	Shipping Method	Motor Capacity	Motor mounting bolts	
ETS-17	M	B	Coupling	Shipped Included	400 W	M5	4
	Y					M5	4
ETS-14	P					M4	4

* If "O" is selected for the mounting motor specification, the motor specification code for the 1st and 2nd axes will be either "M" or "P."

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	6

* For sensor specifications, please refer to P. 162.

[Other attached parts for axis combination]

Cable carrier, bracket for axis combination

MEMO

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

Combination parts: Cable Carrier Assy

RoHS

Model No. Notation Method

ETS - 650 (❶) A (❷) - CABC 13 (❸) - X (❹) 030 (❺)

❶ Combination Axis	
650	ETS-14 x ETS-13
760	ETS-17 x ETS-14
870	ETS-22 x ETS-17
880	ETS-22 x ETS-22

❷ Combination method	
A	X-Y-axis
P	X-Z Axis
F	Y-Z Axis

❸ Combination Direction	
00	Parts with no combination direction restrictions
01	Parts dedicated to combination direction 1
02	Parts dedicated to combination direction 2
13	Parts dedicated to combination directions 1 and 3
14	Parts dedicated to combination directions 1 and 4
23	Parts dedicated to combination directions 2 and 3
24	Parts dedicated to combination directions 2 and 4

❹ Axis Related to Part Specification	
X	X-axis
Y	Y-axis
Z	Z-axis

❺❹ Axis Stroke	
000 to 150	0 mm to 1500 mm (every 50 mm)

Single Part

ETS - TKP0450 W78 R75 (❶) 30 (❷)

❷ Link count	
01 to 99	1 link to 99 links

❶ Cableveyor (type)	
TKP0450 W78 R75	Cable carrier (inner dim: 78 x 25) <outer dim: 98 x 36>
TKP0450 W78 R50	Cable carrier (inner dim: 78 x 25) <outer dim: 98 x 36>
TKP0350 W50 R50	Cable carrier (inner dim: 50 x 22) <outer dim: 62 x 30>

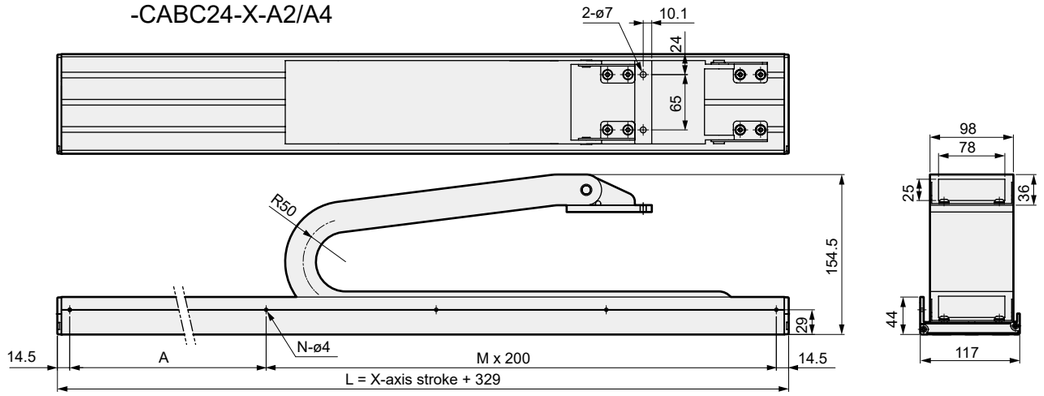
Combination Table

			1st Axis		2nd Axis		Parts
❶ Combination Axis	❷ Combination method	❸ Combination Direction (Restriction)	❹ Axis Related to Part Specification	❺❹ Axis Stroke	❹ Axis Related to Part Specification	❺❹ Axis Stroke	Cable Carrier (Type)
ETS-650	A	13	X	100 to 1050	-	-	TKP0450W78R50
		24					
		14	-	-	Y	50 to 650	TKP0350W50R50
		23					
ETS-760	A	13	X	100 to 1250	-	-	TKP0450W78R50
		24					
		14	-	-	Y	50 to 650	TKP0350W50R50
		23					
ETS-870	A	13	X	100 to 1500	-	-	TKP0450W78R75
		24					
		14	-	-	Y	50 to 750	TKP0350W50R50
		23					
ETS-650	P	01	X	100 to 1050	-	-	TKP0450W78R75
		02					
		00 *1	-	-	Z	50 to 650	TKP0350W50R50
ETS-760	P	01	X	100 to 1250	-	-	TKP0450W78R75
		02					
		00	-	-	Z	50 to 950	TKP0350W50R50
ETS-880	P	01	X	100 to 1500	-	-	TKP0450W78R75
		02					
ETS-760	F	00	Y	100 to 1250	-	-	TKP0350W50R50

*1 Common parts with ETS-650 P

Cable Carrier External Dimension Drawing

● ETS-650 A-CABC13-X-A1/A3
-CABC24-X-A2/A4



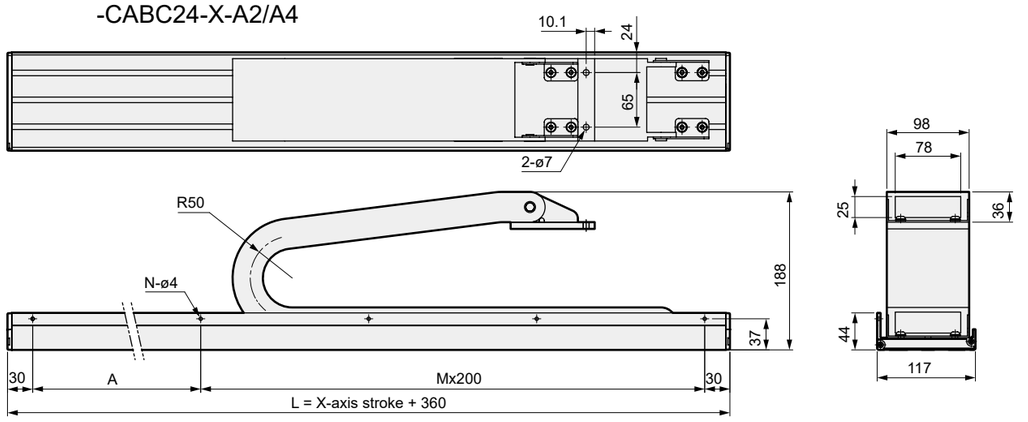
No. of cable carrier links = [A + stroke + (R x 3.14)] / S

X Cable Carrier			
Connection Direction	A	R	S
A1/A3	250	50	45
A2/A4	416	50	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229	1279	1329	1379
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

● ETS-760 A-CABC13-X-A1/A3
-CABC24-X-A2/A4



No. of cable carrier links = [A + stroke + (R x 3.14)] / S

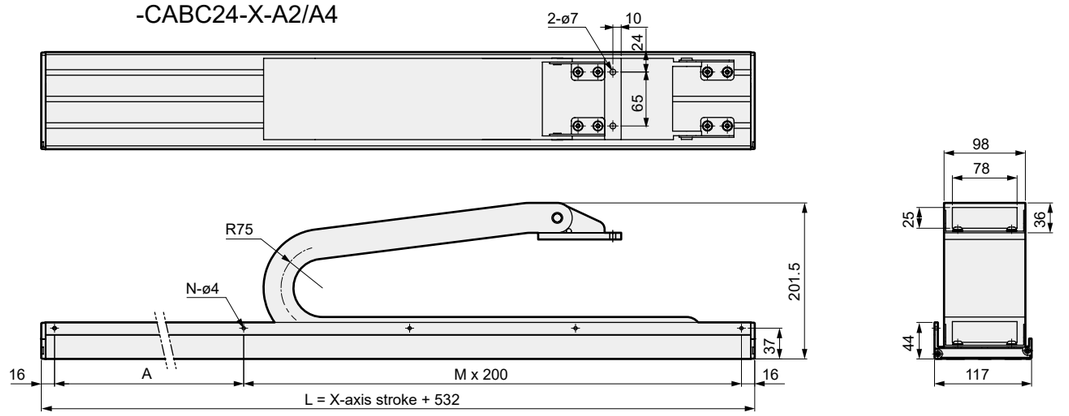
X Cable Carrier			
Connection Direction	A	R	S
A1/A3	265	50	45
A2/A4	421	50	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	460	510	560	610	660	710	760	810	860	910	960	1010	1060	1110	1160	1210	1260	1310	1360	1410	1460	1510	1560	1610
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	6	6	7
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	8	8	9

Cable Carrier External Dimension Drawing

● ETS-870 A-CABC13-X-A1/A3
-CABC24-X-A2/A4



No. of cable carrier links = [A + stroke + (R x 3.14)] / S

X Cable Carrier			
Connection Direction	A	R	S
A1/A3	355	75	45
A2/A4	605	75	45

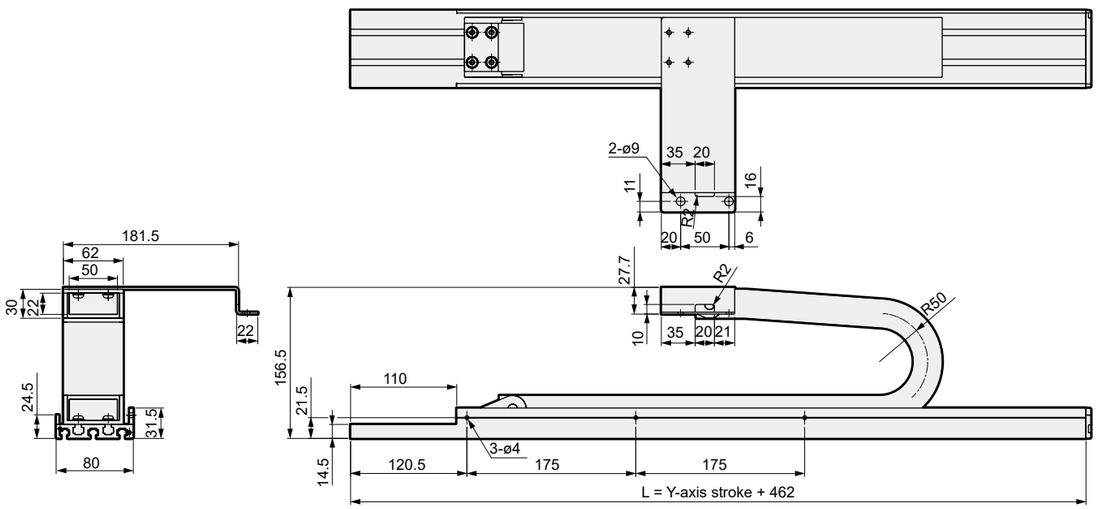
A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9

X-axis stroke (mm)	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	1582	1632	1682	1732	1782	1832	1882	1932	1982	2032
A	150	200	50	100	150	200	50	100	150	200
M	7	7	8	8	8	8	9	9	9	9
N	9	9	10	10	10	10	11	11	11	11

Cable Carrier External Dimension Drawing

● ETS-650 A-CABC14-Y



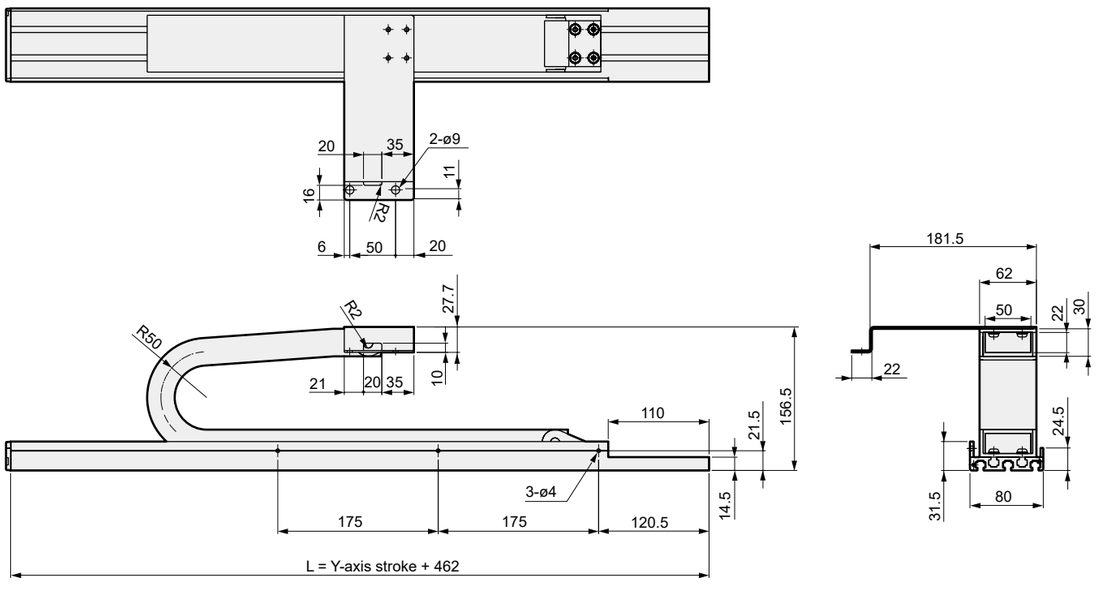
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

No. of cable carrier links = [A + stroke + (R x 3.14)] / S

Y Cable Carrier			
Connection Direction	A	R	S
A1/A4	284	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-650 A-CABC23-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

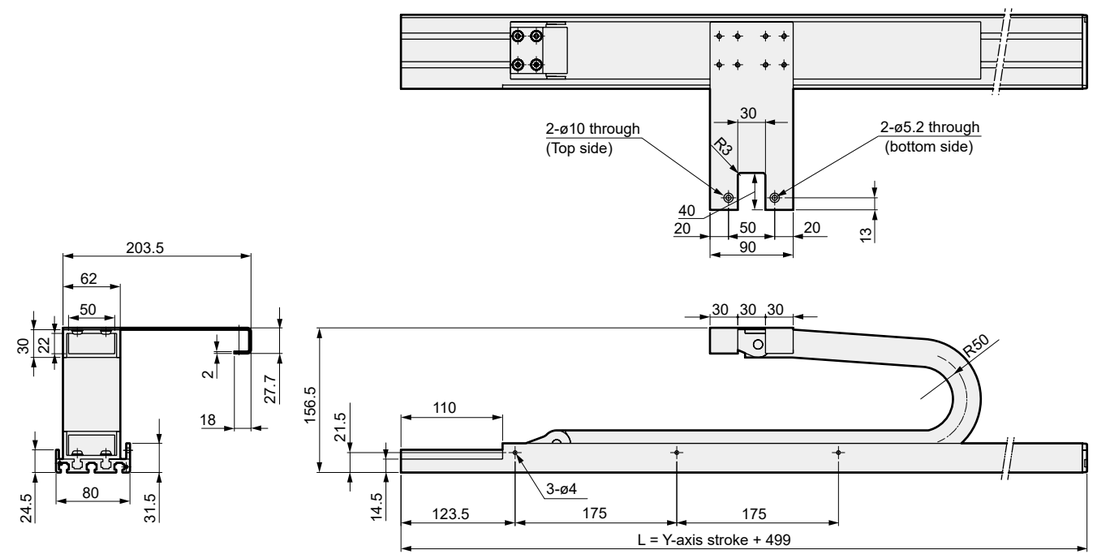
No. of cable carrier links = [A + stroke + (R x 3.14)] / S

Y Cable Carrier			
Connection Direction	A	R	S
A2/A3	284	50	35

A: Basic length R: Bending radius S: Link pitch

Cable Carrier External Dimension Drawing

● ETS-760 A-CABC14-Y



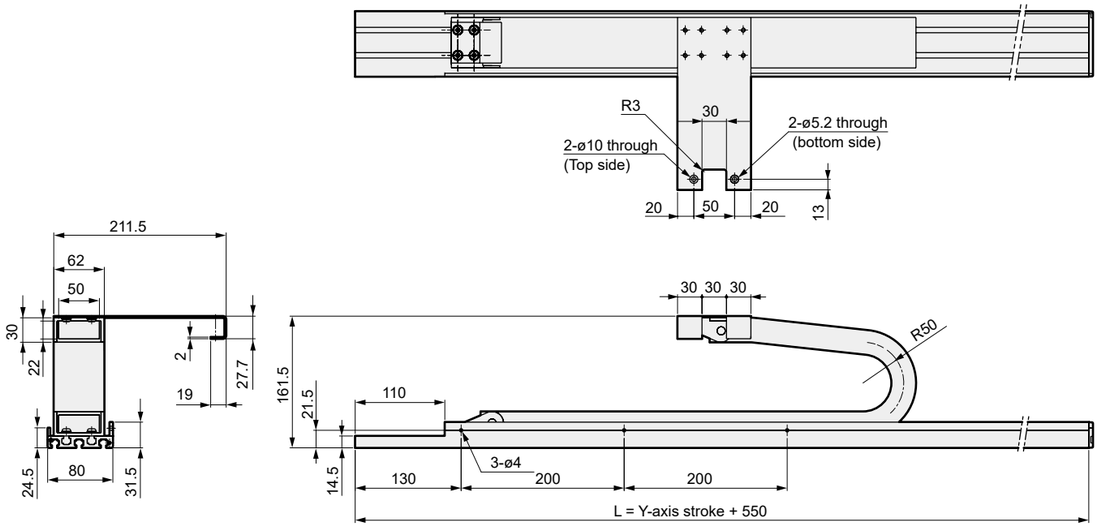
Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

No. of cable carrier links = [A + stroke + (R x 3.14)] / S

Y Cable Carrier			
Connection Direction	A	R	S
A1/A4	298	50	35

A: Basic length R: Bending radius S: Link pitch

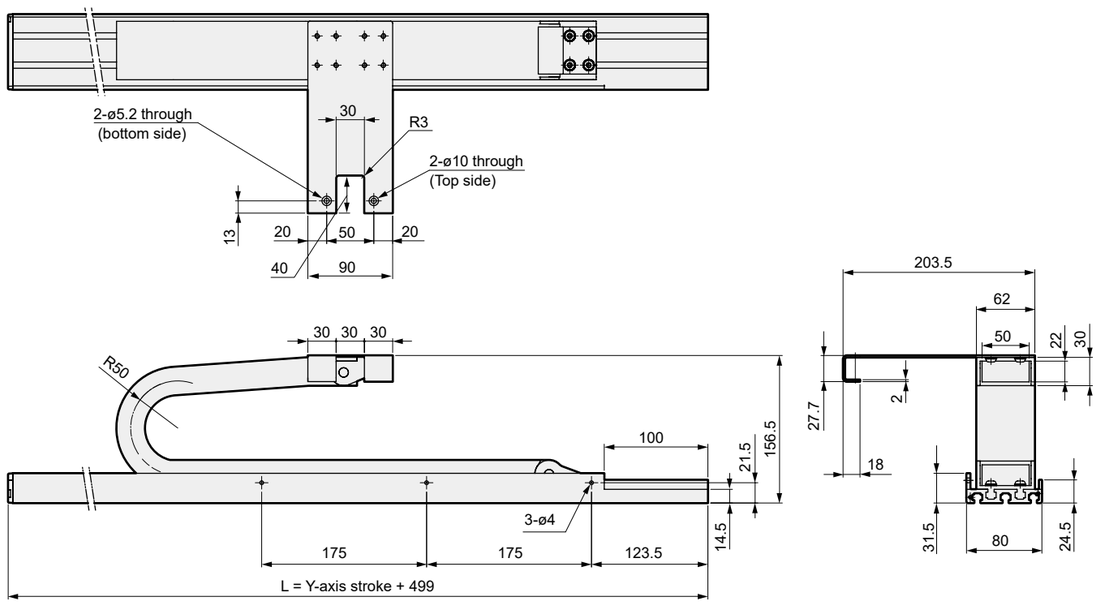
● ETS-870 A-CABC14-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
L	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300

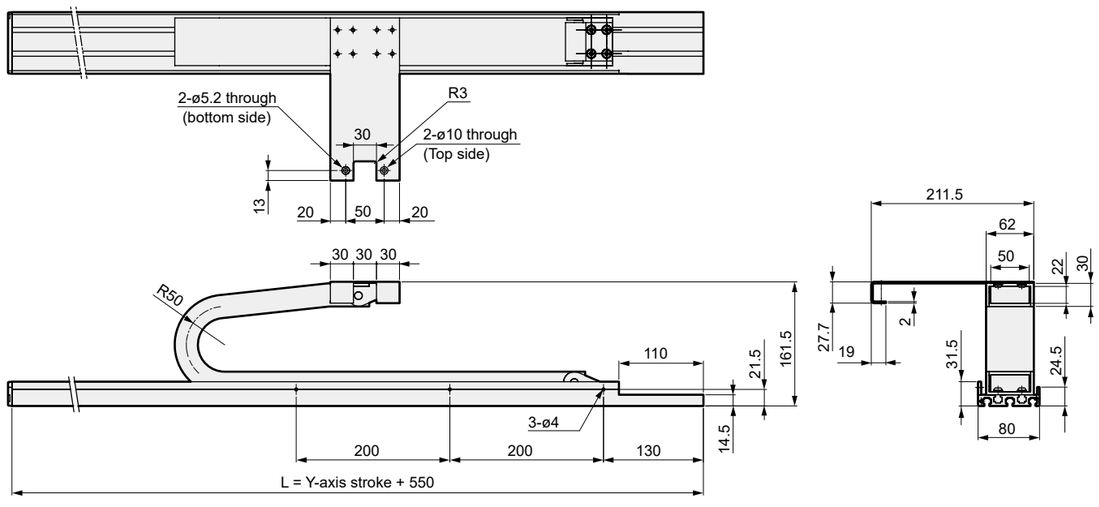
Cable Carrier External Dimension Drawing

● ETS-760 A-CABC23-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149

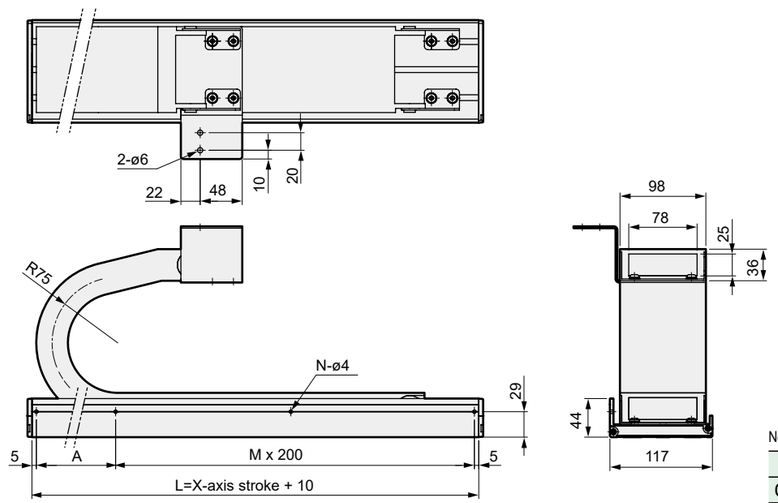
● ETS-870 A-CABC23-Y



Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750
L	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300

Cable Carrier External Dimension Drawing

● ETS-650 P-CABC01-X



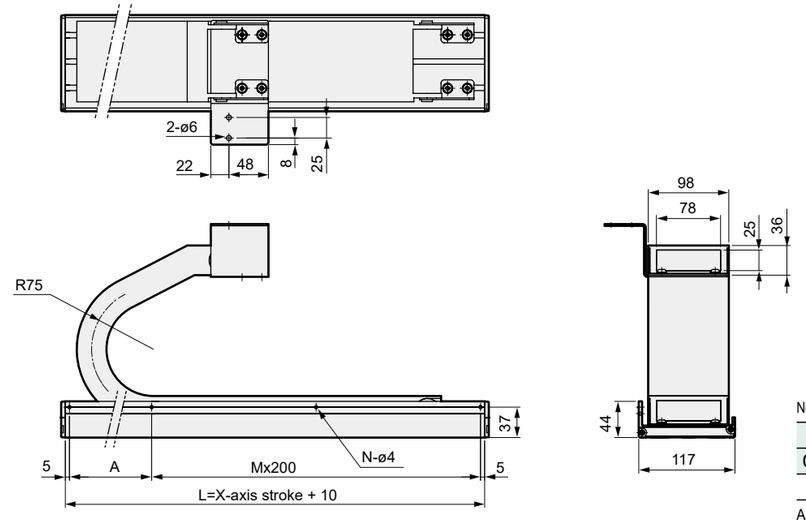
No. of cable carrier links = [A + stroke + (R x 3.14)] / S

X Cable Carrier			
Connection Direction	A	R	S
P1	202	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735	760	785
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7

● ETS-760 P-CABC01-X



No. of cable carrier links = [A + stroke + (R x 3.14)] / S

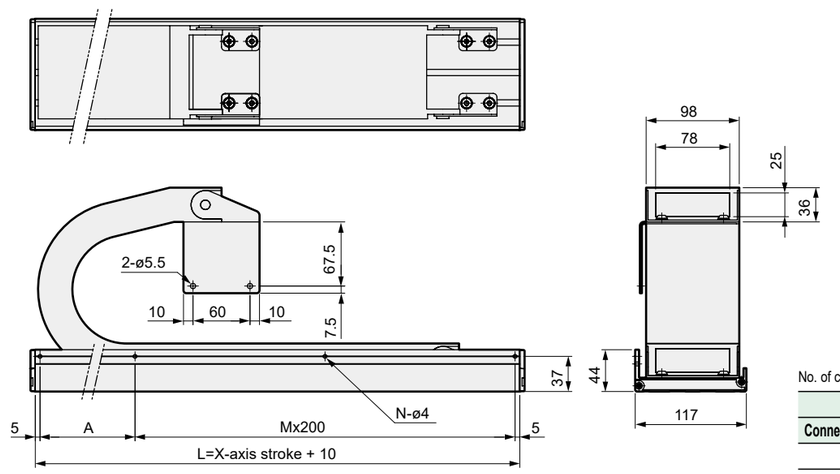
X Cable Carrier			
Connection Direction	A	R	S
P1	209	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735	760	785	810	835	860	885
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8

Cable Carrier External Dimension Drawing

● ETS-880 P-CABC01-X



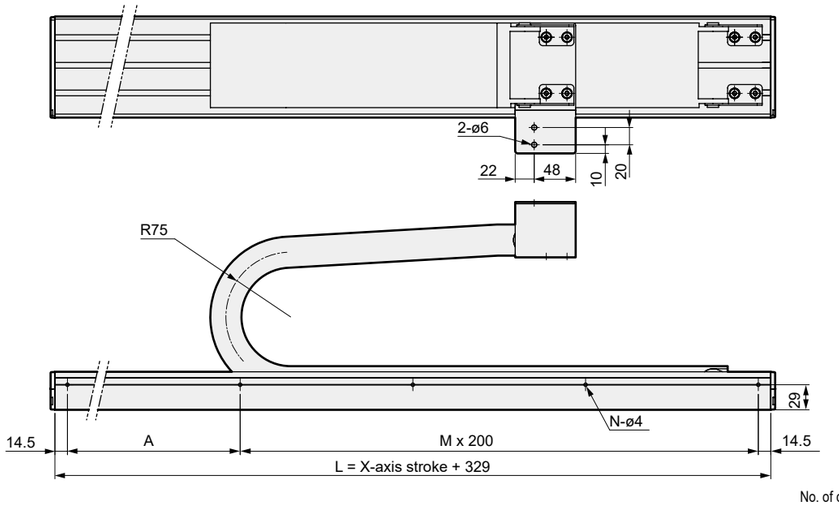
No. of cable carrier links = [A + stroke + (R x 3.14)] / S

X Cable Carrier			
Connection Direction	A	R	S
P1	202	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735	760	785	810	835	860	885	910	935	960	985	1010
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7
N	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9

● ETS-650 P-CABC02-X



No. of cable carrier links = [A + stroke + (R x 3.14)] / S

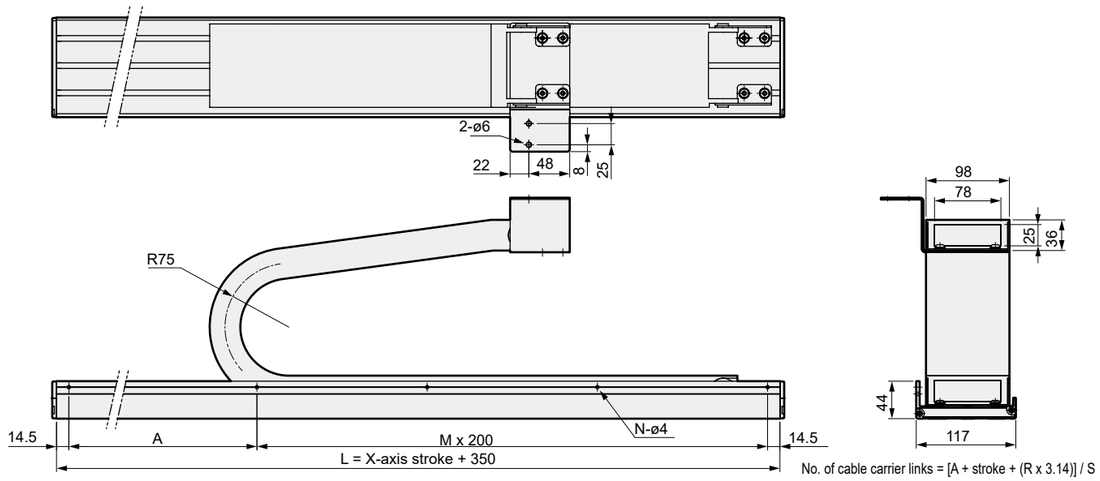
X Cable Carrier			
Connection Direction	A	R	S
P2	296	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	429	479	529	579	629	679	729	779	829	879	929	979	1029	1079	1129	1179	1229	1279	1329	1379
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

Cable Carrier External Dimension Drawing

● ETS-760 P-CABC02-X



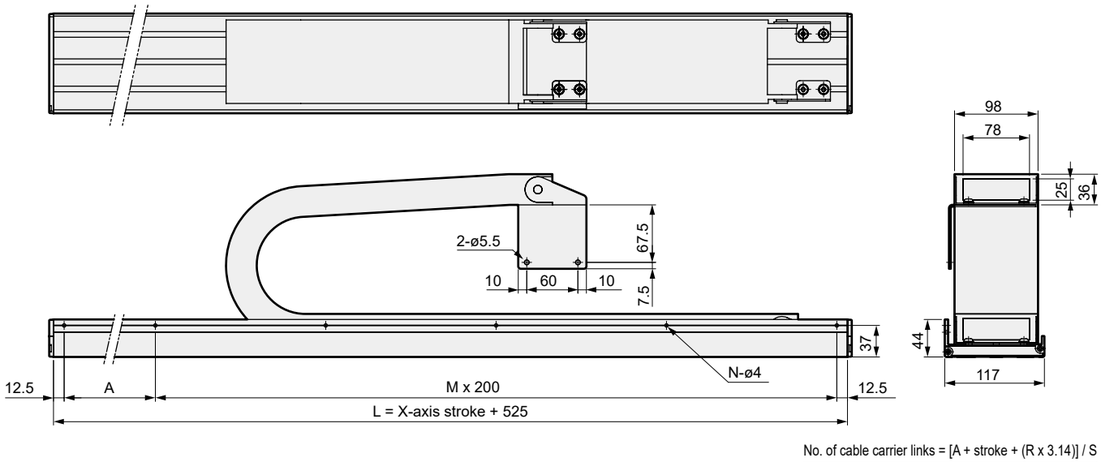
No. of cable carrier links = [A + stroke + (R x 3.14)] / S

X Cable Carrier			
Connection Direction	A	R	S
P2	317	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9

● ETS-880 P-CABC02-X



No. of cable carrier links = [A + stroke + (R x 3.14)] / S

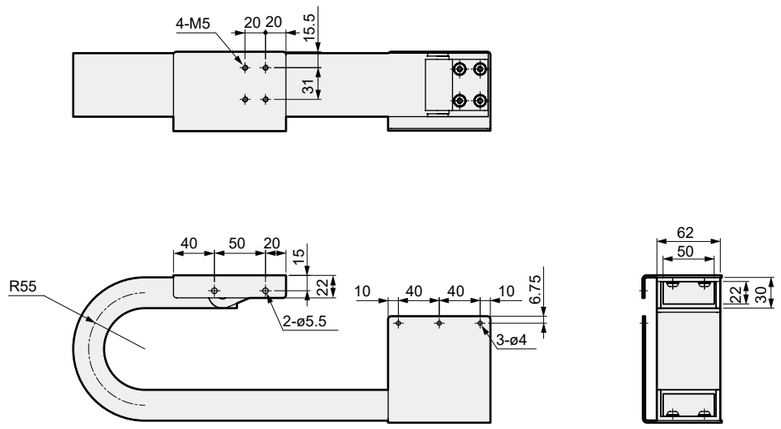
X Cable Carrier			
Connection Direction	A	R	S
P1/P2	368	75	45

A: Basic length R: Bending radius S: Link pitch

X-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	625	675	725	775	825	875	925	975	1025	1075	1125	1175	1225	1275	1325	1375	1425	1475	1525	1575	1625	1675	1725	1775	1825	1875	1925	1975	2025
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9
N	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11

Cable Carrier External Dimension Drawing

● ETS-650 P/760 P-CABC00-Z

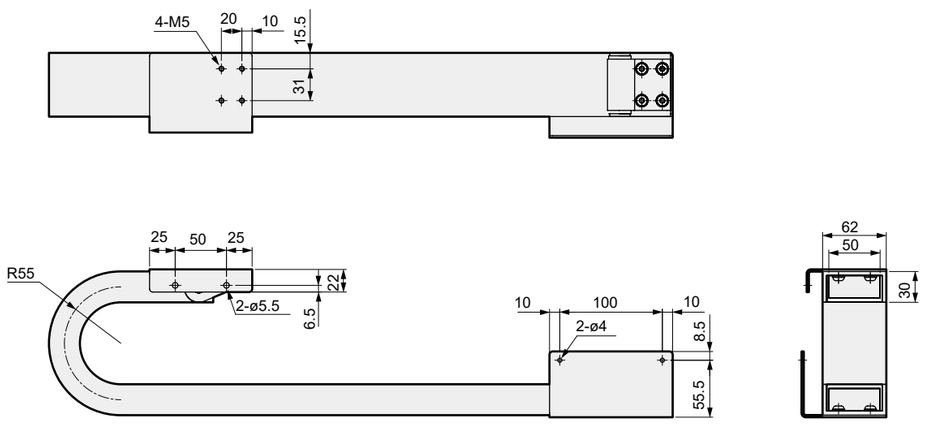


No. of cable carrier links = [A + stroke + (R x 3.14)] / S

Z Cable Carrier			
Connection Direction	A	R	S
F1/F3	100	50	35

A: Basic length R: Bending radius S: Link pitch

● ETS-880 P-CABC00-Z



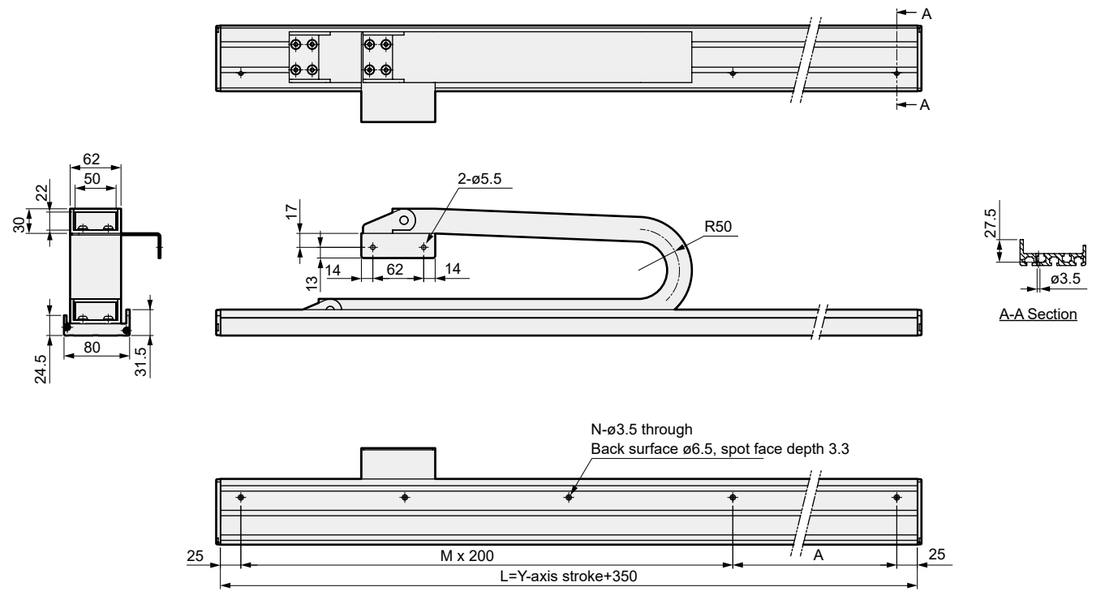
No. of cable carrier links = [A + stroke + (R x 3.14)] / S

Z Cable Carrier			
Connection Direction	A	R	S
P1/P2	250	50	35

A: Basic length R: Bending radius S: Link pitch

Cable Carrier External Dimension Drawing

● ETS-760 F-CABC00-Y



No. of cable carrier links = [A+stroke+(Rx3.14)] / S

Y Cable Carrier			
Connection Direction	A	R	S
F1/F3	190	50	35

A: Basic length R: Bending radius S: Link pitch

Y-axis stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8	8

Electric Actuator Ball Screw Drive Slider Type

ETS Multi-Axis Series

Combination parts: Bracket for Axis Combination

RoHS

Model No. Notation Method

ETS - 650 (❶) A (❷) - BKTC 14 (❸) - Y (❹) 000

❶ Combination Axis	
650	ETS-14 x ETS-13
760	ETS-17 x ETS-14
870	ETS-22 x ETS-17
880	ETS-22 x ETS-22

❷ Combination method	
A	X-Y-axis
P	X-Z Axis
F	Y-Z Axis

❸ Combination Direction	
00	Parts with no combination direction restrictions
14	Parts dedicated to combination directions 1 and 4
23	Parts dedicated to combination directions 2 and 3

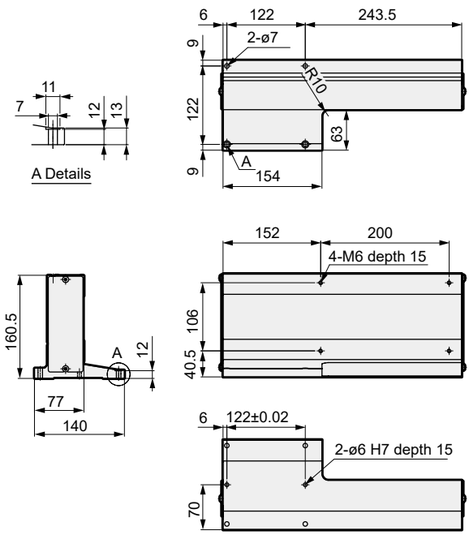
❹ Axis Related to Part Specification	
Y	Y-axis
Z	Z-axis

Combination Table

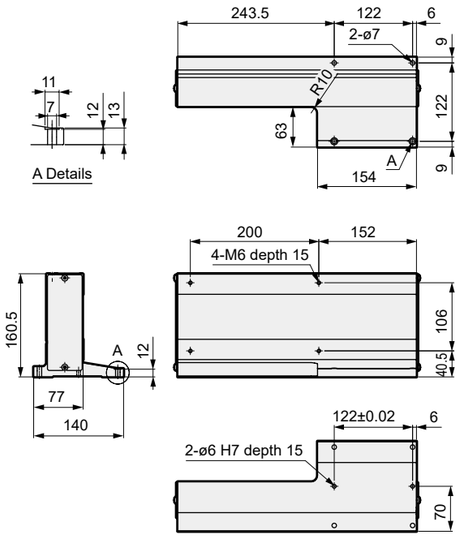
❶ Combination Axis	❷ Combination method	❸ Combination Direction (Restriction)	❹ Axis Related to Part Specification
ETS-650	A	14	Y
		23	
ETS-760	A	14	Y
		23	
ETS-870	A	14	Y
		23	
ETS-650	P	00	Z
ETS-760	P	00	Z
ETS-880	P	00	Z
ETS-760	F	00	Z

Bracket External Dimension Drawing

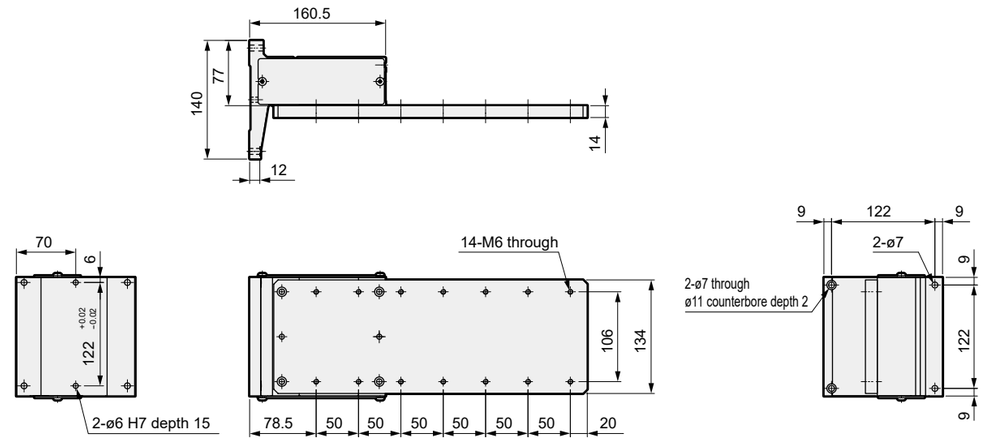
● ETS-650 A-BKTC14-Y000



● ETS-650 A-BKTC23-Y000

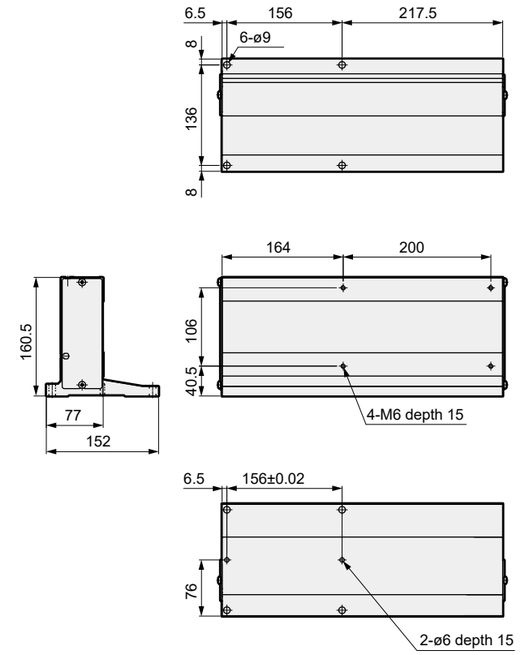


● ETS-650 P-BKTC00-Z000

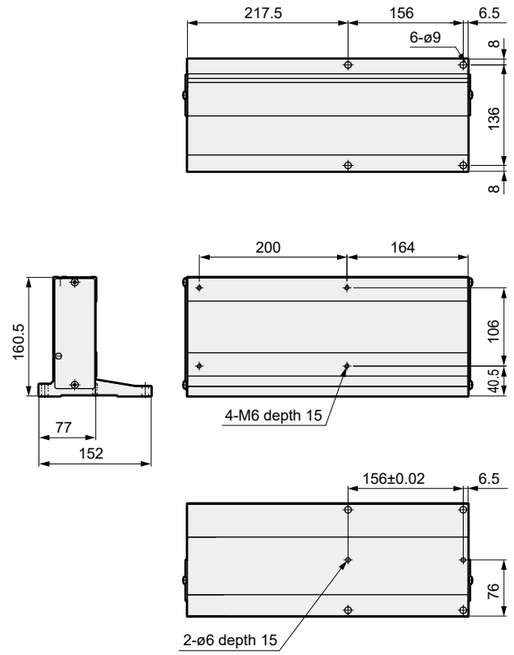


Bracket External Dimension Drawing

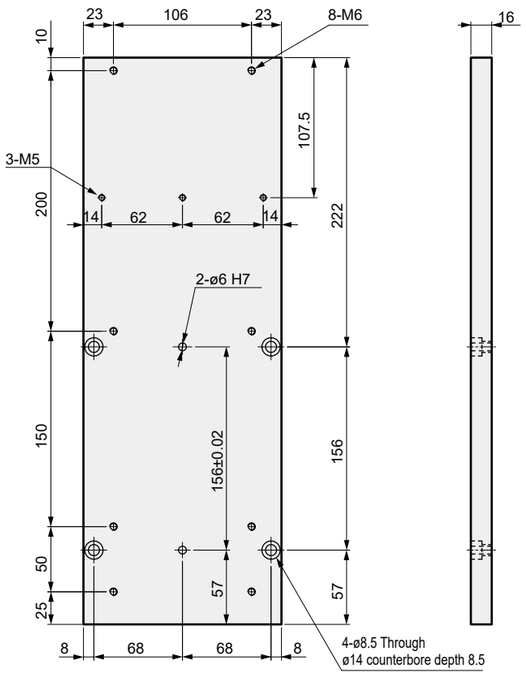
● ETS-760 A-BKTC14-Y000



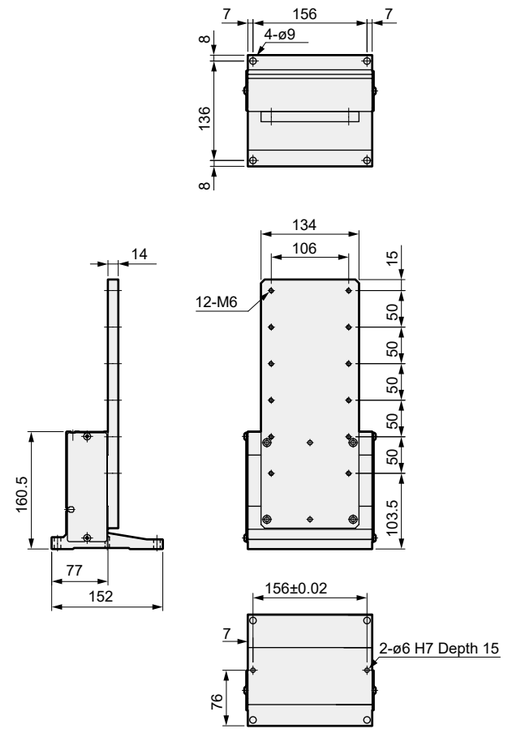
● ETS-760 A-BKTC23-Y000



● ETS-760 F-BKTC00-Z000

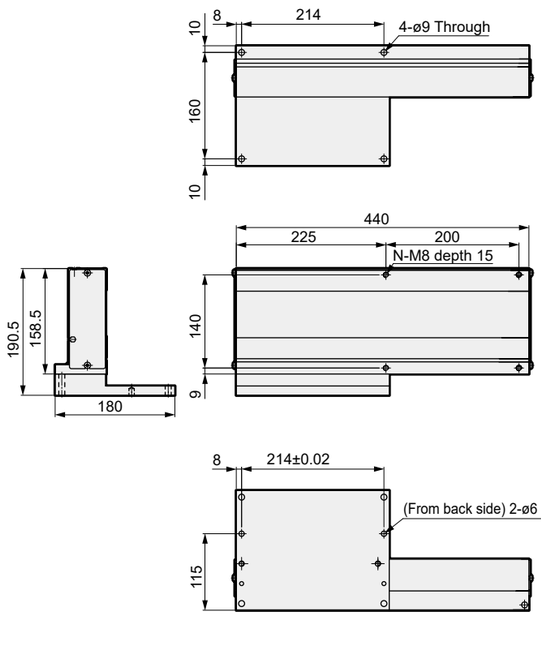


● ETS-760 P-BKTC00-Z000

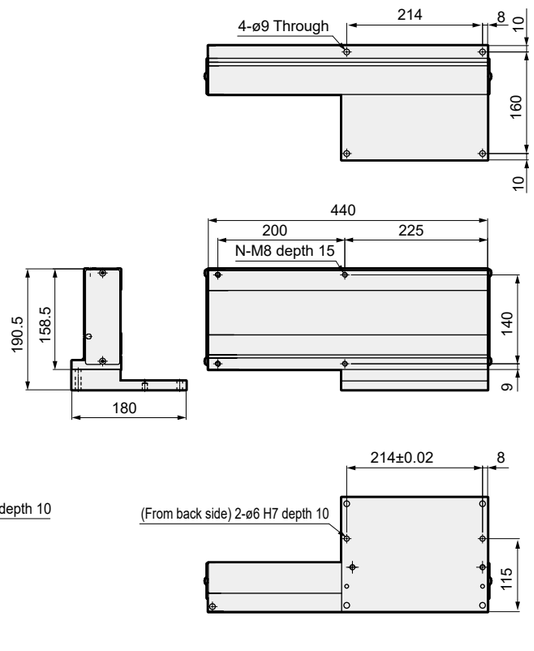


Bracket External Dimension Drawing

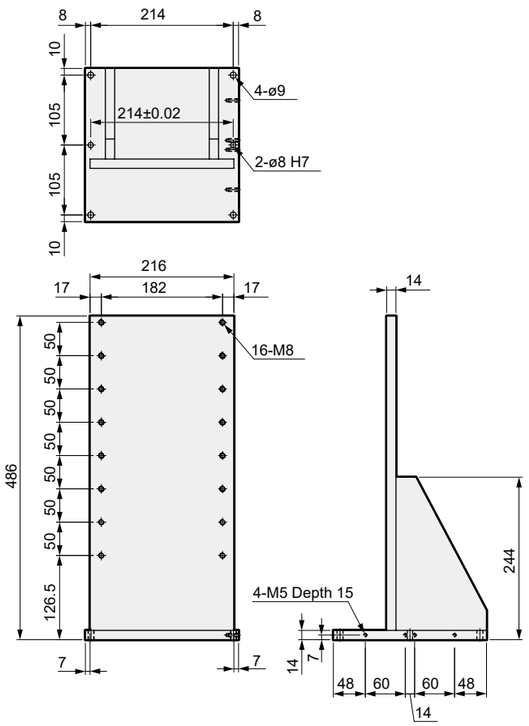
● ETS-870 A-BKTC14-Y000



● ETS-870 A-BKTC23-Y000



● ETS-880 P-BKTC00-Z000



Model Selection Check Sheet → CKD (Contact)

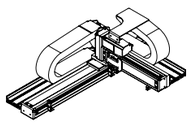
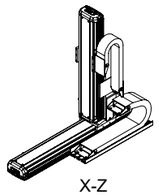
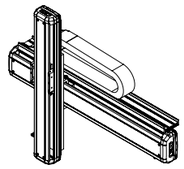
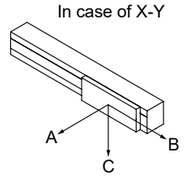
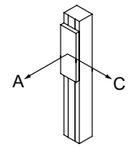
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions:

Combination	 X-Y	 X-Z	 Y-Z	
	1st Axis		2nd Axis	
Basic Specifications	Combination direction :			
	Maximum Stroke	mm	Maximum Stroke	mm
	Repeatability : ±	mm	Repeatability : ±	mm
Operating Conditions	Travel stroke :	mm	Travel stroke :	mm
	Speed Setting :	mm/s	Speed Setting :	mm/s
	Travel time :	s	Travel time :	s
	Set acceleration/deceleration :	mm/s^2	Set acceleration/deceleration :	mm/s^2
	Set acceleration/deceleration time :	s	Set acceleration/deceleration time :	s
Load Conditions	Payload :	kg		
	Distance from center of 2nd axis slider to center of gravity of load			
	In case of X-Y  In case of X-Z, Y-Z 			
	A direction :	mm		
	B direction :	mm		
	C direction :	mm		
	Special notes regarding load :			
Pressing Load	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )			
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %			
	Atmosphere :			
Motor Used	Manufacturer :			
	Motor capacity :	W	Motor capacity :	W
	Model Number :		Model Number :	
	Model Number :		Model Number :	
Special Notes				

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Actuator Servo Motor Compatible Motorless Specification

ECS

Slider Type (Ball Screw Drive, Low Particle Emission Specification)

CONTENTS

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・ECS-17	248
・ECS-22	256
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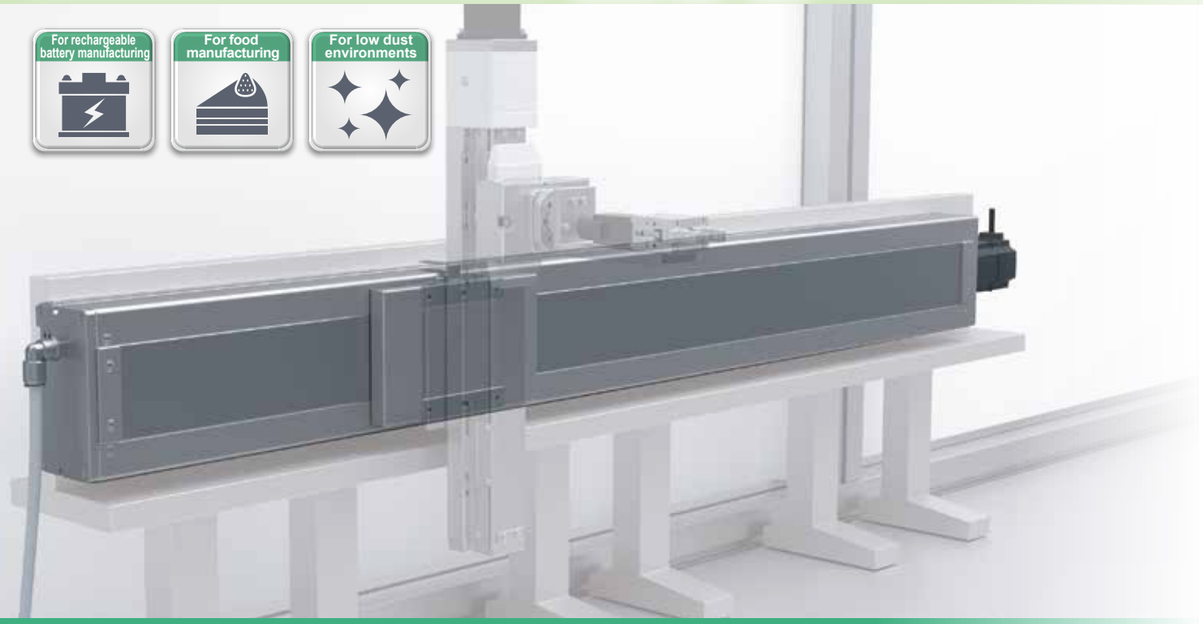
Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

ECS Series



For High-Load Transport (Low Particle Emission Model)

Line-up	Body Size / Motor capacity	14 200 W	14 400 W	17 400 W	17 750 W	22 750 W	Catalog page
Low dust specification **ECS**		●	●	●	●	●	236
Supports low dust specifications and rechargeable battery manufacturing processes **ECS-P4**		●	●	●	●	●	CC-1226AA
Low dust specifications / compatible with food manufacturing processes **ECS-FP1**		●	●	●	●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

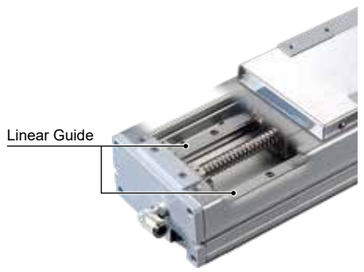
Servo Motor

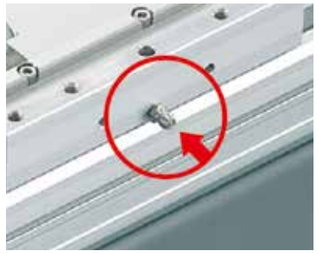
Mitsubishi Electric Corporation / Delta Electronics Co., Ltd. / Sanyo Denki Co., Ltd. / Mitsubishi Electric Corporation / Keyence Corporation / Panasonic Corporation / OMRON Corporation / Fuji Electric Corporation / FANUC CORPORATION / Bosch Rexroth AG / Rockwell Automation, Inc. / SIEMENS AG

Supports high-load transfer

High rigidity / Reduced man-hours / Easy maintenance

It has a high-rigidity structure with two built-in linear guides to firmly support the load. A grease nipple is equipped on the side of the actuator. It is possible to grease the ball screw and guide all at once from the outside without disassembling the main body. Significantly reduces maintenance man-hours.



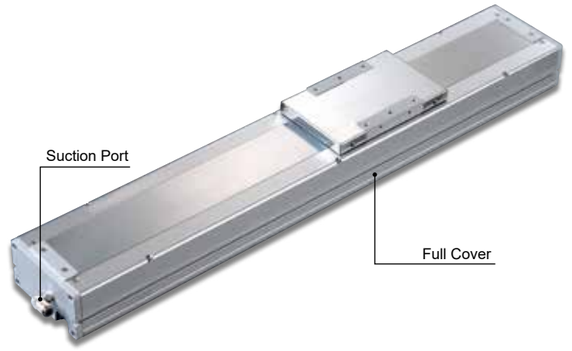


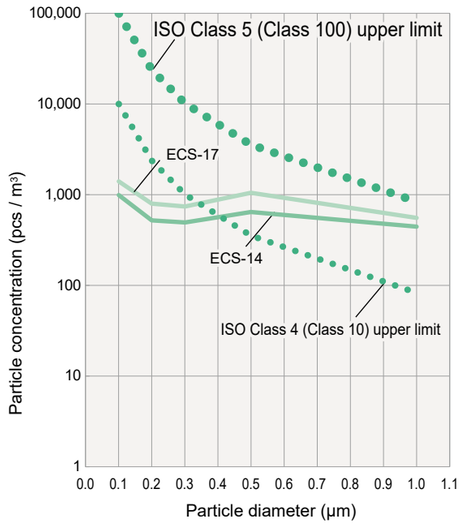
* Select by model No.

Low Particle Emission Structure

Low Particle Generation

The actuator body has a full cover with few gaps, and dust is exhausted outside through a suction port. Ideal for liquid crystal panel production lines and food lines.





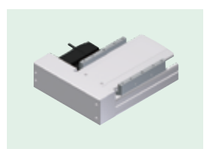
* Please refer to the catalog text for data acquisition conditions. This is not a guaranteed value.

Motor fold-back variations

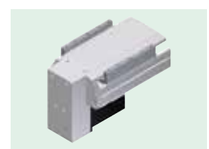
High versatility / Space saving / Reduced design hours

We have prepared a total of 5 motor fold-back variations that can be selected according to the equipment.

Straight Mounting



Right Side Return Mount



Bottom Side Return Mount

Left Side Fold-back Mounting

Built-in Mounting

* Please check the specification page for the conditions under which built-in mounting can be selected.

System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and Max. Speed (mm/s) *4	Page
Low Particle Emission Type		ECS-14	200 / 400	135	5	95 *2	27 *2	50 mm: 250	240
						110	33	100 mm: 250
					10	75	18	150 mm: 500
						88	22	200 mm: 500 — *5 300: 0.80 sec; *5 600: 1.40 sec; *5 900: 2.77 sec; *5 1050: 4.40 sec
					16	44	7	250 mm: 800
						48	10	300 mm: 800
					20	35	6	350 mm: 1000
						40	8	400 mm: 1000 — *5 300: 0.50 sec; *5 600: 0.80 sec; *5 900: 1.44 sec; *5 1050: 2.30 sec
		ECS-17	400 / 750	170	5	120 *3	40 *3	50 mm: 250	248
						120	50	100 mm: 250
					10	110	30	150 mm: 500
						120	40	200 mm: 500 — *5 300: 0.80 sec; *5 600: 1.40 sec; *5 900: 2.20 sec; *5 1200: 4.37 sec
					20	75	14	250 mm: 1000
						83	25	300 mm: 1000
					40	35	5	350 mm: 2000
						50	10	400 mm: 2000 — *5 300: 0.35 sec; *5 600: 0.50 sec; *5 900: 0.70 sec; *5 1200: 1.24 sec
		ECS-22	750	220	5	150	55	50 mm: 250	256
								100 mm: 250
					10	150	45	150 mm: 500
								200 mm: 500 — *5 300: 0.80 sec; *5 600: 1.40 sec; *5 900: 2.00 sec; *5 1200: 3.63 sec; *5 1500: 7.70 sec
					25	120	20	250 mm: 1250
								300 mm: 1250
					40	60	10	350 mm: 2000
								400 mm: 2000 — *5 300: 0.35 sec; *5 600: 0.50 sec; *5 900: 0.70 sec; *5 1200: 1.20 sec; *5 1500: 2.70 sec

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The upper value is the payload at 200 W, and the lower value is the payload at 400 W.
*3 The upper value is the payload for 400 W, and the lower value is the payload for 750 W.

*4 The maximum speed is based on the assumption that the customer-mounted motor can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*5 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration.
Please note that this is not the value at max. payload.

Model Number Configuration

Model No. Notation Method

ECS - 14 - 05 040 - E M 2 N C B N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

14	Body width 135 mm
17	Body width 170 mm
22	Body width 220 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm
25	25 mm
40	40 mm

❸ Stroke

005	50 mm
to	(every 50 mm)
150	1500 mm

❹ Motor mounting direction *1

E	Straight Mounting
B	Built-in Mounting
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M	Refer to the list on the page at right
Y	
P	
F	

❻ Motor Capacity

2	200 W
4	400 W
8	750 W

❼ Brake *1

N	None
B	Yes

❽ Origin sensor (1 pc) *2

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side (Shipped included)
D	Outside, opposite motor side (Shipped included)

❾ Limit sensor (2 pcs) *2

N	None
A	Inside
B	Outside

❿ Grease nipple

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

*1 Select "Yes" only when the motor mounting direction is "built-in mounting".
If selecting other mounting directions, please select "None."
*2 Sensor dogs are assembled at shipment regardless of the presence of the sensor.

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❷ Screw Lead	❸ Stroke
14	05	005 to 105 (50 mm to 1050 mm)
	10	
	16	
	20	
17	05	005 to 125 (50 mm to 1250 mm)
	10	
	20	
	40	
22	05	005 to 150 (50 mm to 1500 mm)
	10	
	25	
	40	

Model Number Display Example

ECS-14-05040-EM2 NCBNP

❶ Body Size : 14 Series
❷ Screw lead : 5 mm
❸ Stroke : 400 mm
❹ Motor Mounting Direction : Straight Mounting
❺ Mounting motor specification : M (Refer to the table on the page at right)
❻ Motor Capacity : 200 W
❼ Brake : None
❽ Origin sensor : External motor side
❾ Limit sensor : Outside
❿ Grease nipple : None (Body mounting direction: Standard)
⓫ Locating pin hole : Yes

*This product is available only for the actuator (and motor mounting part) and does not include a motor.
The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	200 W (ECS-14 Series)	400 W (ECS-14/17 Series)	750 W *3 (ECS-17/22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT23 W	HK-KT43 W	HK-KT7 M3 W
M	Delta Electronics, Inc.	ECMA-C *2	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Yaskawa Electric Corporation	Σ-7 *1	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X *1	SGMXJ-02	SGMXJ-04	SGMXJ-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
		SV2 *1	SV2-□020	SV2-□040	SV2-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
		MINAS A6 *1	MSMF02	MSMF04	MSMF08
P	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030
		1 S *1	R88 M-1 M20030	R88 M-1 M40030	R88 M-1 M75030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201 D7-□B2□	GYS401 D7-□B2□	-
		ALPHA7 GYB	GYB201 D7-□B2□	GYB401 D7-□B2□	GYB751 D7-□B2□
F	FANUC CORPORATION *1	βiS-B	A06 B-2115-B1	A06 B-2116-B1	A06 B-2063-B1
P	Bosch Rexroth AG	MSM	MSM031 B	MSM031 C	MSM041 B
M	Rockwell Automation, Inc. *1	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2	TLP-A090-075-DKA□2
M	SIEMENS AG *1	1 FK2 *4	1 FK2203-2 AG0	1 FK2203-4 AG0	1 FK2204-5 AK0

* For mounting motors other than the above and products from other motor manufacturers, please contact us.
*1 "Built-in mounting" is not supported.
*2 The ECMA series (with brake) does not support "built-in mounting".
*3 "Built-in mounting" is not supported for the ECS-17 750 W.
*4 The servo motor is an item subject to regulation under Item 7(8) of Appended Table 1 of the Export Trade Control Order, and it also falls under the specifications. (As of January 2021)

Manufacturer	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	-
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	P	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M

Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-14 Series

Motor Straight, Built-in Mounting Type

● Servo Motor Capacity : 200 W / 400 W

Model No. Notation Method

ECS - 14 - 05 - 040 - E M 2 N N N N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *1

E	Straight Mounting
B	Built-in Mounting

❺ Mounting Motor Specifications

M, Y, P, F	Select the mounting motor specification from the table below.

❻ Motor Capacity

2	200 W
4	400 W

❼ Brake *1

N	None
B	Yes

❽ Origin sensor (1 pc) *2, *3, *4

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ limit sensors (2 pcs) *2, *3, *4

N	None
A	Inside
B	Outside

❿ Grease Nipple *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 239 for motor model No.

*1 "Available" can only be selected when "Built-in mounting" is selected for the motor mounting method.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*3 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*4 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*5 Here, "Body mounting direction: Standard means mounting from the bottom.

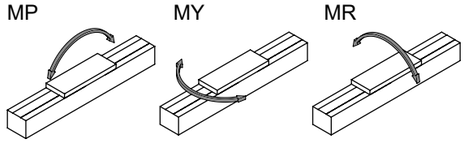
Specifications

Applicable Motor Capacity		200 W / 400 W Servo Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. Payload *1	Horizontal 200 W kg	95	75	44	35
	Horizontal 400 W kg	110	88	48	40
	Vertical 200 W kg	27	18	7	6
	Vertical 400 W kg	33	22	10	8
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	200 W N	683	341	213	174
	400 W N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic Allowable Load	N	6567			
Static Allowable Moment	N·m	MP: 552 MY: 551 MR: 485			
Dynamic allowable moment	N·m	MP: 262.7 MY: 262.7 MR: 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

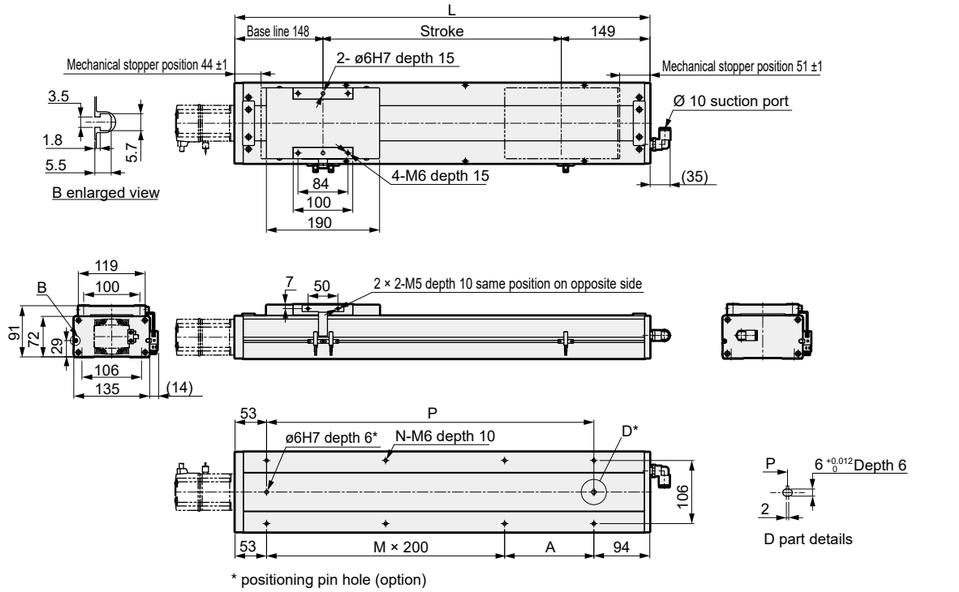
Allowable Overhang Length

* Refer to P. 266 for details.

External Dimension Drawing Motor Straight Mounting

● ECS-14-□□□□□-E

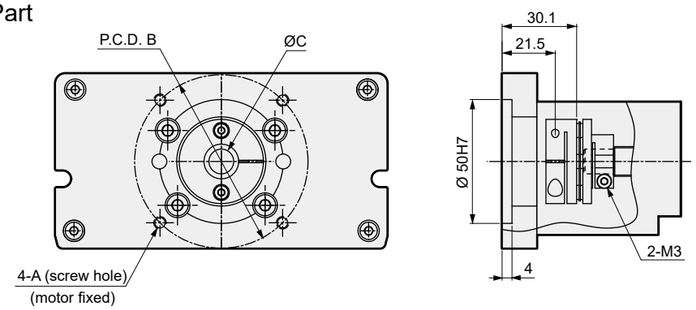
● Refer to P. 272 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	347	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197	1247	1297	1347
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	10.5	11.1	11.7	12.3	12.9	13.5	14.1	14.7	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.5	20.1	20.7	21.3	21.9	22.5

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolt
M	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
Y	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
P	200 W / 400 W	M4	ø70	ø11/ø14	4-M4 x L18
F	200 W / 400 W	M5	ø70	ø9/ø14	4-M5 x L16 / 4-M5 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped Included	Shipped Included	200 W/ 400 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

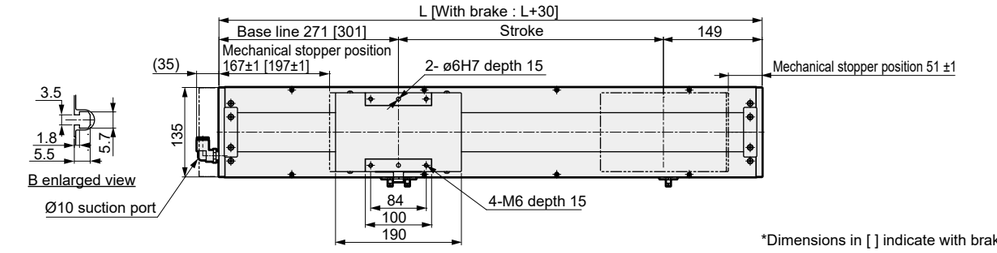
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

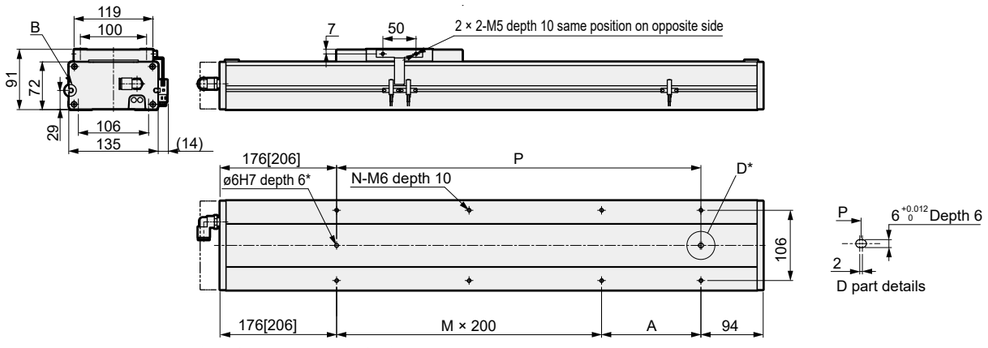
External Dimension Drawing: Motor Built-in Mounting

● ECS-14-□□□□□-B

● Refer to P. 272 for grease nipple dimensions.

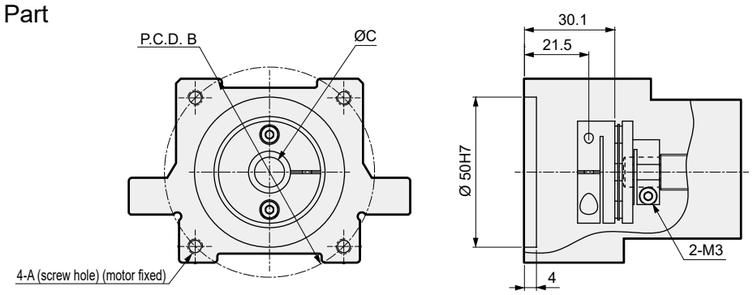


*Dimensions in [ ] indicate with brake.



Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	470	520	570	620	670	720	770	820	870	920	970	1020	1070	1120	1170	1220	1270	1320	1370	1420	1470
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	11.5	12.1	12.7	13.3	13.9	14.5	15.1	15.7	16.3	16.9	17.5	18.1	18.7	19.3	19.9	20.5	21.1	21.7	22.3	22.9	23.5

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolt
M	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
Y	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
P	200 W / 400 W	M4	ø70	ø11/ø14	4-M4 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped Included	Shipped Included	200 W/ 400 W	M5	4
Y				M5	4
P				M4	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

MEMO

Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-14 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 200 W / 400 W

Model No. Notation Method

ECS - 14 - 05 - 050 - R M 2 N N N N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

2	200 W
4	400 W

❼ Brake

N	None

❽ Origin sensor (1 pc)*1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ limit sensors (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	200 W	400 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 239 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Capacity		200 W/400 W Servo Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke mm		50 to 1050			
Screw lead mm		5	10	16	20
Max. Payload *1	Horizontal 200 W kg	95	75	44	35
	Horizontal 400 W kg	110	88	48	40
	Vertical 200 W kg	27	18	7	6
	Vertical 400 W kg	33	22	10	8
Max. Speed mm/s		250	500	800	1000
Rated thrust *1	200 W N	683	341	213	174
	400 W N	1388	694	433	347
Repeatability mm		±0.01			
Lost Motion mm		0.1 or less			
Dynamic Allowable Load N		6567			
Static Allowable Moment N·m		MP : 552 MY : 551 MR : 485			
Dynamic allowable moment N·m		MP : 262.7 MY : 262.7 MR : 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

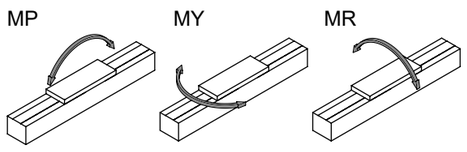
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 266 for details.

Moment Direction

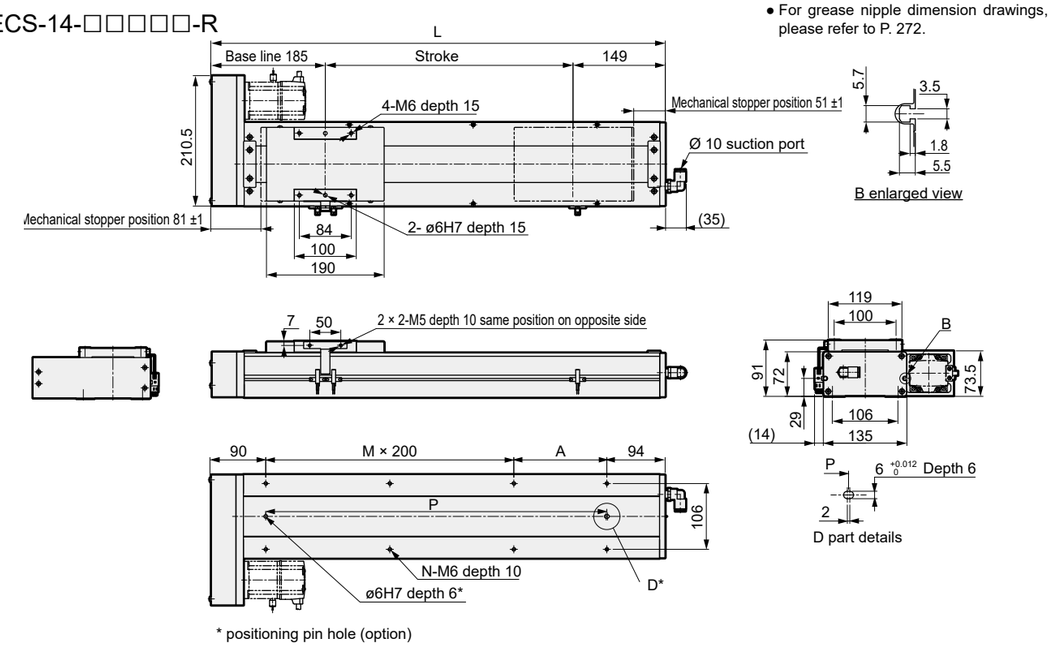
MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● ECS-14-□□□□□-R

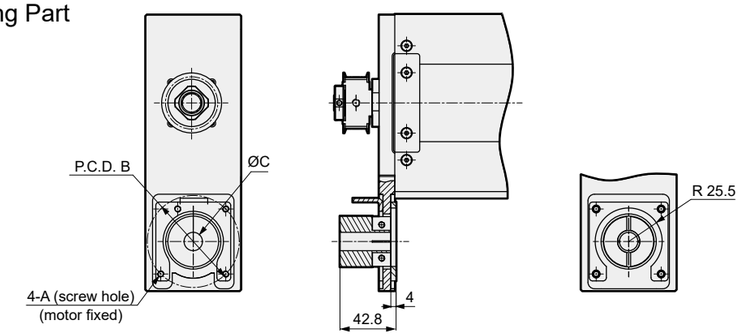
• For grease nipple dimension drawings, please refer to P. 272.



* positioning pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.3

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolt
M	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
Y	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
P	200 W / 400 W	M4	ø70	ø11/ø14	4-M4 x L18
F	200 W / 400 W	M5	ø70	ø9/ø14	4-M5 xL18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	200 W/ 400 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

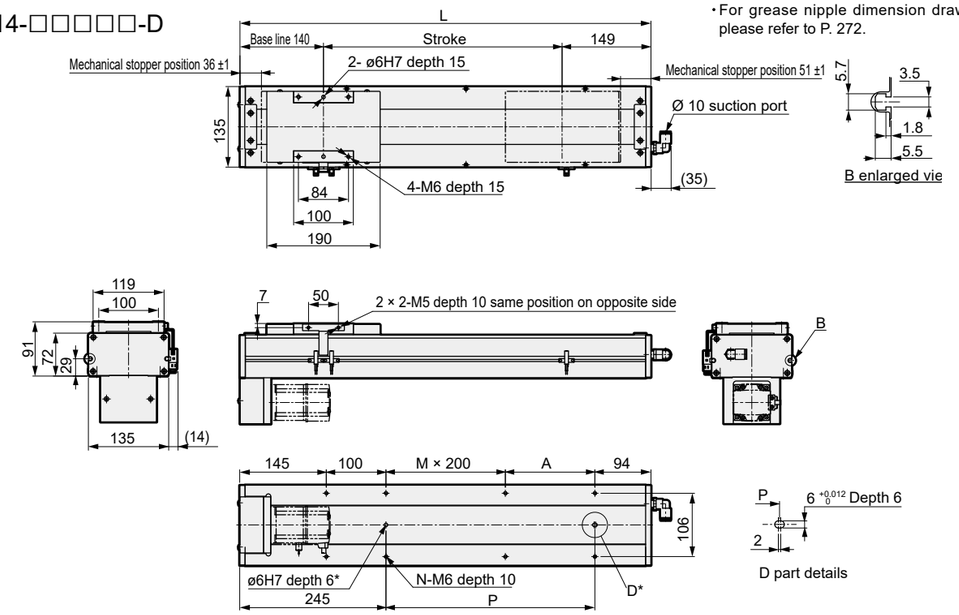
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

●ECS-14-□□□□□-D

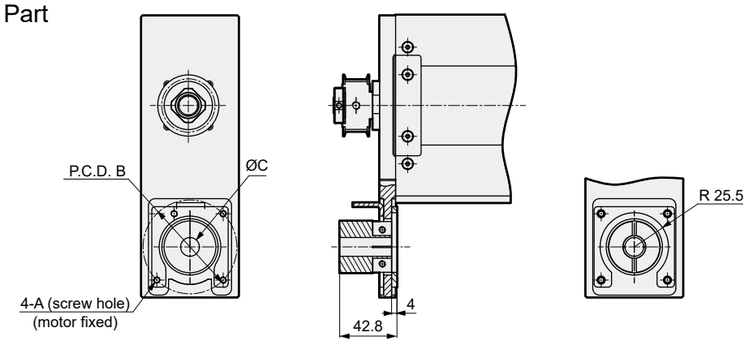
・For grease nipple dimension drawings, please refer to P. 272.



* positioning pin hole (option) The only positioning pin hole on stroke 50 is a round hole.

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189	1239	1289	1339
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Weight (kg)	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.3

Motor Mounting Part



Mounting	Motor Specification	A	B	C	Motor mounting bolt
M	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
Y	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
P	200 W / 400 W	M4	ø70	ø11/ø14	4-M4 x L18
F	200 W / 400 W	M5	ø70	ø9/ø14	4-M5 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	200 W/ 400 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

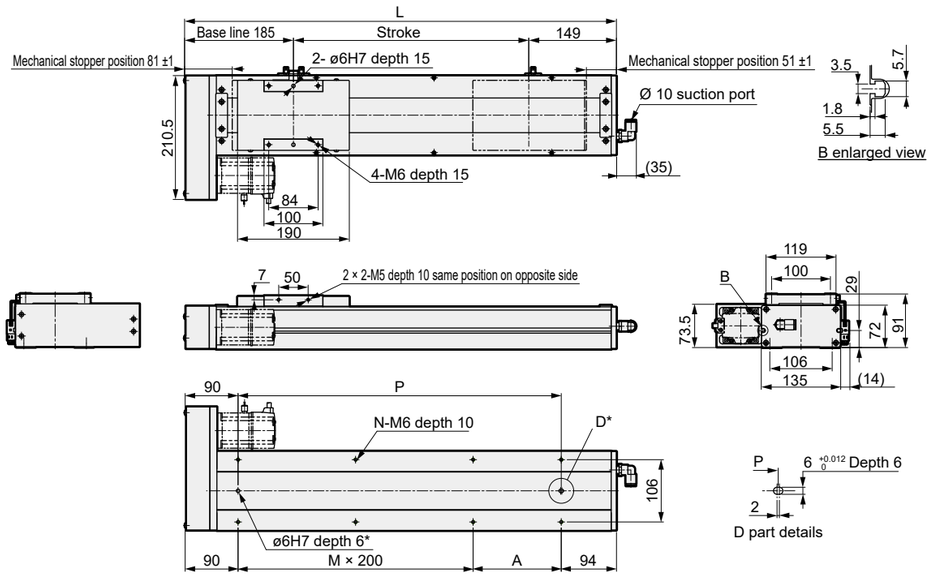
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Left Side Fold-back Mounting

●ECS-14-□□□□□-L

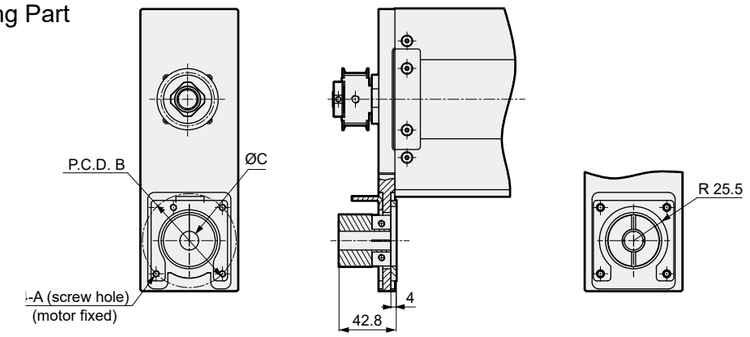
・For grease nipple dimension drawings, please refer to P. 272.



* positioning pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.3

Motor Mounting Part



Mounting	Motor Specification	A	B	C	Motor mounting bolt
M	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
Y	200 W / 400 W	M5	ø70	ø14	4-M5 x L18
P	200 W / 400 W	M4	ø70	ø11/ø14	4-M4 x L18
F	200 W / 400 W	M5	ø70	ø9/ø14	4-M5 x L18

List of Accessories

[Motor Mounting Parts]

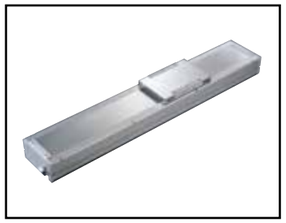
Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	200 W/ 400 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.



Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-17 Series

Motor Straight, Built-in Mounting Type

● Servo Motor Capacity : 400 W / 750 W

Model No. Notation Method

ECS - 17 - 05 - 040 - E M 4 N N N N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

17	Body width 170 mm

❷ Screw Lead

05	5 mm
10	10 mm
20	20 mm
40	40 mm

❸ Stroke

005 to 125	50 mm (every 50 mm) 1250 mm

❹ Motor mounting direction *1, *2

E	Straight Mounting
B	Built-in Mounting

❺ Mounting Motor Specifications

M	Select the mounting motor specification from the table below.
Y	
P	
F	

❻ Motor Capacity *1

4	400 W
8	750 W

❼ Brake *2

N	None
B	Yes

❽ Origin sensor (1 pc) *3, *4, *5

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ limit sensors (2 pcs) *3, *4, *5

N	None
A	Inside
B	Outside

❿ Grease nipple *5, *6

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	400 W	750 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	-
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 239 for motor model No.

*1 For Motor Capacity 750 W type, "Built-in mounting" cannot be selected as the motor mounting method.
*2 "Available" can only be selected when "Built-in mounting" is selected for the motor mounting method.
*3 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*4 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped Included)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*5 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*6 Here, "Body mounting direction: Standard means mounting from the bottom.

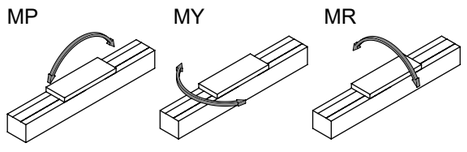
Specifications

Applicable Motor Capacity		400 W/750 W Servo Motor			
Drive Method		Ball screw ø20			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1250			
Screw lead	mm	5	10	20	40
Max. Payload *1	Horizontal 400 W kg	120	110	75	35
	Horizontal 750 W kg	120	120	83	50
	Vertical 400 W kg	40	30	14	7
	Vertical 750 W kg	50	40	25	10
Max. Speed	mm/s	250	500	1000	2000
Rated thrust *1	400 W N	1388	694	347	174
	750 W N	2100	1050	525	260
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic Allowable Load	N	10102			
Static Allowable Moment	N·m	MP: 1034 MY: 1032 MR: 908			
Dynamic allowable moment	N·m	MP: 424.3 MY: 424.3 MR: 520.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 850	950	1050	1150	1250
5	250	225	200	175	150
10	500	450	400	350	300
20	1000	900	800	700	600
40	2000	1800	1600	1400	1200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

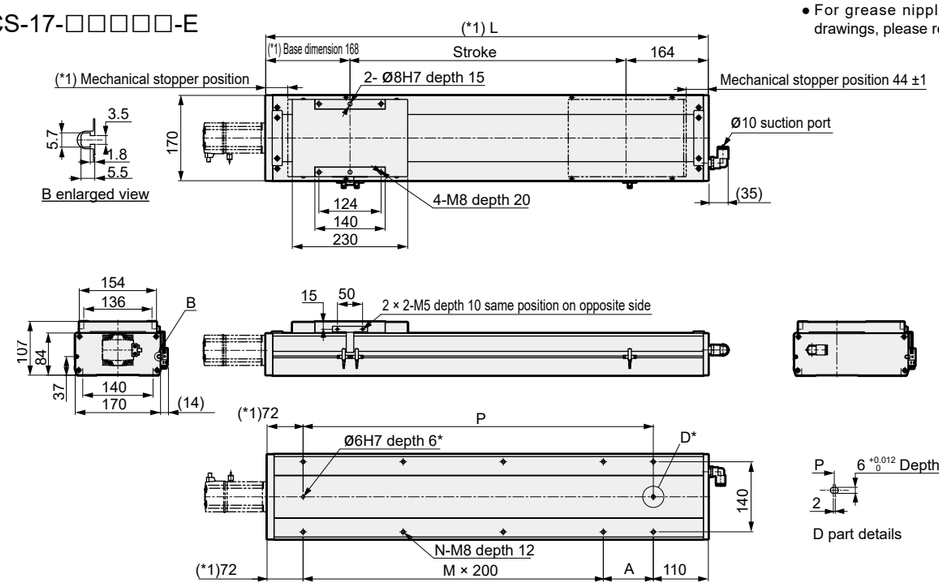
Allowable Overhang Length

* Refer to P. 266 for details.

External Dimension Drawing Motor Straight Mounting

● ECS-17-□□□□□-E

• For grease nipple dimension drawings, please refer to P. 272.



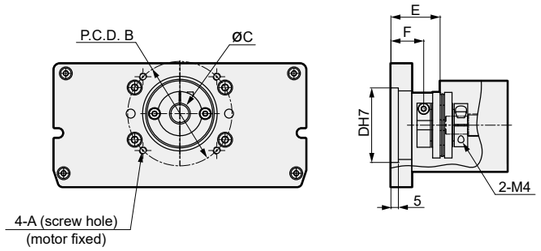
* positioning pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L (*1)	382	432	482	532	582	632	682	732	782	832	882	932	982	1032	1082	1132	1182	1232	1282	1332	1382	1432	1482	1532	1582
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	12.7	13.4	14.2	15.0	15.8	16.6	17.3	18.1	18.9	19.7	20.5	21.2	22.0	22.8	23.6	24.4	25.1	25.9	26.7	27.5	28.3	29.0	29.8	30.6

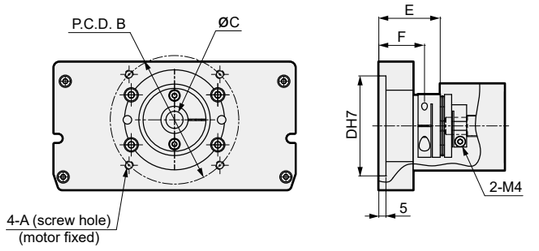
(*1) For Motor Capacity 750 W type, it will be +10 mm.

Motor Mounting Part

● ECS-17-400 W-E



● ECS-17-750 W-E



Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolt
M	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	ø50/ø70	33/43	22/32	4-M5 x L18 / 4-M6 x L20
Y	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	ø50/ø70	33/43	22/32	4-M5 x L18 / 4-M6 x L20
P	400 W / 750 W	M4/M5	ø70/ø90	ø14/ø19	ø50/ø70	33/43	22/32	4-M4 x L18 / 4-M5 x L20
F	400 W / 750 W	M5/M6	ø70/ø100	ø14/ø14	ø50/ø80	33/29	22/18	4-M5 x L18 / 4-M6 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped Included	Shipped Included	400 W/ 750 W	M5/M6	4
Y				M5/M6	4
P				M4/M5	4
F				M5/M6	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

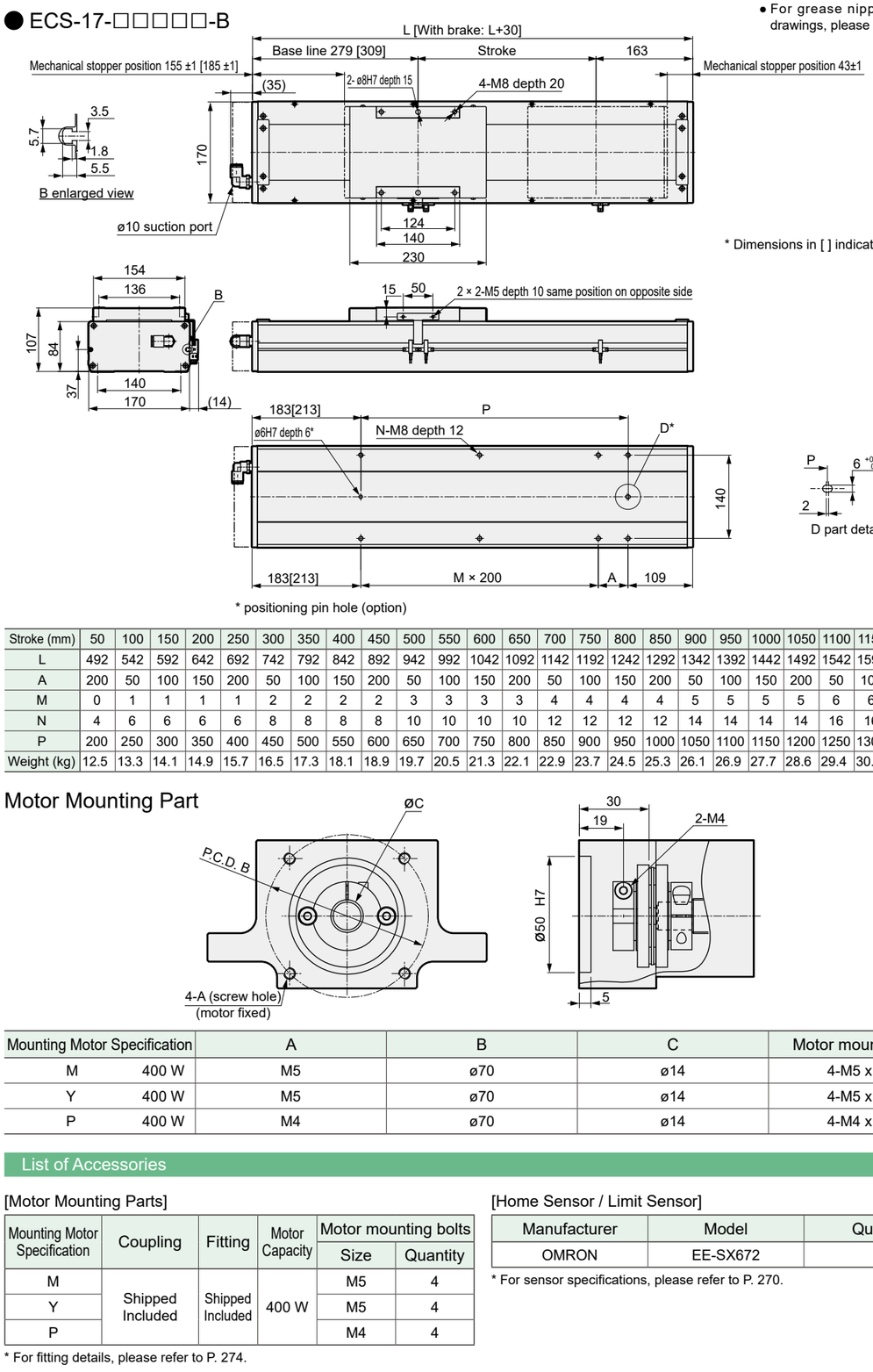
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Built-in Mounting

● ECS-17-□□□□□-B

● For grease nipple dimension drawings, please refer to P. 272.



* Dimensions in [ ] indicate with brake.

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192	1242	1292	1342	1392	1442	1492	1542	1592	1642	1692
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.5	13.3	14.1	14.9	15.7	16.5	17.3	18.1	18.9	19.7	20.5	21.3	22.1	22.9	23.7	24.5	25.3	26.1	26.9	27.7	28.6	29.4	30.2	31.0	31.8

Motor Mounting Part

Mounting Motor Specification		A	B	C	Motor mounting bolt
M	400 W	M5	ø70	ø14	4-M5 x L18
Y	400 W	M5	ø70	ø14	4-M5 x L18
P	400 W	M4	ø70	ø14	4-M4 x L18

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped Included	Shipped Included	400 W	M5	4
Y				M5	4
P				M4	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

MEMO

Axis
ECS
ETV
ECV
EKS
ESM
Servo motor compatible
EBS
EBR
ETS
ETS Multi
Ending

Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-17 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 400 W / 750 W

Model No. Notation Method

ECS - 17 - 05 - 040 - R M 4 N N N N P

❶ Body Size

17	Body width 170 mm

❷ Screw Lead

05	5 mm
10	10 mm
20	20 mm
40	40 mm

❸ Stroke

005 to 125	50 mm (every 50 mm) 1250 mm

❹ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

4	400 W
8	750 W

❼ Brake

N	None

❽ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ limit sensors (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	400 W	750 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	-
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	P	P
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	F	F
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 239 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Assembled shipmen)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Capacity		400 W/750 W Servo Motor			
Drive Method		Ball screw ø20			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1250			
Screw lead	mm	5	10	20	40
Max. Payload *1	Vertical 400 W kg	120	110	75	35
	Vertical 750 W kg	120	120	83	50
	Horizontal 400 W kg	40	30	14	7
	Horizontal 750 W kg	50	40	25	10
Max. Speed	mm/s	250	500	1000	2000
Rated thrust *1	400 W N	1388	694	347	174
	750 W N	2100	1050	525	260
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic Allowable Load	N	10102			
Static Allowable Moment	N·m	MP: 1034 MY: 1032 MR: 908			
Dynamic allowable moment	N·m	MP: 424.3 MY: 424.3 MR: 520.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

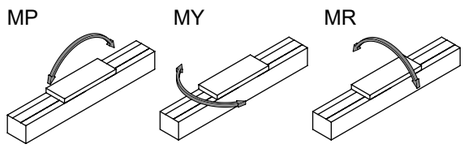
Screw Lead \ Stroke	100 to 850	950	1050	1150	1250
5	250	225	200	175	150
10	500	450	400	350	300
20	1000	900	800	700	600
40	2000	1800	1600	1400	1200

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 266 for details.

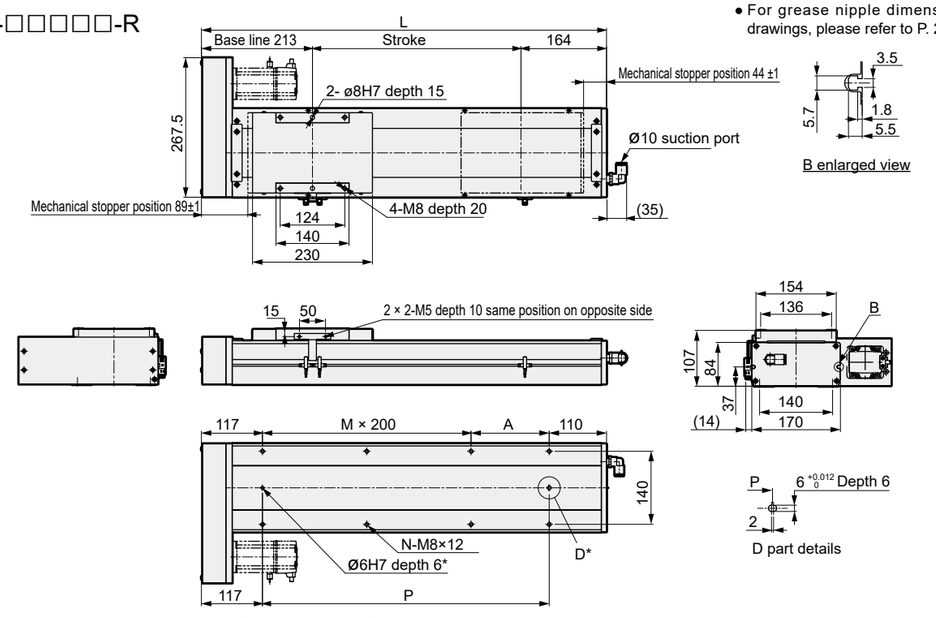
Moment Direction



External Dimension Drawing Motor Right Side Fold-back Mounting

● ECS-17 -□□□□□-R

• For grease nipple dimension drawings, please refer to P. 272.

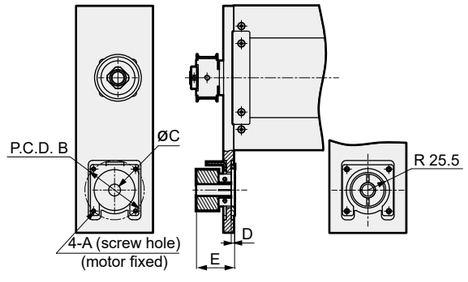


* positioning pin hole (option)

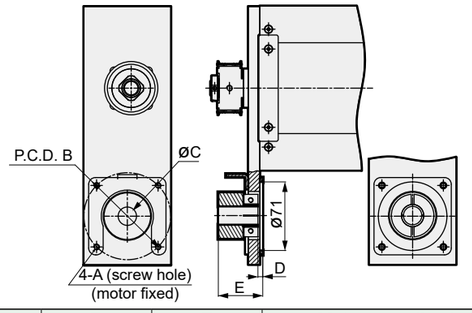
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	427	477	527	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	4	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	16
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.6	13.4	14.2	15.0	15.8	16.6	17.4	18.1	18.9	19.7	20.5	21.3	22.1	22.9	23.6	24.4	25.2	26.0	26.8	27.6	28.4	29.1	29.9	30.7	31.5

Motor Mounting Part

● ECS-17-400 W-R



● ECS-17-750 W-R



Mounting Motor Specification		A	B	C	D	E	Motor mounting bolt
M	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
Y	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
P	400 W / 750 W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 x L18/4-M5 x L24
F	400 W / 750 W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 x L18/4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	400 W/ 750 W	M5/M6	4
Y				M5/M6	4
P				M4/M5	4
F				M5/M6	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

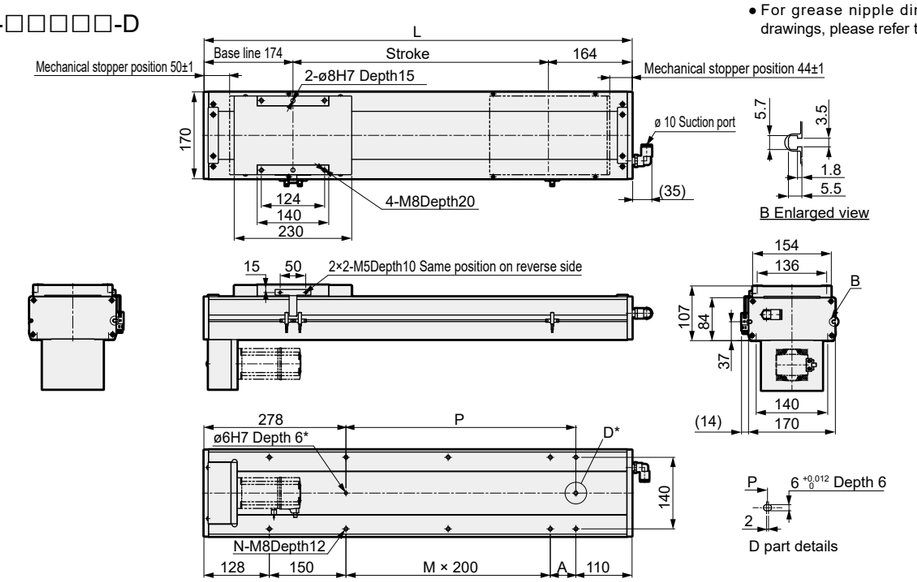
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

●ECS-17-□□□□□-D

• For grease nipple dimension drawings, please refer to P. 272.

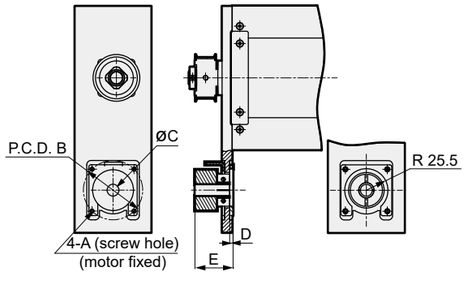


* Positioning pin hole (option)
Only round holes are available for positioning pin holes on stroke 50.

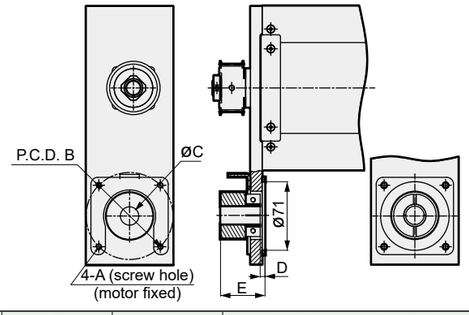
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	388	438	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	12.6	13.4	14.2	15.0	15.8	16.6	17.4	18.1	18.9	19.7	20.5	21.3	22.1	22.9	23.6	24.4	25.2	26.0	26.8	27.6	28.4	29.1	29.9	30.7	31.5

Motor Mounting Part

● ECS-17-400 W-D



● ECS-17-750 W-D



Mounting Motor Specification		A	B	C	D	E	Motor mounting bolt
M	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
Y	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
P	400 W / 750 W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 x L18/4-M5 x L24
F	400 W / 750 W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 x L18/4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	400 W/ 750 W	M5/M6	4
Y				M5/M6	4
P				M4/M5	4
F				M5/M6	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

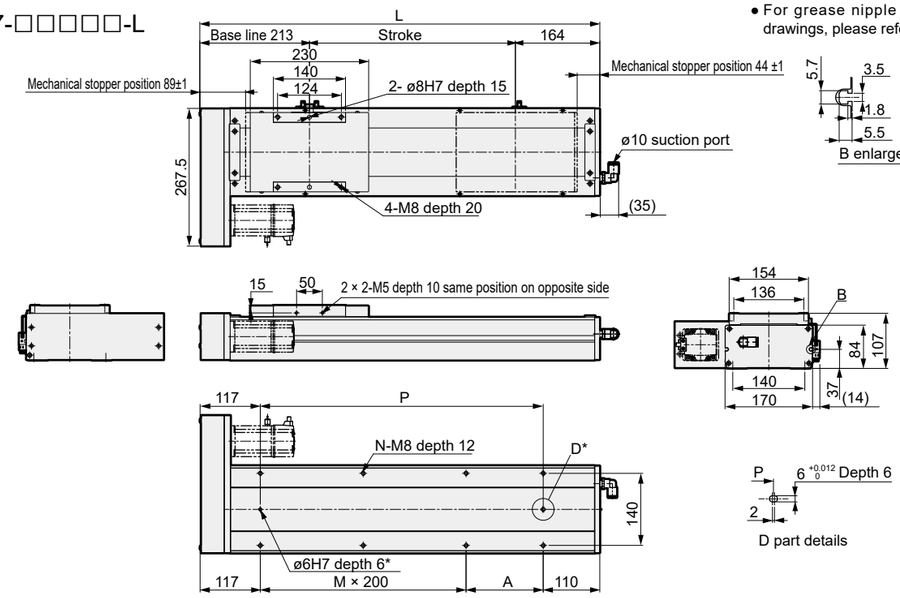
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ECS-17-□□□□□-L

• For grease nipple dimension drawings, please refer to P. 272.

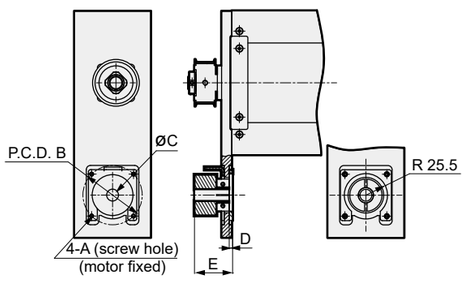


* positioning pin hole (option)

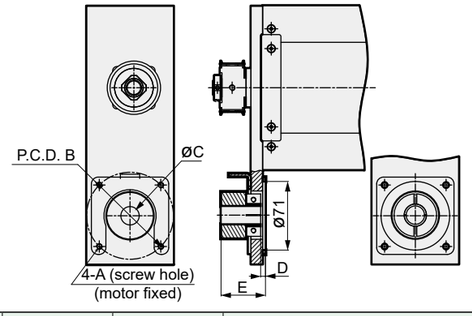
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250
L	427	477	527	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.6	13.4	14.2	15.0	15.8	16.6	17.4	18.1	18.9	19.7	20.5	21.3	22.1	22.9	23.6	24.4	25.2	26.0	26.8	27.6	28.4	29.1	29.9	30.7	31.5

Motor Mounting Part

● ECS-17-400 W-L



● ECS-17-750 W-L



Mounting Motor Specification		A	B	C	D	E	Motor mounting bolt
M	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
Y	400 W / 750 W	M5/M6	ø70/ø90	ø14/ø19	4/5	45/46	4-M5 x L18/4-M6 x L24
P	400 W / 750 W	M4/M5	ø70/ø90	ø14/ø19	4/5	45/46	4-M4 x L18/4-M5 x L24
F	400 W / 750 W	M5/M6	ø70/ø100	ø14/ø14	4/7	45/48	4-M5 x L18/4-M6 x L25

List of Accessories

[Motor Mounting Parts]

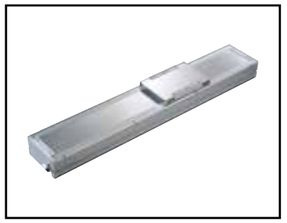
Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	400 W/ 750 W	M5/M6	4
Y				M5/M6	4
P				M4/M5	4
F				M5/M6	4

* For fitting details, please refer to P. 274.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.



Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-22 Series

Motor Straight, Built-in Mounting Type

● Servo Motor Capacity : 750 W

Model No. Notation Method

ECS - 22 - 05 - 050 - E M 8 N N N N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

22	Body width 220 mm

❷ Screw Lead

05	5 mm
10	10 mm
25	25 mm
40	40 mm

❸ Stroke

005 to 150	100 mm (every 50 mm) 1500 mm

❹ Motor mounting direction*1

E	Straight Mounting
B	Built-in Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

8	750 W

❼ Brake *1

N	None
B	Yes

❽ Origin sensor (1 pc) *2, *3, *4

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *2, *3, *4

N	None
A	Inside
B	Outside

❿ Grease Nipple *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	-
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 239 for motor model No.

*1 "Available" can only be selected when "Built-in mounting" is selected for the motor mounting method.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*3 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Assembled shipment)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*4 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*5 Here, "Body mounting direction: Standard means mounting from the bottom.

Specifications

Applicable Motor Capacity		750 W Servo Motor			
Drive Method		Ball Screw ø25			ø20
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1500			
Screw lead	mm	5	10	25	40
Max. payload *1	Horizontal kg	150	150	120	60
	Vertical kg	55	45	20	10
Max. Speed	mm/s	250	500	1250	2000
Rated thrust *1	N	2100	1050	420	260
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic Allowable Load	N	14174			
Static Allowable Moment	N·m	MP: 2052 MY: 2052 MR: 1810			
Dynamic allowable moment	N·m	MP: 1098.5 MY: 1098.5 MR: 999.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 900	1000	1100	1200	1300	1400	1500
5	250	225	200	175	150	125	100
10	500	450	400	350	300	250	200
25	1250	1125	1000	875	750	625	500

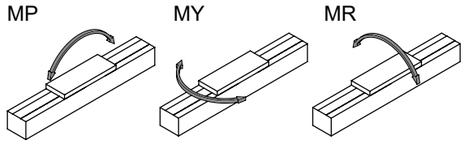
Screw Lead \ Stroke	100 to 850	950	1050	1150	1250	1350	1450	1500
40	2000	1800	1600	1400	1200	1000	800	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 266 for details.

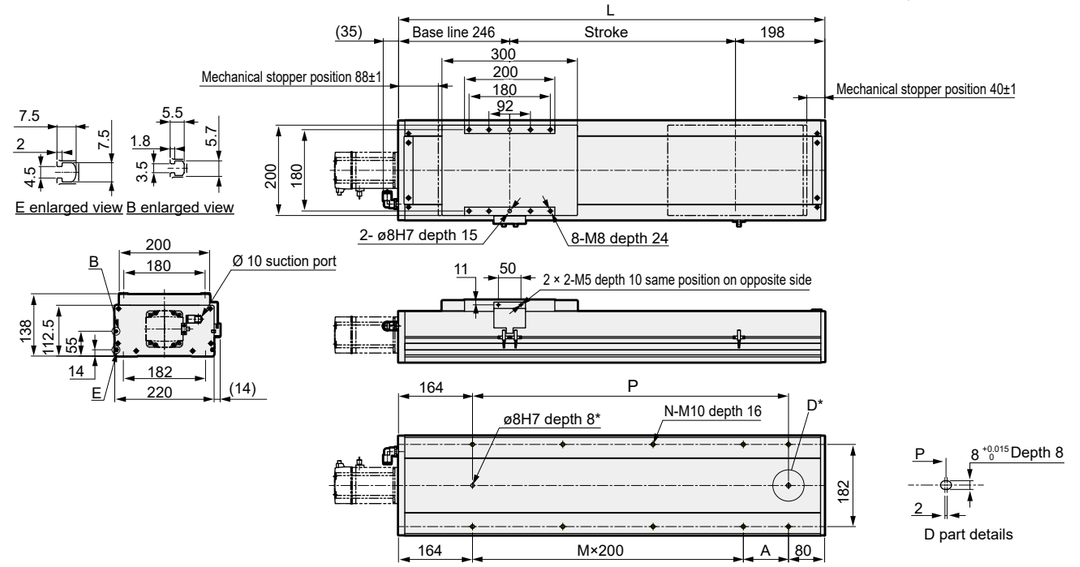
Moment Direction



External Dimension Drawing Motor Straight Mounting

● ECS-22-□□□□□-E

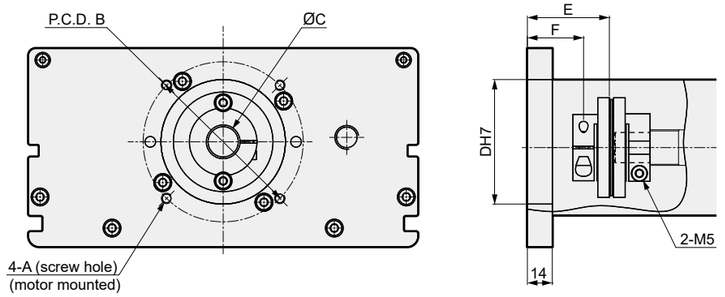
• For grease nipple dimension drawings, please refer to P. 272.



* positioning pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	494	544	594	644	694	744	794	844	894	944	994	1044	1094	1144	1194	1244	1294	1344	1394	1444	1494	1544	1594	1644	1694	1744	1794	1844	1894	1944
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	27.5	28.9	30.5	31.9	33.4	34.9	36.3	37.8	39.2	40.7	42.1	43.6	45.1	46.5	48.0	49.4	50.9	52.4	53.8	55.3	56.7	58.2	59.7	61.1	62.6	64.0	65.5	67.0	68.4	69.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolt
M	750 W	M6	ø90	ø19	ø70	46.1	31.6	4-M6 x L16
Y	750 W	M6	ø90	ø19	ø70	46.1	31.6	4-M6 x L16
P	750 W	M5	ø90	ø19	ø70	46.1	31.6	4-M5 x L16
F	750 W	M6	ø100	ø14	ø80	29.7	15.2	4-M6 x L16

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Assembled shipment	Shipped Included	750 W	M6	4
Y				M6	4
P				M5	4
F				M6	4

* For fittings, refer to P. 274 for details.

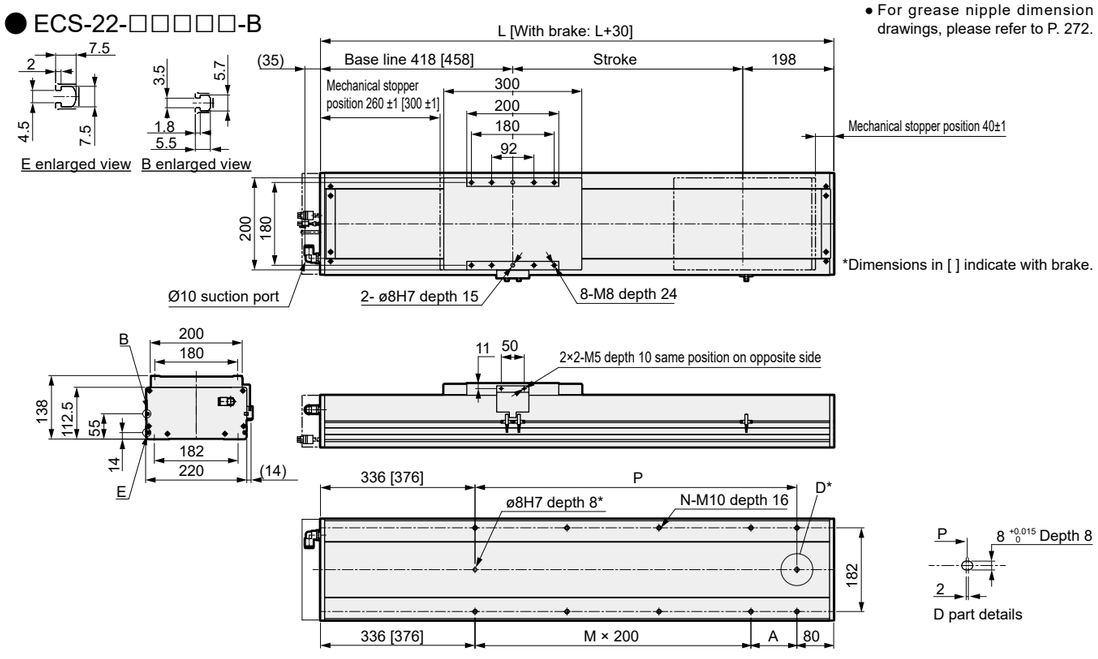
[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Built-in Mounting

● ECS-22-□□□□□-B

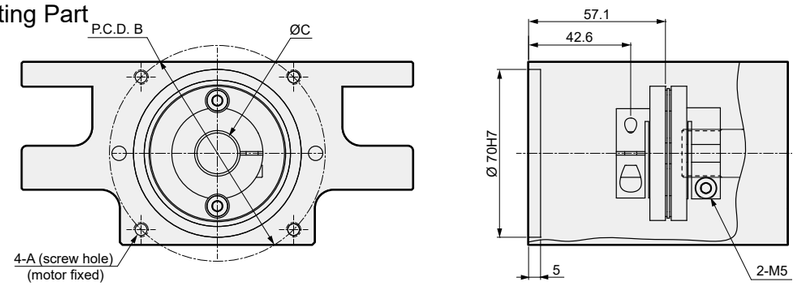


● For grease nipple dimension drawings, please refer to P. 272.

*Dimensions in [ ] indicate with brake.

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	26.0	31.3	32.7	34.2	35.7	37.1	38.6	40.1	41.6	43.0	44.5	46.0	47.4	48.9	50.4	51.8	53.3	54.8	56.3	57.7	59.2	60.7	62.1	63.6	65.1	66.5	68.0	69.5	71.0	72.4

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolt
M	750 W	M6	ø90	ø19	4-M6 x L16
Y	750 W	M6	ø90	ø19	4-M6 x L16
P	750 W	M5	ø90	ø19	4-M5 x L16

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Assembled shipment	Shipped Included	750 W	M6	4
Y				M6	4
P				M5	4

* For fittings, refer to P. 274 for details.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

MEMO

Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-22 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 750 W

Model No. Notation Method

ECS - 22 - 05 - 040 - R M 8 N N N N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

22	Body width 220 mm

❷ Screw Lead

05	5 mm
10	10 mm
25	25 mm
40	40 mm

❸ Stroke

005 to 150	50 mm (every 50 mm) 1500 mm

❹ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

M, Y, P, F	Select the mounting motor specification from the table below.

❻ Motor Capacity

8	750 W

❼ Brake

N	None

❽ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	-
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 239 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Assembled shipment)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Capacity		750 W Servo Motor			
Drive Method		Ball Screw ø25			ø20
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1500			
Screw lead	mm	5	10	25	40
Max. payload *1	Horizontal kg	150	150	120	60
	Vertical kg	55	45	20	10
Max. Speed	mm/s	250	500	1250	2000
Rated thrust *1	N	2100	1050	420	260
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Dynamic Allowable Load	N	14174			
Static Allowable Moment	N·m	MP : 2052 MY : 2052 MR : 1810			
Dynamic allowable moment	N·m	MP : 1098.5 MY : 1098.5 MR : 999.3			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 900	1000	1100	1200	1300	1400	1500
5	250	225	200	175	150	125	100
10	500	450	400	350	300	250	200
25	1250	1125	1000	875	750	625	500

Screw Lead \ Stroke	100 to 850	950	1050	1150	1250	1350	1450	1500
40	2000	1800	1600	1400	1200	1000	800	600

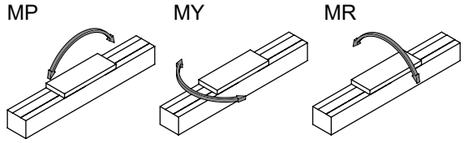
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 266 for details.

Moment Direction

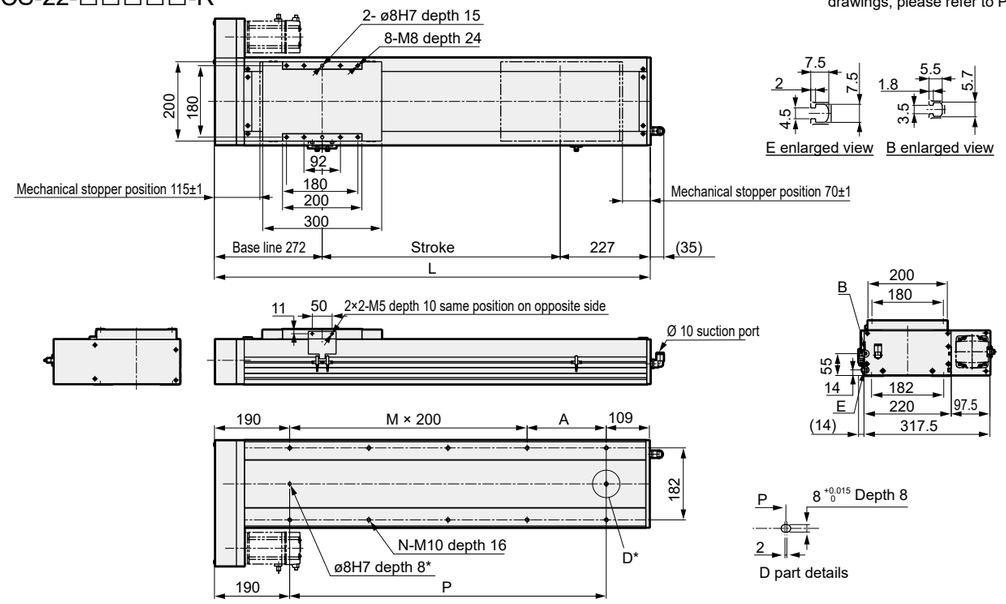
MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● ECS-22-□□□□□-R

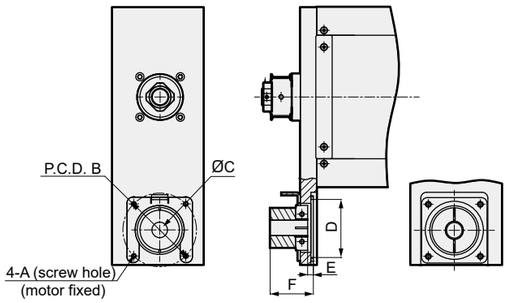
● For grease nipple dimension drawings, please refer to P. 272.



* positioning pin hole (option)

Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199	1249	1299	1349	1399	1449	1499	1549	1599	1649	1699	1749	1799	1849	1899	1949	1999
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	26.0	30.1	31.6	33.0	34.5	35.9	37.4	38.9	40.3	41.8	43.2	44.7	46.2	47.6	49.1 k	50.5	52.0	53.5	54.9	56.4	57.8	59.3	60.8	62.2	63.7	65.1	66.6	68.1	69.5	71.0

Motor Mounting Part



Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolt
M	750 W	M6	ø90	ø19	ø71	7	52.8	4-M6 x L24
Y	750 W	M6	ø90	ø19	ø71	7	52.8	4-M6 x L24
P	750 W	M5	ø90	ø19	ø71	7	52.8	4-M5 x L24
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	750 W	M6	4
Y				M6	4
P				M5	4
F				M6	4

* For fittings, refer to P. 274 for details.

[Home Sensor / Limit Sensor]

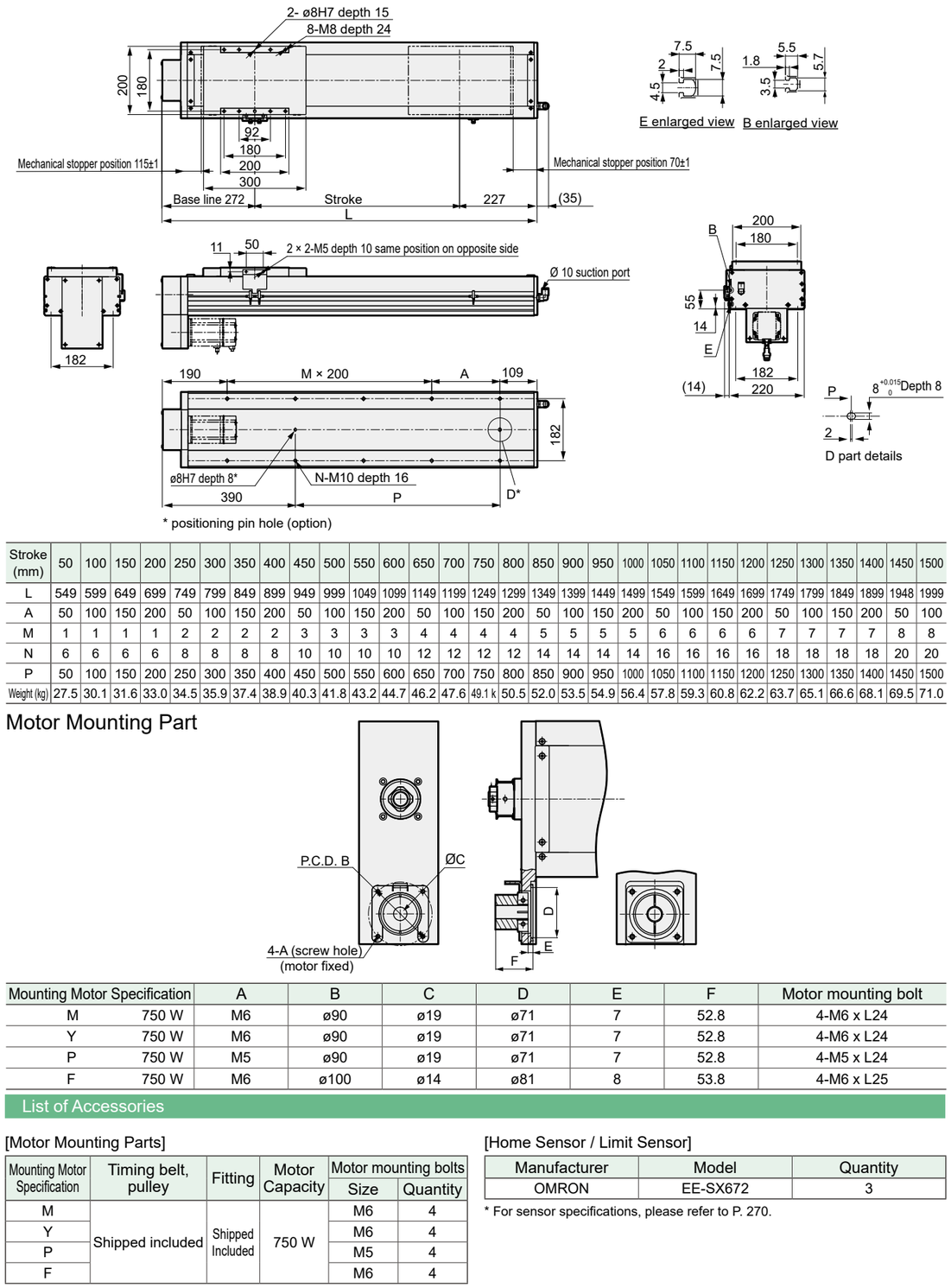
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● ECS-22-□□□□□-D

• For grease nipple dimension drawings, please refer to P. 272.



Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199	1249	1299	1349	1399	1449	1499	1549	1599	1649	1699	1749	1799	1849	1899	1948	1999
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
Weight (kg)	27.5	30.1	31.6	33.0	34.5	35.9	37.4	38.9	40.3	41.8	43.2	44.7	46.2	47.6	49.1 k	50.5	52.0	53.5	54.9	56.4	57.8	59.3	60.8	62.2	63.7	65.1	66.6	68.1	69.5	71.0

Motor Mounting Part

Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolt
M	750 W	M6	ø90	ø19	ø71	7	52.8	4-M6 x L24
Y	750 W	M6	ø90	ø19	ø71	7	52.8	4-M6 x L24
P	750 W	M5	ø90	ø19	ø71	7	52.8	4-M5 x L24
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 x L25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	750 W	M6	4
Y				M6	4
P				M5	4
F				M6	4

* For fittings, refer to P. 274 for details.

[Home Sensor / Limit Sensor]

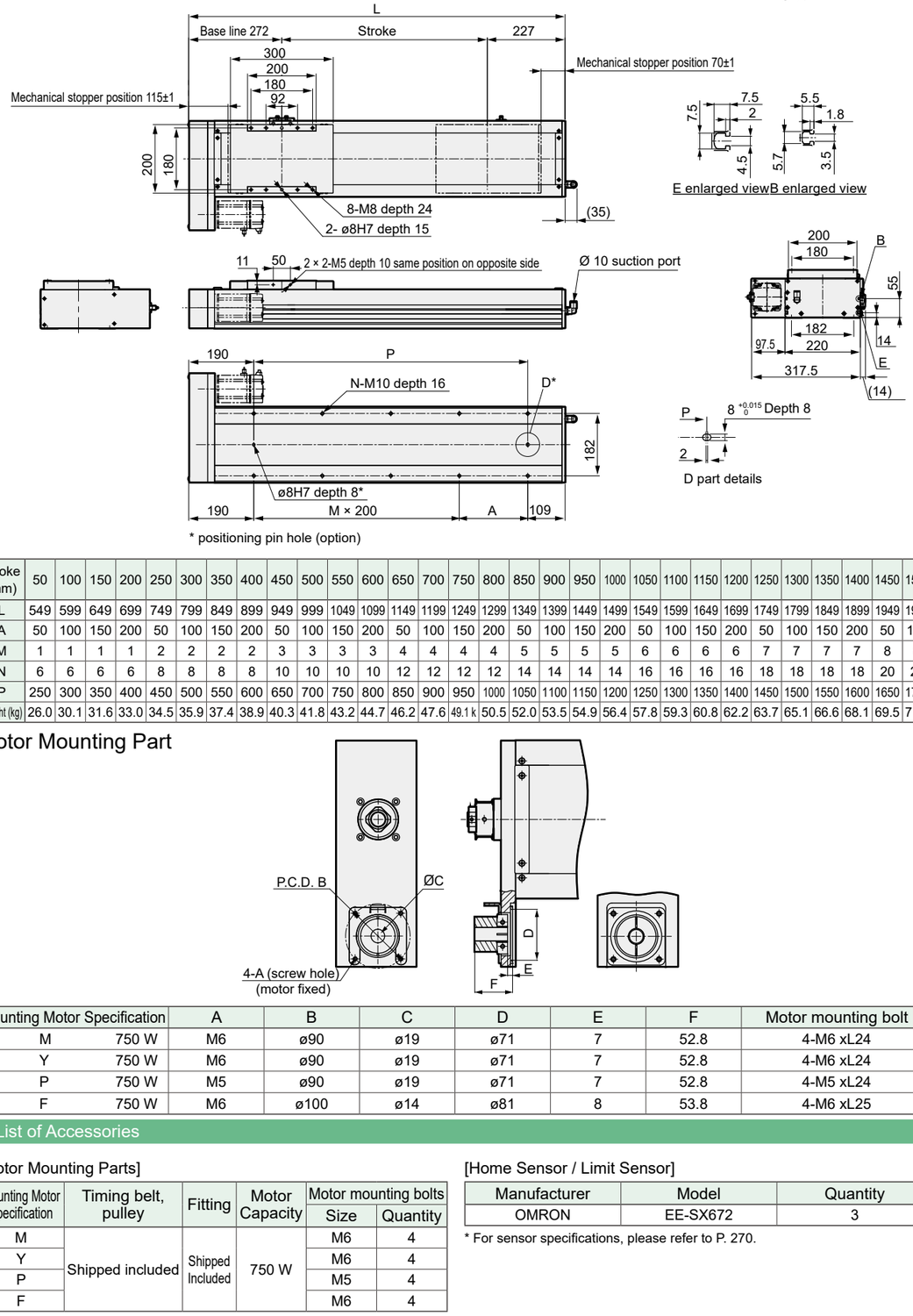
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ECS-22-□□□□□-L

• For grease nipple dimension drawings, please refer to P. 272.



Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500
L	549	599	649	699	749	799	849	899	949	999	1049	1099	1149	1199	1249	1299	1349	1399	1449	1499	1549	1599	1649	1699	1749	1799	1849	1899	1949	1999
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	26.0	30.1	31.6	33.0	34.5	35.9	37.4	38.9	40.3	41.8	43.2	44.7	46.2	47.6	49.1 k	50.5	52.0	53.5	54.9	56.4	57.8	59.3	60.8	62.2	63.7	65.1	66.6	68.1	69.5	71.0

Motor Mounting Part

Mounting Motor Specification		A	B	C	D	E	F	Motor mounting bolt
M	750 W	M6	ø90	ø19	ø71	7	52.8	4-M6 xL24
Y	750 W	M6	ø90	ø19	ø71	7	52.8	4-M6 xL24
P	750 W	M5	ø90	ø19	ø71	7	52.8	4-M5 xL24
F	750 W	M6	ø100	ø14	ø81	8	53.8	4-M6 xL25

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Shipped Included	750 W	M6	4
Y				M6	4
P				M5	4
F				M6	4

* For fittings, refer to P. 274 for details.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 270.

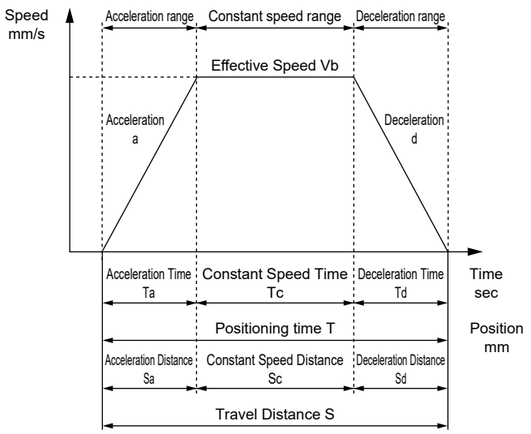
Model Selection

STEP-1 Confirmation of Payload

Payload varies depending on the mounting orientation and screw lead. Select the size and screw lead by referring to the selection table (P. 236) and the specification table for each model.

STEP-2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time. Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s^2	
	Set Deceleration	d	mm/s^2	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	= {2 x a x d x S / (a + d)} $^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb/a [0.2 sec or more]
	Deceleration Time	Td	s	= Vb/d [0.2 sec or more]
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	= (a x Ta^2) / 2
	Deceleration Distance	Sd	mm	= (d x Td^2) / 2
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* Acceleration/deceleration setting by acceleration/deceleration time varies with set speed and stroke.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Please use an acceleration/deceleration time of 0.2 sec or more.
* 1 G ≈ 9.8 m/s^2.

STEP-3 Confirming Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 266 to 268).

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

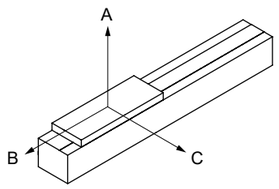
[For confirmation via iPad or smartphone]

* May not display correctly depending on the smartphone's usage environment.

MEMO

Allowable Overhang Length (ECS Series)

[Horizontal Installation]



[Allowable Overhang Length]

● ECS-14 (200 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	2300	250	240
			80	1600	180	170
			95	1150	145	140
		10	30	2000	500	450
			50	1400	280	250
			75	1000	170	160
		16	10	2200	1200	1000
			20	1600	600	500
			44	800	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			35	1000	330	290

● ECS-17 (750 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	3300	410	470
			100	2000	230	260
			120	1700	180	210
		10	60	2300	400	440
			75	1850	310	350
			95	1450	230	270
		20	30	2000	650	620
			50	1150	370	370
			83	650	210	210
		40	10	1650	1150	850
			20	530	350	270
			50	300	190	150

● ECS-14 (400 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	2300	250	240
			80	1600	180	170
			110	1150	120	115
		10	30	2000	500	450
			50	1400	280	250
			88	700	140	125
		16	10	2200	1200	1000
			20	1600	600	500
			48	800	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			40	600	280	230

● ECS-22

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	3600	650	650
			100	2800	350	340
			150	2300	260	230
		10	60	2850	960	810
			100	2000	570	460
			150	1450	340	310
		25	50	2000	850	610
			80	1200	500	360
			120	770	300	220
		40	10	4200	2850	1850
			30	1400	900	600
			60	650	420	270

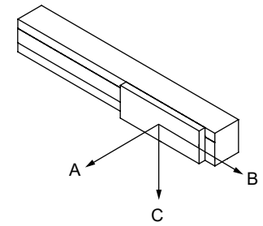
● ECS-17 (400 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	2950	400	475
			100	2000	220	265
			110	1850	200	240
		10	60	1600	350	400
			75	1350	270	320
			90	1050	220	230
		20	30	1850	650	650
			50	1100	380	380
			75	700	240	240
		40	10	1700	1150	900
			20	850	550	430
			35	450	300	240

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

Allowable Overhang Length (ECS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

● ECS-14 (200 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	240	250	1600
			80	170	180	1200
			95	140	145	1050
		10	30	420	460	1500
			50	240	250	1000
			75	150	160	700
		16	10	1050	1200	2650
			20	500	620	1450
			44	230	270	800
		20	10	1000	1200	1900
			20	500	600	1000
			35	270	300	600

● ECS-17 (750 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	500	430	2700
			100	280	240	1650
			120	230	200	1350
		10	60	420	380	2300
			75	330	300	1800
			95	250	230	1400
		20	30	640	650	1700
			50	370	380	1000
			83	210	210	560
		40	10	900	1150	1700
			20	280	350	550
			50	160	195	310

● ECS-14 (400 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	240	250	1600
			80	170	180	1200
			110	115	120	1050
		10	30	420	460	1500
			50	240	250	1000
			88	120	130	700
		16	10	1050	1200	2650
			20	500	620	1450
			48	200	230	800
		20	10	1000	1200	1900
			20	500	600	1000
			40	230	290	600

● ECS-22

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	940	1100	3850
			100	540	620	2450
			150	340	400	2150
		10	60	800	980	3700
			100	460	540	2200
			150	280	350	1450
		25	50	600	790	1950
			80	360	480	1200
			120	220	290	750
		40	10	1950	2900	3500
			30	620	950	1400
			60	290	430	650

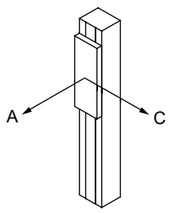
● ECS-17 (400 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	500	420	2450
			100	280	240	1600
			110	250	215	1400
		10	60	420	380	1950
			75	330	300	1500
			90	270	240	1200
		20	30	650	650	1600
			50	375	380	900
			75	245	240	600
		40	10	900	1100	1750
			20	450	550	850
			35	240	300	470

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

Allowable Overhang Length (ECS Series)

[Vertical Installation]



[Allowable Overhang Length]

● ECS-14 (200 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	755	755
			25	605	605
			27	560	560
		10	10	1350	1350
			15	900	900
			18	750	750
		16	2	2400	2400
			4	1700	1700
			7	1300	1300
		20	6	1200	1200

● ECS-14 (400 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	755	755
			25	605	605
			33	455	455
		10	10	1350	1350
			15	900	900
			22	650	650
		16	2	2400	2400
			4	1700	1700
			10	1000	1000
		20	4	1800	1800
			6	1200	1200
			8	900	900

● ECS-17 (400 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	1400	1400
			30	950	950
			40	700	700
		10	15	1700	1700
			25	1000	1000
			30	850	850
		20	5	2000	2000
			10	1800	1800
			14	1400	1400
		40	5	650	650

● ECS-17 (750 W)

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	20	1500	1500
			30	1000	1000
			50	600	600
		10	15	1700	1700
			25	1000	1000
			40	620	620
		20	5	2200	2200
			10	1900	1900
			25	730	730
		40	10	700	700

● ECS-22

Motor Mounting	Acceleration/ Deceleration Time sec	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight · Fold-back	0.2	5	30	2400	2400
			50	1450	1450
			55	1050	1050
		10	20	3,000	3,000
			30	2000	2000
			45	1350	1350
		25	15	2600	2600
			20	1950	1950
		40	5	2600	2600
			10	1950	1950

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

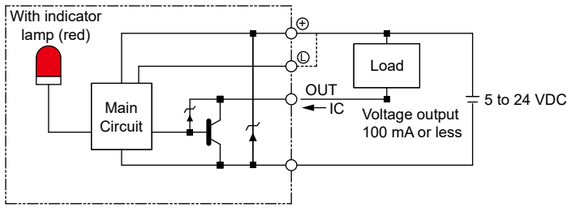
Home Sensor, Limit Sensor

	Manufacturer	Model
Outer mounting sensor	OMRON	EE-SX672
Inner mounting sensor	OMRON	EE-SX674

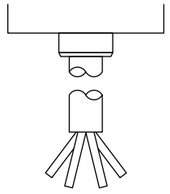
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared emitting diode (940 nm)
Indicator Light	Lights up when light is received (red)
Power Supply Voltage	5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption	35 mA or less (NPN type)
Control output	NPN type : NPN open collector output 5 to 24 VDC 100 mA or less Off-state current 0.5 mA or less, residual voltage 0.8 V or less (at load current 100 mA) Residual voltage: 0.4 V or less (with 40 mA load current)
Ambient illuminance	Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1000 lx or less
Ambient Temperature Range	Operating : -25 to +55°C Storage: -30 to +80°C (however, no freezing or condensation)
Ambient humidity range	Operating : 5 to 85%RH Storage: 5 to 95%RH (however, no freezing or condensation)
Enclosure	IP50 IEC60529 standard
Cord length	2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Sensor Dog Dimension Drawing

Body Size	E/D/B	Motor Mounting Direction			
		R		L	
		Without grease nipple	With grease nipple	Without grease nipple	With grease nipple
ECS-14	Fig. 1	Fig. 1	Fig. 2	Fig. 1	Fig. 2
ECS-17	Fig. 1	Fig. 1	Fig. 2	Fig. 1	Fig. 2
ECS-22	Fig. 3	Fig. 3		Fig. 3	

Fig. 1

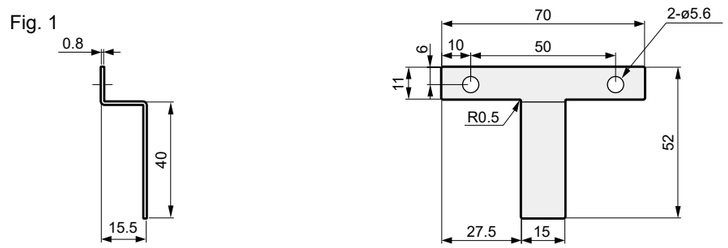


Fig. 2

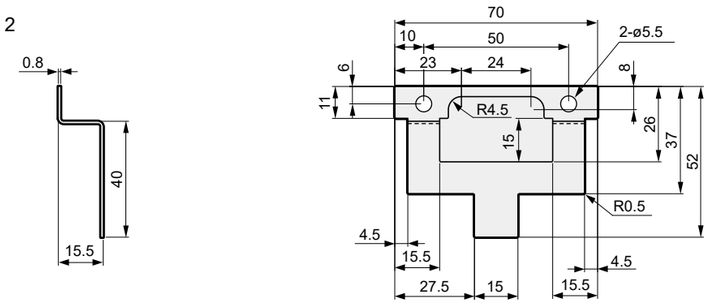
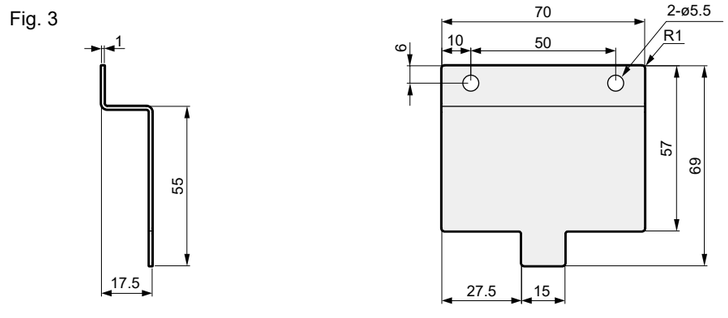


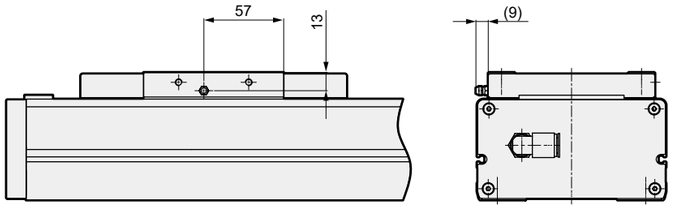
Fig. 3



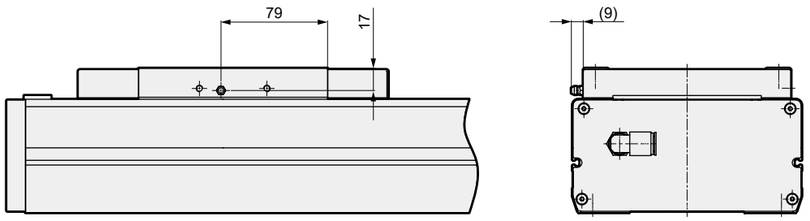
Grease Nipple Dimension Drawing

* Symmetrical with respect to the actuator.

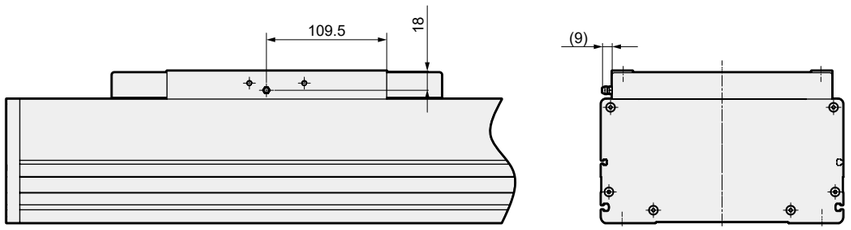
● ECS-14



● ECS-17



● ECS-22



MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

List of Accessories

Basic Type

Motor Mounting Bolts (Common for all motor mounting directions)

Model No.	Mounting Motor Specification	Motor Capacity	Size	Quantity
ECS-14	M	200 W 400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ECS-17	M	400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4
ECS-22	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4

By Motor Mounting Direction

Model No.	Attached Part Name	Attached Quantity
E (External direct mounting) B (Built-in)	Coupling (Shipped Included)	1 pc
R (Right fold-back mounting) L (Left fold-back mounting) D (Bottom fold-back mounting)	Timing Belt	1 pc.
	Pulley	1 pc

When home/limit sensor is selected *1

Sensor mounting direction	Shipment Form	Quantity
Inner sensor	Shipped assembled in fixed position	3 pcs. *2
Outer sensor	Shipped included *3	

*1 The shipping form for the home and limit sensors varies depending on whether they are mounted inside or outside.
*2 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None".
*3 Sensor mounting screws are also attached.

Fitting for Suction Port

Model No.	Fitting Model Number	Shipment Form	Quantity
ECS-14 to ECS-22	GWL10-8	Shipped included	1 pc.

Maintenance Parts

● Maintenance Parts Set

Model Number	Applicable Models	Component Parts ① Timing Belt	② Pulley	③ Sensor Dog	④ Photoelectric Bracket	⑤ Roller unit
ECS-08 JP002-0011	ECS-14	○ (2 pcs.)	○ (3 pcs.)	○ (1 pc.)	-	○ (4 pcs.)
ECS-08 JP002-0012	ECS-17	○ (4 pcs.)	○ (2 pcs.)	○ (1 pc.)	-	○ (4 pcs.)
ECS-08 JP002-0013	ECS-22	○ (3 pcs.)	○ (2 pcs.)	○ (1 pc.)	-	○ (6 pcs.)

* For sensor dogs (P. 271), body sizes 14/17 are Fig. 1, and body size 22 is Fig. 3.
For other sensor dogs, please contact us.

● Maintenance parts (coupling)

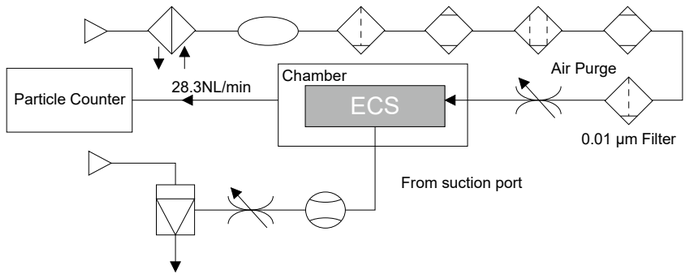
Model Number	Applicable Models	Motor Capacity	Bore Diameter
ETS-22007-000289	ECS-14 (Mounting motor specification : F)	200 W	ø9
ETS-22007-000016	ECS-14 (Mounting motor specification : P)	200 W	ø11
ETS-22007-000017	ECS-14 (Mounting motor specification : M, Y)	200 W / 400 W	ø14
ETS-22007-000022	ECS-17 (Mounting motor specification : P)	400 W	ø14
ETS-22007-000358	ECS-17 (Mounting motor specification : F)	750 W	ø14
ETS-22007-000397	ECS-22 (Mounting motor specification : F)	750 W	ø14
ETS-22007-000024	ECS-17 (Mounting motor specification : M, Y)	750 W	ø19
ETS-22007-000029	ECS-22 (Mounted motor specification : M, Y, P)	750 W	ø19

● Maintenance parts (external mounted sensor)

Basic Price Model Number	Applicable Models	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

Particle Emission Characteristics Reference Data

Test Circuit



Measurement Method

① Set a test sample in the acrylic resin chamber.

② Supply clean air at the same flow rate as the particle counter intake rate (28.3 NL/min).

③ Place the chamber in an ISO class 4 (class 10) clean bench.

④ Activate the test sample and measure changes in particle concentration over time during the specified measurement time.

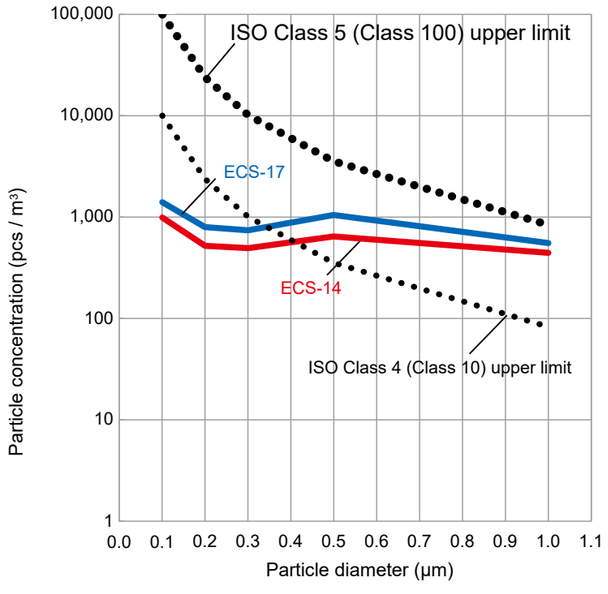
⑤ Operating speed of the test sample

Measurement Conditions

Item		Content
Test Sample	Model No.	For ECS-14-20040, operating speed 800 mm/sec
		For ECS-17-20040, operating speed 800 mm/sec
	Acceleration/Deceleration Time	0.3 sec
	Air Suction Volume	60.0 NL/min for ECS-14-20040
		60.0 NL/min for ECS-17-20040
Chamber	Internal Volume	28.3 NL
Particle Counter	Name	Laser dust monitor
	Minimum measurable particle size	0.1 μm
	Suction Volume	28.3 NL/min
Setting Conditions	Sampling	10 min
	Interval	40 min
	Measurement Time	50 h

Particle Emission Data

Data is measured under the above conditions and is not guaranteed.



To Use This Product Safely

Be sure to read this before use.

For general information on Electric Actuators, please refer to Intro 15.

Individual Precautions: Electric Actuator ECS Series

During Design and Selection

Danger

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

■ Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.

■ When mounting the product, be sure to securely hold and fix it (including the workpiece).
There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
● If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
● Use in such environments can cause damage and malfunction.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature: -10°C to 50°C, Storage humidity: 35% to 80%, Operating Temperature: 0°C to 40°C, Operating humidity: 35% to 80%)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Consider the possibility of power source failure.
● In case of breakdown in the power source, take countermeasures without causing trouble or damage to the operator or equipment.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
● Design so that restarting does not cause harm to people or damage to the equipment.
Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
Consider the possibility of failure of the installed motor.
Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Regarding installing, setting up, adjusting and maintaining the product, read through the instruction manual and operate correctly.

■ Indicate the maintenance conditions in the device's instruction manual.
● The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

■ Do not pressurize from the suction port. Lubricating grease may scatter, potentially reducing product life.

■ The required air suction volume for this product varies by model. Please use the required air suction volume for your model.

ECS-14	ECS-17	ECS-22
60 NL/min or less	80 NL/min or less	100 NL/min or less

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

ECSModel Selection Check Sheet → **CKD** (Contact)

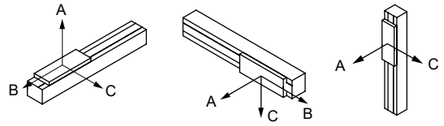
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	ECS-	
Basic Specifications	Max. Stroke :	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s² (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Slider Type	
	Load weight :	kg
	Mounting Orientation : Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other  	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

ETV

Slider Type (Belt Drive)

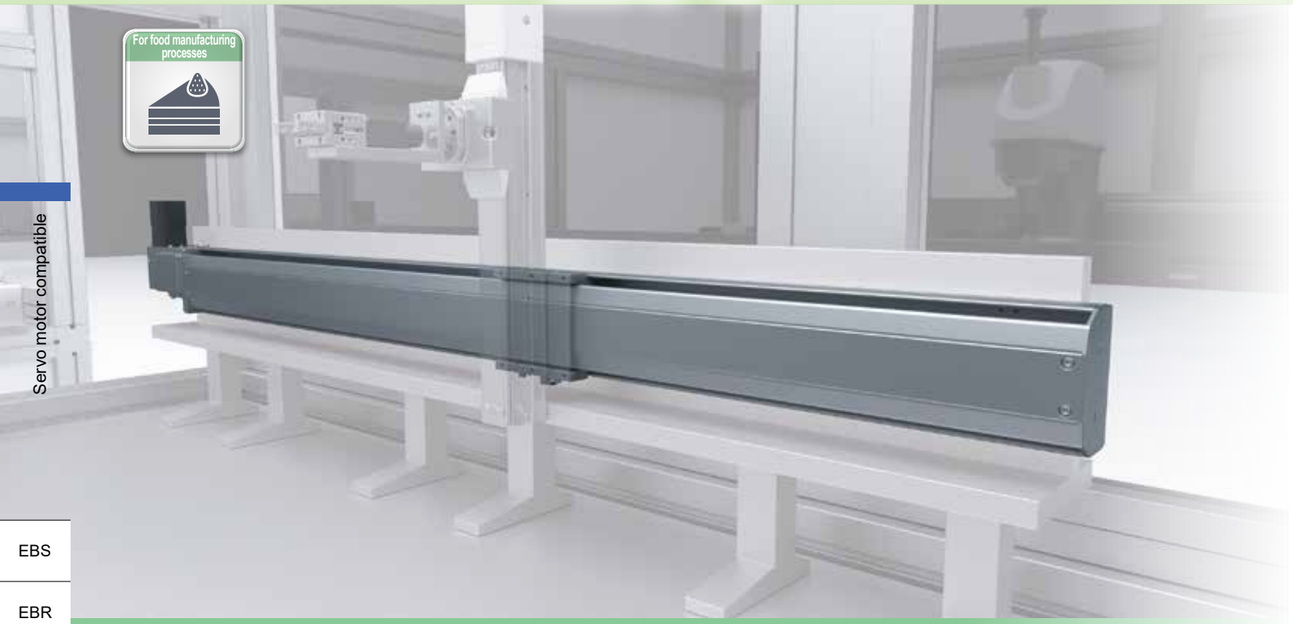
Electric Actuator Servo Motor Compatible Motorless Specification

CONTENTS

Product Introduction	282
System Table	284
● Specifications, Model No. Notation, External Dimension Drawings	
・ETV-14	288
・ETV-17	296
・ETV-22	304
● Model Selection	312
● Technical Data	314
⚠ Precautions for Use	322
Model Selection Checklist	323

Servo motor compatible
EBS
EBR
ETS
ETS
Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

ETV Series



Long Stroke & High-Speed Transport

Line-up	Body Size / Motor capacity	14 / 200 W	17 / 400 W	22 / 750 W	Catalog page
ETV		●	●	●	284
Supports food manufacturing processes ETV-FP1		●	●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

Servo Motor

Mitsubishi Electric Corporation | Delta Electronics Co., Ltd. | Sanyo Denki Co., Ltd. | Mitsubishi Electric Corporation | Keyence Corporation | Panasonic Corporation | OMRON Corporation | Fuji Electric Corporation | FANUC CORPORATION | Bosch Rexroth AG | Rockwell Automation, Inc. | SIEMENS AG

Long Stroke & High-Speed Transport with Belt Drive

High versatility | Productivity improved

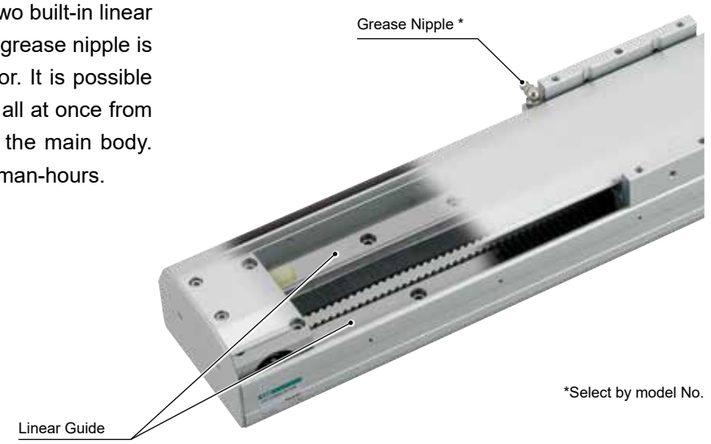
Belt drive supports strokes up to 3500 mm. Max. speed is up to 2000 mm/s.

Max.	Max. Speed
3500 mm Supported	2000 mm/s Supported

Achieves high rigidity

High rigidity | Reduced man-hours | Easy maintenance

It has a high-rigidity structure with two built-in linear guides to firmly support the load. A grease nipple is equipped on the side of the actuator. It is possible to grease the ball screw and guide all at once from the outside without disassembling the main body. Significantly reduces maintenance man-hours.

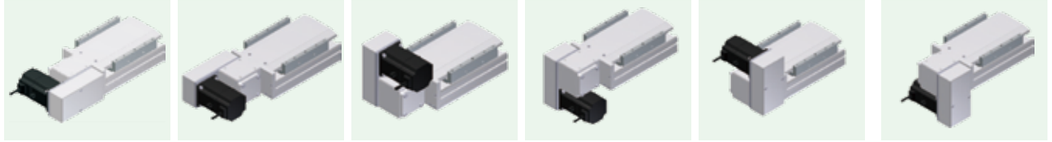


*Select by model No.

Motor fold-back variations

High versatility | Space saving | Reduced design hours

We have prepared a total of 6 motor fold-back variations that can be selected according to the equipment.



Right Side Return Mount | Left Side Fold-back Mounting | Top Left Fold-back Mounting | Bottom Left Fold-back Mounting | Top Right Fold-back Mounting | Bottom Right Fold-back Mounting

System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Lead Equivalent (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and Max. Speed (mm/s) *2	Page
Belt type		ETV-14	200	135	40	25	-	100 mm: 0.90 sec; 300: 0.90 sec; 600: 0.90 sec; 800: 0.90 sec; *3 1000: 0.90 sec; 1200: 0.90 sec; *3 1500: 1.15 sec; *3 2000: 1.40 sec; *3 2500: 1.65 sec; *3 3,000: 1.93 sec; Max. st: 3050 mm; 2000	288
		ETV-17	400	170	40	45	-	100 mm: 0.90 sec; 300: 0.90 sec; 600: 0.90 sec; 800: 0.90 sec; *3 1000: 0.90 sec; 1200: 0.90 sec; *3 1500: 1.15 sec; *3 2000: 1.40 sec; *3 2500: 1.65 sec; *3 3,000: 1.90 sec; 3500: 2.15 sec; Max. st: 3500 mm; 2000	296
		ETV-22	750	220	40	85	-	100 mm: 0.90 sec; 300: 0.90 sec; 600: 0.90 sec; 800: 0.90 sec; *3 1000: 0.90 sec; 1200: 0.90 sec; *3 1500: 1.15 sec; *3 2000: 1.40 sec; *3 2500: 1.65 sec; *3 3,000: 1.90 sec; 3500: 2.15 sec; Max. st: 3500 mm; 2000	304

*1 For wall-mounted installation, the payload is the same as for horizontal installation.

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

*3 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration.
Please note that this is not the value at max. payload.

Model Number Configuration

Model No. Notation Method

ETV - 14 - 40 010 - R M 2 X C B D P

❶ Body Size

14	Body width 135 mm
17	Body width 170 mm
22	Body width 220 mm

❷ Lead Equivalent

40	40 mm

❸ Stroke

010	100 mm
to	(every 50 mm)
350	3500 mm

❹ Motor Mounting Direction

R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺ Mounting Motor Specifications

M	Refer to the list on the page at right
Y	
P	
F	

❻ Motor Capacity

2	200 W
4	400 W
8	750 W

❼ Drive Belt Type

X	Standard (Rubber)
L	Low Particle Emission (Urethane)

❽ Origin sensor *1

N	None
C	Outside Motor Side (Shipped included)
D	Outside Motor Opposite Side (Shipped included)

❾ Limit sensor *1

N	None
B	Outside (Shipped included)

❿ Grease nipple

N	None (Body mounting direction: Standard)
D	None (Body mounting direction: Bottom side)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❷ Screw Lead	❸ Stroke
14	40	010 to 305 (100 mm to 3500 mm)
17		010 to 350 (100 mm to 3500 mm)
22		010 to 350 (100 mm to 3500 mm)

*1 Sensor dogs will be assembled and shipped regardless of the presence of sensors.

Manufacturer	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	-
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	P	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M

Model Number Display Example

ETV-14-40010-RM2 XCBDP

❶ Body Size : 14 Series
❷ Lead Equivalent : 40 mm
❸ Stroke : 100 mm
❹ Motor Mounting Direction : Right Side Return Mount
❺ Mounting motor specification : M (Refer to the table on the page at right)
❻ Motor Capacity : 200 W
❼ Drive Belt Type : Standard (rubber)
❽ Origin sensor : Outside motor side
❾ Limit sensor : Outside
❿ Grease nipple : None (Main body mounting direction: Bottom side)
⓫ Locating pin hole : Yes

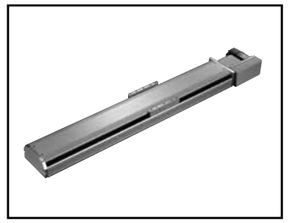
* This product is provided as an actuator (and motor mounting parts) only; the motor is not included. The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	200 W (ETV-14 Series)	400 W (ETV-17 Series)	750 W (ETV-22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT23 W	HK-KT43 W	HK-KT7 M3 W
M	Delta Electronics, Inc.	ECMA-C	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Mitsubishi Electric Corporation	Σ-7	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X	SGMXJ-02	SGMXJ-04	SGMXJ-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
		SV2	SV2-□020	SV2-□040	SV2-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
		MINAS A6	MSMF02	MSMF04	MSMF08
P	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030
		1 S	R88 M-1 M20030	R88 M-1 M40030	R88 M-1 M75030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201 D7-□B2□	GYS401 D7-□B2□	-
		ALPHA7 GYB	GYB201 D7-□B2□	GYB401 D7-□B2□	GYB751 D7-□B2□
F	FANUC CORPORATION	βiS-B	A06 B-2115-B1	A06 B-2116-B1	A06 B-2063-B1
P	Bosch Rexroth AG	MSM	MSM031 B	MSM031 C	MSM041 B
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2	TLP-A090-075-DKA□2
M	SIEMENS AG	1 FK2 *1	1 FK2203-2 AG0	1 FK2203-4 AG0	1 FK2204-5 AK0

* For mounting motors other than the above and products from other motor manufacturers, please contact us.

*1 The servo motor is a regulated item under Paragraph 7(8) of Appended Table 1 of the Export Trade Control Order, and its specifications also meet the applicable criteria. (As of January 2021)



Electric Actuator Belt Type

ETV-14 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 200 W

Model No. Notation Method

ETV - 14 - 40 - 010 - R M 2 X N N N N

❶ Body Size

14	Body width 135 mm

❷ Lead Equivalent

40	40 mm

❸ Stroke

010 to 305	100 mm (every 50 mm) 3050 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺ Mounting Motor Specifications

M	Select the mounting motor specification from the table below.
Y	
P	
F	

❻ Motor Capacity

2	200 W

❼ Drive Belt Type

X	Standard (rubber)
L	Low Particle Emission (Urethane)

❽ Origin sensor (1 pc) *1, *2, *3

N	None
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 287 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
*5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.

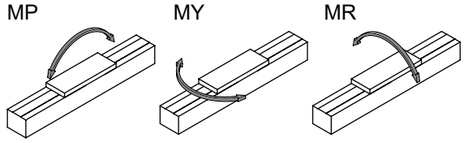
Specifications

Applicable Motor Capacity		200 W Servo Motor
Drive Method		Belt width 22 mm
Stroke	mm	100 to 3050
Lead equivalent	mm	40
Max. payload *1	Horizontal kg	25
	Vertical kg	-
Max. Speed	mm/s	2000
Rated thrust *1	N	100
Repeatability	mm	±0.04
Lost motion		0.1 mm or less
Dynamic allowable load	N	6566.9
Static Allowable Moment	N·m	MP : 552 MY : 551 MR : 485
Dynamic allowable moment	N·m	MP : 262.7 MY : 262.7 MR : 261.0
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)
Atmosphere		No corrosive gas, explosive gas, or dust

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Lead Equivalent \ Stroke	100 to 3050
40	2000

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

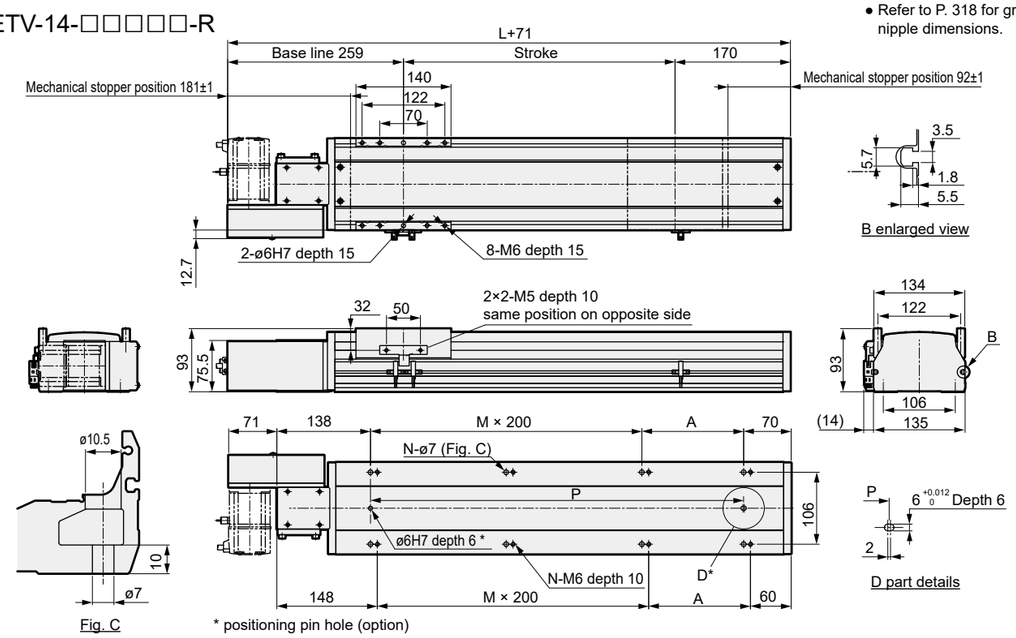
Allowable Overhang Length

* Refer to P. 314 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● ETV-14-□□□□□-R

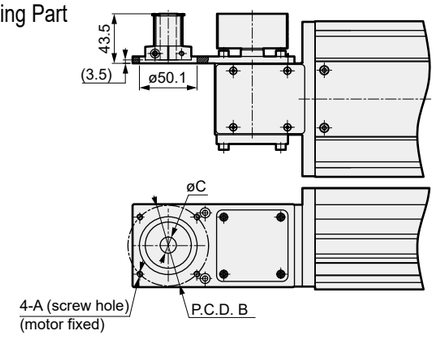
● Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	24.5	25.1	25.7	26.3	26.9	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

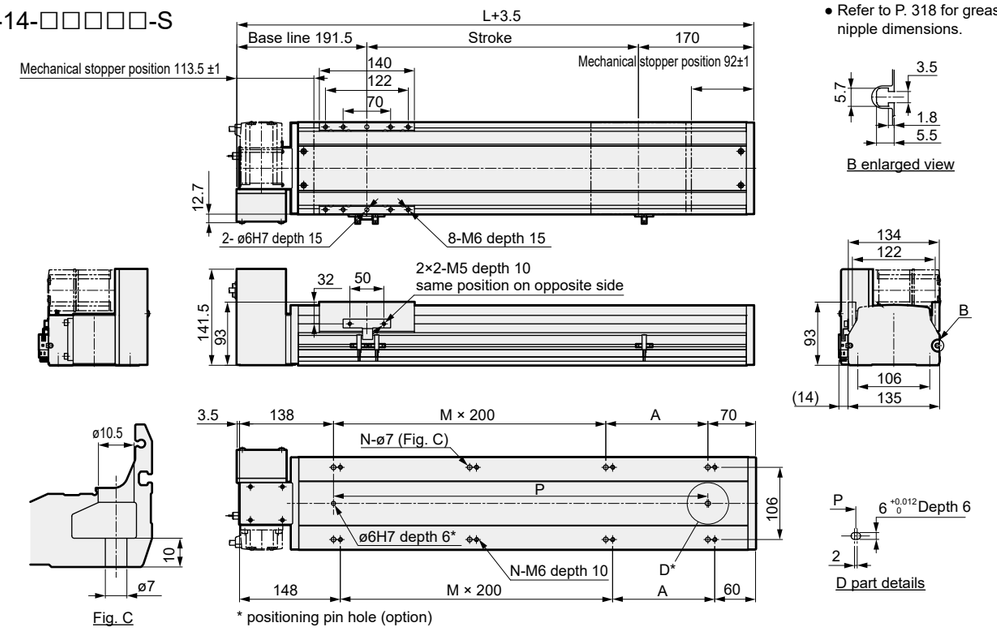
[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

External Dimension Drawing: Top Right Fold-back Motor Mounting

● ETV-14-□□□□□-S



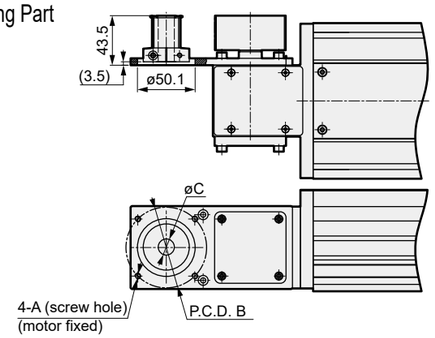
* positioning pin hole (option)

● Refer to P. 318 for grease nipple dimensions.

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	24.5	25.1	25.7	26.3	26.9	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

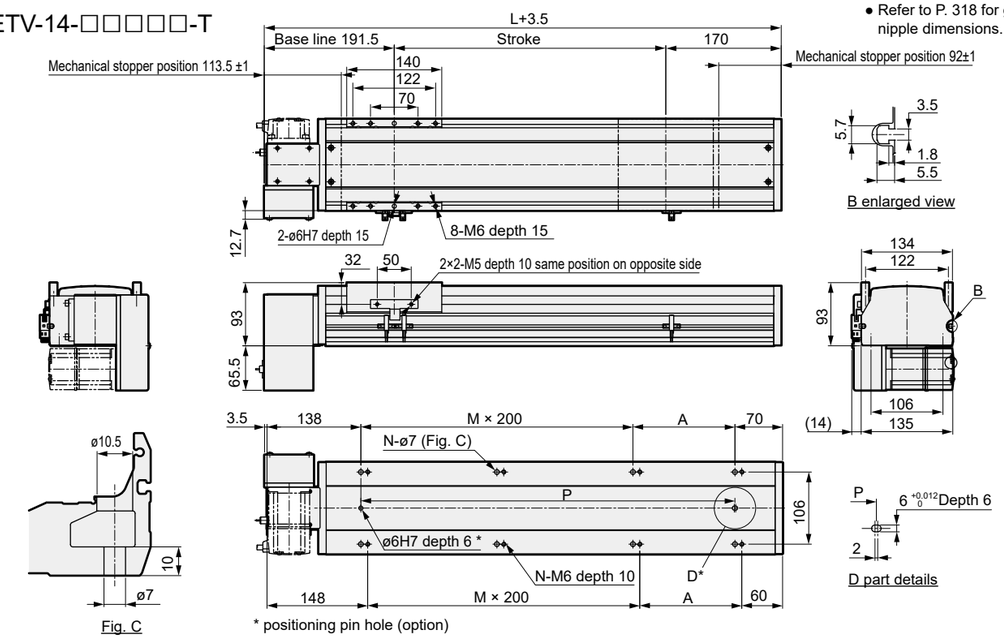
[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

● ETV-14-□□□□□-T



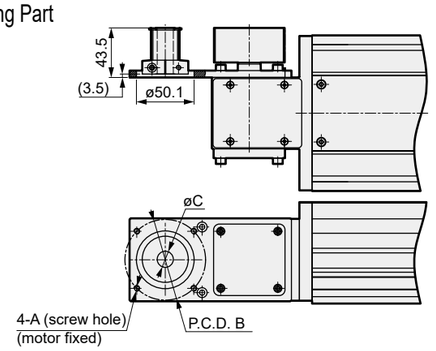
* positioning pin hole (option)

● Refer to P. 318 for grease nipple dimensions.

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	24.5	25.1	25.7	26.3	26.9	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

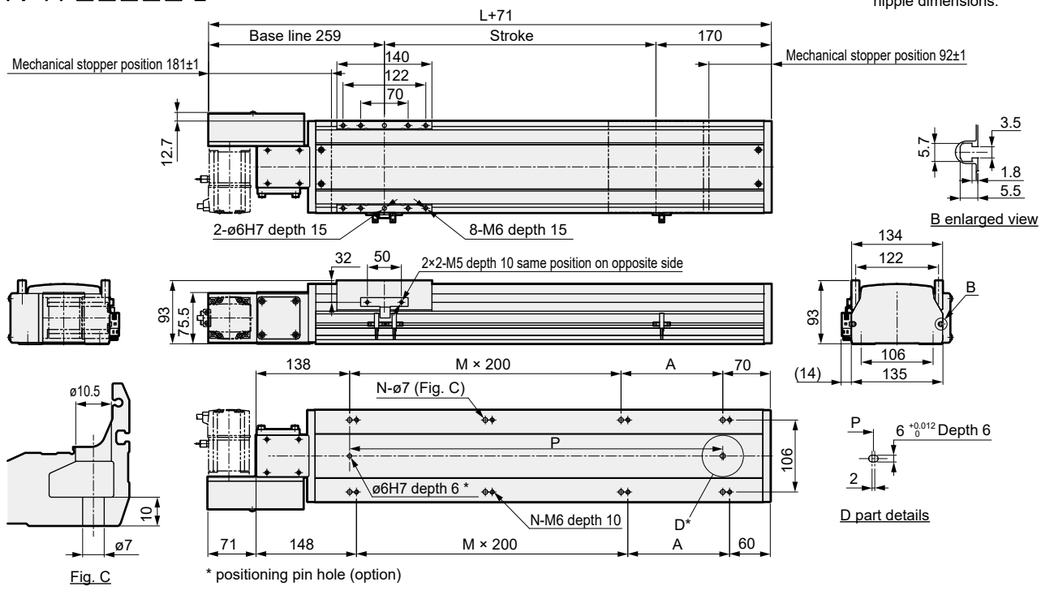
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETV-14-□□□□□-L

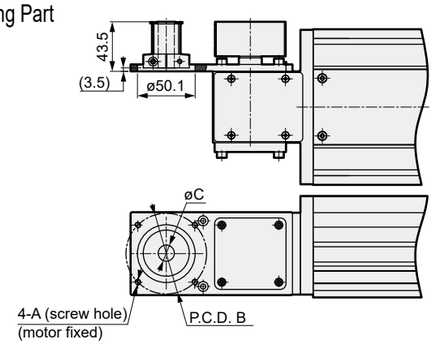
● Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	50	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	24.5	25.1	25.7	26.3	26.9	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

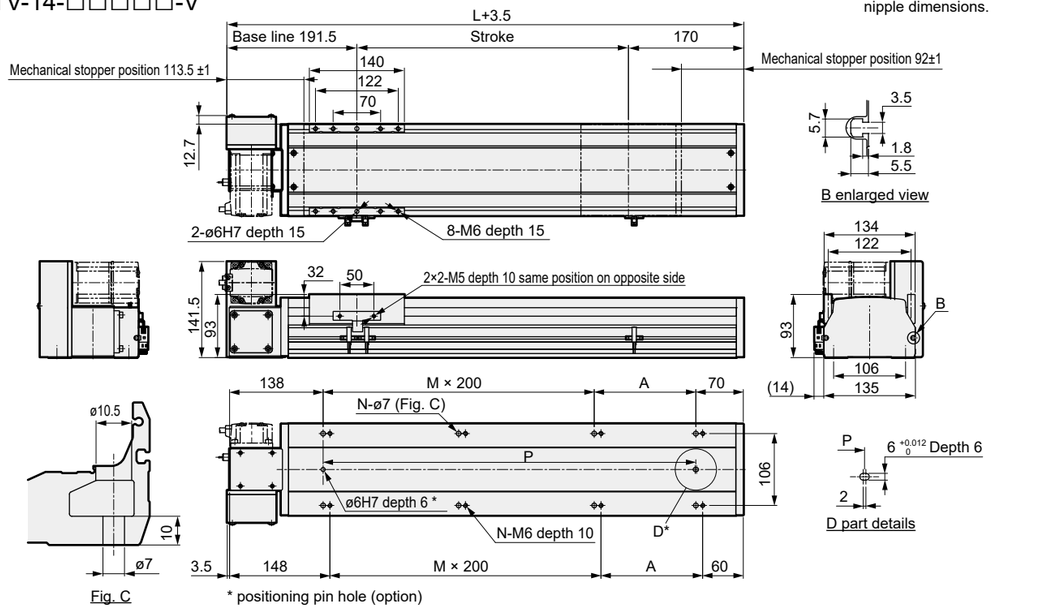
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ETV-14-□□□□□-V

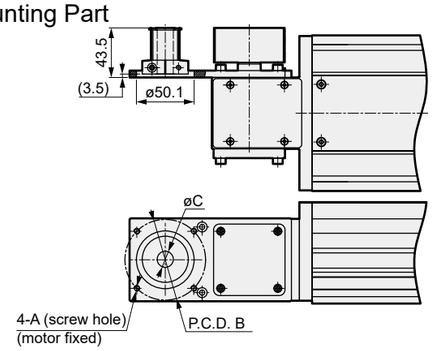
● Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	24.5	25.1	25.7	26.3	26.9	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

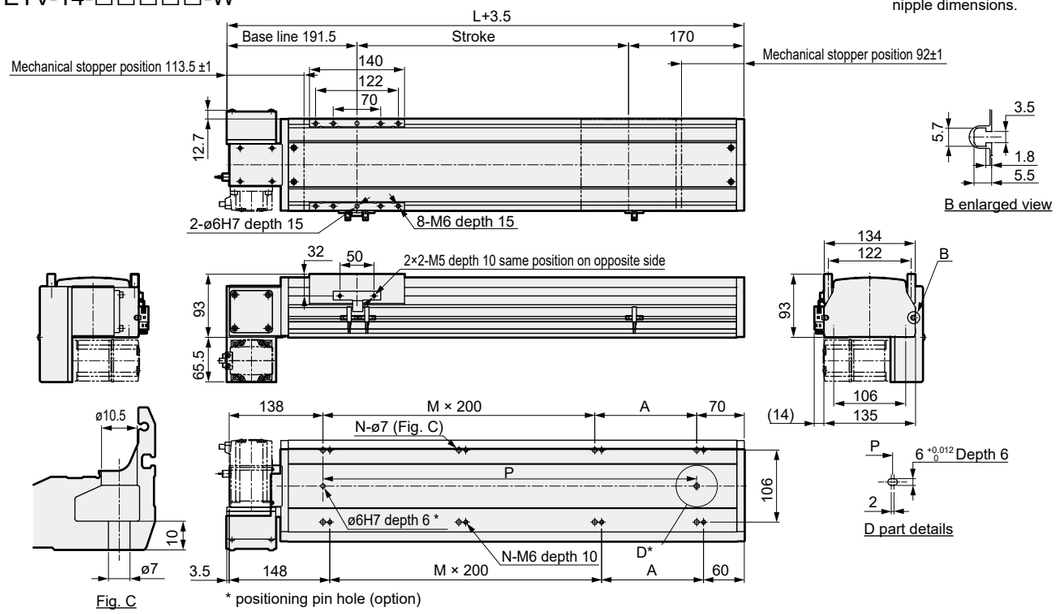
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

● ETV-14-□□□□□-W

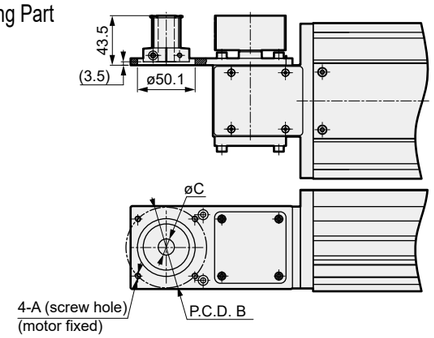
● Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158	1208	1258	1308	1358	1408	1458	1508	1558	1608	1658	1708	1758	1808	1858	1908
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	8.6	9.0	9.5	10.0	10.5	11.0	11.4	12.0	12.4	13.0	13.4	13.9	14.4	14.9	15.4	15.9	16.4	16.9	17.3	17.9	18.5	19.1	19.7	20.3	20.9	21.5	22.1	22.7	23.3	23.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1958	2008	2058	2108	2158	2208	2258	2308	2358	2408	2458	2508	2558	2608	2658	2708	2758	2808	2858	2908	2958	3008	3058	3108	3158	3208	3258	3308	3358	3408
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	24.5	25.1	25.7	26.3	26.9	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

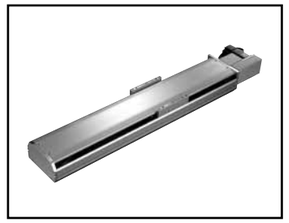
Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	200 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

MEMO



Electric Actuator Belt Type

ETV-17 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 400 W

Model No. Notation Method

ETV - 17 - 40 - 010 - R M 4 X N N N N

❶ Body Size

17	Body width 170 mm

❷ Lead Equivalent

40	40 mm

❸ Stroke

010 to 350	100 mm (every 50 mm) 3500 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺ Mounting Motor Specifications

M	Select the mounting motor specification from the table below.
Y	
P	
F	

❻ Motor Capacity

4	400 W

❼ Drive Belt Type

X	Standard (rubber)
L	Low Particle Emission (Urethane)

❽ Origin sensor (1 pc) *1, *2, *3

N	None
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 287 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
*5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.

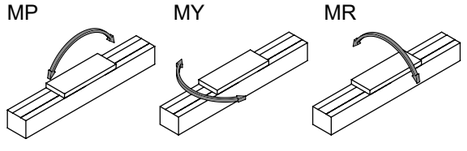
Specifications

Applicable Motor Capacity		400 W Servo Motor
Drive Method		Belt width 30 mm
Stroke	mm	100 to 3500
Lead equivalent	mm	40
Max. payload *1	Horizontal kg	45
	Vertical kg	-
Max. Speed	mm/s	2000
Rated thrust *1	N	204
Repeatability	mm	±0.04
Lost motion		0.1 mm or less
Dynamic allowable load	N	10102.1
Static Allowable Moment	N·m	MP : 1034 MY : 1032 MR : 908
Dynamic allowable moment	N·m	MP : 424.3 MY : 424.3 MR : 520.3
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)
Atmosphere		No corrosive gas, explosive gas, or dust

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Lead Equivalent \ Stroke	100 to 3500
40	2000

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

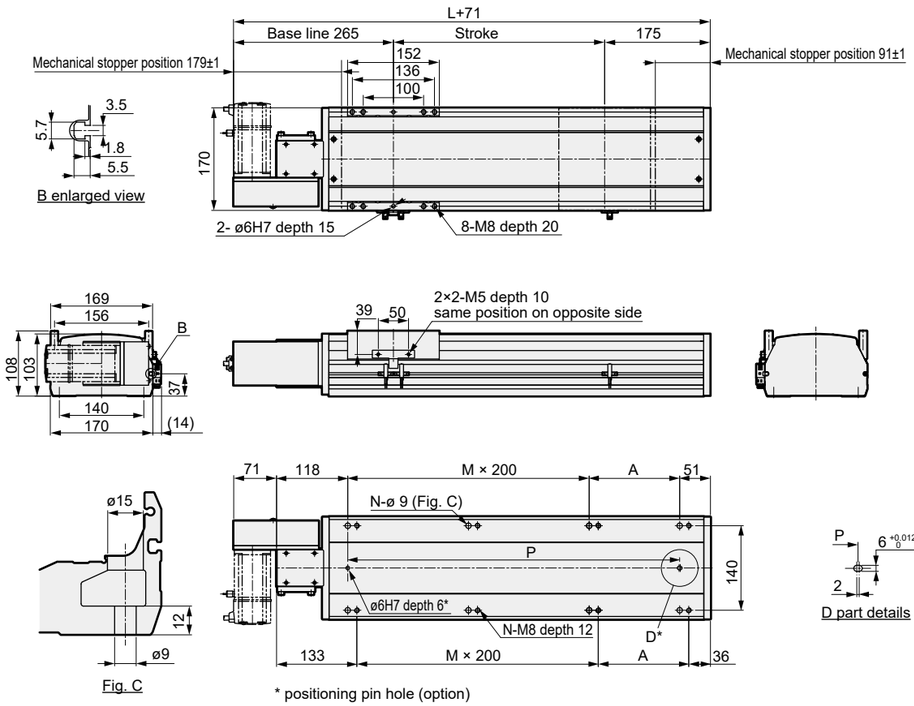
Allowable Overhang Length

* Refer to P. 314 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● ETV-17-□□□□□-R

● Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

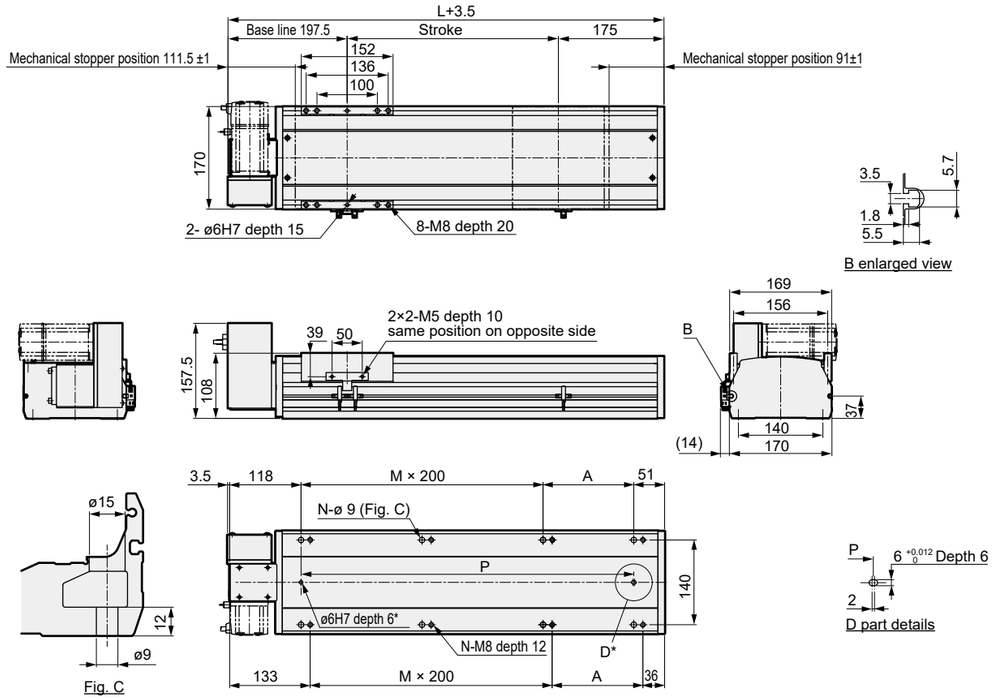
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing: Top Right Fold-back Motor Mounting

● ETV-17-□□□□□-S

• Refer to P. 318 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

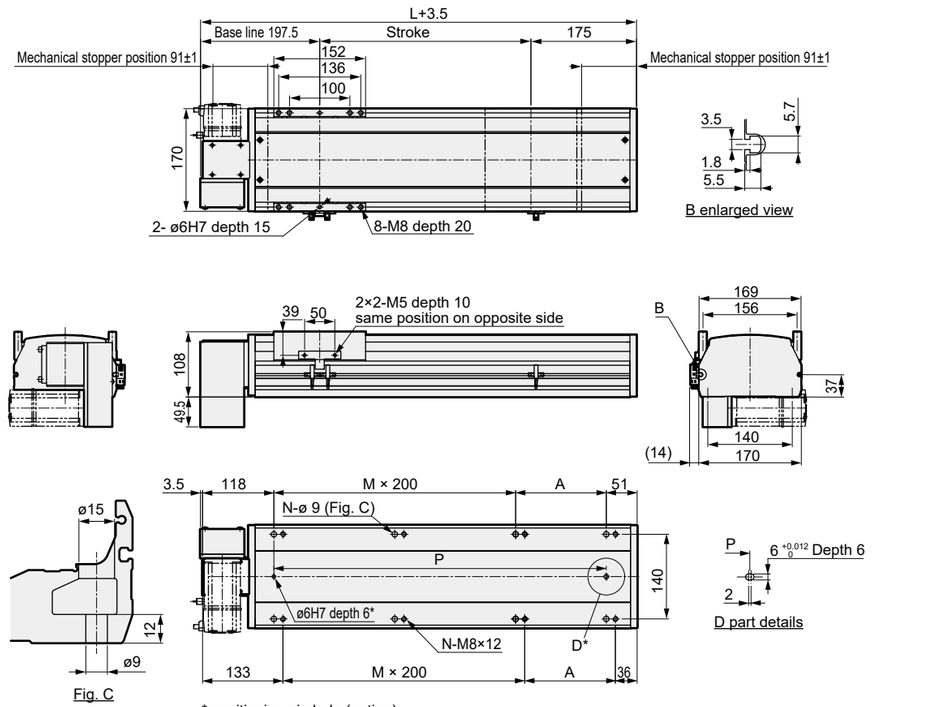
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

● ETV-17-□□□□□-T

• Refer to P. 318 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETV-17-□□□□□-L

• Refer to P. 318 for grease nipple dimensions.

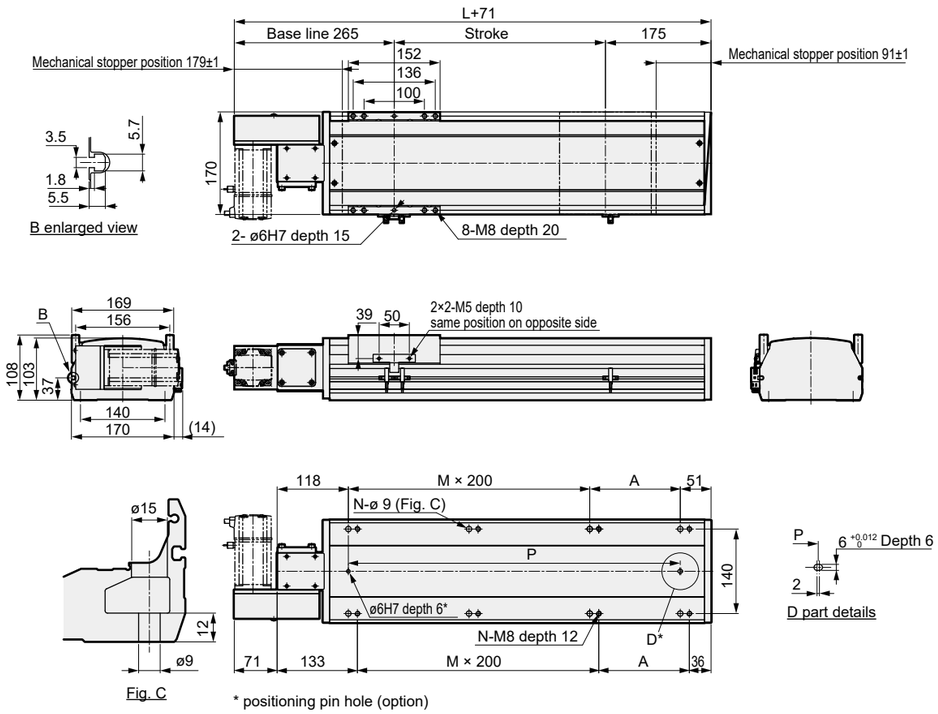


Fig. C

* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ETV-17-□□□□□-V

• Refer to P. 318 for grease nipple dimensions.

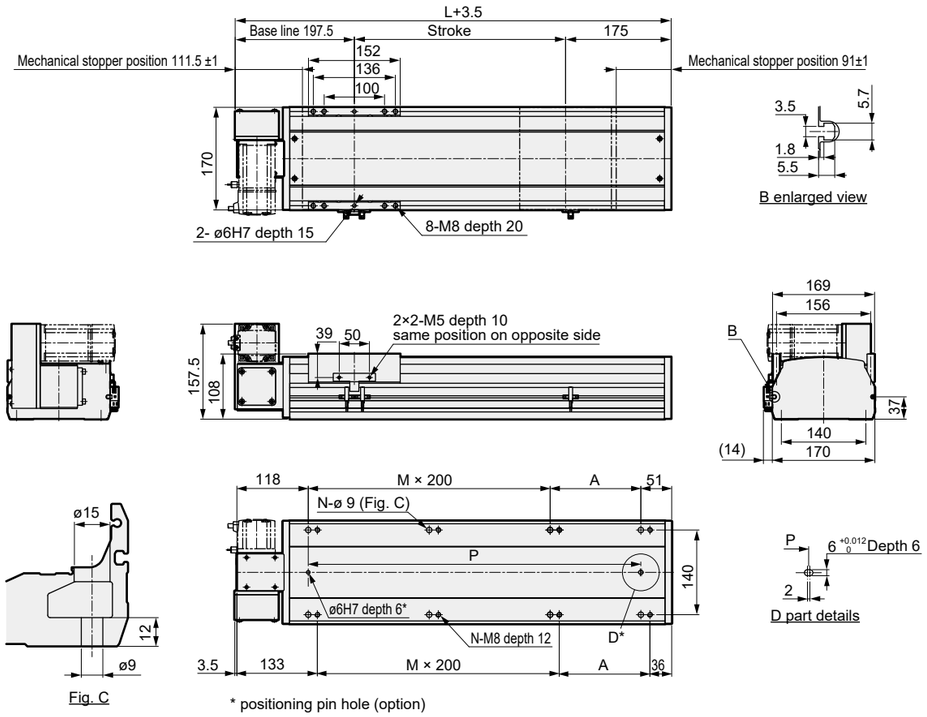


Fig. C

* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

● ETV-17-□□□□□-W

● Refer to P. 318 for grease nipple dimensions.

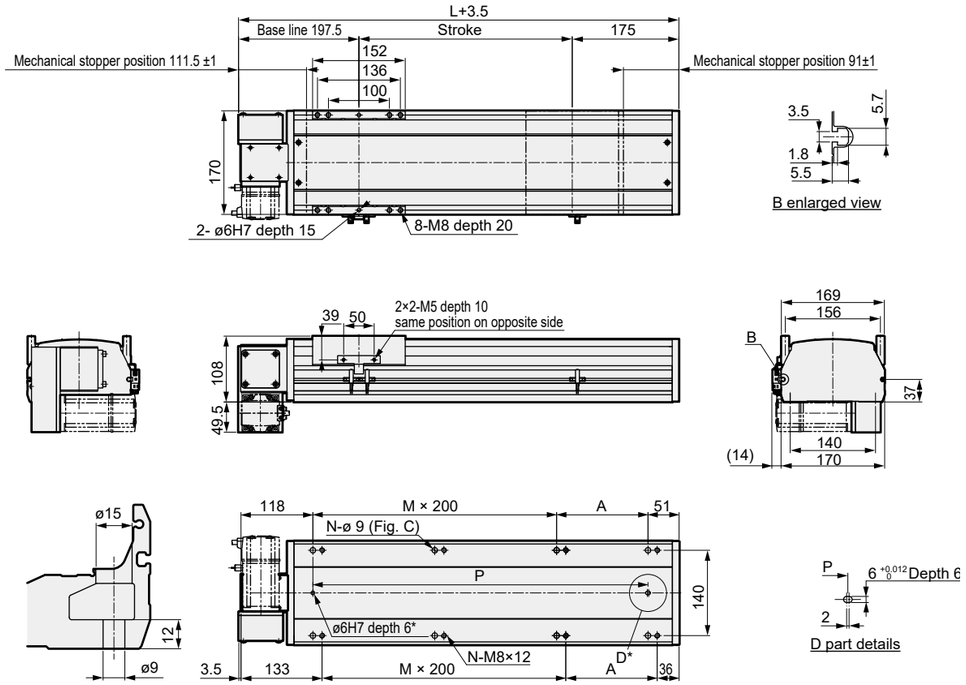


Fig. C

* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	469	519	569	619	669	719	769	819	869	919	969	1019	1069	1119	1169	1219	1269	1319	1369	1419	1469	1519	1569
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	12.0	13.8	14.6	15.4	16.1	16.9	17.7	18.5	19.2	20.0	20.8	21.6	22.3	23.1	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.2

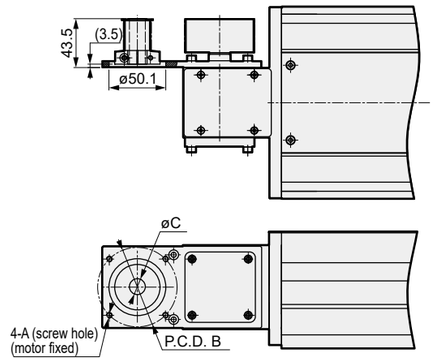
Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1619	1669	1719	1769	1819	1869	1919	1969	2019	2069	2119	2169	2219	2269	2319	2369	2419	2469	2519	2569	2619	2669	2719
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	31.0	31.8	32.6	33.4	34.2	35.0	35.8	36.6	37.4	38.2	39.0	39.8	40.6	41.4	42.2	43.0	43.8	44.6	45.4	46.2	47.0	47.8	48.6

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2769	2819	2869	2919	2969	3019	3069	3119	3169	3219	3269	3319	3369	3419	3469	3519	3569	3619	3669	3719	3769	3819	3869
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	49.4	50.2	51.0	51.8	52.6	53.4	54.2	55.0	55.8	56.6	57.4	58.2	59.0	59.8	60.6	61.4	62.2	63.0	63.8	64.6	65.4	66.2	67.0

* For motor mounting dimensions and list of accessories, please refer to P. 303.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	400 W	M5	ø70	ø14	4-M5 x L12
Y	400 W	M5	ø70	ø14	4-M5 x L12
P	400 W	M4	ø70	ø14	4-M4 x L12
F	400 W	M5	ø70	ø14	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

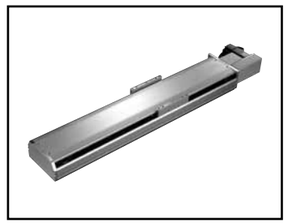
Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	400 W	M5	4
Y			M5	4
P			M4	4
F			M5	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

MEMO



Electric Actuator Belt Type

ETV-22 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 750 W

Model No. Notation Method

ETV - 22 - 40 - 010 - R - M - 8 - X - N - N - N - N

❶ Body Size

22	Body width 220 mm

❷ Lead Equivalent

40	40 mm

❸ Stroke *1, *2

010 to 350	100 mm (every 50 mm) 3500 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺ Mounting Motor Specifications

M	Select the mounting motor specification from the table below.
Y	
P	
F	

❻ Motor Capacity

8	750 W

❼ Drive Belt Type

X	Standard (rubber)
L	Low Particle Emission (Urethane)

❽ Origin sensor (1 pc) *1, *2, *3

N	None
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	-
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means that it can be mounted from either the top or bottom side.
*5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.

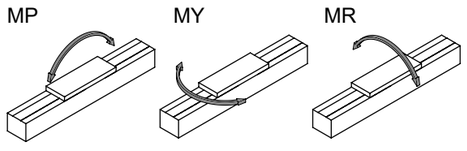
* Refer to P. 287 for motor model No.

Specifications

Applicable Motor Capacity		750 W Servo Motor
Drive Method		Belt width 50 mm
Stroke	mm	100 to 3500
Lead equivalent	mm	40
Max. Payload *1	Horizontal kg	85
	Vertical kg	-
Max. Speed	mm/s	2000
Rated thrust *1	N	367
Repeatability	mm	±0.04
Lost motion		0.1 mm or less
Dynamic allowable load	N	14174.2
Static Allowable Moment	N·m	MP : 2052 MY : 2052 MR : 1810
Dynamic allowable moment	N·m	MP : 1098.5 MY : 1098.5 MR : 999.3
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)
Atmosphere		No corrosive gas, explosive gas, or dust

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction



Stroke and Max. Speed

(mm/s)

Lead Equivalent \ Stroke	100 to 3500
40	2000

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

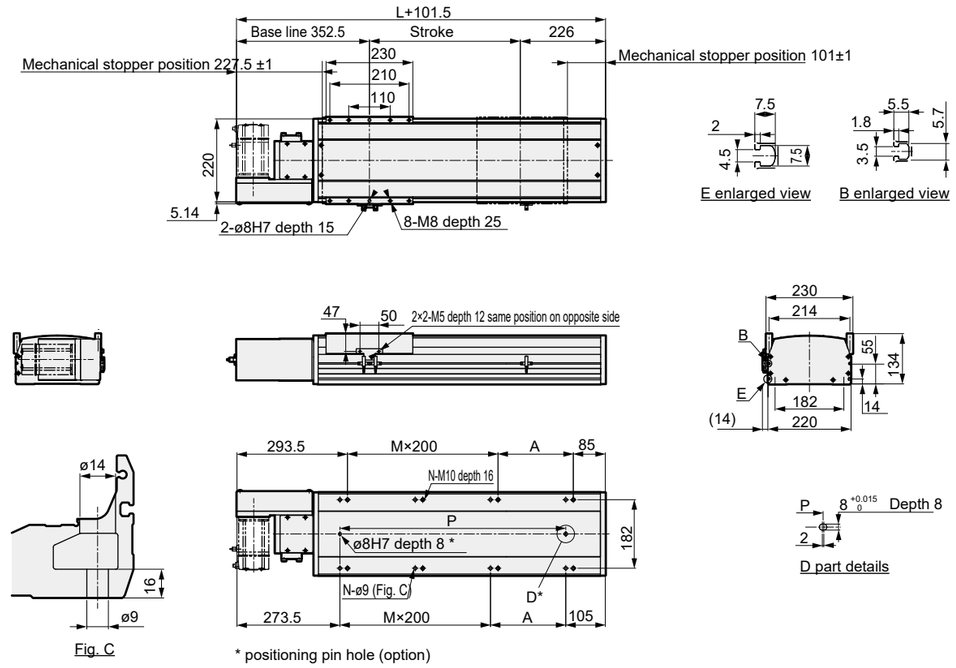
Allowable Overhang Length

* Refer to P. 314 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● ETV-22-□□□□□-R

● Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

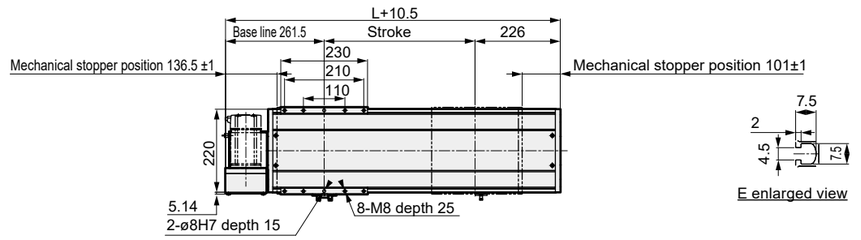
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

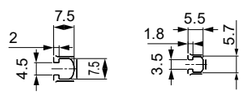
* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawing: Top Right Fold-back Motor Mounting

● ETV-22-□□□□□-S

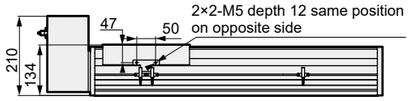
• Refer to P. 318 for grease nipple dimensions.

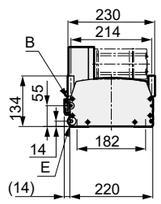




E enlarged view

B enlarged view





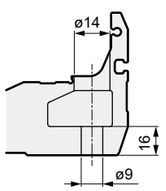
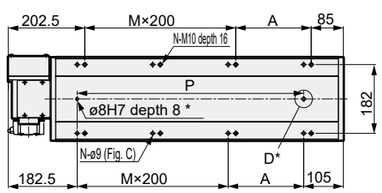
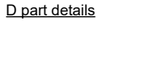


Fig. C



*: Positioning pin hole (option)



D part details

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

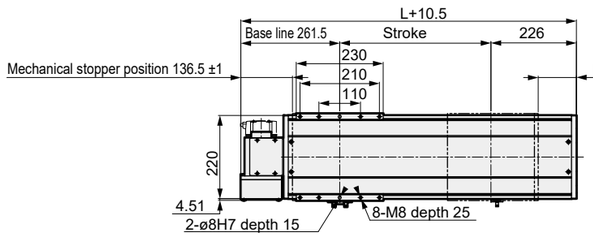
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

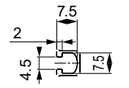
* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

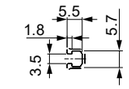
● ETV-22-□□□□□-T

• Refer to P. 318 for grease nipple dimensions.

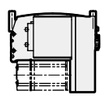


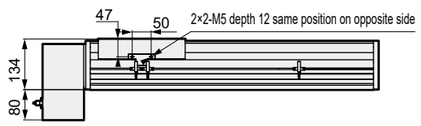


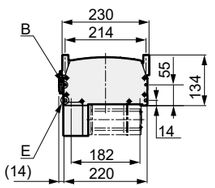
E enlarged view



B enlarged view







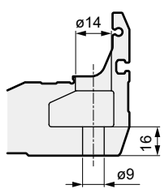
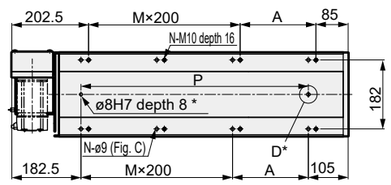
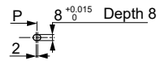


Fig. C



* positioning pin hole (option)



D part details

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

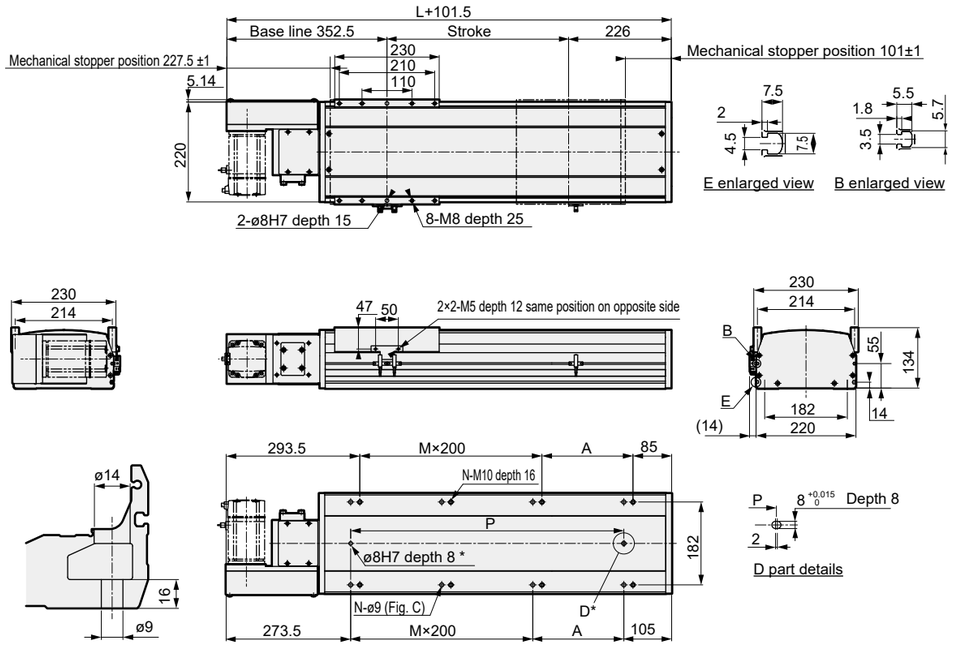
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETV-22-□□□□□-L

• Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

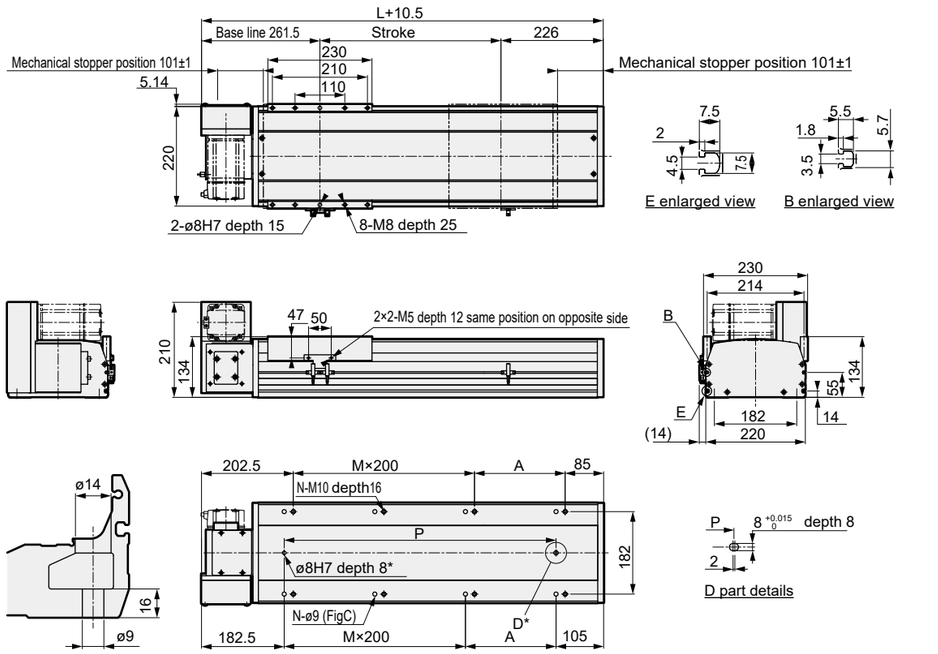
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ETV-22-□□□□□-V

• Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

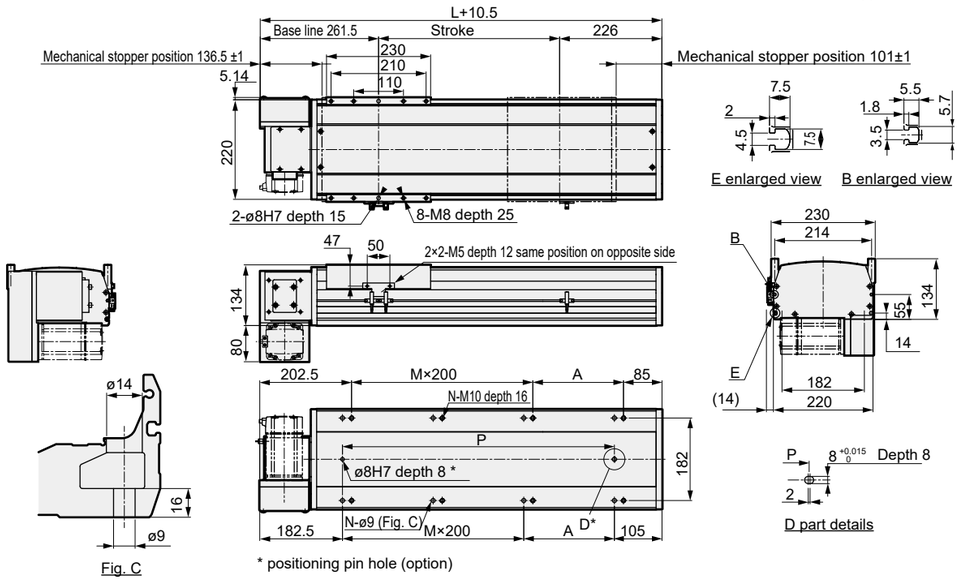
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

● ETV-22-□□□□□-W

● Refer to P. 318 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	577	627	677	727	777	827	877	927	977	1027	1077	1127	1177	1227	1277	1327	1377	1427	1477	1527	1577	1627	1677
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6
N	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16
P	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400
Weight (kg)	30.0	31.2	32.4	33.6	34.8	36.0	37.2	38.4	39.6	40.8	42.0	43.2	44.4	45.6	46.8	48.0	49.2	50.4	51.6	52.8	54.0	55.2	56.4

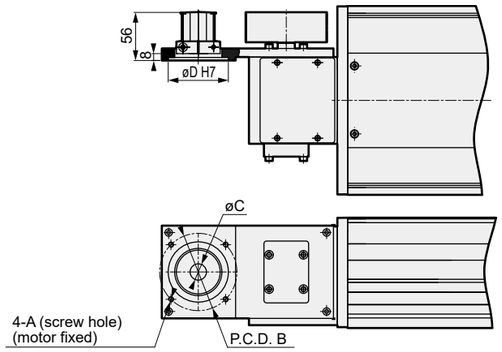
Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1727	1777	1827	1877	1927	1977	2027	2077	2127	2177	2227	2277	2327	2377	2427	2477	2527	2577	2627	2677	2727	2777	2827
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12
N	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28
P	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550
Weight (kg)	57.6	58.8	60.0	61.2	62.4	63.6	64.8	66.0	67.2	68.4	69.6	70.8	72.0	73.2	74.4	75.6	76.8	78.0	79.2	80.4	81.6	82.8	84.0

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2877	2927	2977	3027	3077	3127	3177	3227	3277	3327	3377	3427	3477	3527	3577	3627	3677	3727	3777	3827	3877	3927	3977
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18	18
N	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40	40
P	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650	3700
Weight (kg)	85.2	86.4	87.6	88.8	90.0	91.2	92.4	93.6	94.8	96.0	97.2	98.4	99.6	100.8	102.0	103.2	104.4	105.6	106.8	108.0	109.2	110.4	111.6

* For motor mounting dimensions and list of accessories, please refer to P. 311.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

Motor Mounting Part



Mounting Motor Specification		A	B	C	D	Motor mounting bolts
M	750 W	M6	ø90	ø19	ø70	4-M6 x L20
Y	750 W	M6	ø90	ø19	ø70	4-M6 x L20
P	750 W	M5	ø90	ø19	ø70	4-M5 x L20
F	750 W	M6	ø100	ø14	ø80	4-M6 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Capacity	Motor mounting bolts	
			Size	Quantity
M	Shipped included	750 W	M6	4
Y			M6	4
P			M5	4
F			M6	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 316.

MEMO

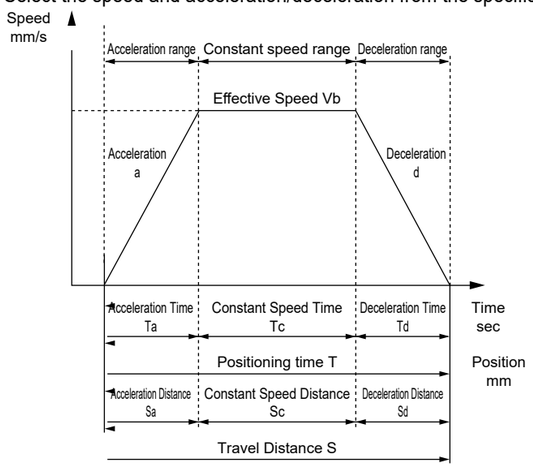
Model Selection

STEP-1 Confirmation of Payload

Payload varies depending on the mounting orientation and screw lead. Select the size and lead by referring to the selection table (P. 284) and the specification table for each model.

STEP-2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time.
Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	= {2 xaxdxS/(a+d)} 1/2
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	=Vb/a [0.4 sec or more]
	Deceleration Time	Td	s	=Vb/d [0.4 sec or more]
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	=(axTa²)/2
	Deceleration Distance	Sd	mm	=(dxTd²)/2
	Constant Speed Distance	Sc	mm	= S - (Sa+Sd)
	Positioning Time	T	s	= Ta+Tc+Td

* Do not use at speeds exceeding the specifications.
* The setting of acceleration/deceleration by acceleration/deceleration time varies depending on the set speed and stroke.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Please use an acceleration/deceleration time of 0.4 sec or more.
* 1 G ≈ 9.8 m/s².

STEP-3 Confirmation of Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 314, 315).

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

[For confirmation via iPad or smartphone]

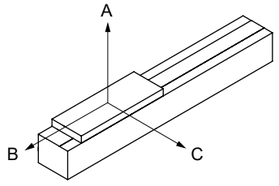
*May not display correctly depending on the smartphone's usage environment.

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Allowable Overhang Length (ETV Series)

[Horizontal Installation]



[Allowable Overhang Length]

● ETV-14

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	1800	700	550
			20	880	330	260
			25	700	260	200

● ETV-17

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	3,000	1250	1150
			20	1600	600	550
			30	1050	400	360
			45	650	250	230

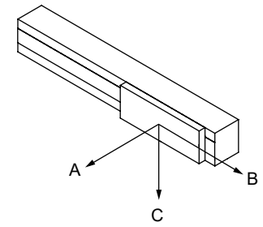
● ETV-22

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	45	1700	650	470
			65	1150	420	310
			85	850	310	225

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

Allowable Overhang Length (ETV Series)

[When Wall-Mounted]



● ETV-14

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	540	690	1800
			20	260	330	860
			25	200	255	680

● ETV-17

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	1150	1250	2700
			20	550	600	1550
			30	350	390	1000
			45	220	230	630

● ETV-22

Motor Mounting	Acceleration/Deceleration Time sec	Equivalent Screw Lead	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	45	480	650	1700
			65	320	430	1150
			85	230	320	850

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

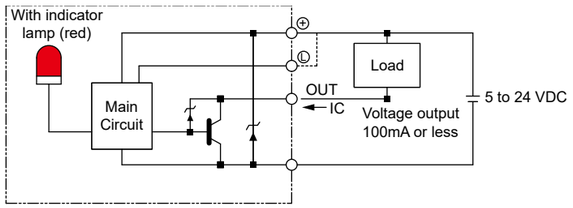
Sensor Specifications

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

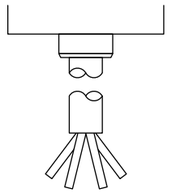
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared emitting diode (940 nm)
Indicator Light	Lights up when light is received (red)
Power Supply Voltage	5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption	35 mA or less (NPN type)
Control output	NPN type: NPN open collector output 5 to 24 VDC 100 mA or less Off-state current 0.5 mA or less, residual voltage 0.8 V or less (at load current 100 mA) Residual voltage: 0.4 V or less (with 40 mA load current)
Ambient illuminance	Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1000 lx or less
Ambient Temperature Range	Operating: -25 to +55°C Storage: -30 to +80°C (however, no freezing or condensation)
Ambient humidity range	Operating: 5 to 85%RH Storage: 5 to 95%RH (however, no freezing or condensation)
Enclosure	IP50 IEC60529 standard
Cord length	2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Sensor Dog External Dimension Drawing

	Motor Mounting Direction
Body Size	R / S / T / L / V / W
ETV-14	Fig. 1
ETV-17	Fig. 1
ETV-22	Fig. 2

Fig. 1

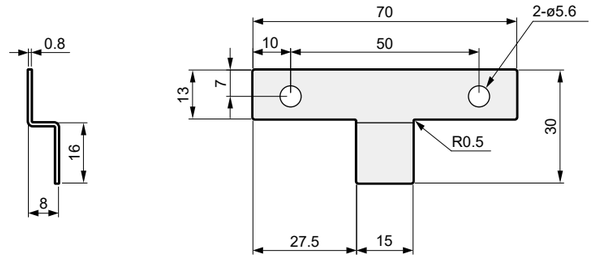
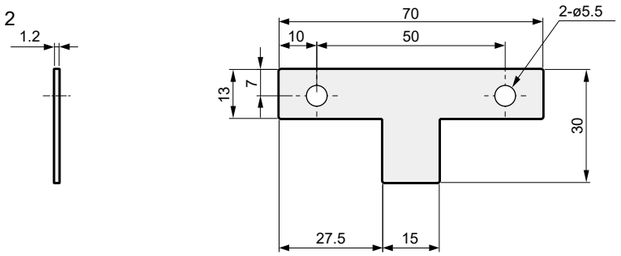


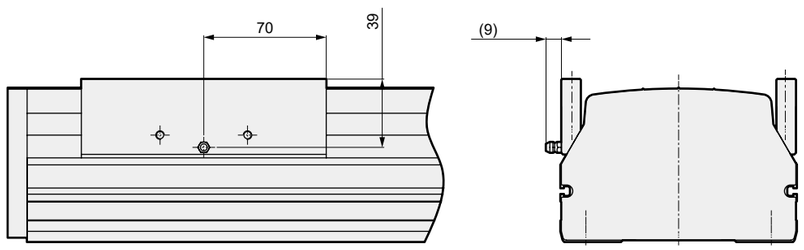
Fig. 2



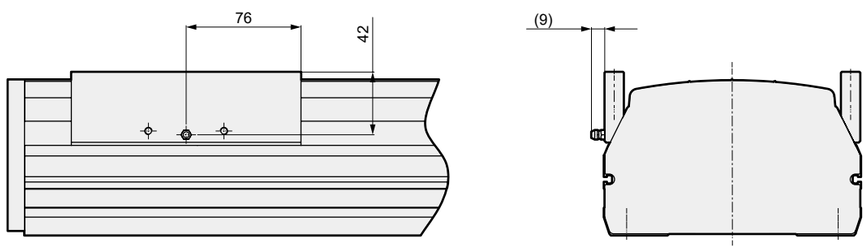
Grease Nipple Dimension Drawing

* Symmetrical with respect to the actuator.

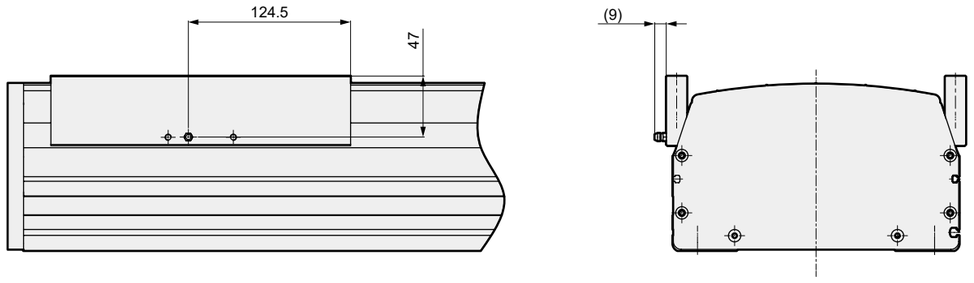
● ETV-14



● ETV-17



● ETV-22



MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

List of Accessories

Basic Type

Motor Mounting Bolts (Common for all motor mounting directions)

Model No.	Mounting Motor Specification	Motor Capacity	Size	Quantity
ETV-14	M	200 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ETV-17	M	400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ETV-22	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4

By Motor Mounting Direction

Attached Part Name	Attached quantity
Timing Belt	1 pc.
Pulley	1 pc

When home / limit sensor is selected

Sensor mounting direction	Shipment Form	Quantity
Outer sensor	Shipped included *1	3 pcs. *2

*1 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None".
*2 Sensor mounting screws are also attached.

Maintenance Parts

● Maintenance Parts Set

Model Number	Applicable Models	Component Parts ① Timing Belt	Component Parts ② Pulley	Component Parts ③ Sensor Dog
ETV-08 JP002-0025	ETV-14	○ (1 pc.)	○ (3 pcs.)	○ (1 pc.)
ETV-08 JP002-0026	ETV-17	○ (1 pc.)	○ (1 pc.)	○ (1 pc.)
ETV-08 JP002-0019	ETV-22	○ (2 pcs.)	○ (2 pcs.)	○ (1 pc.)

● Maintenance parts (external mounted sensor)

Model Number	Applicable Models	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Individual Precautions : Electric Actuator ETV Series

During Design and Selection

Danger

- Do not use in locations where hazardous materials such as ignitable, flammable, or explosive substances are present. There is a possibility of ignition, fire, or explosion.
- Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.
- When mounting the product, be sure to securely hold and fix it (including the workpiece).
  There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

- Use within the product's specified operating range.
- If there is a risk of danger to the human body, install a protective cover.
  - If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.
- Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.
- Install indoors with low humidity.
  In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
  - Use in such environments can cause damage and malfunction.
- Use and store in accordance with the working/storage temperatures and where there is no condensation.
  (Storage temperature: -10°C to 50°C, Storage humidity: 35% to 80%, Operating Temperature: 0°C to 40°C, Operating humidity: 35% to 80%)
  This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.
- Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
  This can cause failure, explosion, or fire.
- Use and store in a location free from strong electromagnetic waves, ultraviolet rays, and radiation.
  This can cause malfunction or failure.
- Consider the possibility of power source failure.
  - In case of breakdown in the power source, take countermeasures without causing trouble or damage to the operator or equipment.
- Consider the operating state when restarting after an emergency stop or abnormal stop.
  - Design so that restarting does not cause harm to people or damage to the equipment.
    Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
    Consider the possibility of failure of the installed motor.
    Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.
- Avoid using this product where vibration and impact are present.
- Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

Caution

- Do not use in a range where the moving table could collide with the stroke end and break.
- Clearly state the maintenance conditions in the equipment's instruction manual.
  - The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.
- Regarding installing, setting up, adjusting and maintaining the product, read through the instruction manual and operate correctly.
- The product is manufactured in conformity with the related standards. Never disassemble or modify.
- Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.
- The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

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

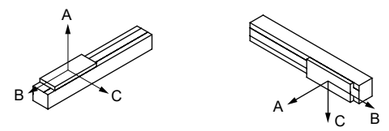
ETVModel Selection Check Sheet → CKD (Contact)

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

Customer:

Company		Department	
Name		E-mail	
TEL		FAX	

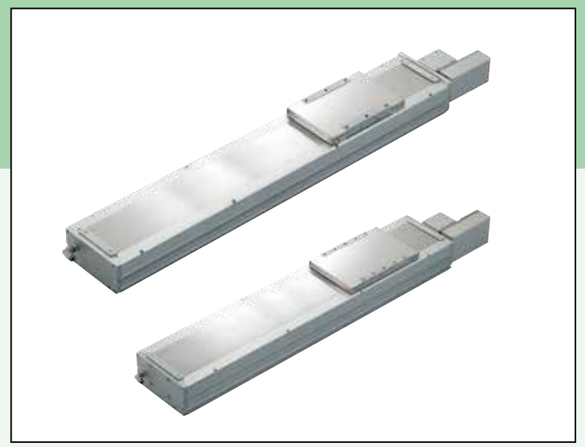
Selection Conditions:

Desired Model	ETV-	
Basic Specifications	Max. Stroke : mm, Ball screw lead : mm	
Operating Conditions	Moving stroke : mm, travel time : s	
	Set Speed : mm/s	
	Set acceleration/deceleration : mm/s² (set acceleration/deceleration time : s)	
	Repeatability : ± mm	
Load Conditions	Slider Type	
	Load weight : kg	
	Mounting Orientation: Horizontal/Wall-mounted/Ceiling-mounted/Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C: mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

Electric Actuator Servo Motor Compatible Motorless Specification

ECV

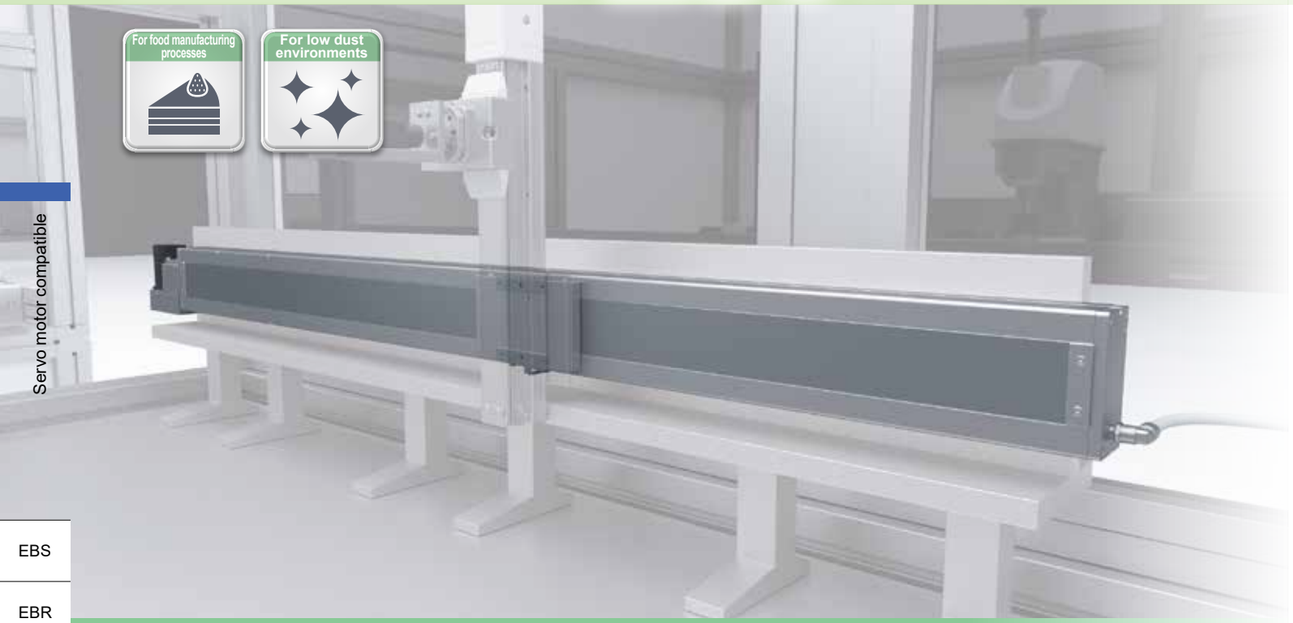
Slider Type
(Belt Drive, Low Particle Emission Specification)



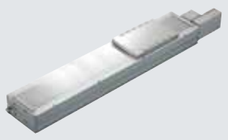
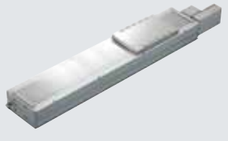
CONTENTS

Product Introduction	326
System Table	328
● Specifications, Model No. Notation, External Dimension Drawings	
・ECV-14	332
・ECV-17	340
・ECV-22	348
● Model Selection	356
● Technical Data	358
⚠ Precautions for Use	367
Model Selection Checklist	368

ECV Series



Long Stroke & High-Speed Transport (Low Particle Emission Model)

Line-up	Body Size / Motor capacity	14 / 200 W	17 / 400 W	22 / 750 W	Catalog page
Low dust specification **ECV** 		●	●	●	**328**
Low dust specifications / compatible with food manufacturing processes **ECV-FP1** 		●	●	●	**CC-1271AA**

List of supported motor manufacturers * Refer to each model page compatible model and capacity

Servo Motor

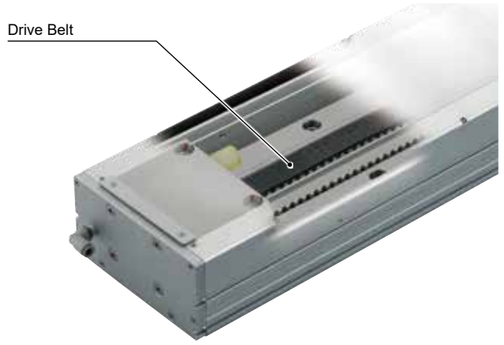
Mitsubishi Electric Corporation | Delta Electronics Co., Ltd. | Sanyo Denki Co., Ltd. | Mitsubishi Electric Corporation | Keyence Corporation | Panasonic Corporation | OMRON Corporation | Fuji Electric Corporation | FANUC CORPORATION | Bosch Rexroth AG | Rockwell Automation, Inc. | SIEMENS AG

Long Stroke & High-Speed Transport with Belt Drive

High versatility | Productivity improved

Belt drive supports strokes up to 3500 mm.
Maximum speed is up to 2000 mm/s.

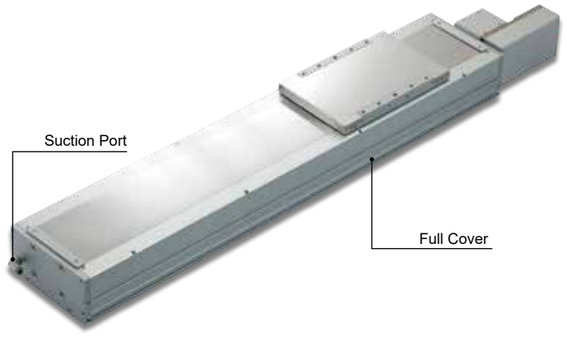
Max.	Max. Speed
3500 mm Supported	2000 mm/s Supported

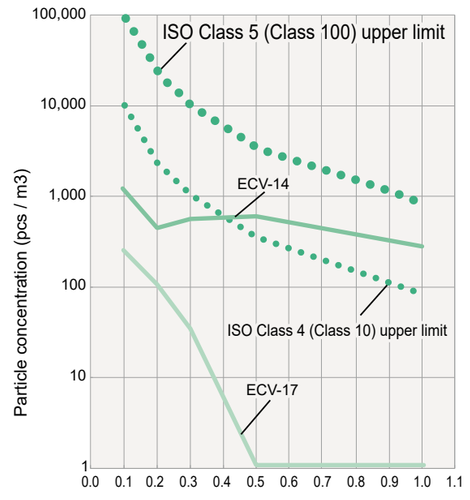


Low Particle Emission Structure

Low Particle Generation

The actuator body has a full cover with few gaps, and dust is exhausted outside through a suction port. Ideal for liquid crystal panel production lines and food lines.



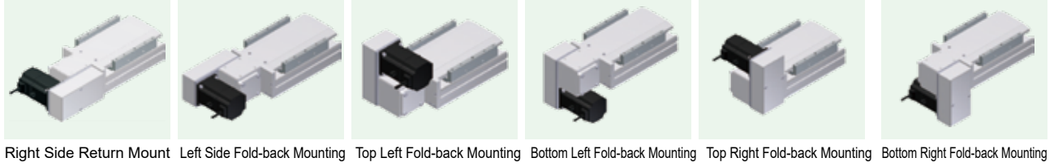


* Please refer to the catalog text for data acquisition conditions. This is not a guaranteed value.

Motor fold-back variations

High versatility | Space saving | Reduced design hours

We have prepared a total of 6 motor fold-back variations that can be selected according to the equipment.



Right Side Return Mount | Left Side Fold-back Mounting | Top Left Fold-back Mounting | Bottom Left Fold-back Mounting | Top Right Fold-back Mounting | Bottom Right Fold-back Mounting

System Table

Type	Model No.		Application Motor (W)	Body Width (mm)	Lead Equivalent (mm)	Max. Payload (kg) Horizontal *1	Max. Payload (kg) Vertical	Stroke (mm) and Max. Speed (mm/s) *2	Listed Page
Low Particle Emission Belt Type		ECV-14	200	135	40	25	-	100 mm, 300, 600, 800, ×3 1000, ×3 1500, ×3 2000, ×3 2500, ×3 3,000, ×3 3500, 3800 Max. st: 3050 mm 2000 ⏱ 0.90 sec, 1.15 sec, 1.40 sec, 1.65 sec, 1.93 sec	332
		ECV-17	400	170	40	45	-	100 mm, 300, 600, 800, ×3 1000, ×3 1500, ×3 2000, ×3 2500, ×3 3,000, ×3 3500, 3800 Max. st: 3500 mm 2000 ⏱ 0.90 sec, 1.15 sec, 1.40 sec, 1.65 sec, 1.90 sec, 2.15 sec	340
		ECV-22	750	220	40	85	-	100 mm, 300, 600, 800, ×3 1000, ×3 1500, ×3 2000, ×3 2500, ×3 3,000, ×3 3500, 3800 Max. st: 3500 mm 2000 ⏱ 0.90 sec, 1.15 sec, 1.40 sec, 1.65 sec, 1.90 sec, 2.10 sec	348

*1 For wall-mounted installation, the payload is the same as for horizontal installation.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
*3 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration. Please note that this is not the value at max. payload.

Model Number Configuration

Model No. Notation Method

ECV - 14 - 40 010 - R M 2 X C B D P

❶

❶ Body Size	
14	Body width 135 mm
17	Body width 170 mm
22	Body width 220 mm

❷

❷ Lead Equivalent	
40	40 mm

❸

❸ Stroke	
010 to 350	100 mm (every 50 mm) 3500 mm

❹

❹ Motor Mounting Direction	
R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺

❺ Mounting Motor Specifications	
M Y P F	Refer to the list on the page at right

❻

❻ Motor Capacity	
2	200 W
4	400 W
8	750 W

❼

❼ Drive Belt Type	
X	Standard (Rubber)
L	Low Particle Emission (Urethane)

❽

❽ Origin sensor *1	
N	None
C	Outside Motor Side (Shipped included)
D	Outside Motor Opposite Side (Shipped included)

❾

❾ Limit sensor *1	
N	None
B	Outside (Shipped included)

❿

❿ Grease nipple	
N	None (Body mounting direction: Standard)
D	None (Body mounting direction: Bottom side)
R	Right direction
L	Left direction

⓫

⓫ Positioning pin hole	
N	None
P	Yes

*1 Sensor dogs will be assembled and shipped regardless of the presence of sensors.

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❷ Screw Lead	❸ Stroke
14	40	010 to 305 (100 mm to 3500 mm)
17		010 to 350 (100 mm to 3500 mm)
22		010 to 350 (100 mm to 3500 mm)

Model Number Display Example

ECV-14-40010-RM2 XCBDP

❶ Body size : 14 Series
❷ Lead Equivalent : 40 mm
❸ Stroke : 100 mm
❹ Motor mounting direction : Right Side Return Mount
❺ Mounting motor specification : M (Please refer to the table on the right page)
❻ Motor Capacity : 200 W
❼ Drive belt type : Standard (rubber)
❽ Home sensor : External motor side
❾ Limit sensor : Outside
❿ Grease nipple : None (Body mounting direction: Bottom side)
⓫ Locating pin hole : Yes

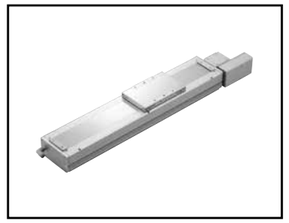
*This product is available only for the actuator (and motor mounting part) and does not include a motor. The user must prepare, mount, and adjust the motor and driver.

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	200 W (ECV-14 Series)	400 W (ECV-17 Series)	750 W (ECV-22 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT23 W	HK-KT43 W	HK-KT7 M3 W
M	Delta Electronics, Inc.	ECMA-C	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Mitsubishi Electric Corporation	Σ-7	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X	SGMXJ-02	SGMXJ-04	SGMXJ-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
		SV2	SV2-□020	SV2-□040	SV2-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
		MINAS A6	MSMF02	MSMF04	MSMF08
P	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030
		1 S	R88 M-1 M20030	R88 M-1 M40030	R88 M-1 M75030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201 D7-□B2□	GYS401 D7-□B2□	-
		ALPHA7 GYB	GYB201 D7-□B2□	GYB401 D7-□B2□	GYB751 D7-□B2□
F	FANUC CORPORATION	βiS-B	A06 B-2115-B1	A06 B-2116-B1	A06 B-2063-B1
P	Bosch Rexroth AG	MSM	MSM031 B	MSM031 C	MSM041 B
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2	TLP-A090-075-DKA□2
M	SIEMENS AG	1 FK2 *1	1 FK2203-2 AG0	1 FK2203-4 AG0	1 FK2204-5 AK0

* For mounting motors other than the above and products from other motor manufacturers, please contact us.
*1 The servo motor is an item subject to regulation under Item 7(8) of Appended Table 1 of the Export Trade Control Order, and it also falls under the specifications.
(As of January 2021)

Manufacturer	200 W	400 W	750 W
Mitsubishi Electric Corporation	M	M	M
Delta Electronics, Inc.	M	M	M
Sanyo Denki Co., Ltd.	M	M	-
Yaskawa Electric Corporation	Y	Y	Y
Keyence Corporation	Y	Y	Y
Panasonic Corporation	P	P	P
OMRON Corporation	P	P	P
Fuji Electric Co., Ltd.	M	M	M
FANUC CORPORATION	F	F	F
Bosch Rexroth AG	P	P	P
Rockwell Automation, Inc.	M	M	M
SIEMENS AG	M	M	M



Electric Actuator Belt Type

ECV-14 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 200 W

Model No. Notation Method

ECV - 14 - 40 - 010 - R M 2 X N N N N

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

14	Body width 135 mm

❷ ead Equivalent

40	40 mm

❸ Stroke

010 to 305	100 mm (every 50 mm) 3050 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

2	200 W

❼ Drive Belt Type

X	Standard (rubber)
L	Low Particle Emission (Urethane)

❽ Origin sensor (1 pc) *1, *2, *3

N	None
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 331 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.
*5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.

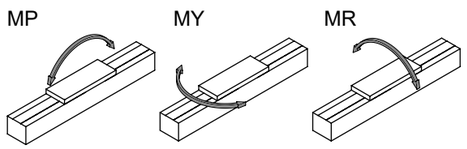
Specifications

Applicable Motor Capacity		200 W Servo Motor
Drive Method		Belt width 22 mm
Stroke	mm	100 to 3050
Lead equivalent	mm	40
Max. payload *1	Horizontal kg	25
	Vertical kg	-
Max. Speed	mm/s	2000
Rated thrust *1	N	100
Repeatability	mm	±0.04
Lost motion		0.1 mm or less
Dynamic allowable load	N	6566.9
Static Allowable Moment	N·m	MP : 552 MY : 551 MR : 485
Dynamic allowable moment	N·m	MP : 262.7 MY : 262.7 MR : 261.0
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)
Atmosphere		No corrosive gas, explosive gas, or dust

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Lead Equivalent \ Stroke	100 to 3050
40	2000

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

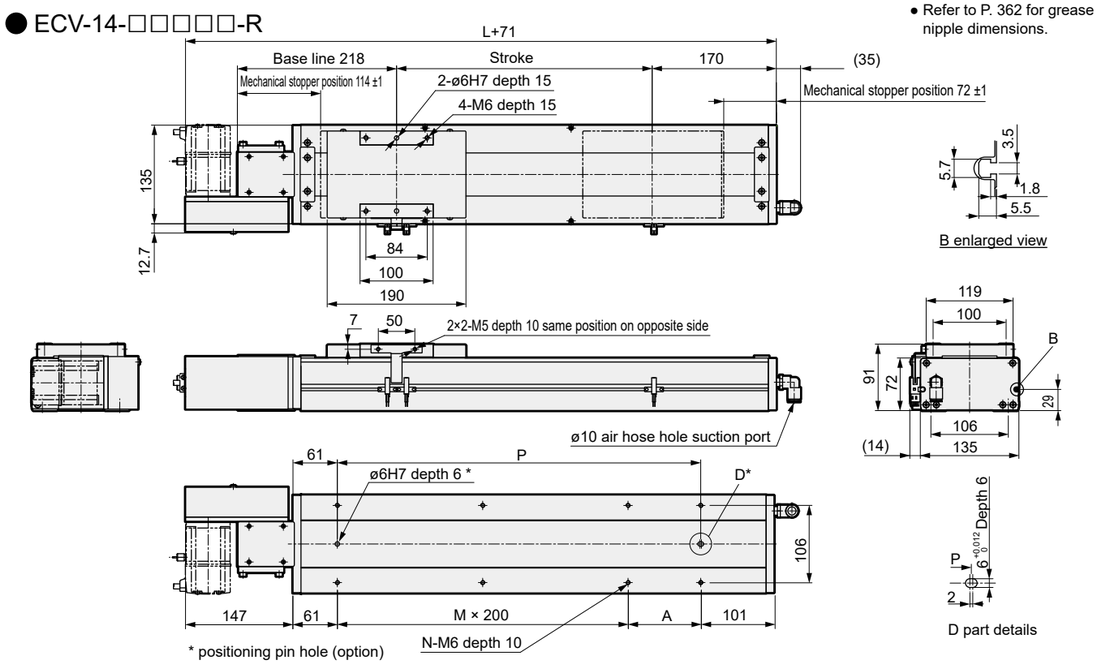
Allowable Overhang Length

* Refer to P. 358 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● ECV-14-□□□□□-R

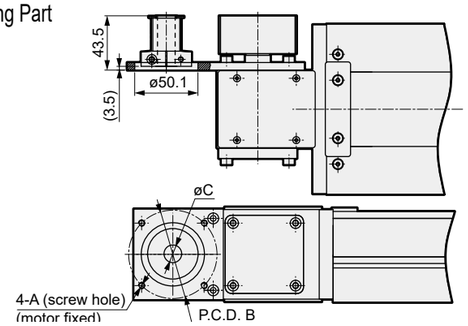
● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.5	42.5	43.1	43.7	44.3	44.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Attached Shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fittings, refer to P. 364 for details.

[Home Sensor / Limit Sensor]

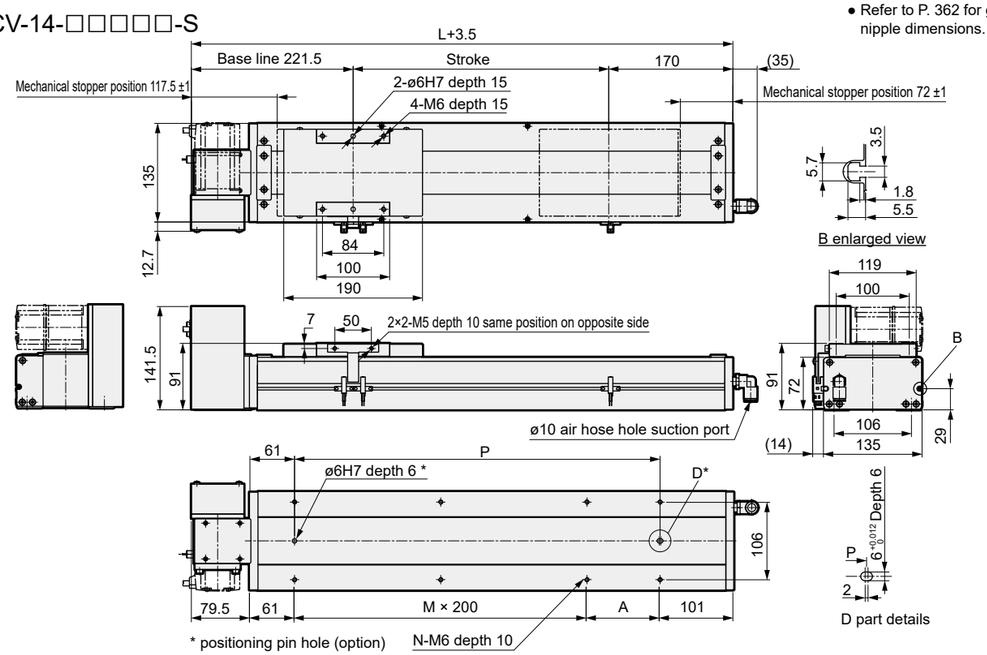
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

External Dimension Drawing: Top Right Fold-back Motor Mounting

● ECV-14-□□□□□-S

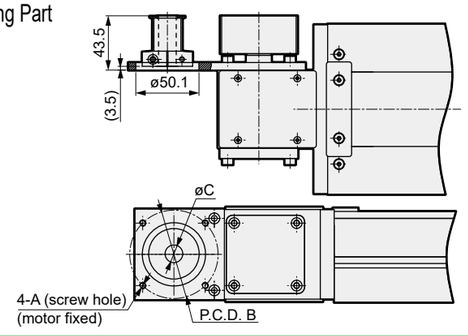
● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.5	42.5	43.1	43.7	44.3	44.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Attached Shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fittings, refer to P. 364 for details.

[Home Sensor / Limit Sensor]

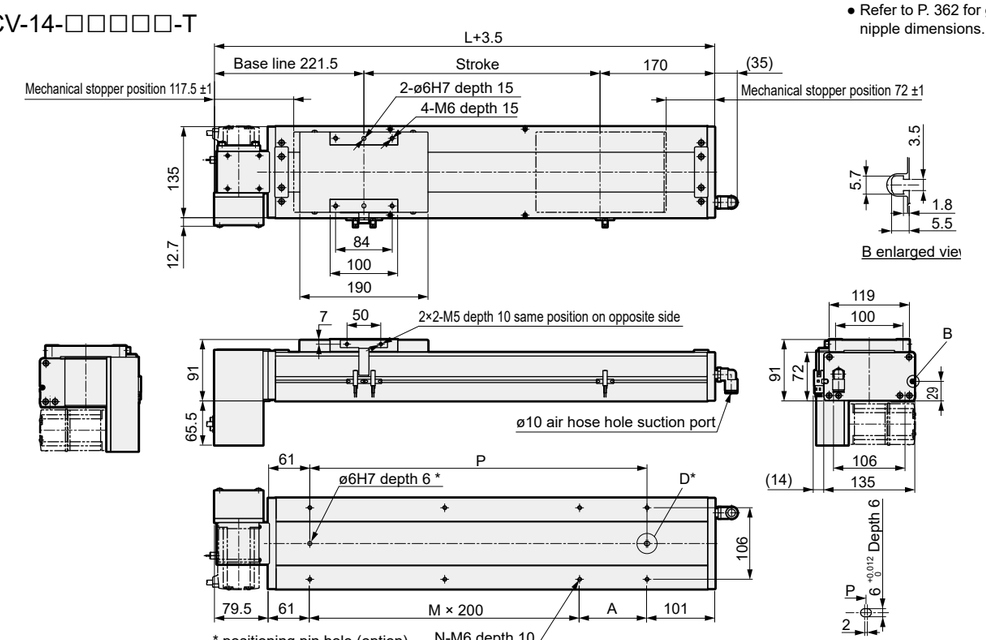
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

● ECV-14-□□□□□-T

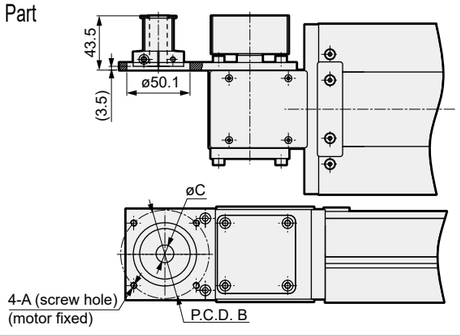
● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.5	42.5	43.1	43.7	44.3	44.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Attached Shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fittings, refer to P. 364 for details.

[Home Sensor / Limit Sensor]

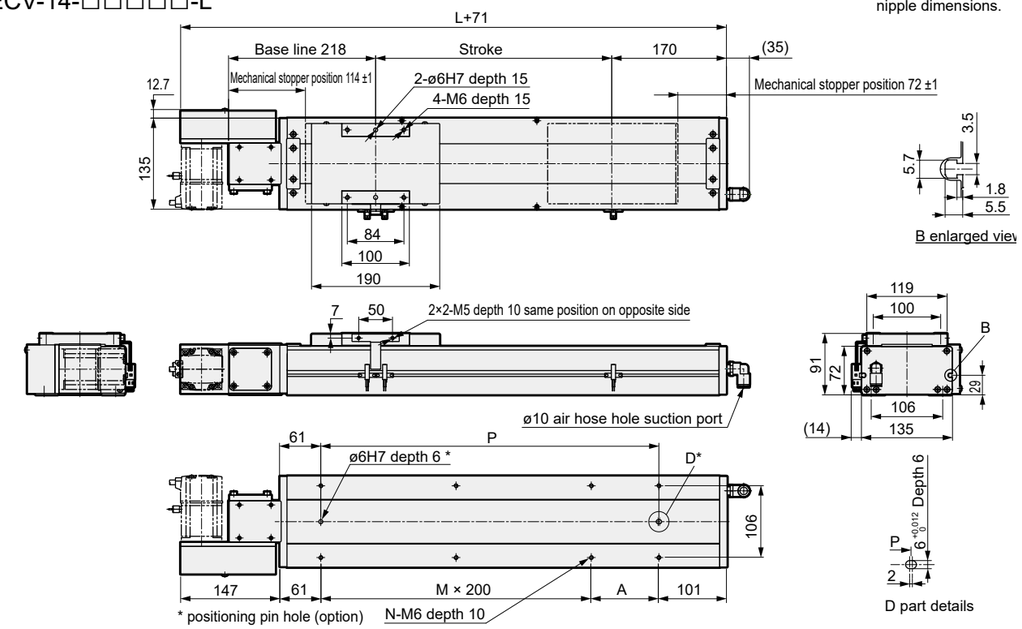
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ECV-14-□□□□□-L

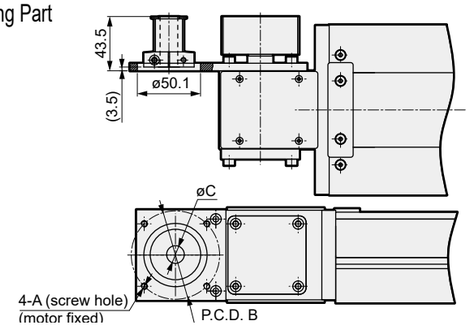
● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.5	42.5	43.1	43.7	44.3	44.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Attached Shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fittings, refer to P. 364 for details.

[Home Sensor / Limit Sensor]

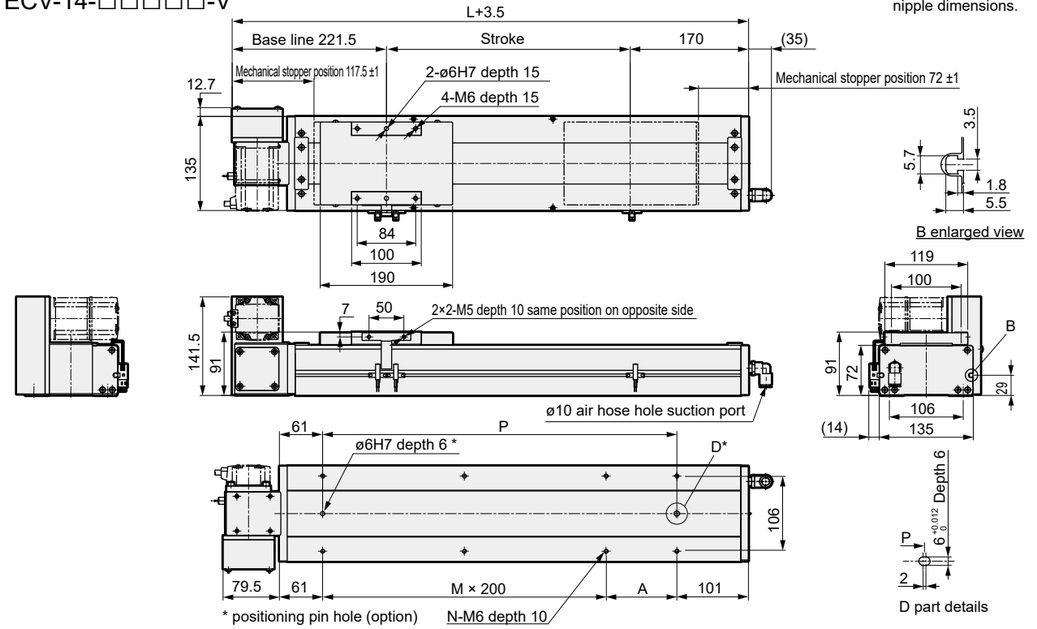
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ECV-14-□□□□□-V

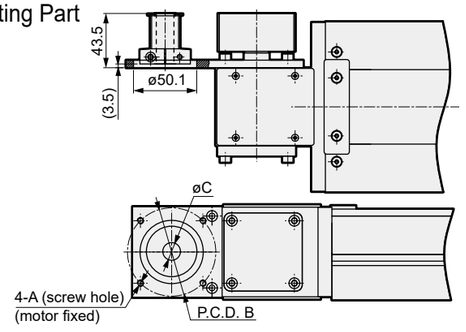
● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.5	42.5	43.1	43.7	44.3	44.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Attached Shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fittings, refer to P. 364 for details.

[Home Sensor / Limit Sensor]

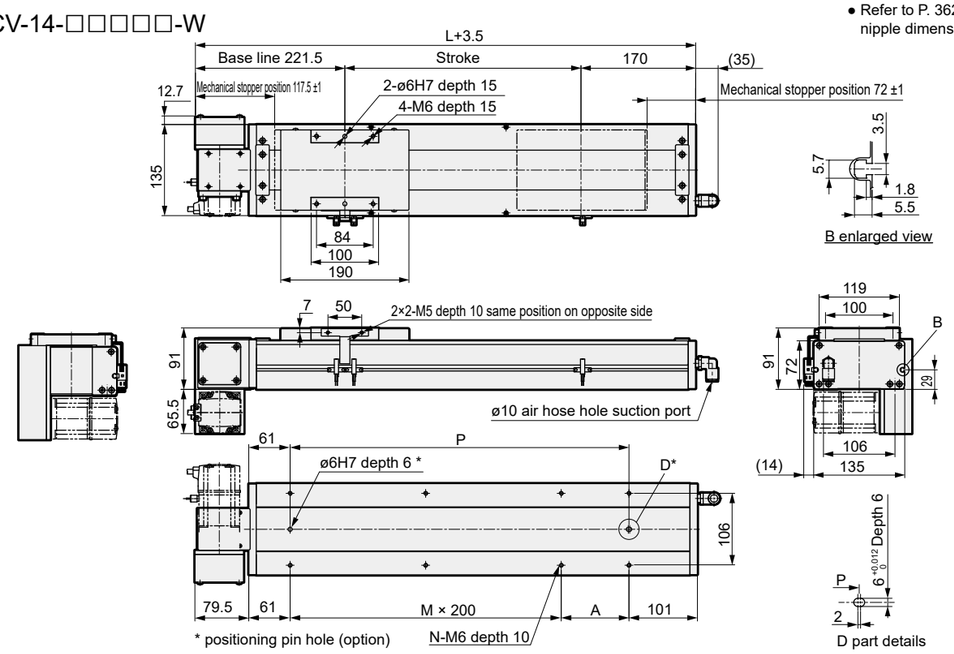
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

● ECV-14-□□□□□-W

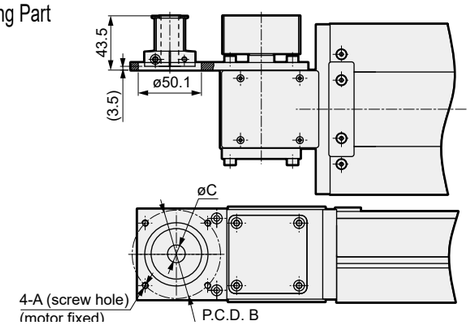
● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550
L	488	538	588	638	688	738	788	838	888	938	988	1038	1088	1138	1188	1238	1288	1338	1388	1438	1488	1538	1588	1638	1688	1738	1788	1838	1888	1938
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7	7	7	7	8	8
N	6	6	6	6	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	16	18	18	18	18	20	20
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700
Weight (kg)	11.6	12.0	12.5	13.0	13.5	14.0	14.4	15.0	15.4	16.0	16.4	16.9	17.4	17.9	18.4	18.9	19.4	19.9	20.3	20.9	21.5	22.1	22.7	23.3	23.9	24.5	25.1	25.7	26.3	26.9

Stroke (mm)	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050
L	1988	2038	2088	2138	2188	2238	2288	2338	2388	2438	2488	2538	2588	2638	2688	2738	2788	2838	2888	2938	2988	3038	3088	3138	3188	3238	3288	3338	3388	3438
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13	13	13	13	14	14	14	14	15	15	15	15
N	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30	32	32	32	32	34	34	34	34
P	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200
Weight (kg)	27.5	28.1	28.7	29.3	29.9	30.5	31.1	31.7	32.3	32.9	33.5	34.1	34.7	35.3	35.9	36.5	37.1	37.7	38.3	38.9	39.5	40.1	40.7	41.3	41.5	42.5	43.1	43.7	44.3	44.9

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	200 W	M5	ø70	ø14	4-M5 x L12
Y	200 W	M5	ø70	ø14	4-M5 x L12
P	200 W	M4	ø70	ø11	4-M4 x L12
F	200 W	M5	ø70	ø9	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Included at shipment	200 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

* For fittings, refer to P. 364 for details.

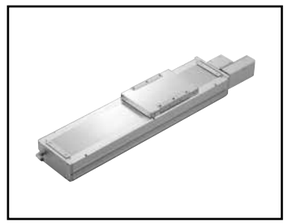
[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending



Electric Actuator Belt Type

ECV-17 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 400 W

Model No. Notation Method

ECV - 17 - 40 - 010 - R M 4 X N N N N

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

17	Body width 170 mm

❷ Lead Equivalent

40	40 mm

❸ Stroke

010 to 350	100 mm (every 50 mm) 3500 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

4	400 W

❼ Drive Belt Type

X	Standard (rubber)
L	Low Particle Emission (Urethane)

❽ Origin sensor (1 pc) *1, *2, *3

N	None
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.
*5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 331 for motor model No.

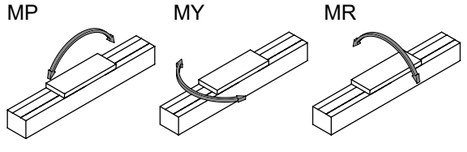
Specifications

Applicable Motor Capacity		400 W Servo Motor
Drive Method		Belt width 30 mm
Stroke	mm	100 to 3500
Lead equivalent	mm	40
Max. payload *1	Horizontal kg	45
	Vertical kg	-
Max. Speed	mm/s	2000
Rated thrust *1	N	204
Repeatability	mm	±0.04
Lost motion		0.1 mm or less
Dynamic allowable load	N	10102.1
Static Allowable Moment	N·m	MP: 1034 MY: 1032 MR: 908
Dynamic allowable moment	N·m	MP: 424.3 MY: 424.3 MR: 520.3
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)
Atmosphere		No corrosive gas, explosive gas, or dust

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Lead Equivalent \ Stroke	100 to 3500
40	2000

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

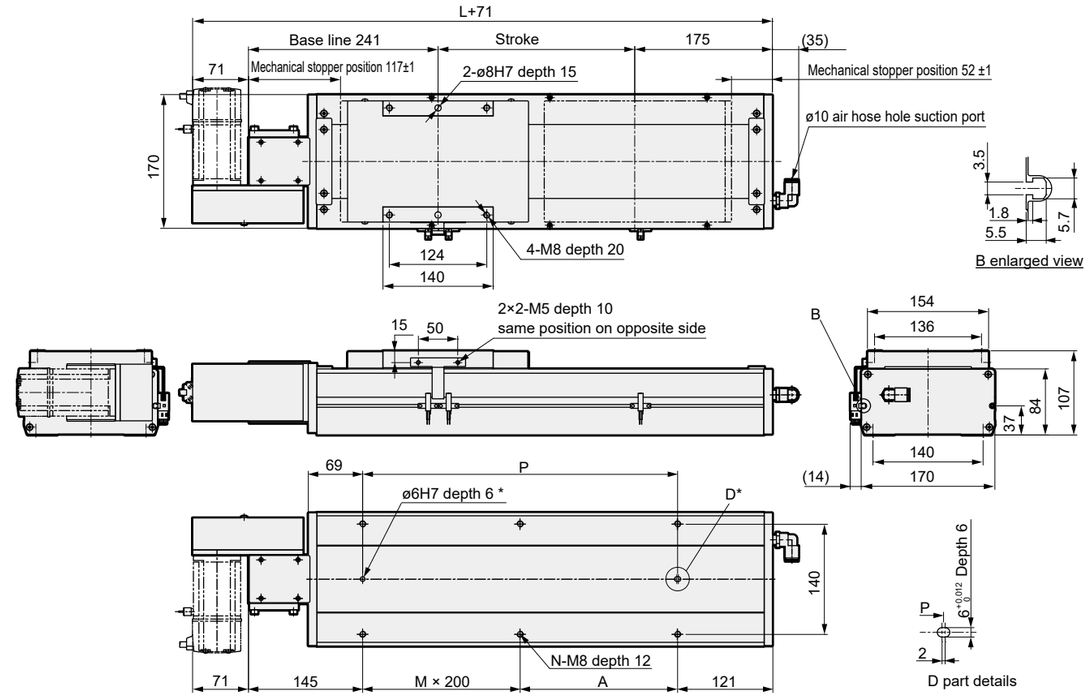
Allowable Overhang Length

* Refer to P. 358 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● ECV-17-□□□□□-R

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6

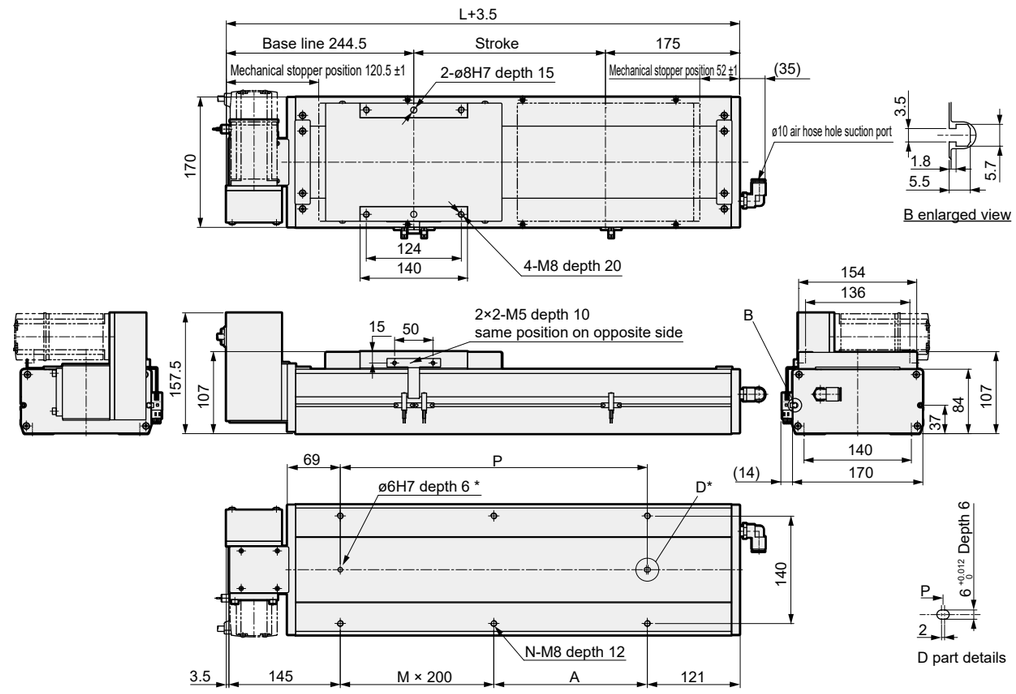
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

* For motor mounting dimensions and list of accessories, please refer to P. 347.

External Dimension Drawing: Top Right Fold-back Motor Mounting

● ECV-17-□□□□□-S

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6

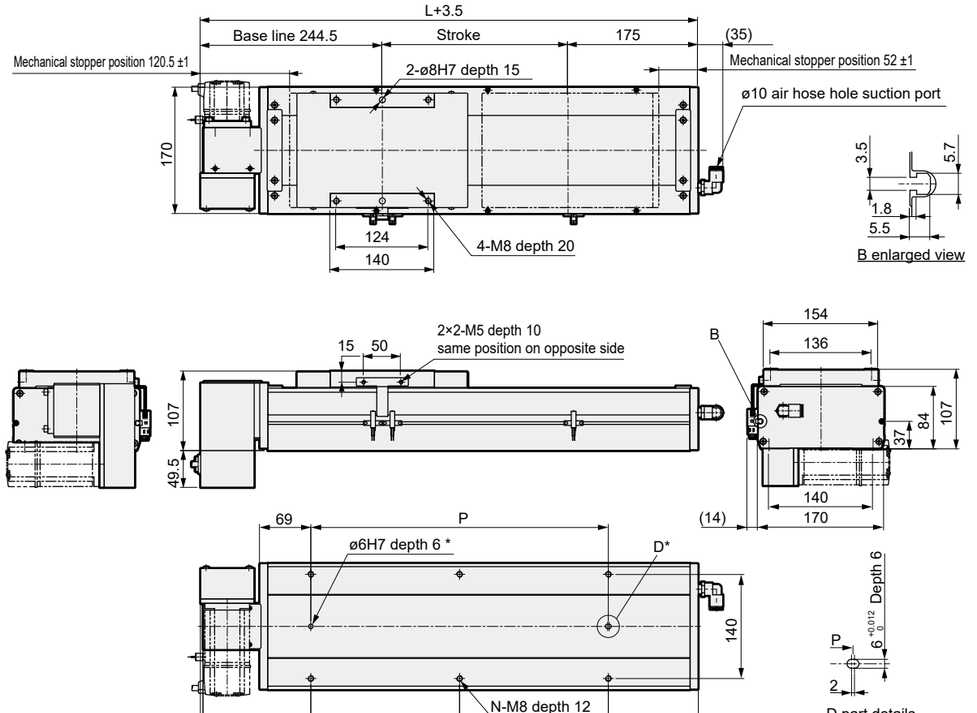
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

* For motor mounting dimensions and list of accessories, please refer to P. 347.

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

● ECV-17-□□□□□-T

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6

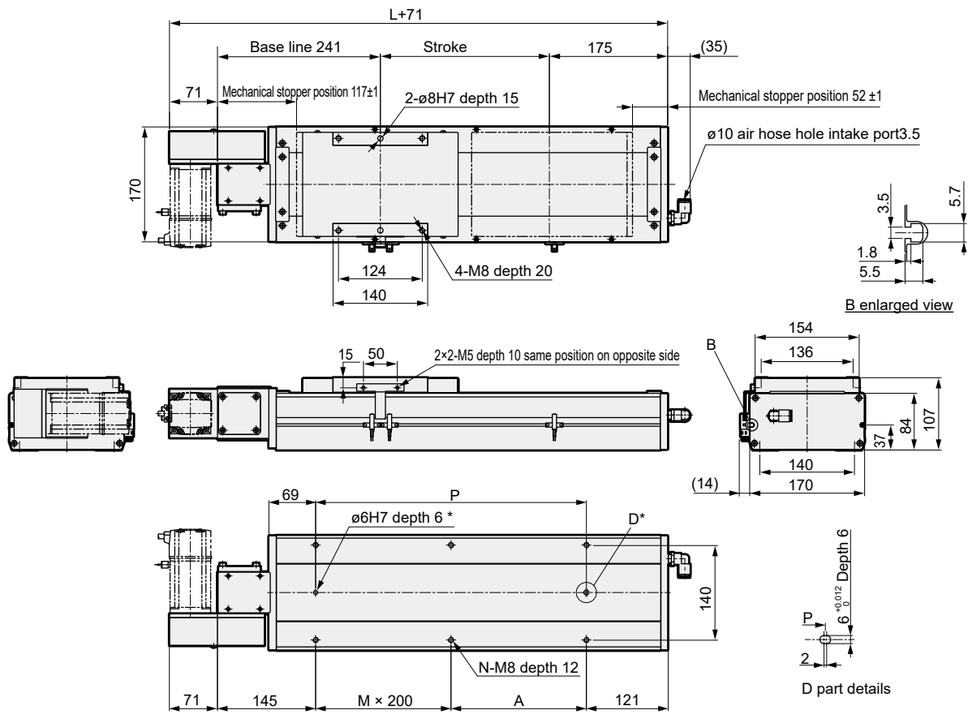
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

* For motor mounting dimensions and list of accessories, please refer to P. 347.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ECV-17-□□□□□-L

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6

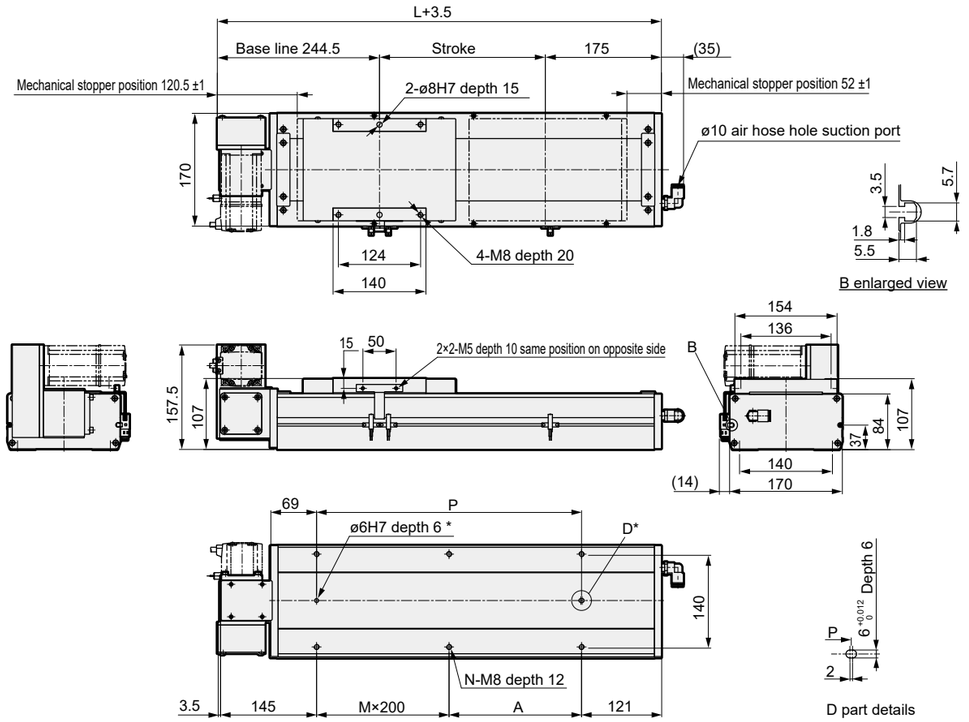
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

* For motor mounting dimensions and list of accessories, please refer to P. 347.

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ECV-17-□□□□□-V

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6

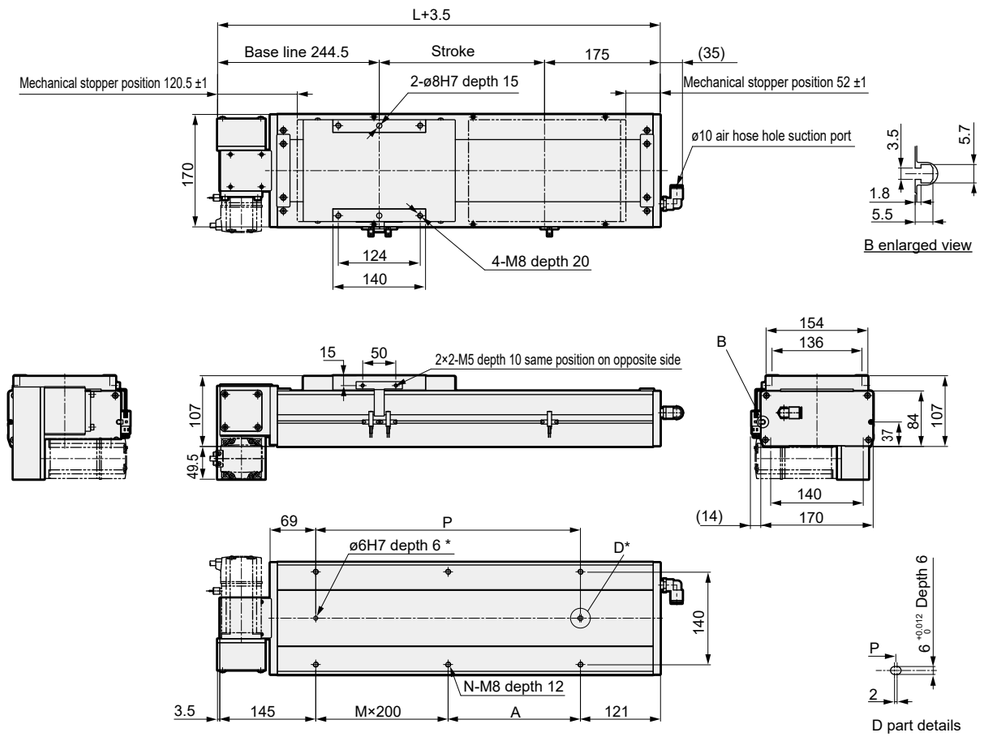
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

* For motor mounting dimensions and list of accessories, please refer to P. 347.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

● ECV-17-□□□□□-W

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	516	566	616	666	716	766	816	866	916	966	1016	1066	1116	1166	1216	1266	1316	1366	1416	1466	1516	1566	1616
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6
N	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16
P	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350
Weight (kg)	15.0	16.8	17.6	18.4	19.1	19.9	20.7	21.5	22.2	23.0	23.8	24.6	25.3	26.1	26.9	27.7	28.4	29.2	30.0	30.8	31.6	32.4	33.2

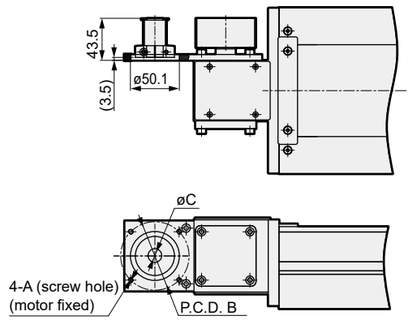
Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1666	1716	1766	1816	1866	1916	1966	2016	2066	2116	2166	2216	2266	2316	2366	2416	2466	2516	2566	2616	2666	2716	2766
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	6	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12
N	16	18	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28
P	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500
Weight (kg)	34.0	34.8	35.6	36.4	37.2	38.0	38.8	39.6	40.4	41.2	42.0	42.8	43.6	44.4	45.2	46.0	46.8	47.6	48.4	49.2	50.0	50.8	51.6

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500
L	2816	2866	2916	2966	3016	3066	3116	3166	3216	3266	3316	3366	3416	3466	3516	3566	3616	3666	3716	3766	3816	3866	3916
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	12	12	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	28	28	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	52.4	53.2	54.0	54.8	55.6	56.4	57.2	58.0	58.8	59.6	60.4	61.2	62.0	62.8	63.6	64.4	65.2	66.0	66.8	67.6	68.4	69.2	70.0

* For motor mounting dimensions and list of accessories, please refer to P. 347.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	400 W	M5	ø70	ø14	4-M5 x L12
Y	400 W	M5	ø70	ø14	4-M5 x L12
P	400 W	M4	ø70	ø14	4-M4 x L12
F	400 W	M5	ø70	ø14	4-M5 x L12

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Capacity	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Attached Shipment	400 W	M5	4
Y				M5	4
P				M4	4
F				M5	4

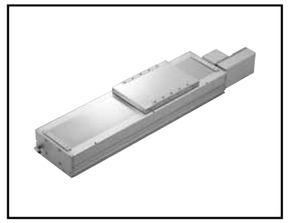
* For fittings, refer to P. 364 for details.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

MEMO



Electric Actuator Belt Type

ECV-22 Series

Motor Fold-back Mounting Type

● Servo Motor Capacity : 750 W

Model No. Notation Method

ECV - 22 - 40 - 010 - R M 8 X N N N N

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

22	Body width 220 mm

❷ Lead Equivalent

40	40 mm

❸ Stroke

010 to 340	100 mm (every 50 mm) 3400 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
S	Top Right Fold-back Mounting
T	Bottom Right Fold-back Mounting
L	Left Side Fold-back Mounting
V	Top Left Fold-back Mounting
W	Bottom Left Fold-back Mounting

❺ Mounting Motor Specifications

M Y P F	Select the mounting motor specification from the table below.

❻ Motor Capacity

8	750 W

❼ Drive Belt Type

X	Standard (rubber)
L	Low Particle Emission (Urethane)

❽ Origin sensor (1 pc) *1, *2, *3

N	None
C	Outside, motor side
D	Outside, opposite motor side

❾ Limit sensor (2 pcs) *1, *2, *3

N	None
B	Outside

❿ Grease nipple *3, *4, *5

N	None (Body mounting direction: Bottom side)
R	Right direction
L	Left direction

⓫ Positioning pin hole

N	None
P	Yes

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 The customer can adjust the sensor position. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.
*5 If "R", "S", or "T" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple.
If "L", "V", or "W" is selected, "L" cannot be selected for the grease nipple.

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	-
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	F
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 331 for motor model No.

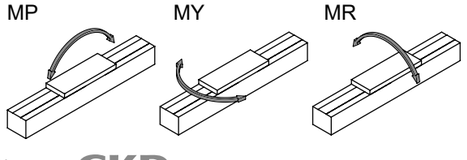
Specifications

Applicable Motor Capacity		750 W Servo Motor
Drive Method		Belt width 50 mm
Stroke	mm	100 to 3400
Lead equivalent	mm	40
Max. Payload *1	Horizontal kg	85
	Vertical kg	-
Max. Speed	mm/s	2000
Rated thrust *1	N	367
Repeatability	mm	±0.04
Lost motion		0.1 mm or less
Dynamic allowable load	N	14174.2
Static Allowable Moment	N·m	MP : 2052 MY : 2052 MR : 1810
Dynamic allowable moment	N·m	MP : 1098.5 MY : 1098.5 MR : 999.3
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)
Atmosphere		No corrosive gas, explosive gas, or dust

*1 Rated thrust and maximum payload are guideline values, assuming that the motor mounted will output the rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Lead Equivalent \ Stroke	100 to 3400
40	2000

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

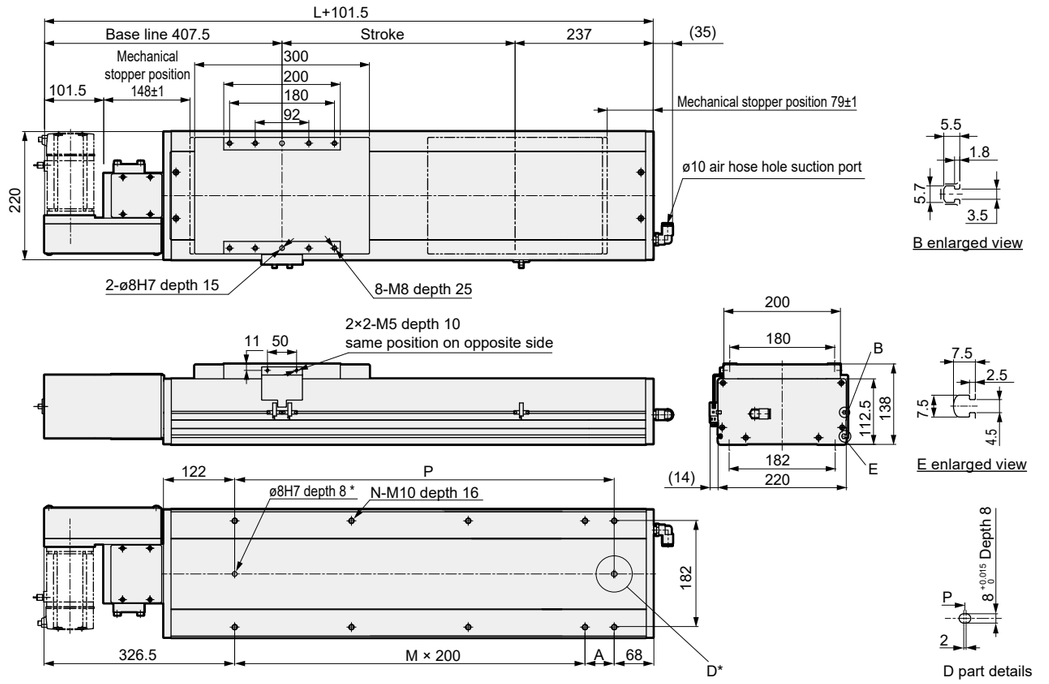
Allowable Overhang Length

* Refer to P. 358 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● ECV-22-□□□□□-R

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0

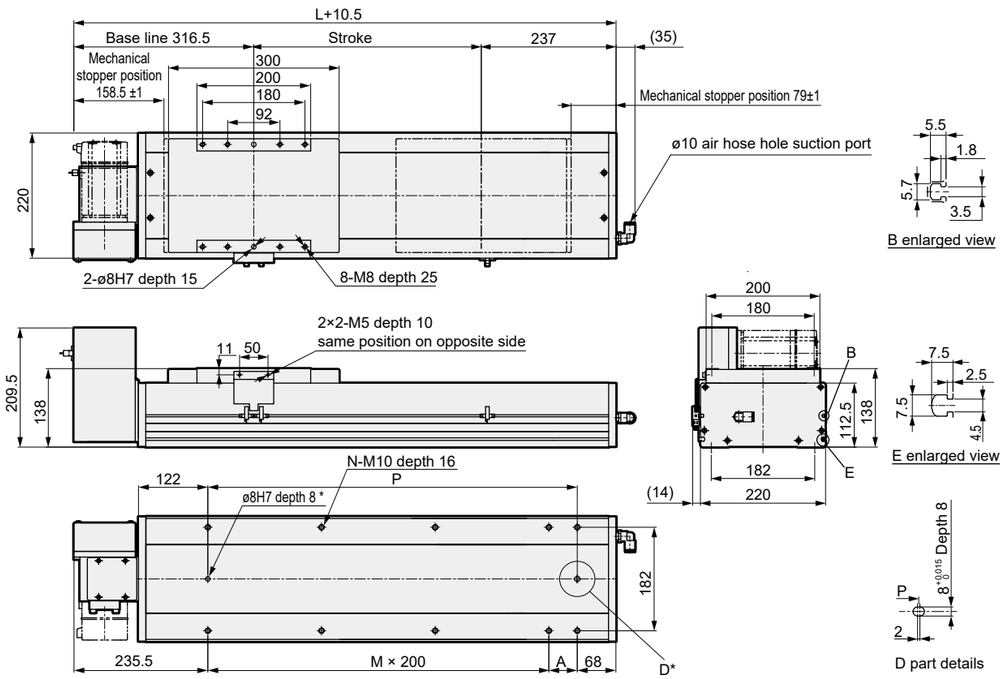
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	36	38	38	38	40
P	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2

* For motor mounting dimensions and list of accessories, please refer to P. 355.

External Dimension Drawing: Top Right Fold-back Motor Mounting

● ECV-22-□□□□□-S

● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0

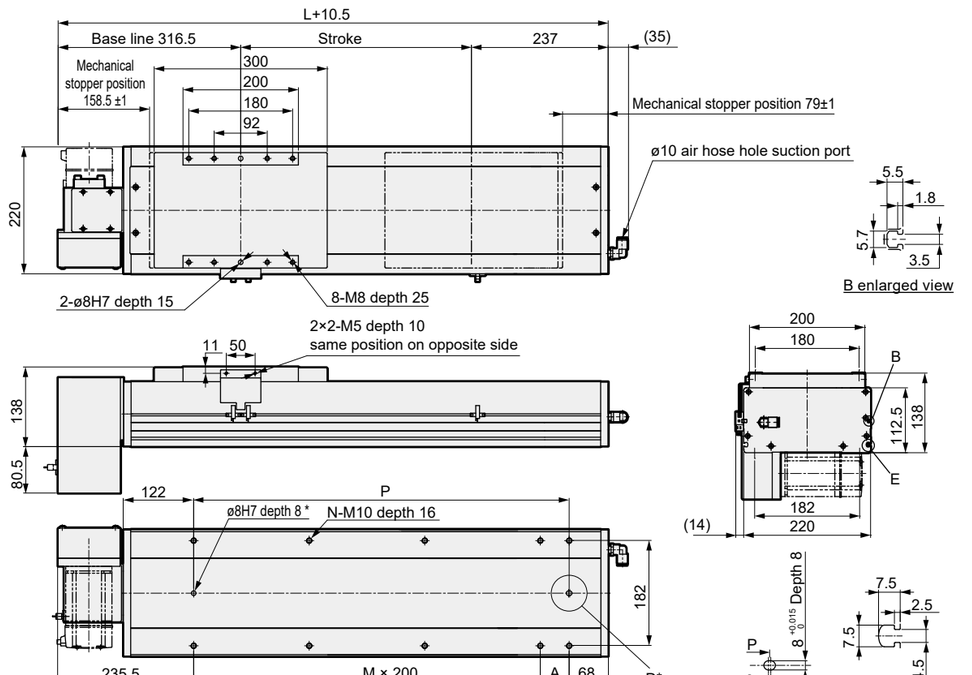
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3543	3643	3693	3743	3793	3843	3893	3943
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2

* For motor mounting dimensions and list of accessories, please refer to P. 355.

External Dimension Drawing: Bottom Right Fold-back Motor Mounting

● ECV-22-□□□□□-T

● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0

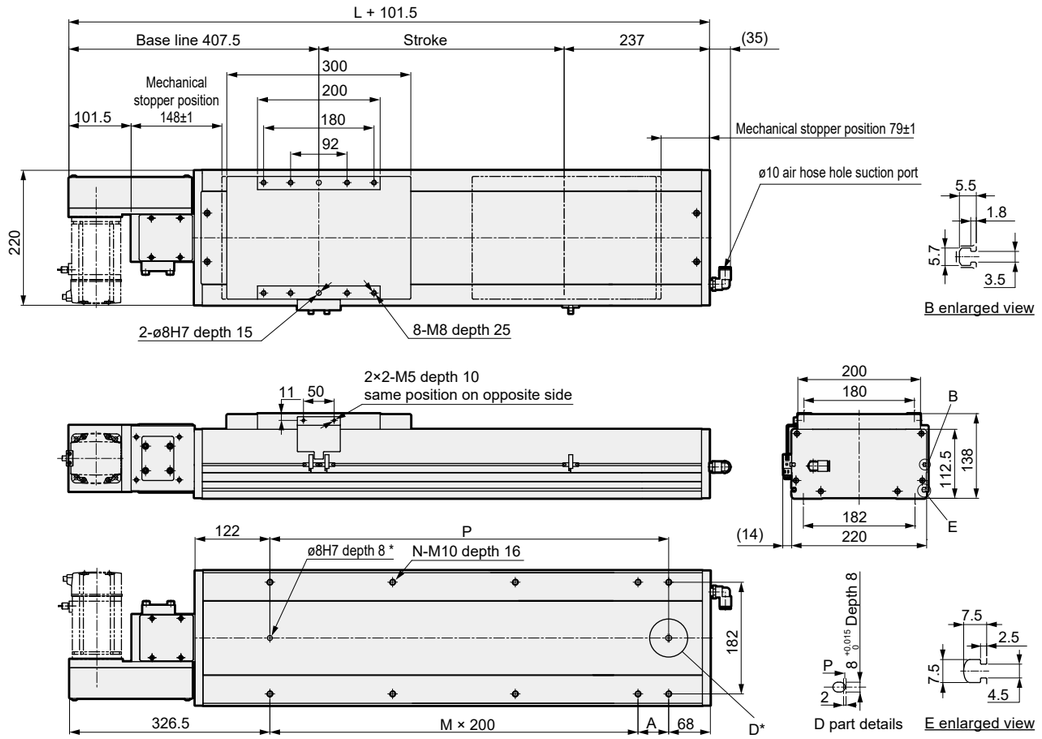
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2

* For motor mounting dimensions and list of accessories, please refer to P. 355.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ECV-22-□□□□□-L

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0

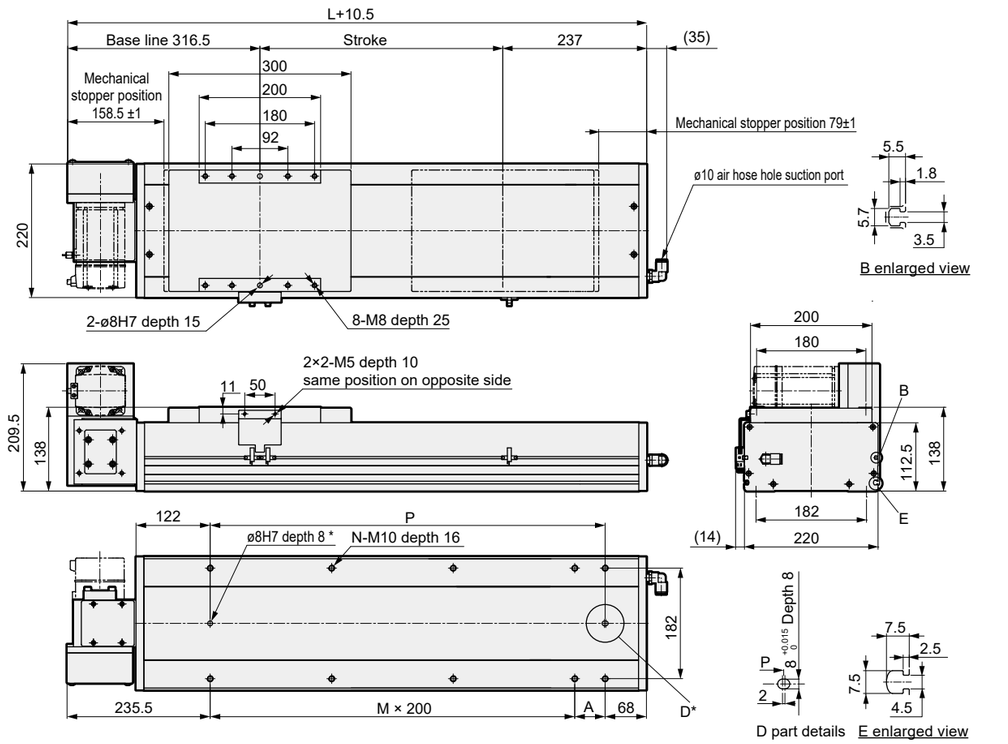
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2

* For motor mounting dimensions and list of accessories, please refer to P. 355.

External Dimension Drawing: Top Left Fold-back Motor Mounting

● ECV-22-□□□□□-V

● Refer to P. 362 for grease nipple dimensions.



* positioning pin hole (option)

Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4

Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0

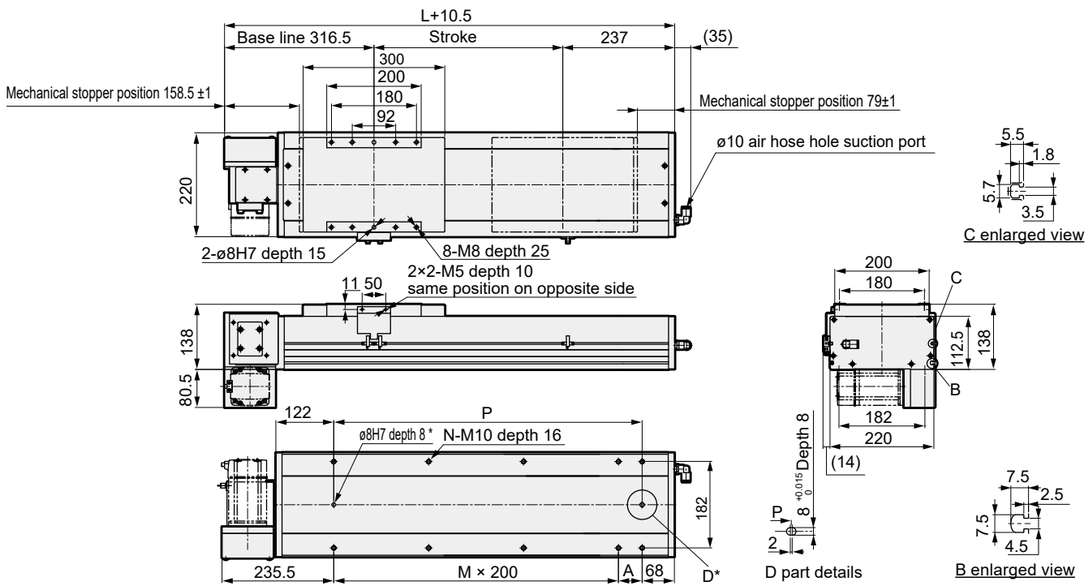
Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2

* For motor mounting dimensions and list of accessories, please refer to P. 355.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

● ECV-22-□□□□□-W

● Refer to P. 362 for grease nipple dimensions.



Stroke (mm)	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	643	693	743	793	843	893	943	993	1043	1093	1143	1193	1243	1293	1343	1393	1443	1493	1543	1593	1643	1693	1743
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	7
N	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14	16	16	16	16	18
P	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200	1250	1300	1350	1400	1450
Weight (kg)	33.0	34.2	35.4	36.6	37.8	39.0	40.2	41.4	42.6	43.8	45.0	46.2	47.4	48.6	49.8	51.0	52.2	53.4	54.6	55.8	57.0	58.2	59.4

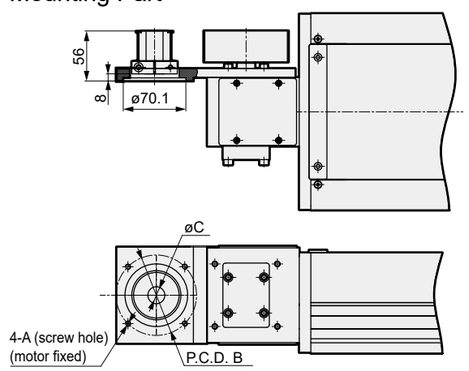
Stroke (mm)	1250	1300	1350	1400	1450	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350
L	1793	1843	1893	1943	1993	2043	2093	2143	2193	2243	2293	2343	2393	2443	2493	2543	2593	2643	2693	2743	2793	2843	2893
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12
N	18	18	18	20	20	20	20	22	22	22	22	24	24	24	24	26	26	26	26	28	28	28	28
P	1500	1550	1600	1650	1700	1750	1800	1850	1900	1950	2000	2050	2100	2150	2200	2250	2300	2350	2400	2450	2500	2550	2600
Weight (kg)	60.6	61.8	63.0	64.2	65.4	66.6	67.8	69.0	70.2	71.4	72.6	73.8	75.0	76.2	77.4	78.6	79.8	81.0	82.2	83.4	84.6	85.8	87.0

Stroke (mm)	2400	2450	2500	2550	2600	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400
L	2943	2993	3043	3093	3143	3193	3243	3293	3343	3393	3443	3493	3543	3593	3643	3693	3743	3793	3843	3893	3943
A	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50
M	13	13	13	13	14	14	14	14	15	15	15	15	16	16	16	16	17	17	17	17	18
N	30	30	30	30	32	32	32	32	34	34	34	34	36	36	36	36	38	38	38	38	40
P	2650	2700	2750	2800	2850	2900	2950	3,000	3050	3100	3150	3200	3250	3300	3350	3400	3450	3500	3550	3600	3650
Weight (kg)	88.2	89.4	90.6	91.8	93.0	94.2	95.4	96.6	97.8	99.0	100.2	101.4	102.6	103.8	105.0	106.2	107.4	108.6	109.8	111.0	112.2

* For motor mounting dimensions and list of accessories, please refer to P. 355.

External Dimension Drawing: Bottom Left Fold-back Motor Mounting

Motor Mounting Part



Mounting Motor Specification		A	B	C	Motor mounting bolts
M	750 W	M6	ø90	ø19	4-M6 x L20
Y	750 W	M6	ø90	ø19	4-M6 x L20
P	750 W	M5	ø90	ø19	4-M5 x L20
F	750 W	M6	ø100	ø14	4-M6 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor shape	Motor mounting bolts	
				Size	Quantity
M	Shipped included	Attached Shipment	750 W	M6	4
Y				M6	4
P				M5	4
F				M6	4

* For fittings, refer to P. 364 for details.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 360.

MEMO

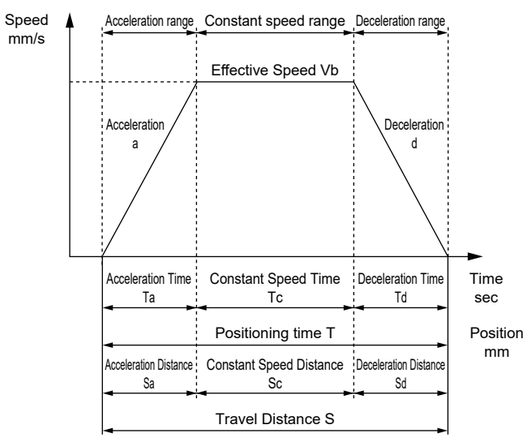
Model Selection

STEP-1 Confirmation of Payload

Payload varies depending on the mounting orientation and screw lead.
Select the size and lead by referring to the selection table (P. 328) and the specification table for each model.

STEP-2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time.
Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s^2	
	Set Deceleration	d	mm/s^2	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	= {2 x a x d x S / (a + d)} $^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb/a [0.4 sec or more]
	Deceleration Time	Td	s	= Vb/d [0.4 sec or more]
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	= (a x Ta^2)/2
	Deceleration Distance	Sd	mm	= (d x Td^2)/2
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* The setting of acceleration/deceleration by acceleration/deceleration time varies depending on the set speed and stroke.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Please use an acceleration/deceleration time of 0.4 sec or more.

*1 G ≈ 9.8 m/s².

STEP-3 Confirmation of Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 358, P. 359).

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

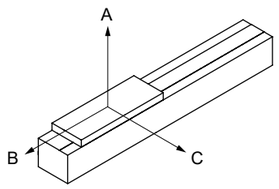
[For confirmation via iPad or smartphone]

* May not display correctly depending on the smartphone's usage environment.

MEMO

Allowable Overhang Length (ECV Series)

[Horizontal Installation]



[Allowable Overhang Length]

● ECV-14

Motor Mounting	Acceleration/ deceleration time sec	Screw Lead Equivalent	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	1800	700	550
			20	880	330	260
			25	700	260	200

● ECV-17

Motor Mounting	Acceleration/ deceleration time sec	Screw Lead Equivalent	Payload kg	Overhang mm		
				A	B	C
Fold-back	40	10	10	3,000	1250	1150
			20	1600	600	550
			30	1050	400	360
			45	650	250	230

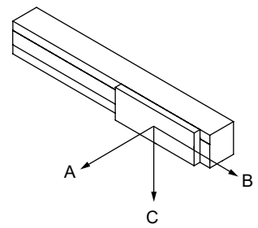
● ECV-22

Motor Mounting	Acceleration/ deceleration time sec	Screw Lead Equivalent	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	45	1700	650	470
			65	1150	420	310
			85	850	310	225

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

Allowable Overhang Length (ECV Series)

[When Wall-Mounted]



[Allowable Overhang Length]

● ECV-14

Motor Mounting	Acceleration/ deceleration time sec	Screw Lead Equivalent	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	540	690	1800
			20	260	330	860
			25	200	255	680

● ECV-17

Motor Mounting	Acceleration/ deceleration time sec	Screw Lead Equivalent	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	10	1150	1250	2700
			20	550	600	1550
			30	350	390	1000
			45	220	230	630

● ECV-22

Motor Mounting	Acceleration/ deceleration time sec	Screw Lead Equivalent	Payload kg	Overhang mm		
				A	B	C
Fold-back	0.4	40	45	480	650	1700
			65	320	430	1150
			85	230	320	850

* For ceiling-mounted use, please select 1/3 of the max. payload, static allowable moment, dynamic allowable load, dynamic allowable moment, and overhang length. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

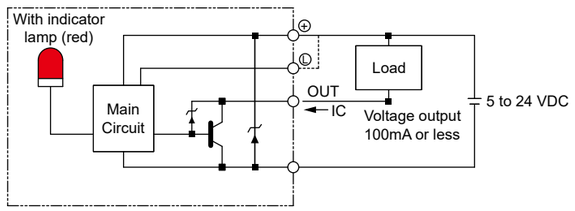
Sensor Specifications

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

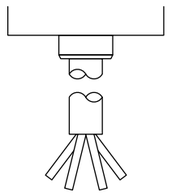
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared emitting diode (940 nm)
Indicator Light	Lights up when light is received (red)
Power Supply Voltage	5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption	35 mA or less (NPN type)
Control output	NPN type: NPN open collector output 5 to 24 VDC 100 mA or less Off-state current 0.5 mA or less, residual voltage 0.8 V or less (at load current 100 mA) Residual voltage: 0.4 V or less (with 40 mA load current)
Ambient illuminance	Illuminance at Light-Receiving Surface: Fluorescent Lamp : 1000 lx or less
Ambient Temperature	Operating : -25 to +55°C Storage : -30 to +80°C (however, no freezing or condensation)
Ambient Humidity	Operating : 5 to 85%RH Storage : 5 to 95%RH (however, no freezing or condensation)
Enclosure	IP50 IEC60529 standard
Cord length	2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Sensor Dog External Dimension Drawing

	Motor Mounting Direction
Body Size	R / S / T / L / V / W
ECV-14	Fig. 1
ECV-17	Fig. 1
ECV-22	Fig. 2

Fig. 1

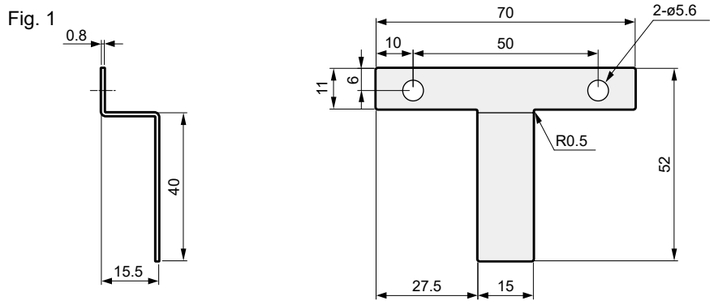
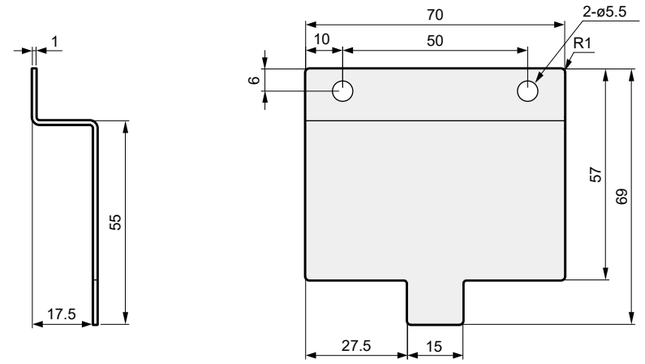


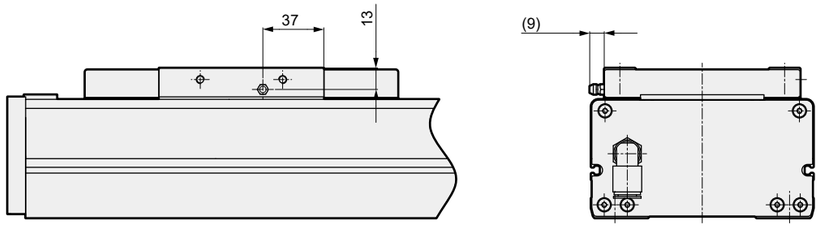
Fig. 2



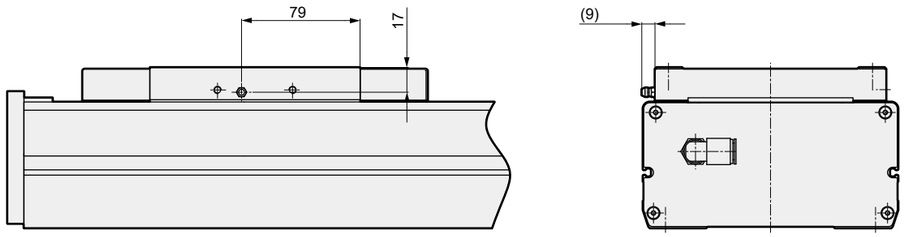
Grease Nipple Dimension Drawing

* Symmetrical with respect to the actuator.

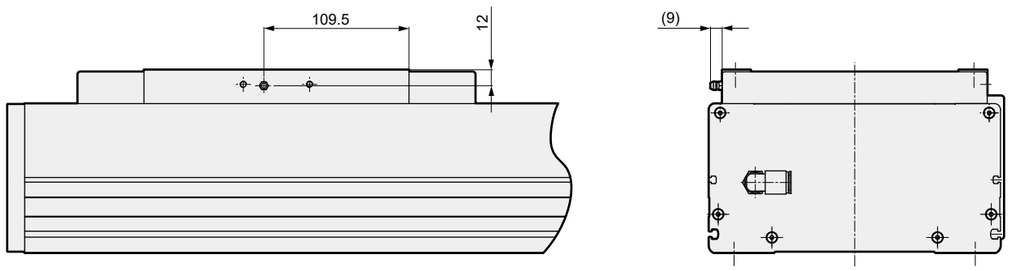
● ECV-14



● ECV-17



● ECV-22



MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

List of Accessories

Basic Type

Motor Mounting Bolts (Common for all motor mounting directions)

Model No.	Mounting Motor Specification	Motor Capacity	Size	Quantity
ECV-14	M	200 W	M5	4 pcs.
	Y		M5	4 pcs.
	P		M4	4 pcs.
	F		M5	4 pcs.
ECV-17	M	400 W	M5	4 pcs.
	Y		M5	4 pcs.
	P		M4	4 pcs.
	F		M5	4 pcs.
ECV-22	M	750 W	M6	4 pcs.
	Y		M6	4 pcs.
	P		M5	4 pcs.
	F		M6	4 pcs.

By Motor Mounting Direction

Attached Part Name	Attached quantity
Timing Belt	1 pc.
Pulley	1 pc

When home/limit sensor is selected

Sensor mounting direction	Shipment Form	Quantity
Outer sensor	Shipped included *1	3 pcs. *2

*1 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None". The sensor rail (ECV-10) is shipped as "None".
*2 Sensor mounting screws are also attached.

Fitting for Suction Port

Model No.	Fitting Model Number	Shipment Form	Quantity
ECV-14 to ECV-22	GWL10-8	Shipped included	1 pc.

Maintenance Parts

● Maintenance Parts Set

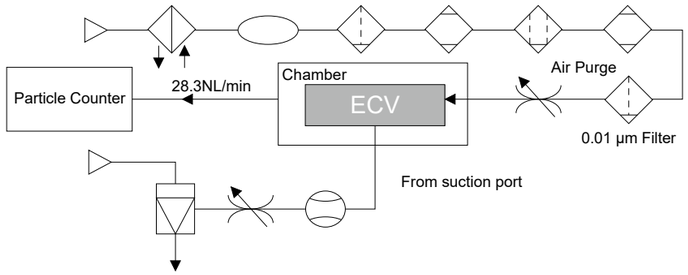
Model Number	Applicable Models	Component Parts			
		①	②	③	④
		Timing Belt	Pulley	Sensor Dog	Roller unit
ECV-08 JP002-0022	ECV-14	○ (1 pc.)	○ (3 pcs.)	○ (1 pc.)	○ (4 pcs.)
ECV-08 JP002-0023	ECV-17	○ (1 pc.)	○ (1 pc.)	○ (1 pc.)	○ (4 pcs.)
ECV-08 JP002-0020	ECV-22	○ (2 pcs.)	○ (2 pcs.)	○ (1 pc.)	○ (6 pcs.)

● Maintenance parts (external mounted sensor)

Model Number	Applicable Models	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

Particle Emission Characteristics Reference Data

Test Circuit



Measurement Method

① Test sample set in acrylic resin chamber.

② Clean air supplied in the same quantity as the particle counter intake rate (28.3 NL/min).

③ Set in a clean bench of ISO Class 4 (Class 10) within the chamber.

④ Test sample activated, particle concentration change over time measured up to required measurement time.

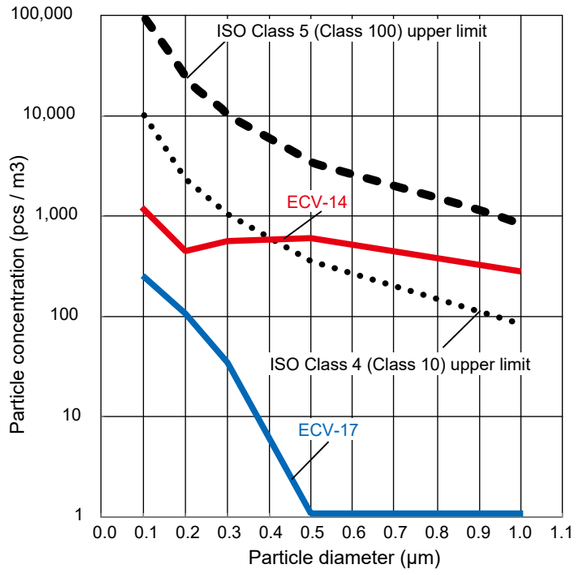
⑤ Test sample operating speed

Measurement Conditions

Item		Content
Test Sample	Model No.	For ECV-14-40040, operating speed 800 mm/sec
		For ECV-17-40040, operating speed 800 mm/sec
	Acceleration/Deceleration Time	0.4 sec
	Air Suction Volume	60.0 NL/min for ECV-14-40040
		80.0 NL/min for ECV-17-40040
Chamber	Internal Volume	28.3 NL
Particle Counter	Name	Laser dust monitor
	Minimum measurable particle size	0.1 μm
	Suction Volume	28.3 NL/min
Setting Conditions	Sampling	10 min
	Interval	40 min
	Measurement Time	50 h

Particle Emission Data

Data is measured under the above conditions and is not guaranteed.



To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Individual Precautions: Electric Actuator ECV Series

During Design and Selection

Danger

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

■ Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.

■ When mounting the product, be sure to securely hold and fix it (including the workpiece).
There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
● If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
● Use in such environments can cause damage and malfunction.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature : -10 °C to 50 °C, Storage humidity : 35 % to 80 %, Operating Temperature : 0 °C to 40 °C, Operating humidity : 35 % to 80 %)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Consider the possibility of power source failure.
● In case of breakdown in the power source, take countermeasures without causing trouble or damage to the operator or equipment.

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

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Clearly state the maintenance conditions in the equipment's instruction manual.
● The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ Regarding installing, setting up, adjusting and maintaining the product, read through the instruction manual and operate correctly.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

■ Do not pressurize from the suction port. Lubricating grease may scatter, potentially reducing product life.

■ The required air intake amount differs depending on the model. Please use the required air suction volume for your model.

ECV-14	ECV-17	ECV-22
60 NL/min or less	80 NL/min or less	100 NL/min or less

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

ECVModel Selection Check Sheet → **CKD** (Contact)

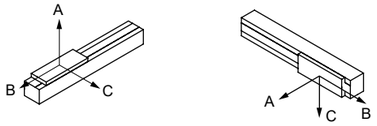
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	ECV-	
Basic Specifications	Max. Stroke : mm, Ball screw lead : mm	
Operating Conditions	Moving stroke : mm, travel time : s	
	Set Speed : mm/s	
	Set acceleration/deceleration : mm/s² (set acceleration/deceleration time : s)	
	Repeatability : ± mm	
Load Conditions	Slider Type	
	Load weight : kg	
	Mounting Orientation : Horizontal/Wall-mounted/Ceiling-mounted/Other  	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacture : , Model No. :	
	Motor capacity, size:	
Special Notes		

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Actuator Servo Motor Compatible Motorless Specification

EKS-L□

Slider Type (Ball Screw Drive)

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Slider type (ball screw drive)
Servo motor compatible

EKS-L Series

For High Cycle Time Transport

Line-up	Body Size / Motor capacity	04 50 W	04 100 W	05 100 W	06 200 W	08 400 W	10 750 W	Catalog page
EKS-L		●	●	●	●	●	●	374
Compatible with rechargeable battery manufacturing processes — EKS-L-P4		●	●	●	●	●	●	CC-1226AA
Supports food manufacturing processes — EKS-L-FP1		●	●	●	●	●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

Servo Motor

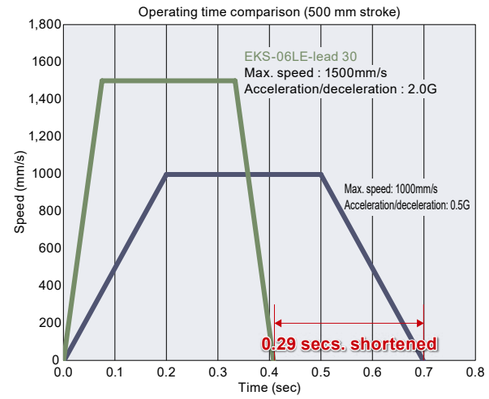
Mitsubishi Electric Corporation / Delta Electronics Co., Ltd. / Sanyo Denki Co., Ltd. / Mitsubishi Electric Corporation / Keyence Corporation / Panasonic Corporation / OMRON Corporation / Fuji Electric Corporation / FANUC CORPORATION / Bosch Rexroth AG / Rockwell Automation, Inc. / SIEMENS AG

Contributes to cycle time reduction

High versatility / Productivity improved

By making the ball screw diameter thicker than conventional models, we have pursued even higher cycle times and higher speeds. Supports acceleration/deceleration of 2 G.

* Supports up to 4 G acceleration/deceleration depending on conditions.



Compact, high-rigidity body

High rigidity / Space saving / Reduced design hours / Reduced number of parts / Reduced man-hours

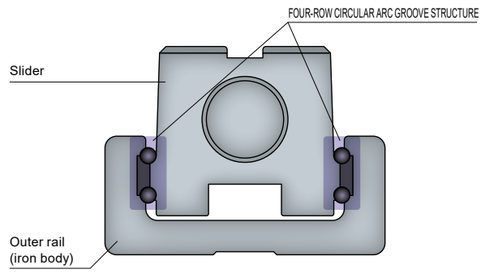
An iron body and U-shaped outer rail guide have been adopted. This actuator has an iron body that is strong against loads and moments, and a structure that is also strong against moments generated by high cycle times. Achieves a running life of 20,000 km.

* Depending on some specifications, the running life will be 10,000 km.

Actuator structure that achieves a long life

Adopts a 4-row circular arc groove guide structure. Suppresses wear due to friction and contributes to longer product life.

Running Life 20,000 km



Contributes to the reduction of support guides

A high-rigidity body that can handle large overhangs and moments caused by high cycle times.

System Table

Slider Type

Type	Model No.		Applicable Motor Capacity (W)	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) *1 Horizontal	Wall-mounted	Vertical	Stroke (mm) and Max. Speed (mm/s) *2	Listed Page
Slider Type		EKS-04 L□-10	50 100	43	10	19	10.5	8.5	100 mm: 500 mm/s; 200: 500 mm/s; *3 300: 500 mm/s (0.63 sec); 400: 500 mm/s; 500: 500 mm/s; *3 600: 440 (1.39 sec); 700: 340; 800: 260; *3 900: 210 (4.30 sec); 1000–1700: —	378
		EKS-04 L□-16			16	14	8	7	100 mm: 800; 200: 800; *3 300: 800 (0.42 sec); 400: 800; 500: 800; *3 600: 710 (0.88 sec); 700: 540; 800: 420; *3 900: 340 (2.66 sec); 1000–1700: —	
		EKS-05 L□-10	100	53	10	26	19	12.5	100 mm: 500; 200: 500; *3 300: 500 (0.63 sec); 400: 500; 500: 500; *3 600: 390 (1.23 sec); 700: 390; 800: 310; *3 900: 250 (3.61 sec); 1000–1700: —	386
		EKS-05 L□-20			20	7.5	7.5	6	100 mm: 1000; 200: 1000; *3 300: 1000 (0.35 sec); 400: 1000; 500: 1000; *3 600: 780 (0.65 sec); 700: 780; 800: 620; *3 900: 500 (1.83 sec); 1000–1700: —	
		EKS-06 L□-20	200	64	20	42	20	12	100 mm: 1000; 200: 1000; *3 300: 1000 (0.35 sec); 400: 1000; 500: 1000; *3 600: 980 (0.65 sec); 700: 980; 800: 770; *3 900: 630 (1.46 sec); 1000: 520; 1100: 430; *3 1200: 370; *3 1300: 320 (4.08 sec); 1400–1700: —	394
		EKS-06 L□-30			30	20.5	18	7.5	100 mm: 1500; 200: 1500; *3 300: 1500 (0.28 sec); 400: 1500; 500: 1500; *3 600: 1480 (0.48 sec); 700: 1480; 800: 1160; *3 900: 940 (1.01 sec); 1000: 780; 1100: 650; *3 1200: 550; *3 1300: 480 (2.73 sec); 1400–1700: —	
		EKS-08 L□-20	400	84	20	83.5	45	23.5	100 mm: 1000; 200: 1000; *3 300: 1000 (0.35 sec); 400: 1000; 500: 1000; *3 600: 980 (0.65 sec); 700: 980; 800: 800; *3 900: 670 (1.17 sec); 1000: 560; 1100: 480; *3 1200: 420 (2.52 sec); 1300: 360; 1400: 320 (4.70 sec); 1500–1700: —	402
		EKS-08 L□-40			40	19	19	10.5	100 mm: 2000; 200: 2000; *3 300: 2000 (0.25 sec); 400: 2000; 500: 2000; *3 600: 1970 (0.40 sec); 700: 1970; 800: 1610; *3 900: 1340 (0.64 sec); 1000: 1130; 1100: 970; *3 1200: 840 (1.29 sec); 1300: 730; 1400: 650 (2.34 sec); 1500–1700: —	
		EKS-10 L□-25	750	104	25	118.5	76	33.5	100 mm: 1250; 200: 1250; *3 300: 1250 (0.30 sec); 400: 1250; 500: 1250; *3 600: 1250 (0.54 sec); 700: 1250; 800: 1250; *3 900: 1250 (0.78 sec); 1000: 1050; 1100: 890; *3 1200: 760 (1.62 sec); 1300: 660; 1400: 580; 1500: 510 (2.97 sec); 1600–1700: —	410
		EKS-10 L□-50			50	40	40	14.5	100 mm: 2500; 200: 2500; *3 300: 2500 (0.25 sec); 400: 2500; 500: 2500; *3 600: 2500 (0.40 sec); 700: 2500; 800: 2500; *3 900: 2500 (0.55 sec); 1000: 2110; 1100: 1790; *3 1200: 1530 (0.86 sec); 1300: 1330; 1400: 1160; 1500: 1030 (1.51 sec); 1600–1700: —	

*1 The maximum payload is the value at an acceleration/deceleration of 0.5 G with straight motor mounting. For details, please refer to the specifications of each model and the payload by acceleration/deceleration table on P. 426 and P. 427.
*2 The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*3 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration / deceleration.
Please note that this is not the value at max. payload.

Model Number Configuration

Model No. Notation Method

EKS - 04 L E - 10 0300 N NN - M 1 N C B

❶ Body Size

04	Body Width 43 mm
05	Body Width 53 mm
06	Body Width 64 mm
08	Body Width 84 mm
10	Body Width 104 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

10	10 mm
16	16 mm
20	20 mm
25	25 mm
30	30 mm
40	40 mm
50	50 mm

❺ Stroke

0100 to 1500	100 mm (in 100 mm increments) 1500 mm

❻ Mounting Motor Specifications

M Y P	Refer to the list on the page at right

❼ Motor Capacity

H	50 W
1	100 W
2	200 W
4	400 W
8	750 W

❽ Motor Shaft Fixing Method *1, *2, *3

N	When straight mounting
D	Flat
K	Key
M	Friction coupling

❾ Origin sensor

N	None
C	Yes

❿ Limit sensor

N	None
B	Yes

*1 For all body sizes with straight mounting, please select "For Straight Mounting".
*2 For EBS-04, 05, and 06 fold-back mounting only, please select either "Flat" or "Key".
*3 For EBS-06, 08, and 10 fold-back mounting only, please select "Friction Coupling".

Model Number Display Example

EKS-04 LE-100300 NNN-M1 NCB

❶ Body Size : 04 Series
❷ Motor : None
❸ Motor Mounting Direction : Straight Mounting
❹ Screw lead : 10 mm
❺ Stroke : 300 mm
❻ Mounting motor specification : M (Please refer to the table on the right page.)
❼ Motor Capacity : 100 W
❽ Motor shaft fixing method : When straight mounting
❾ Origin sensor : Yes
❿ Limit sensor : Yes

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	10	0100 to 0900 (100 mm to 900 mm)
	16	
05	10	0100 to 0900 (100 mm to 900 mm)
	20	
06	20	0100 to 1300 (100 mm to 1300 mm)
	30	
08	20	0100 to 1500 (100 mm to 1500 mm)
	40	
10	25	0100 to 1500 (100 mm to 1500 mm)
	50	

*This product is available only for the actuator (and motor mounting part) and does not include a motor. The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Servo Motor Mounting List

Code	Manufacturer	Series	50 W (EKS-04 Series)	100 W (EKS-04/05 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR053	HG-KR13
		MELSERVO J5	HG-KT053 W	HK-KT13 W
M	Delta Electronics, Inc.	ECMA-C	ECMA-C1040 F	ECMA-C10401
M	Sanyo Denki Co., Ltd.	SANMOTION R *1	R2□A04005	R2□A04010
Y	Mitsubishi Electric Corporation	Σ-7	SGM7 J-A5	SGM7 J-01
		Σ-X	SGMXJ-A5	SGMXJ-01
Y	Keyence Corporation	SV	SV-□005	SV-□010
		SV2	SV2-□005	SV2-□010
P	Panasonic Corporation	MINAS A5	MSMD5 A	MSMD01
		MINAS A6	MSMF5 A	MSMF01
M	OMRON Corporation	G5	R88 M-K0503	R88 M-K10030
		1 S	-	R88 M-1 M10030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS500 D7-□B2□	GYS101 D7-□B2□
		ALPHA7 GYB	-	-
M	FANUC CORPORATION	βis series	βis0.2/5000	βis0.3/5000
P	Bosch Rexroth AG	MSM	MSM019 A	MSM019 B
M	Rockwell Automation, Inc.	TLP	TLP-A046-005-DKA□2	TLP-A046-010-DKA□2
M	SIEMENS AG	1 FK2 *2	1 FK2102-0 AG0	1 FK2102-1 AG0

Code	Manufacturer	Series	200 W (EKS-06 Series)	400 W (EKS-08 Series)	750 W (EKS-10 Series)
M	Mitsubishi Electric Corporation	MELSERVO J4	HG-KR23	HG-KR43	HG-KR73
		MELSERVO J5	HK-KT23 W	HK-KT43 W	HK-KT7 M3 W
M	Delta Electronics, Inc.	ECMA-C	ECMA-C10602	ECMA-C10604	ECMA-C10807
M	Sanyo Denki Co., Ltd.	SANMOTION R	R2□A06020	R2□A06040	-
Y	Mitsubishi Electric Corporation	Σ-7	SGM7 J-02	SGM7 J-04	SGM7 J-08
		Σ-X	SGMXJ-02	SGMXJ-04	SGMXJ-08
Y	Keyence Corporation	SV	SV-□020	SV-□040	SV-□075
		SV2	SV2-□020	SV2-□040	SV2-□075
P	Panasonic Corporation	MINAS A5	MSMD02	MSMD04	MSMD08
		MINAS A6	MSMF02	MSMF04	MSMF08
P	OMRON Corporation	G5	R88 M-K20030	R88 M-K40030	R88 M-K75030
		1 S	R88 M-1 M20030	R88 M-1 M40030	R88 M-1 M75030
M	Fuji Electric Co., Ltd.	ALPHA7 GYS	GYS201 D7-□B2□	GYS401 D7-□B2□	-
		ALPHA7 GYB	GYB201 D7-□B2□	GYB401 D7-□B2□	GYB751 D7-□B2□
P	Bosch Rexroth AG	MSM	MSM031 B	MSM031 C	MSM041 B
M	Rockwell Automation, Inc.	TLP	TLP-A070-020-DKA□2	TLP-A070-040-DKA□2	TLP-A090-075-DKA□2
M	SIEMENS AG	1 FK2 *2	1 FK2203-2 AG0	1 FK2203-4 AG0	1 FK2204-5 AK0

* Contact CKD for information on mounting motors other than the above and products of other motor manufacturers.
*1 Motor mounting direction return installation (R: Right D: Bottom L: Left) is not supported.
*2 The servo motor is an item subject to regulation under Item 7(8) of Appended Table 1 of the Export Trade Control Order, and also falls under the specifications. (As of January 2021)

Electric Actuator (Motorless Specification) Slider Type

EKS-04 LE

Motor Straight Mounting Type

● Servo Motor Capacity : 50 W / 100 W

Model No. Notation Method

EKS - 04 ❶ | L ❷ | E ❸ | - 10 ❹ | 0300 ❺ | NNN - M ❻ | 1 ❼ | N ❽ | C ❾ | B ❿

❶ Body Size

04	Body Width 43 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

10	10 mm
16	16 mm

❺ Stroke *1

0100 to 0900	100 mm (in 100 mm increments) 900 mm

❻ Mounting Motor Specifications

M	Select the Mounting
Y	Motor Specifications from
P	the Table on the right.

❼ Motor Capacity

H	50 W
1	100 W

❽ Motor shaft fixing method

N	When straight mounting

❾ Origin sensor *2

N	None
C	Yes

❿ Limit sensor *2

N	None
B	Yes

Manufacturer	50 W	100 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	M	M
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	M	M
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 377 for motor model No.

*1 For every 50 mm of stroke, please contact us.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

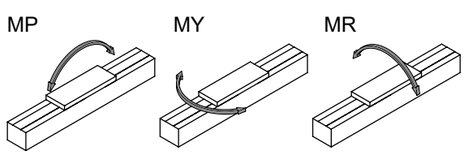
Specifications

Applicable Motor Capacity		50 W/100 W Servo Motor	
Drive Method		Ball screw ø10	
Stroke	mm	100 to 900	
Screw lead	mm	10	16
Max. Payload kg *1, *2	Horizontal	19	14
	Wall-mounted	10.5	8
	Vertical	8.5	7
Max. Speed	mm/s	500	800
Rated thrust *2	N	179	112
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	2140	
Static allowable moment	N·m	MP : 103 MY : 103 MR : 58	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 500	600	700	800	900
10	500	440	340	260	210
16	800	710	540	420	340

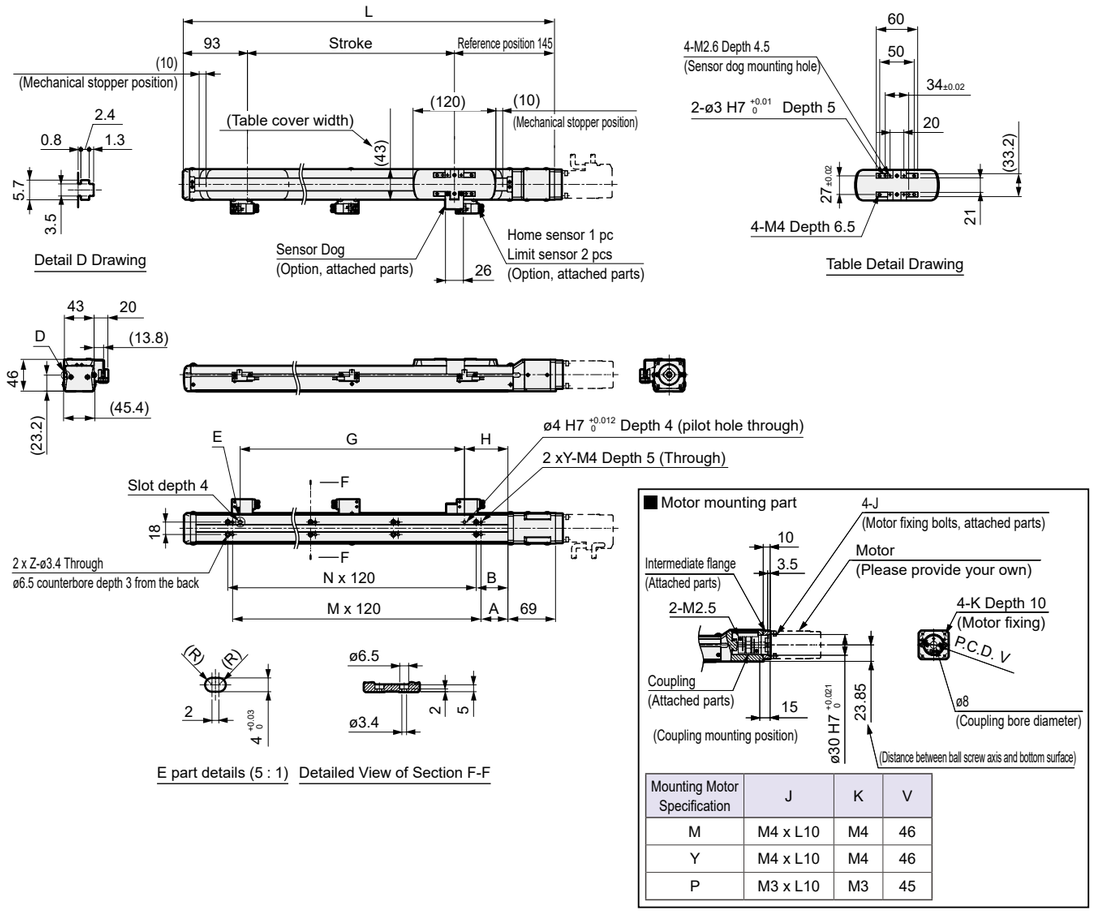
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 420 for details.

External Dimension Drawing Motor Straight Mounting

● EKS-04 LE



Mounting Motor Specification	J	K	V
M	M4 x L10	M4	46
Y	M4 x L10	M4	46
P	M3 x L10	M3	45

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	338	438	538	638	738	838	938	1038	1138
A	59	42	39	89	79	69	59	42	39
B	66	56	46	96	86	76	66	56	46
G	125	225	325	425	525	625	725	825	925
H	48	63	63	48	63	63	48	63	63
M	1	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
Y	2	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	1.7	2.1	2.5	2.9	3.2	3.6	4	4.4	4.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Intermediate flange Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Electric Actuator (Motorless Specification) Slider Type

EKS-04 L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 50 W / 100 W

Model No. Notation Method

EKS - 04 L R - 10 0300 NNN - M 1 D C B

❶ Body Size

04	Body Width 43 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

10	10 mm
16	16 mm

❺ Stroke

0100 to 0900	100 mm (in 100 mm increments) 900 mm

❻ Mounting Motor Specifications

M	Select the Mounting
Y	Motor Specifications from
P	the Table on the right.

❼ Motor Capacity

H	50 W
1	100 W

❽ Motor shaft fixing method

D	Flat
K	Key

❾ Origin sensor *2

N	None
C	Yes

❿ Limit sensor *2

N	None
B	Yes

Manufacturer	50 W	100 W
Mitsubishi Electric Corporation	M	M
Delta Electronics, Inc.	M	M
Sanyo Denki Co., Ltd.	M	M
Yaskawa Electric Corporation	Y	Y
Keyence Corporation	Y	Y
Panasonic Corporation	P	P
OMRON Corporation	M	M
Fuji Electric Co., Ltd.	M	M
FANUC CORPORATION	M	M
Bosch Rexroth AG	P	P
Rockwell Automation, Inc.	M	M
SIEMENS AG	M	M

* Refer to P. 377 for motor model No.

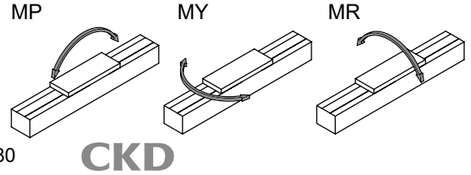
*1 For every 50 mm of stroke, please contact us.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		50 W/100 W Servo Motor	
Drive Method		Ball screw ø10	
Stroke	mm	100 to 900	
Screw lead	mm	10	16
Max. Payload *1, *2	kg Horizontal	19	14
	Wall-mounted	10.5	8
	Vertical	8.5	7
Max. Speed	mm/s	500	800
Rated thrust *2	N	179	112
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	2140	
Static allowable moment	N·m	MP : 103 MY : 103 MR : 58	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 500	600	700	800	900
10	500	440	340	260	210
16	800	710	540	420	340

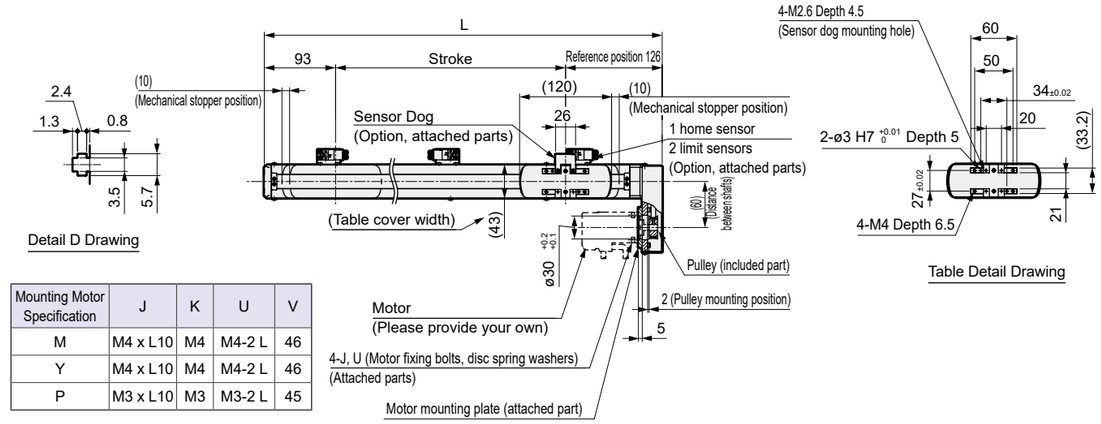
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

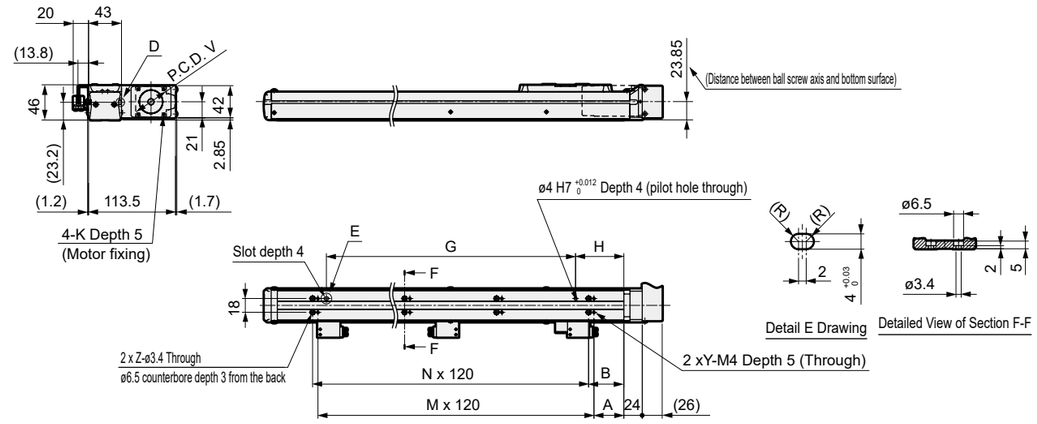
* Refer to P. 420 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EKS-04 LR



Mounting Motor Specification	J	K	U	V
M	M4 x L10	M4	M4-2 L	46
Y	M4 x L10	M4	M4-2 L	46
P	M3 x L10	M3	M3-2 L	45



Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	319	419	519	619	719	819	919	1019	1119
A	59	42	39	89	79	69	59	42	39
B	66	56	46	96	86	76	66	56	46
G	125	225	325	425	525	625	725	825	925
H	48	63	63	48	63	63	48	63	63
M	1	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
Y	2	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	1.9	2.3	2.7	3	3.4	3.8	4.2	4.5	4.9

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

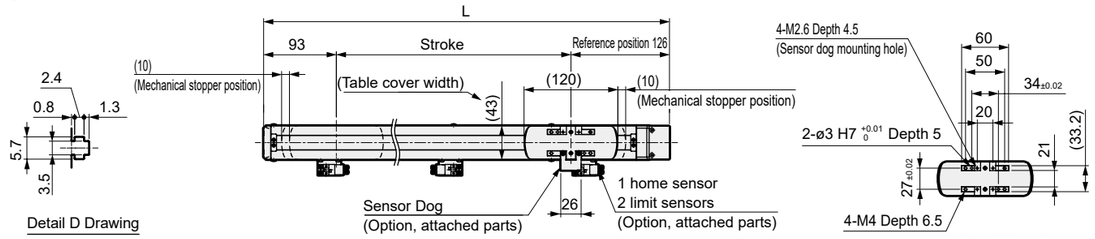
[Home Sensor, Limit Sensor]

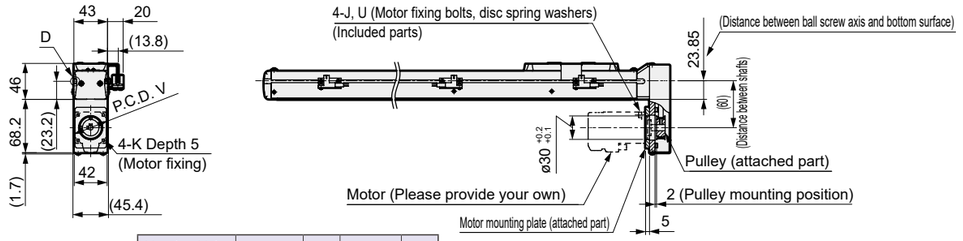
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

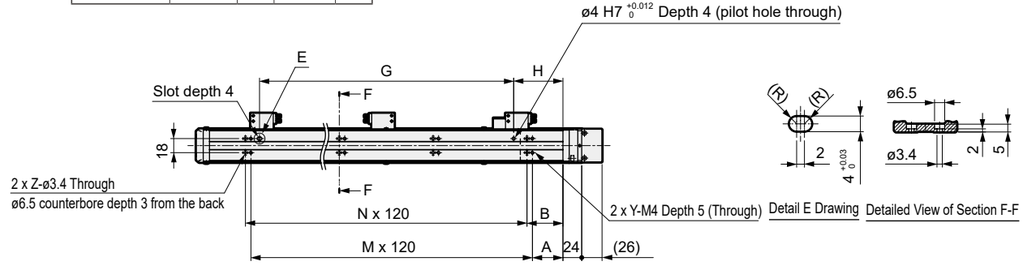
External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EKS-04 LD





Mounting Motor Specification	J	K	U	V
M	M4 x L10	M4	M4-2 L	46
Y	M4 x L10	M4	M4-2 L	46
P	M3 x L10	M3	M3-2 L	45



Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	319	419	519	619	719	819	919	1019	1119
A	59	42	39	89	79	69	59	42	39
B	66	56	46	96	86	76	66	56	46
G	125	225	325	425	525	625	725	825	925
H	48	63	63	48	63	63	48	63	63
M	1	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
Y	2	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	1.9	2.3	2.7	3	3.4	3.8	4.2	4.5	4.9

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

[Home Sensor, Limit Sensor]

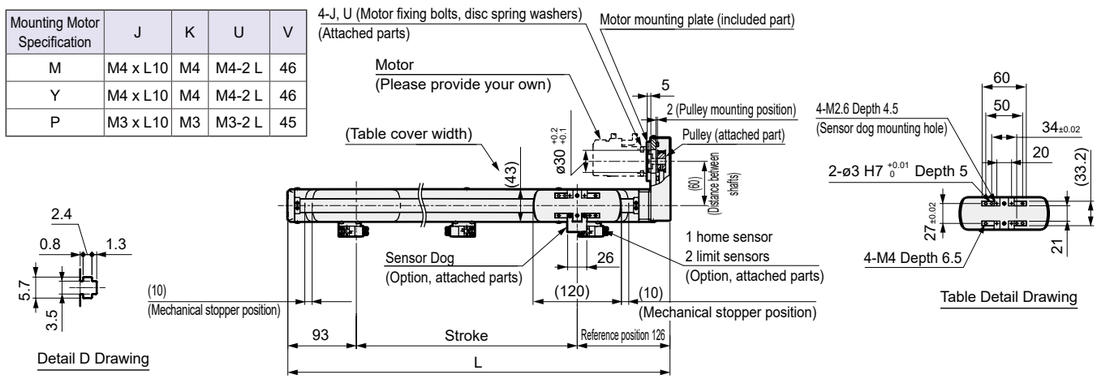
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

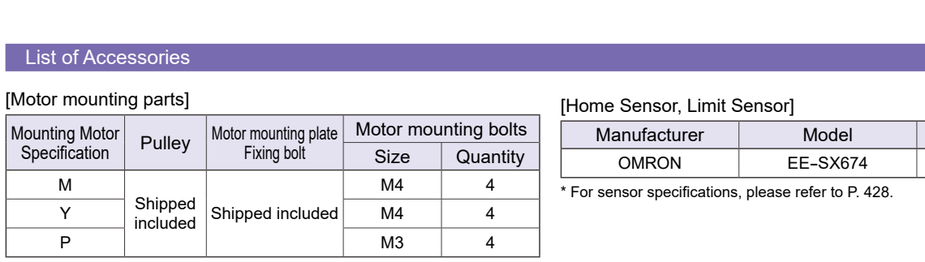
* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EKS-04 LL

Mounting Motor Specification	J	K	U	V
M	M4 x L10	M4	M4-2 L	46
Y	M4 x L10	M4	M4-2 L	46
P	M3 x L10	M3	M3-2 L	45





Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	319	419	519	619	719	819	919	1019	1119
A	59	42	39	89	79	69	59	42	39
B	66	56	46	96	86	76	66	56	46
G	125	225	325	425	525	625	725	825	925
H	48	63	63	48	63	63	48	63	63
M	1	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
Y	2	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	1.9	2.3	2.7	3	3.4	3.8	4.2	4.5	4.9

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

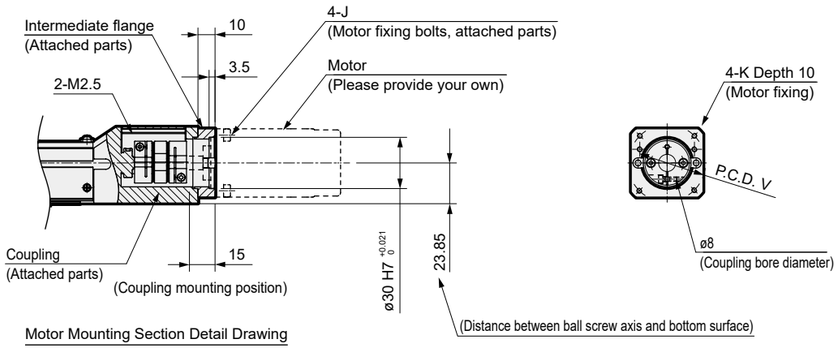
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Common Options

Dimensions when motor is straight mounted



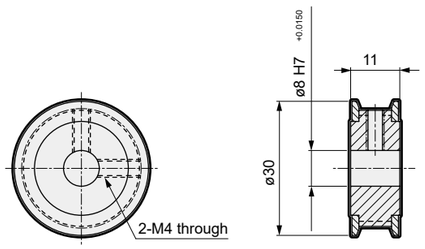
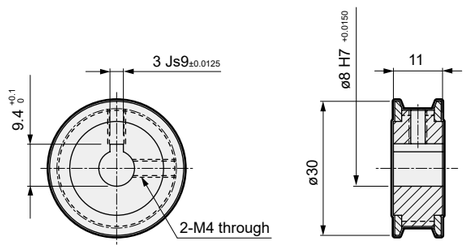
Motor Mounting Section Detail Drawing

Mounting Motor Specification	J	K	V
M	M4 x L10	M4	46
Y	M4 x L10	M4	46
P	M3 x L10	M3	45

When motor is fold-back mounted

Motor shaft fixing method

Pulley (attached part)

Motor shaft fixing method : Flat	Motor shaft fixing method : Key
	

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Actuator (Motorless Specification) Slider Type

EKS-05 LE

Motor Straight Mounting Type

● Servo Motor Capacity : 100 W

Model No. Notation Method

EKS - 05 ❶ | L ❷ | E ❸ | 10 ❹ | 0300 ❺ | NNN - M ❻ | 1 ❼ | N ❽ | C ❾ | B ❿

❶ Body Size
05	Body Width 53 mm

❷ Motor
L	None

❸ Motor Mounting Direction
E	Straight Mounting

❹ Screw Lead
10	10 mm
20	20 mm

❺ Stroke *1
0100 to 0900	100 mm (in 100 mm increments) to 900 mm

❻ Mounting Motor Specifications
M Y P	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity
1	100 W

❽ Motor shaft fixing method
N	When straight mounting

❾ Origin sensor *2
N	None
C	Yes

❿ Limit sensor *2
N	None
B	Yes

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 377 for motor model No.

*1 For every 50 mm of stroke, please contact us.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

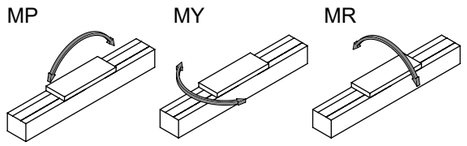
Specifications

Applicable Motor Capacity		100 W Servo Motor	
Drive Method		Ball screw ø13	
Stroke	mm	100 to 900	
Screw lead	mm	10	20
Max. Payload *1 *2	kg Horizontal	26	7.5
	kg Wall-mounted	19	7.5
	kg Vertical	12.5	6
Max. Speed	mm/s	500	1000
Rated thrust *2	N	179	89
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	3100	
Static allowable moment	N·m	MP: 147 MY: 147 MR: 149	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 600	700	800	900
10	500	390	310	250
20	1000	780	620	500

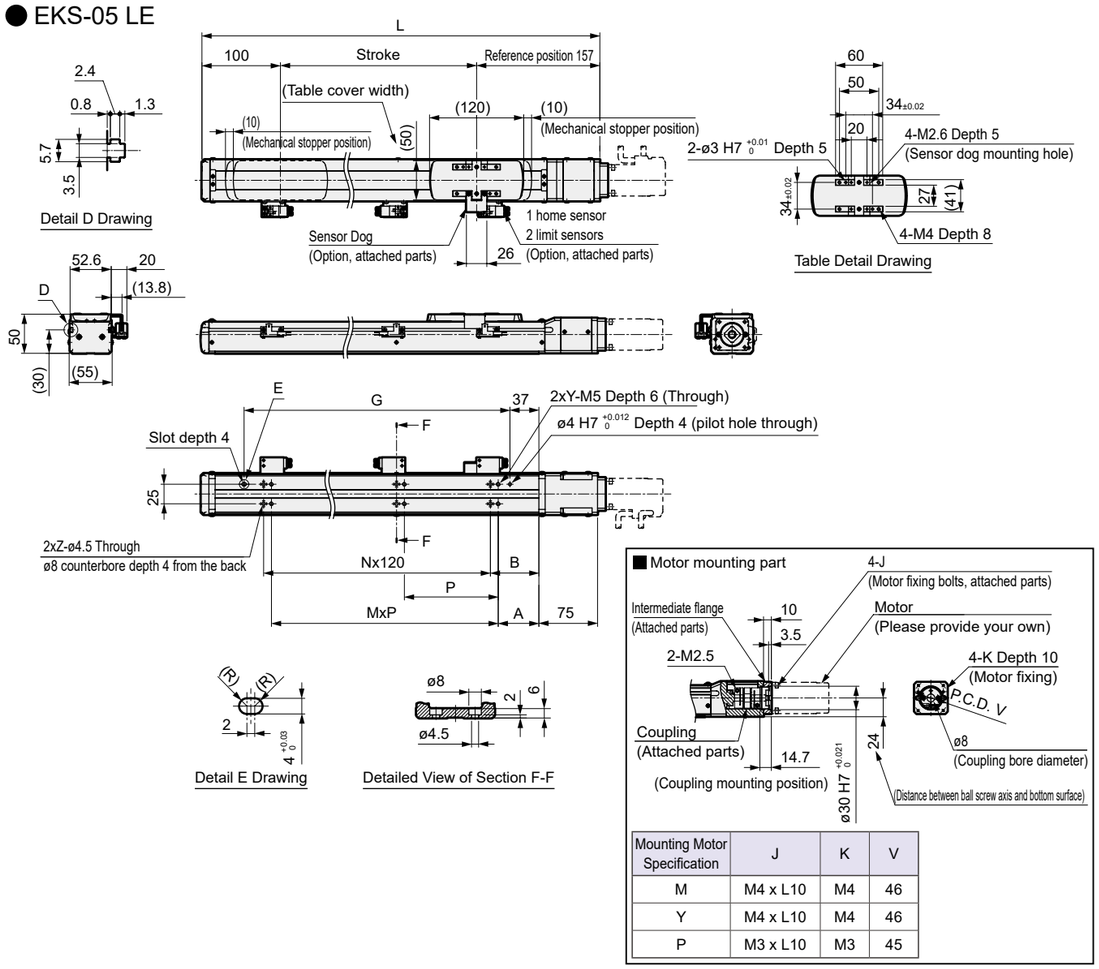
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 420 for details.

External Dimension Drawing Motor Straight Mounting

● EKS-05 LE



Mounting Motor Specification	J	K	V
M	M4 x L10	M4	46
Y	M4 x L10	M4	46
P	M3 x L10	M3	45

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	357	457	557	657	757	857	957	1057	1157
A	12	52	27	92	82	72	62	52	27
B	72	62	52	102	92	82	72	62	52
G	190	290	390	490	590	690	790	890	990
M	2	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
P	120								
Y	3	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	2.6	3.1	3.7	4.2	4.8	5.4	5.9	6.5	7

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Intermediate flange Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Electric Actuator (Motorless Specification) Slider Type

EKS-05L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 100 W

Model No. Notation Method

EKS - 05 L R - 10 0300 NNN - M 1 D C B

❶ Body Size

05	Body Width 53 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

10	10 mm
20	20 mm

❺ Stroke *1

0100 to 0900	100 mm (in 100 mm increments) 900 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Capacity

1	100 W

❽ Motor shaft fixing method

D	Flat
K	Key

❾ Origin sensor *2

N	None
C	Yes

❿ Limit sensor *2

N	None
B	Yes

Manufacturer	100 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	M
Fuji Electric Co., Ltd.	M
FANUC CORPORATION	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 377 for motor model No.

*1 For every 50 mm of stroke, please contact us.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

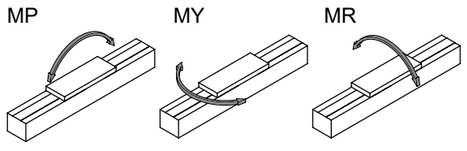
Specifications

Applicable Motor Capacity		100 W Servo Motor	
Drive Method		Ball screw ø13	
Stroke	mm	100 to 900	
Screw lead	mm	10	20
Max. Payload *1 *2	kg Horizontal	26	7.5
	kg Wall-mounted	19	7.5
	kg Vertical	11.5	5
Max. Speed	mm/s	500	1000
Rated thrust *2	N	179	89
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	3100	
Static allowable moment	N·m	MP: 147 MY: 147 MR: 149	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 600	700	800	900
10	500	390	310	250
20	1000	780	620	500

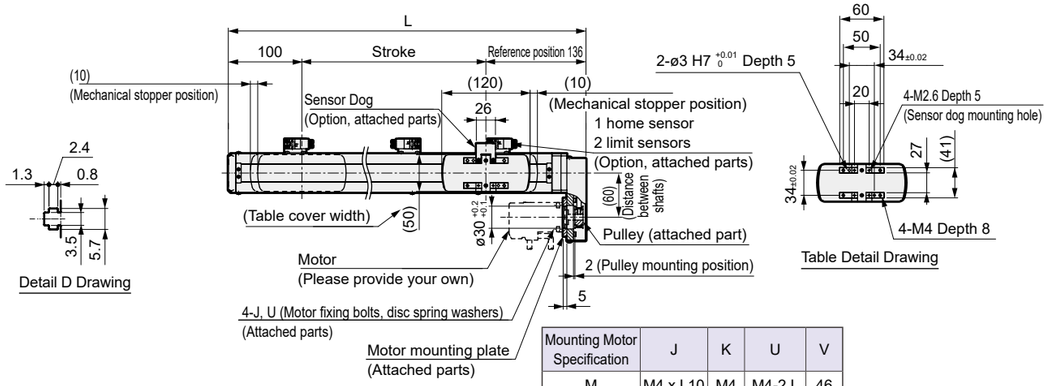
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

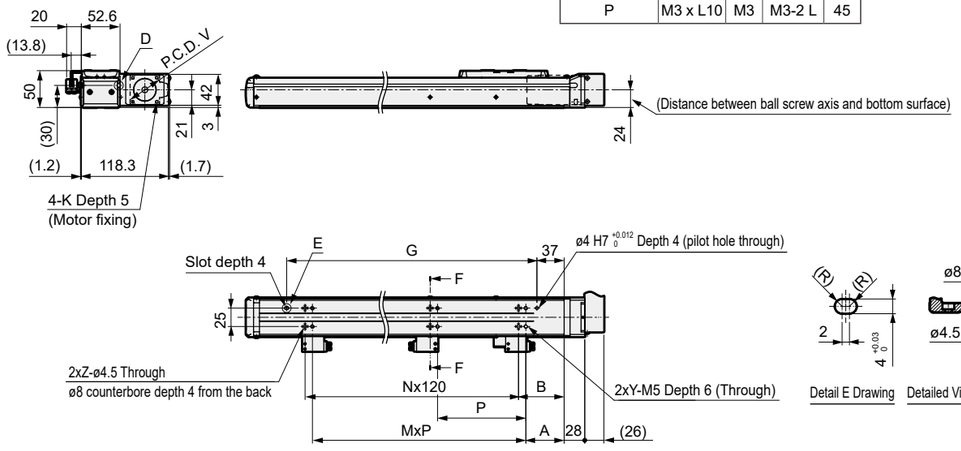
* Refer to P. 420 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EKS-05 LR



Mounting Motor Specification	J	K	U	V
M	M4 x L10	M4	M4-2 L	46
Y	M4 x L10	M4	M4-2 L	46
P	M3 x L10	M3	M3-2 L	45



Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	336	436	536	636	736	836	936	1036	1136
A	12	52	27	92	82	72	62	52	27
B	72	62	52	102	92	82	72	62	52
G	190	290	390	490	590	690	790	890	990
M	2	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
P	120								
Y	3	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	2.7	3.3	3.8	4.4	4.9	5.5	6	6.6	7.2

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

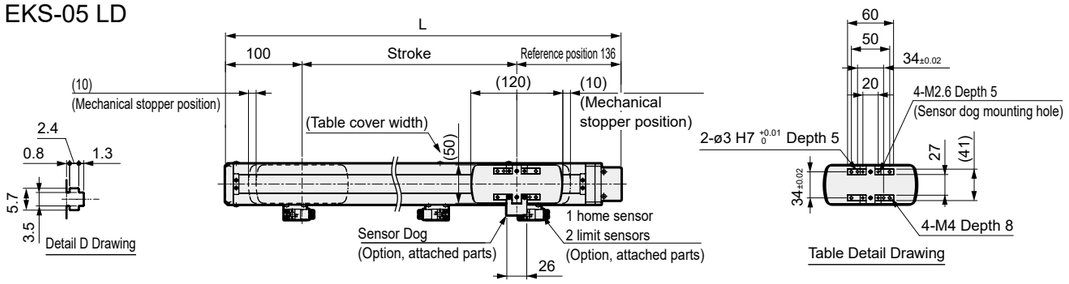
[Home Sensor, Limit Sensor]

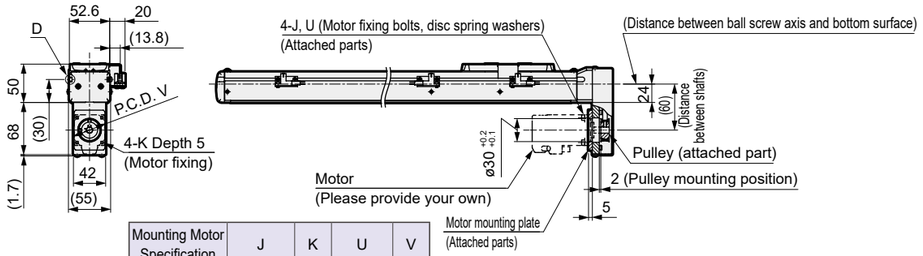
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

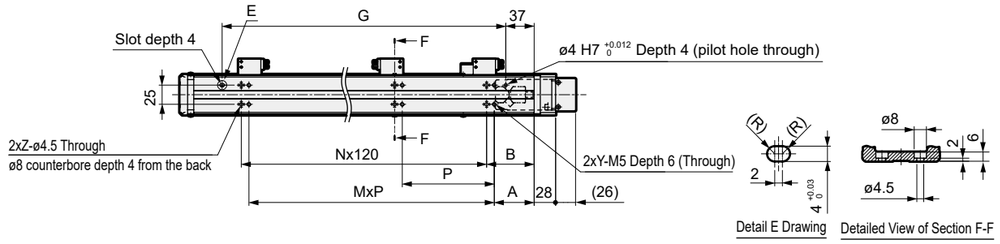
External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EKS-05 LD





Mounting Motor Specification	J	K	U	V
M	M4 x L10	M4	M4-2 L	46
Y	M4 x L10	M4	M4-2 L	46
P	M3 x L10	M3	M3-2 L	45



Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	336	436	536	636	736	836	936	1036	1136
A	12	52	27	92	82	72	62	52	27
B	72	62	52	102	92	82	72	62	52
G	190	290	390	490	590	690	790	890	990
M	2	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
P	120								
Y	3	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	2.7	3.3	3.8	4.4	4.9	5.5	6	6.6	7.2

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

[Home Sensor, Limit Sensor]

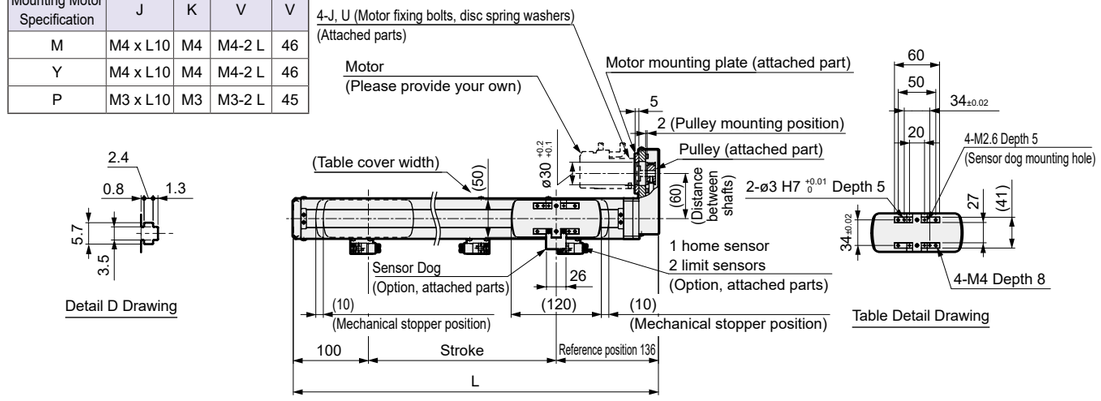
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

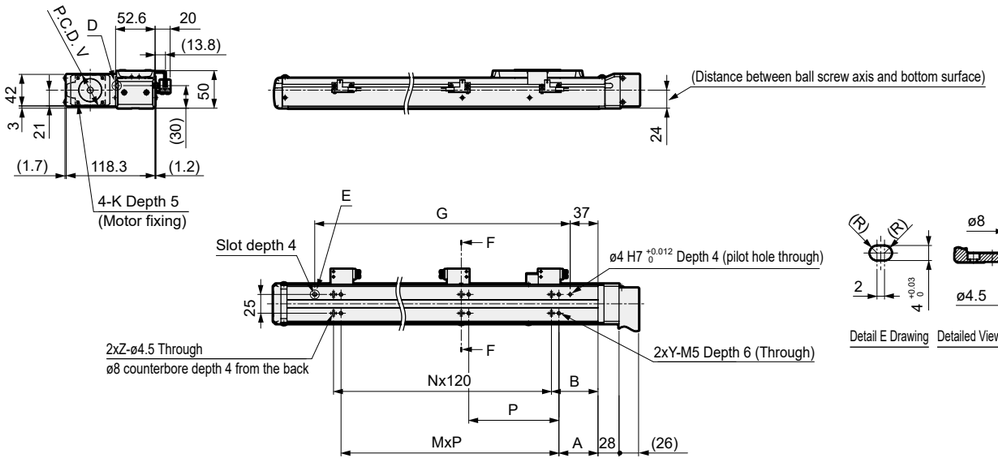
* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EKS-05 LL

Mounting Motor Specification	J	K	V	V
M	M4 x L10	M4	M4-2 L	46
Y	M4 x L10	M4	M4-2 L	46
P	M3 x L10	M3	M3-2 L	45





Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900
Stroke (mm)	100	200	300	400	500	600	700	800	900
L	336	436	536	636	736	836	936	1036	1136
A	12	52	27	92	82	72	62	52	27
B	72	62	52	102	92	82	72	62	52
G	190	290	390	490	590	690	790	890	990
M	2	2	3	3	4	5	6	7	8
N	1	2	3	3	4	5	6	7	8
P	120								
Y	3	3	4	4	5	6	7	8	9
Z	2	3	4	4	5	6	7	8	9
Weight (kg)	2.7	3.3	3.8	4.4	4.9	5.5	6	6.6	7.2

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M4	4
Y			M4	4
P			M3	4

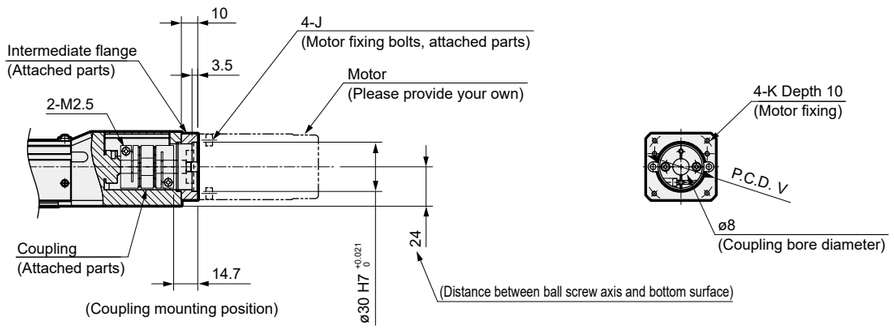
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Common Options

Dimensions when motor is straight mounted



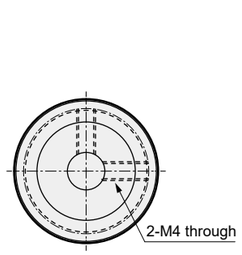
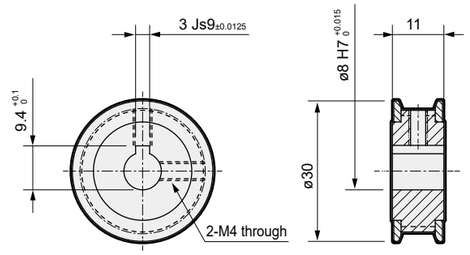
Motor Mounting Section Detail Drawing

Mounting Motor Specification	J	K	V
M	M4 x L10	M4	46
Y	M4 x L10	M4	46
P	M3 x L10	M3	45

When motor is fold-back mounted

Motor shaft fixing method

Pulley (attached part)

Motor shaft fixing method: Flat	Motor shaft fixing method: Key
	

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Actuator (Motorless Specification) Slider Type

EKS-06LE

Inline Motor Mount Type

● Servo Motor Capacity : 200 W

Model No. Notation Method

EKS - 06 L E - 20 0300 NNN - M 2 N C B

❶ Body Size

06	Body Width 64 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

20	20 mm
30	30 mm

❺ Stroke *1

0100 to 1300	100 mm (in 100 mm increments) 1300 mm

❻ Mounting Motor Specifications

M Y P	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

2	200 W

❽ Motor shaft fixing method

N	When straight mounting

❾ Origin sensor *2

N	None
C	Yes

❿ Limit sensor *2

N	None
B	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 377 for motor model No.

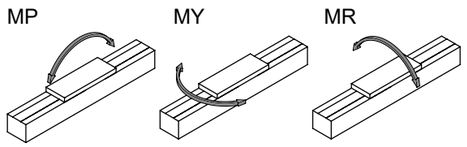
*1 For every 50 mm of stroke, please contact us.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		200 W Servo Motor	
Drive Method		Ball screw ø15	
Stroke	mm	100 to 1300	
Screw lead	mm	20	30
Max. Payload *1 *2	Horizontal	42	20.5
	Wall-mounted	20	18
	Vertical	12	7.5
Max. Speed	mm/s	1000	1500
Rated thrust *2	N	180	120
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	3250	
Static allowable moment	N·m	MP : 330 MY : 216 MR : 188	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 600	700	800	900	1000	1100	1200	1300
20	1000	980	770	630	520	430	370	320
30	1500	1480	1160	940	780	650	550	480

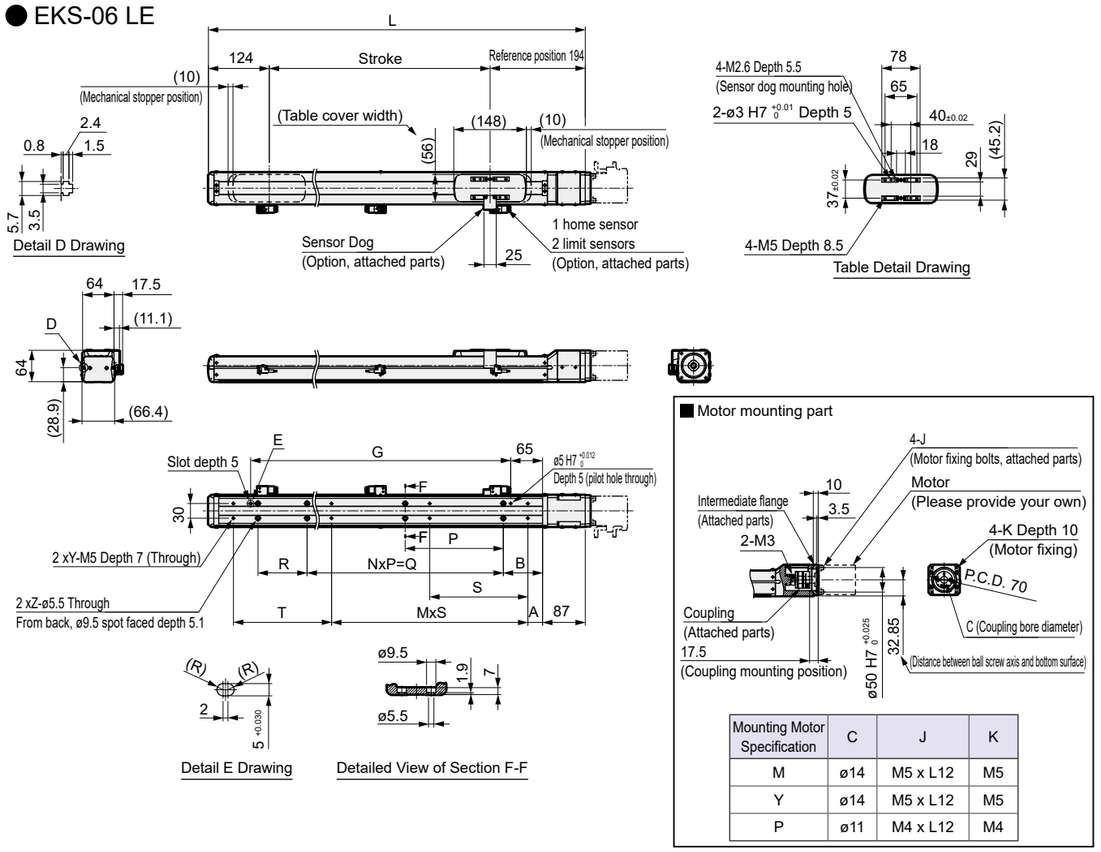
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 420 for details.

External Dimension Drawing Motor Straight Mounting

● EKS-06 LE



■ Motor mounting part

Mounting Motor Specification	C	J	K
M	ø14	M5 x L12	M5
Y	ø14	M5 x L12	M5
P	ø11	M4 x L12	M4

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300
L	418	518	618	718	818	918	1018	1118	1218	1318	1418	1518	1618
A	55	55	55	55	55	55	55	55	55	55	55	55	55
B	105	105	105	105	105	105	105	105	105	105	105	105	105
G	180	280	380	480	580	680	780	880	980	1080	1180	1280	1380
M	2	1	2	2	3	3	4	4	5	5	6	6	7
N	-	-	-	2	2	3	3	4	4	5	5	6	6
P	100	200											
Q	-	-	-	400	400	600	600	800	800	1000	1000	1200	1200
R	-	-	100	-	100	-	100	-	100	-	100	-	100
S	100	200											
T	-	100	-	100	-	100	-	100	-	100	-	100	-
Y	3	3	3	4	4	5	5	6	6	7	7	8	8
Z	2	2	3	3	4	4	5	5	6	6	7	7	8
Weight (kg)	4.3	5.1	5.8	6.6	7.4	8.2	8.9	9.7	10.5	11.3	12	12.8	13.6

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Intermediate flange Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Electric Actuator (Motorless Specification) Slider Type

EKS-06L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 100 W

Model No. Notation Method

EKS - 06 ❶ L ❷ R ❸ - 20 ❹ 0300 ❺ NNN - M ❻ 2 ❼ D ❽ C ❾ B ❿

❶ Body Size

06	Body Width 64 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

20	20 mm
30	30 mm

❺ Stroke *1

0100 to 1300	100 mm (in 100 mm increments) 1300 mm

❻ Mounting Motor Specifications

M Y P	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

2	200 W

❽ Motor shaft fixing method

D	Flat
K	Key
M	Friction coupling

❾ Origin sensor *2

N	None
C	Yes

❿ Limit sensor *2

N	None
B	Yes

Manufacturer	200 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 377 for motor model No.

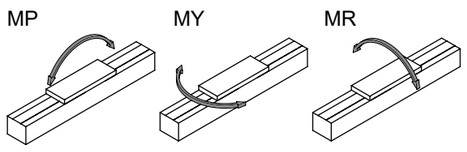
*1 For every 50 mm of stroke, please contact us.
*2 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		200 W Servo Motor	
Drive Method		Ball screw ø15	
Stroke	mm	100 to 1300	
Screw lead	mm	20	30
Max. Payload *1 *2	kg Horizontal	41	19
	kg Wall-mounted	20	18
	kg Vertical	10.5	6.5
Max. Speed	mm/s	1000	1500
Rated thrust *2	N	180	120
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	3250	
Static allowable moment	N·m	MP : 330 MY : 216 MR : 188	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 600	700	800	900	1000	1100	1200	1300
20	1000	980	770	630	520	430	370	320
30	1500	1480	1160	940	780	650	550	480

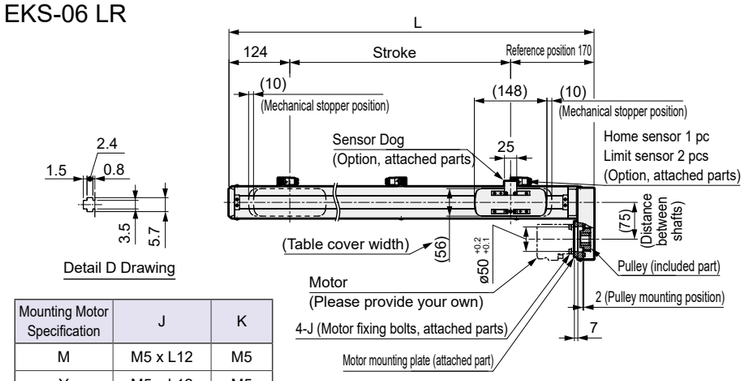
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

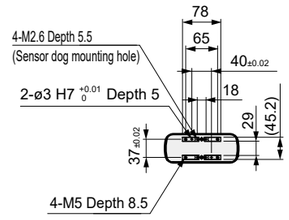
* Refer to P. 420 for details.

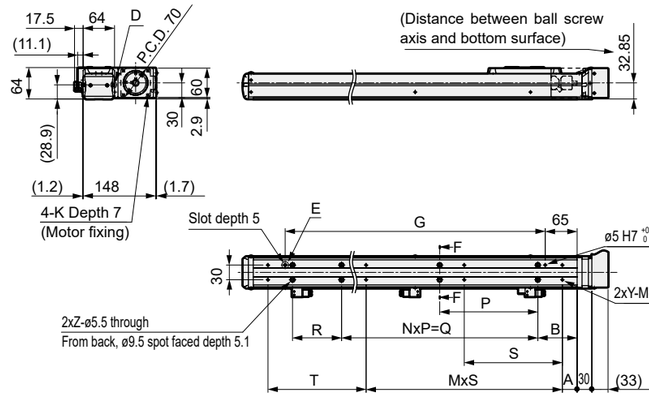
External Dimension Drawing Motor Right Side Fold-back Mounting

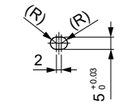
● EKS-06 LR

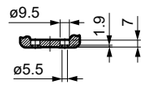


Mounting Motor Specification	J	K
M	M5 x L12	M5
Y	M5 x L12	M5
P	M4 x L12	M4









Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300
L	394	494	594	694	794	894	994	1094	1194	1294	1394	1494	1594
A	55	55	55	55	55	55	55	55	55	55	55	55	55
B	105	105	105	105	105	105	105	105	105	105	105	105	105
G	180	280	380	480	580	680	780	880	980	1080	1180	1280	1380
M	2	1	2	2	3	3	4	4	5	5	6	6	7
N	-	-	-	2	2	3	3	4	4	5	5	6	6
P	100	200											
Q	-	-	-	400	400	600	600	800	800	1000	1000	1200	1200
R	-	-	100	-	100	-	100	-	100	-	100	-	100
S	100	200											
T	-	100	-	100	-	100	-	100	-	100	-	100	-
Y	3	3	3	4	4	5	5	6	6	7	7	8	8
Z	2	2	3	3	4	4	5	5	6	6	7	7	8
Weight (kg)	4.9	5.6	6.4	7.2	8	8.7	9.5	10.3	11.1	11.8	12.6	13.4	14.2

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

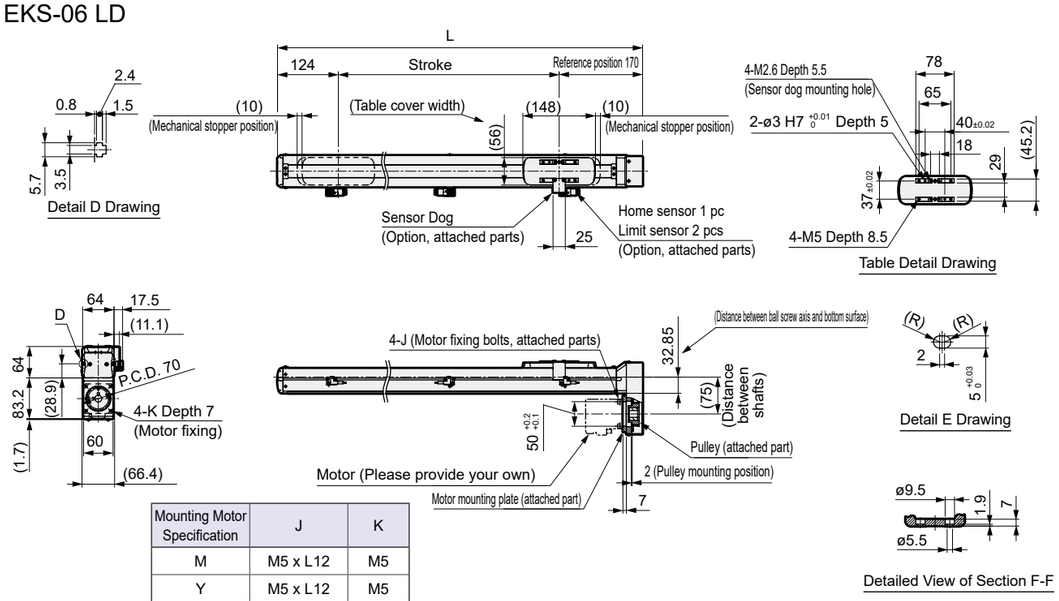
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

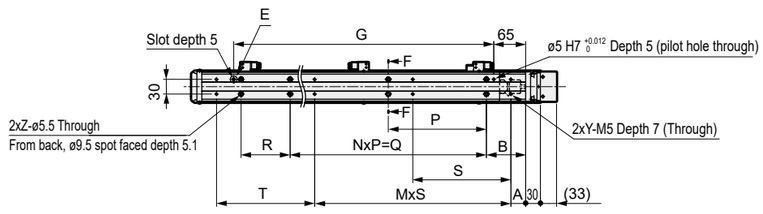
* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EKS-06 LD



Mounting Motor Specification	J	K
M	M5 x L12	M5
Y	M5 x L12	M5
P	M4 x L12	M4



Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300
L	394	494	594	694	794	894	994	1094	1194	1294	1394	1494	1594
A	55	55	55	55	55	55	55	55	55	55	55	55	55
B	105	105	105	105	105	105	105	105	105	105	105	105	105
G	180	280	380	480	580	680	780	880	980	1080	1180	1280	1380
M	2	1	2	2	3	3	4	4	5	5	6	6	7
N	-	-	-	2	2	3	3	4	4	5	5	6	6
P	100	200											
Q	-	-	-	400	400	600	600	800	800	1000	1000	1200	1200
R	-	-	100	-	100	-	100	-	100	-	100	-	100
S	100	200											
T	-	100	-	100	-	100	-	100	-	100	-	100	-
Y	3	3	3	4	4	5	5	6	6	7	7	8	8
Z	2	2	3	3	4	4	5	5	6	6	7	7	8
Weight (kg)	4.9	5.6	6.4	7.2	8	8.7	9.5	10.3	11.1	11.8	12.6	13.4	14.2

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

[Home Sensor, Limit Sensor]

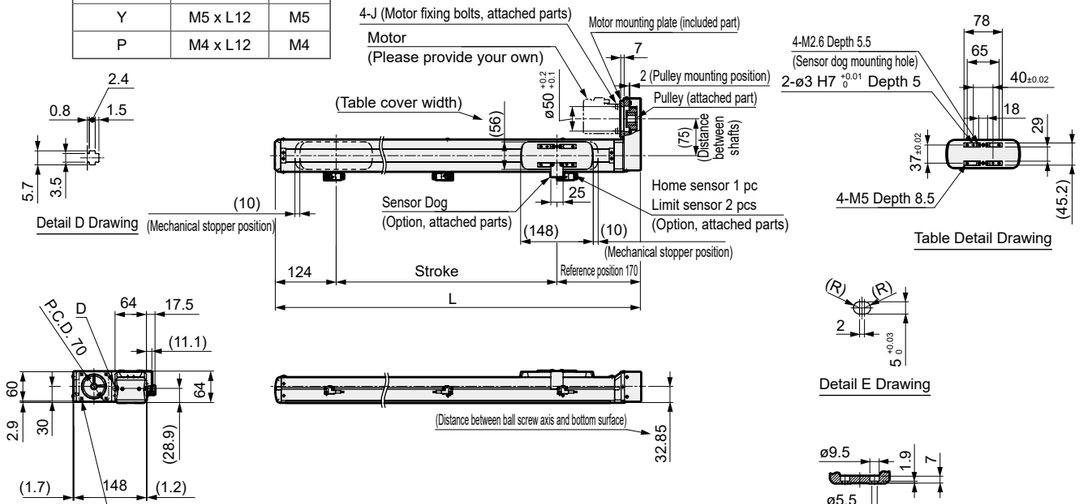
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

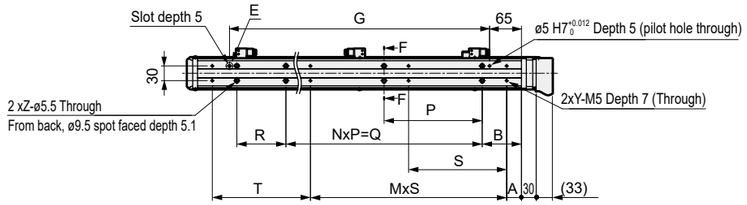
* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EKS-06 LL

Mounting Motor Specification	J	K
M	M5 x L12	M5
Y	M5 x L12	M5
P	M4 x L12	M4





Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300
L	394	494	594	694	794	894	994	1094	1194	1294	1394	1494	1594
A	55	55	55	55	55	55	55	55	55	55	55	55	55
B	105	105	105	105	105	105	105	105	105	105	105	105	105
G	180	280	380	480	580	680	780	880	980	1080	1180	1280	1380
M	2	1	2	2	3	3	4	4	5	5	6	6	7
N	-	-	-	2	2	3	3	4	4	5	5	6	6
P	100	200											
Q	-	-	-	400	400	600	600	800	800	1000	1000	1200	1200
R	-	-	100	-	100	-	100	-	100	-	100	-	100
S	100	200											
T	-	100	-	100	-	100	-	100	-	100	-	100	-
Y	3	3	3	4	4	5	5	6	6	7	7	8	8
Z	2	2	3	3	4	4	5	5	6	6	7	7	8
Weight (kg)	4.9	5.6	6.4	7.2	8	8.7	9.5	10.3	11.1	11.8	12.6	13.4	14.2

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

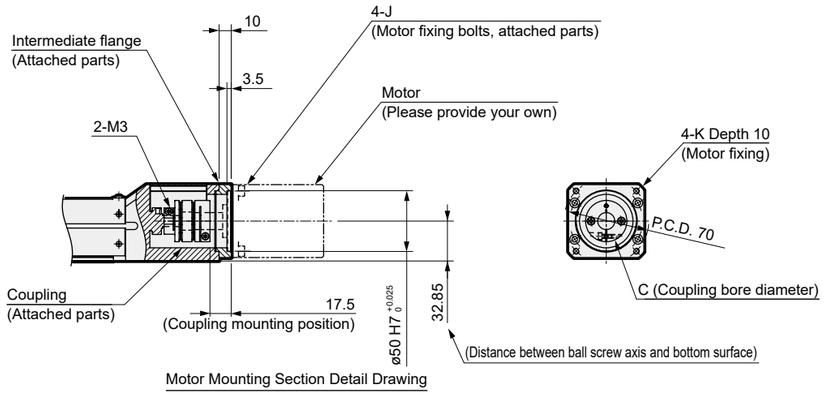
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Common Options

Dimensions when motor is straight mounted



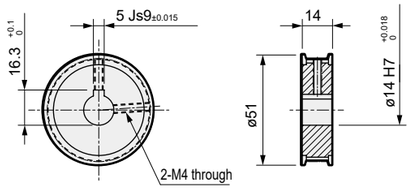
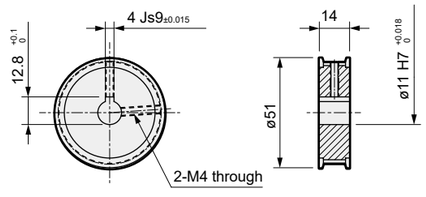
Motor Mounting Section Detail Drawing

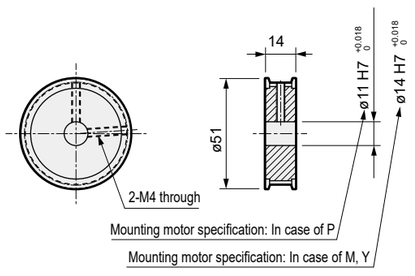
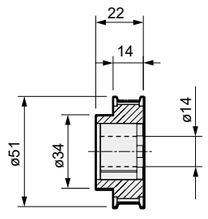
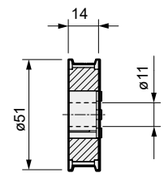
Mounting Motor Specification	C	J	K
M	ø14	M5 x L12	M5
Y	ø14	M5 x L12	M5
P	ø11	M4 x L12	M4

When motor is fold-back mounted

Motor shaft fixing method

Pulley (attached part)

Mounting motor specification : M, Y Motor shaft fixing method : Key	Mounting motor specification : P Motor shaft fixing method : Key
	

Motor shaft fixing method : Flat	Mounting motor specification : M, Y Motor shaft fixing method : Friction coupling	Mounting motor specification : P Motor shaft fixing method : Friction coupling
		

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Actuator (Motorless Specification) Slider Type

EKS-08LE

Motor Straight Mounting Type

● Servo Motor Capacity : 400 W

Model No. Notation Method

EKS - 08 L E - 20 0300 NNN - M 4 N C B

❶ Body Size
08	Body Width 84 mm

❷ Motor
L	None

❸ Motor Mounting Direction
E	Straight Mounting

❹ Screw Lead
20	20 mm
40	40 mm

❺ Stroke
0100 to 1500	100 mm (in 100 mm increments) 1500 mm

❻ Mounting Motor Specifications
M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Capacity
4	400 W

❽ Motor shaft fixing method
N	When straight mounting

❾ Origin sensor *1
N	None
C	Yes

❿ Limit sensor *1
N	None
B	Yes

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 377 for motor model No.

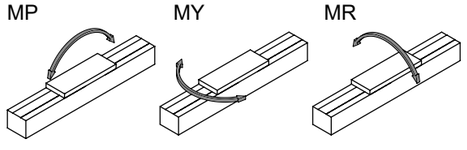
*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Capacity		400 W Servo Motor	
Drive Method		Ball screw ø20	
Stroke	mm	100 to 1500	
Screw lead	mm	20	40
Max. Payload *1 *2	kg Horizontal	83.5	19
	Wall-mounted	45	19
	Vertical	23.5	10.5
Max. Speed	mm/s	1000	2000
Rated thrust *2	N	359	179
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	4000	
Static allowable moment	N·m	MP: 730 MY: 437 MR: 387	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 700	800	900	1000	1100	1200	1300	1400	1500
20	1000	980	800	670	560	480	420	360	320
40	2000	1970	1610	1340	1130	970	840	730	650

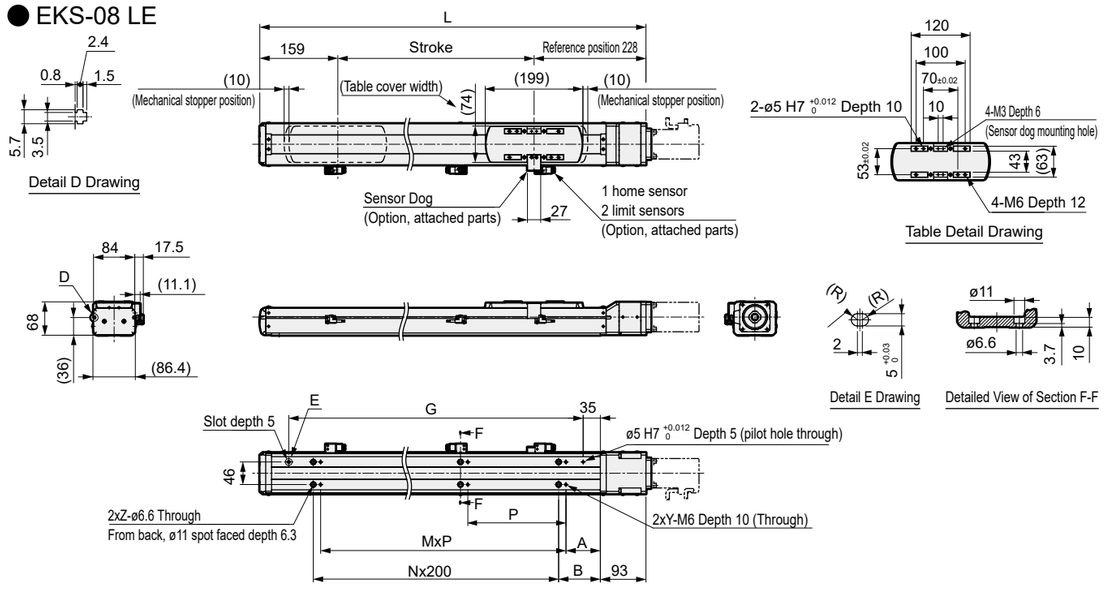
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

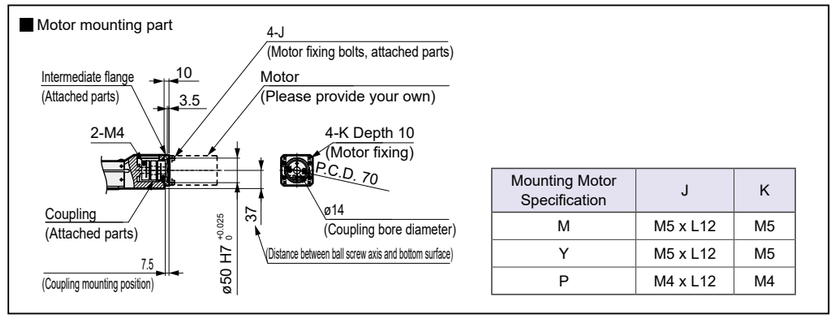
* Refer to P. 420 for details.

External Dimension Drawing Motor Straight Mounting

● EKS-08 LE



■ Motor mounting part



Mounting Motor Specification	J	K
M	M5 x L12	M5
Y	M5 x L12	M5
P	M4 x L12	M4

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	487	587	687	787	887	987	1087	1187	1287	1387	1487	1587	1687	1787	1887
A	65	25	70	120	70	120	70	120	70	120	70	120	70	120	70
B	85	135	85	135	85	135	85	135	85	135	85	135	85	135	85
G	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
M	2	2	2	2	3	3	4	4	5	5	6	6	7	7	8
N	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
P	120	200													
Y	3	3	3	3	4	4	5	5	6	6	7	7	8	8	9
Z	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Weight (kg)	8.1	9.4	10.7	12	13.3	14.6	15.9	17.2	18.5	19.8	21.1	22.4	23.7	25	26.3

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Intermediate flange Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Electric Actuator (Motorless Specification) Slider Type

EKS-08L□

Motor Fold-back Mounting Type

● Servo Motor Capacity : 400 W

Model No. Notation Method

EKS - 08 ❶ L ❷ R ❸ - 20 ❹ 0300 ❺ NNN - M ❻ 4 ❼ M ❽ C ❾ B ❿

❶ Body Size

08	Body Width 84 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

20	20 mm
40	40 mm

❺ Stroke

0100 to 1500	100 mm (in 100 mm increments) 1500 mm

❻ Mounting Motor Specifications

M Y P	Select the Mounting Motor Specifications from the Table on the right.

❼ Motor Capacity

4	400 W

❽ Motor shaft fixing method

M	Friction coupling

❾ Origin sensor *1

N	None
C	Yes

❿ Limit sensor *1

N	None
B	Yes

Manufacturer	400 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Sanyo Denki Co., Ltd.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

* Refer to P. 377 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

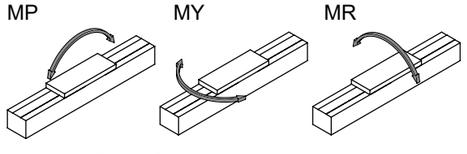
Specifications

Applicable Motor Capacity		400 W Servo Motor	
Drive Method		Ball screw ø20	
Stroke	mm	100 to 1500	
Screw lead	mm	20	40
Max. Payload *1 *2	kg Horizontal	79.5	18
	Wall-mounted	45	18
	Vertical	20.5	9
Max. Speed	mm/s	1000	2000
Rated thrust *2	N	359	179
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	4000	
Static allowable moment	N·m	MP : 730 MY : 437 MR : 387	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.
*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 700	800	900	1000	1100	1200	1300	1400	1500
20	1000	980	800	670	560	480	420	360	320
40	2000	1970	1610	1340	1130	970	840	730	650

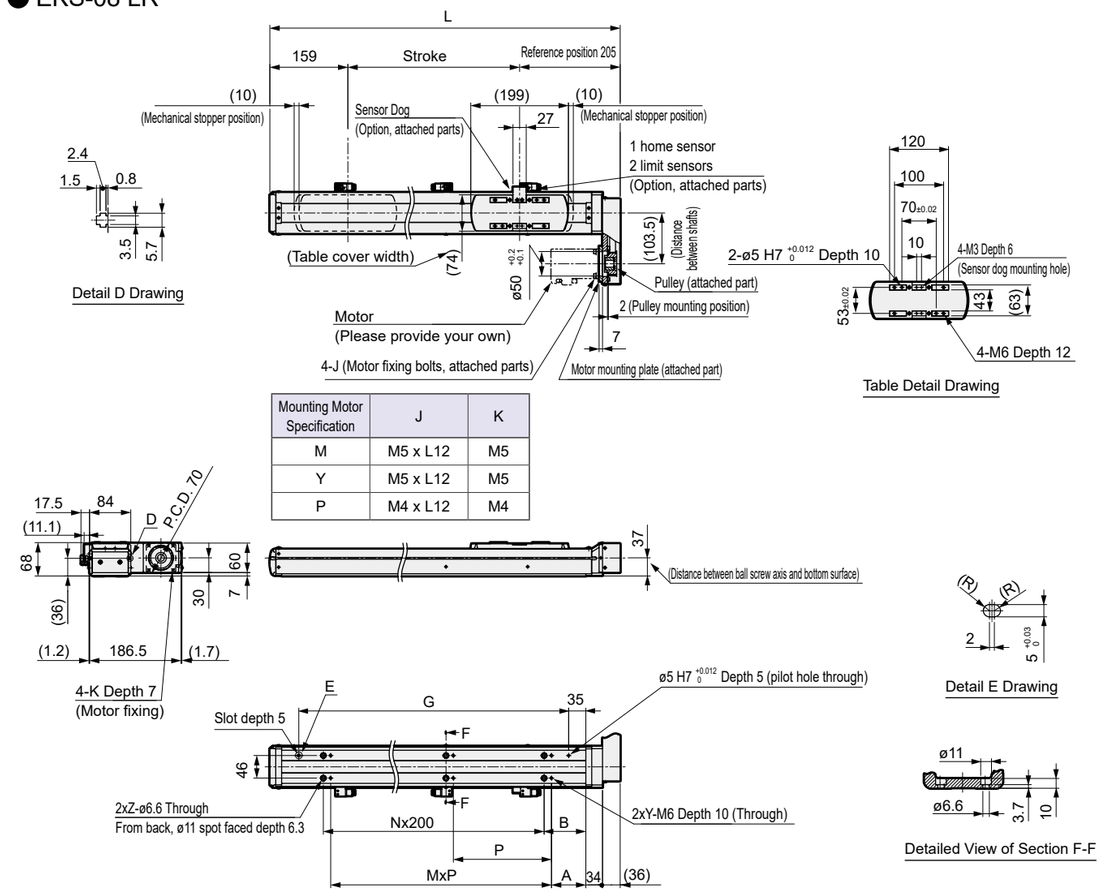
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 420 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EKS-08 LR



Mounting Motor Specification	J	K
M	M5 x L12	M5
Y	M5 x L12	M5
P	M4 x L12	M4

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	464	564	664	764	864	964	1064	1164	1264	1364	1464	1564	1664	1764	1864
A	65	25	70	120	70	120	70	120	70	120	70	120	70	120	70
B	85	135	85	135	85	135	85	135	85	135	85	135	85	135	85
G	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
M	2	2	2	2	3	3	4	4	5	5	6	6	7	7	8
N	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
P	120	200													
Y	3	3	3	3	4	4	5	5	6	6	7	7	8	8	9
Z	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Weight (kg)	8.7	10	11.3	12.6	13.9	15.2	16.5	17.8	19.1	20.4	21.7	23	24.3	25.6	26.9

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

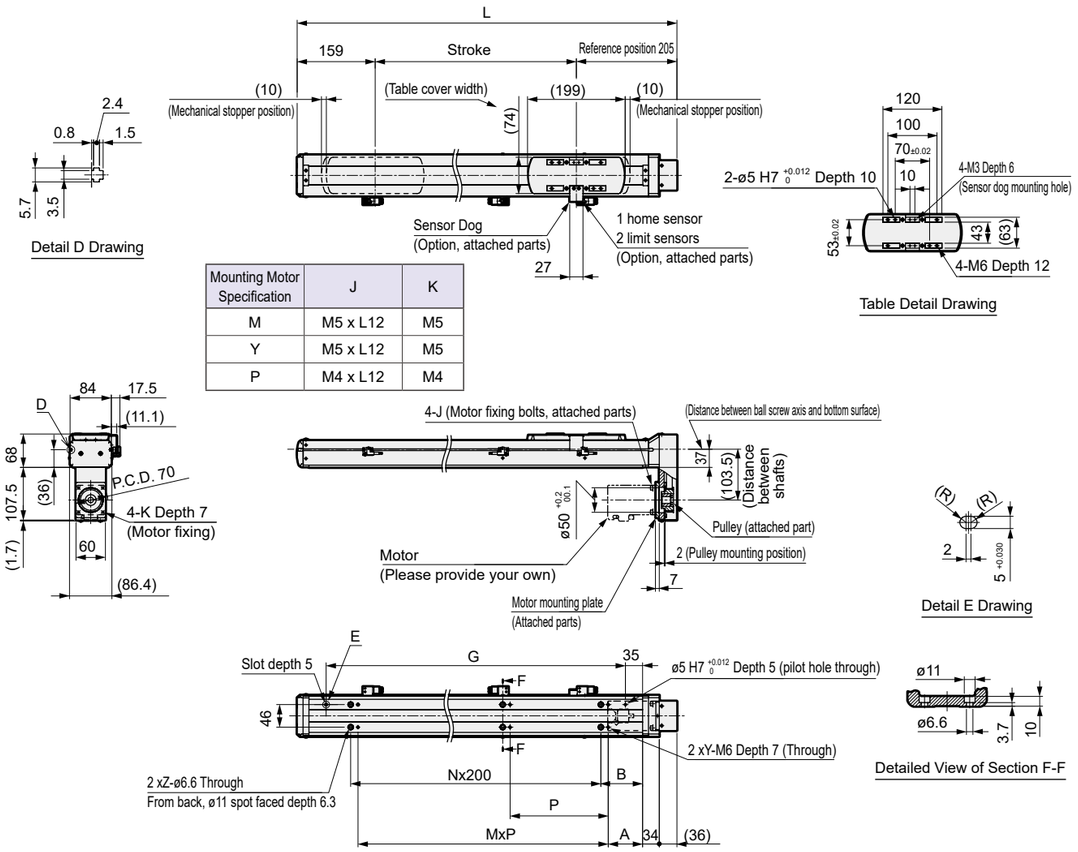
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EKS-08 LD



Mounting Motor Specification	J	K
M	M5 x L12	M5
Y	M5 x L12	M5
P	M4 x L12	M4

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	464	564	664	764	864	964	1064	1164	1264	1364	1464	1564	1664	1764	1864
A	65	25	70	120	70	120	70	120	70	120	70	120	70	120	70
B	85	135	85	135	85	135	85	135	85	135	85	135	85	135	85
G	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
M	2	2	2	2	3	3	4	4	5	5	6	6	7	7	8
N	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
P	120	200													
Y	3	3	3	3	4	4	5	5	6	6	7	7	8	8	9
Z	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Weight (kg)	8.7	10	11.3	12.6	13.9	15.2	16.5	17.8	19.1	20.4	21.7	23	24.3	25.6	26.9

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

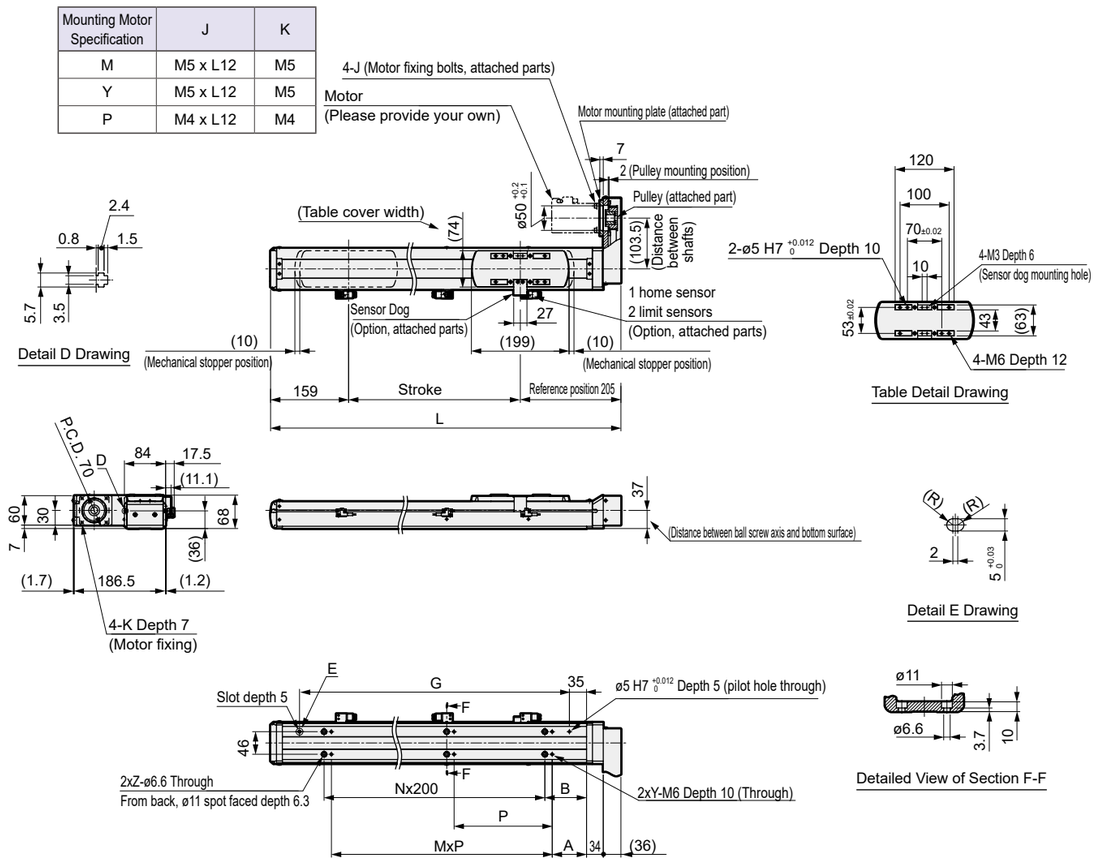
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EKS-08 LL



Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	464	564	664	764	864	964	1064	1164	1264	1364	1464	1564	1664	1764	1864
A	65	25	70	120	70	120	70	120	70	120	70	120	70	120	70
B	85	135	85	135	85	135	85	135	85	135	85	135	85	135	85
G	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700
M	2	2	2	2	3	3	4	4	5	5	6	6	7	7	8
N	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
P	120	200													
Y	3	3	3	3	4	4	5	5	6	6	7	7	8	8	9
Z	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
Weight (kg)	8.7	10	11.3	12.6	13.9	15.2	16.5	17.8	19.1	20.4	21.7	23	24.3	25.6	26.9

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M5	4
Y			M5	4
P			M4	4

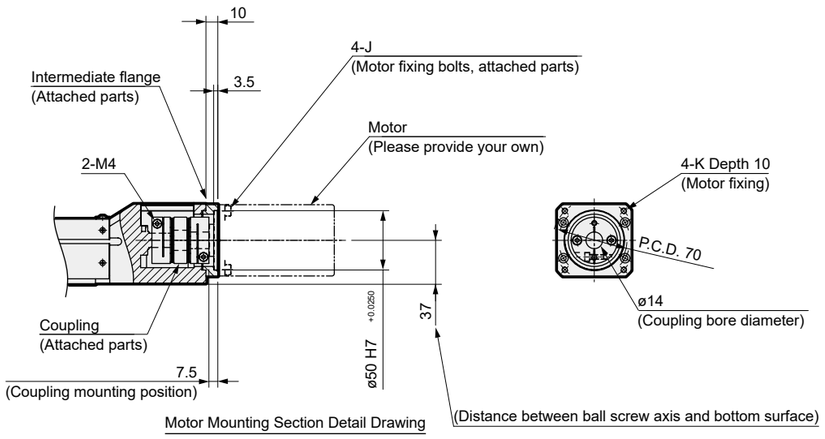
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Common Options

Dimensions when motor is straight mounted



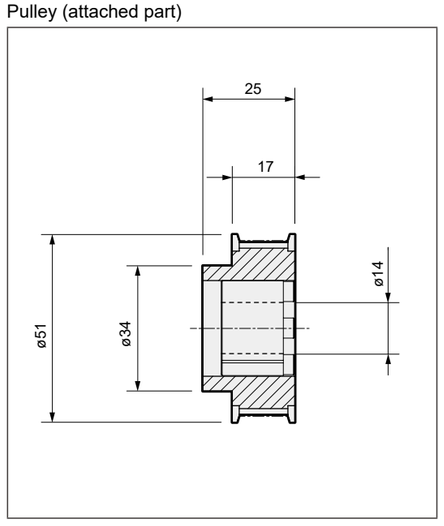
Motor Mounting Section Detail Drawing

Mounting Motor Specification	J	K
M	M5 x L12	M5
Y	M5 x L12	M5
P	M4 x L12	M4

When motor is fold-back mounted

Motor shaft fixing method

Pulley (attached part)



MEMO

Electric Actuator (Motorless Specification) Slider Type

EKS-10LE

Motor Straight Mounting Type

● Servo motor size : 750 W

Model No. Notation Method

EKS - 10 L E - 25 0300 NNN - M 8 N C B

❶ Body Size

10	Body Width 104 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

25	25 mm
50	50 mm

❺ Stroke

0100 to 1500	100 mm (in 100 mm increments) 1500 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Size

8	750 W

❽ Motor shaft fixing method

N	When straight mounting

❾ Origin sensor *1

N	None
C	Yes

❿ Limit sensor *1

N	None
B	Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

* Refer to P. 377 for motor model No.

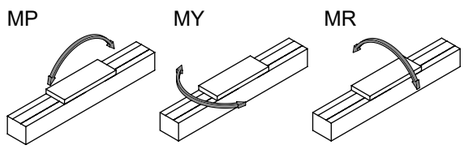
Specifications

Applicable Motor Size		750 W Servo Motor	
Drive Method		Ball screw ø25	
Stroke	mm	100 to 1500	
Screw lead	mm	25	50
Max. Payload *1 *2	kg Horizontal	118.5	40
	kg Wall-mounted	76	40
	kg Vertical	33.5	14.5
Max. Speed	mm/s	1250	2500
Rated thrust *2	N	540	270
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	5830	
Static allowable moment	N·m	MP: 1048 MY: 712 MR: 671	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.

*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 900	1000	1100	1200	1300	1400	1500
25	1250	1050	890	760	660	580	510
50	2500	2110	1790	1530	1330	1160	1030

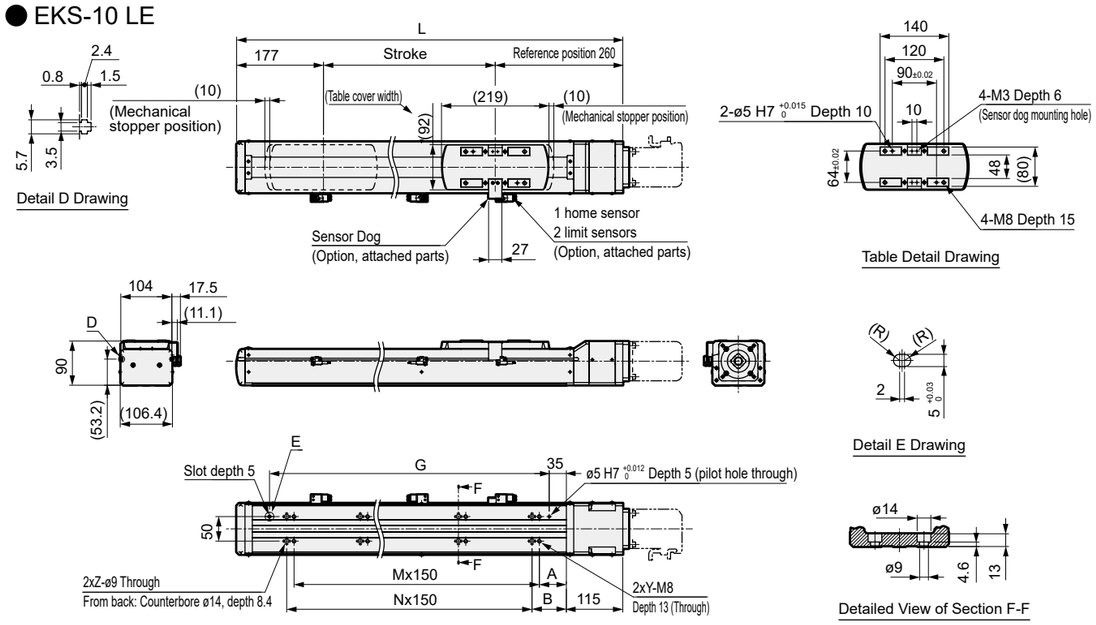
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

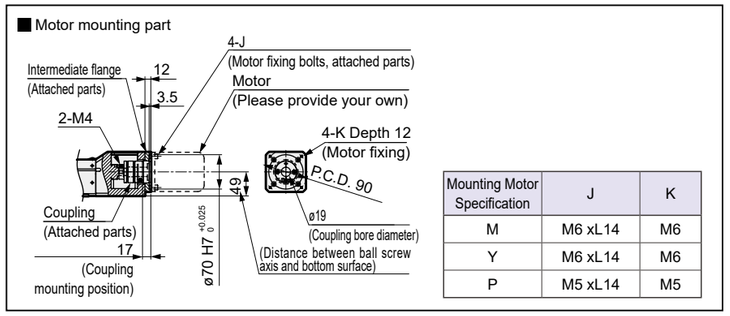
* Refer to P. 420 for details.

External Dimension Drawing Motor Straight Mounting

● EKS-10 LE



■ Motor mounting part



Mounting Motor Specification	J	K
M	M6 xL14	M6
Y	M6 xL14	M6
P	M5 xL14	M5

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	537	637	737	837	937	1037	1137	1237	1337	1437	1537	1637	1737	1837	1937
A	45	80	55	105	80	55	105	80	55	105	80	55	105	80	55
B	120	95	70	120	95	70	120	95	70	120	95	70	120	95	70
G	320	420	520	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720
M	2	2	3	3	4	5	5	6	7	7	8	9	9	10	11
N	1	2	3	3	4	5	5	6	7	7	8	9	9	10	11
Y	3	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Z	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Weight (kg)	14.7	16.8	18.8	20.9	22.9	25	27	29.1	31.2	33.2	35.3	37.3	39.4	41.5	43.5

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Intermediate flange Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M6	4
Y			M6	4
P			M5	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Electric Actuator (Motorless Specification) Slider Type

EKS-10L□

Motor Fold-back Mounting Type

●Servo motor size: 750 W

Model No. Notation Method

EKS - 10 (❶) L (❷) R (❸) - 25 (❹) 0300 (❺) NNN - M (❻) 8 (❼) M (❽) C (❾) B (❿)

❶ Body Size

10	Body Width 104 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

25	25 mm
50	50 mm

❺ Stroke

0100 to 1500	100 mm (in 100 mm increments) 1500 mm

❻ Mounting Motor Specifications

M	Select the Mounting Motor Specifications from the Table on the right.
Y	
P	

❼ Motor Size

8	750 W

❽ Motor shaft fixing method

M	Friction coupling

❾ Origin sensor *1

N	None
C	Yes

❿ Limit sensor *1

N	None
B	Yes

Manufacturer	750 W
Mitsubishi Electric Corporation	M
Delta Electronics, Inc.	M
Yaskawa Electric Corporation	Y
Keyence Corporation	Y
Panasonic Corporation	P
OMRON Corporation	P
Fuji Electric Co., Ltd.	M
Bosch Rexroth AG	P
Rockwell Automation, Inc.	M
SIEMENS AG	M

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

* Refer to P. 377 for motor model No.

Specifications

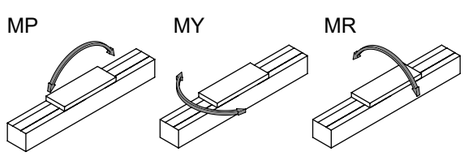
Applicable Motor Size		750 W Servo Motor	
Drive Method		Ball screw ø25	
Stroke	mm	100 to 1500	
Screw lead	mm	25	50
Max. Payload *1 *2	kg Horizontal	92.5	37.5
	kg Wall-mounted	76	37.5
	kg Vertical	28	12.5
Max. Speed	mm/s	1250	2500
Rated thrust *2	N	540	270
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	5830	
Static allowable moment	N·m	MP : 1048 MY : 712 MR : 671	
Operating ambient temperature, humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Storage Ambient Temperature, Humidity		0 to 40°C (without freezing) 20 to 80%RH (without condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 Max. payload is the value at an acceleration/deceleration of 0.5 G. For details, please refer to P. 426.

*2 The rated thrust and maximum payload are guide values assuming the mounted motor can output its rated torque.

Moment Direction

MP MY MR



Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 900	1000	1100	1200	1300	1400	1500
25	1250	1050	890	760	660	580	510
50	2500	2110	1790	1530	1330	1160	1030

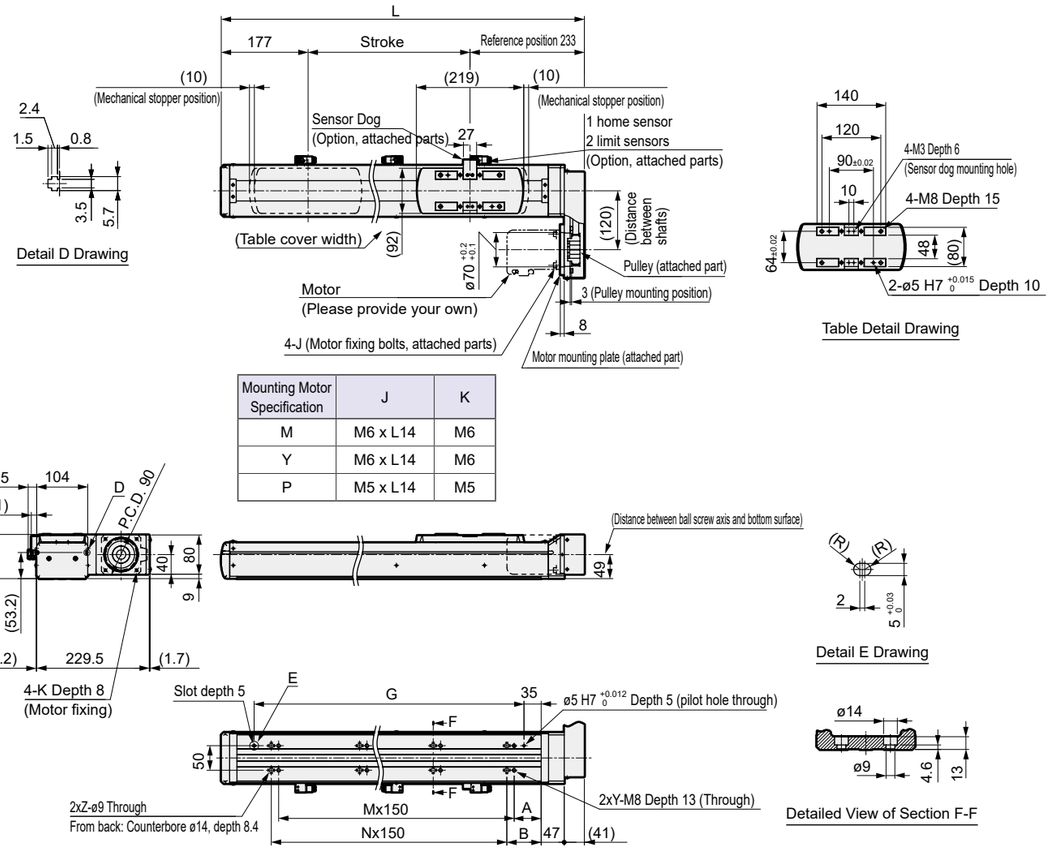
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 420 for details.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EKS-10 LR



Mounting Motor Specification	J	K
M	M6 x L14	M6
Y	M6 x L14	M6
P	M5 x L14	M5

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	510	610	710	810	910	1010	1110	1210	1310	1410	1510	1610	1710	1810	1910
A	45	80	55	105	80	55	105	80	55	105	80	55	105	80	55
B	120	95	70	120	95	70	120	95	70	120	95	70	120	95	70
G	320	420	520	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720
M	2	2	3	3	4	5	5	6	7	7	8	9	9	10	11
N	1	2	3	3	4	5	5	6	7	7	8	9	9	10	11
Y	3	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Z	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Weight (kg)	15.6	17.7	19.8	21.8	23.9	25.9	28	30.1	32.1	34.2	36.2	38.3	40.4	42.4	44.5

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M6	4
Y			M6	4
P			M5	4

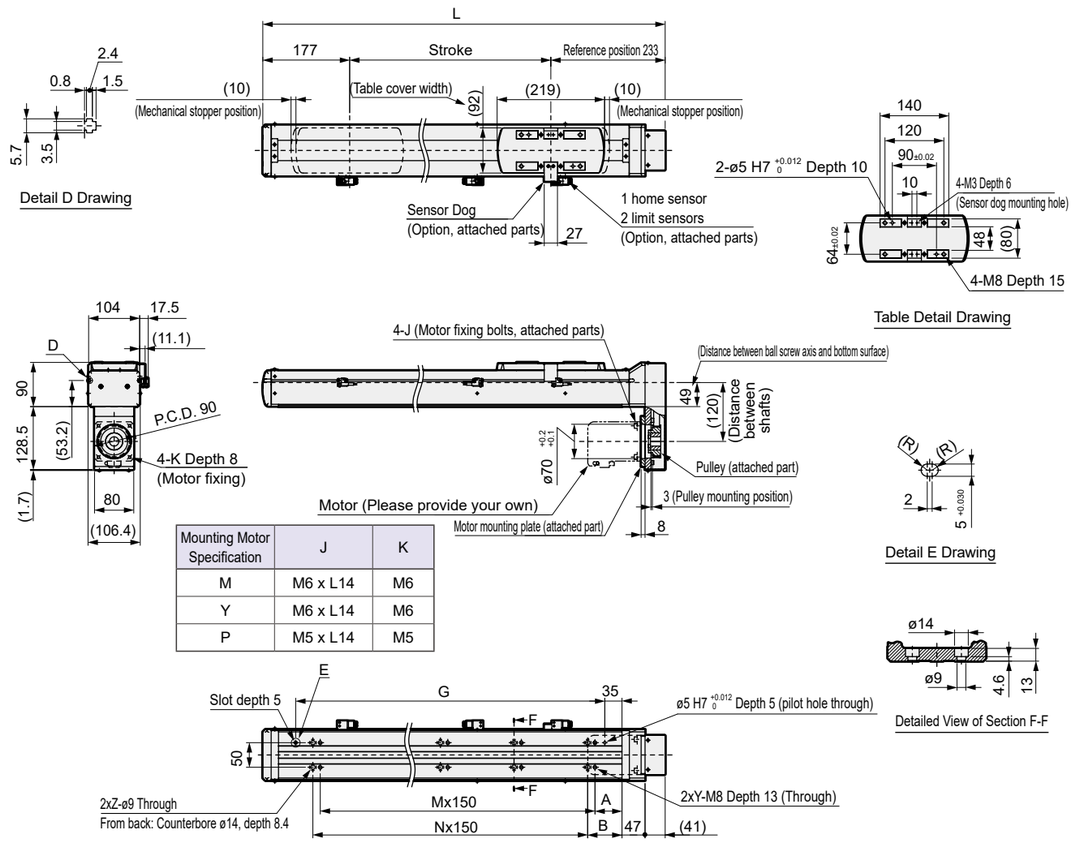
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EKS-10 LD



Mounting Motor Specification	J	K
M	M6 x L14	M6
Y	M6 x L14	M6
P	M5 x L14	M5

Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	510	610	710	810	910	1010	1110	1210	1310	1410	1510	1610	1710	1810	1910
A	45	80	55	105	80	55	105	80	55	105	80	55	105	80	55
B	120	95	70	120	95	70	120	95	70	120	95	70	120	95	70
G	320	420	520	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720
M	2	2	3	3	4	5	5	6	7	7	8	9	9	10	11
N	1	2	3	3	4	5	5	6	7	7	8	9	9	10	11
Y	3	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Z	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Weight (kg)	15.6	17.7	19.8	21.8	23.9	25.9	28	30.1	32.1	34.2	36.2	38.3	40.4	42.4	44.5

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M6	4
Y			M6	4
P			M5	4

[Home Sensor, Limit Sensor]

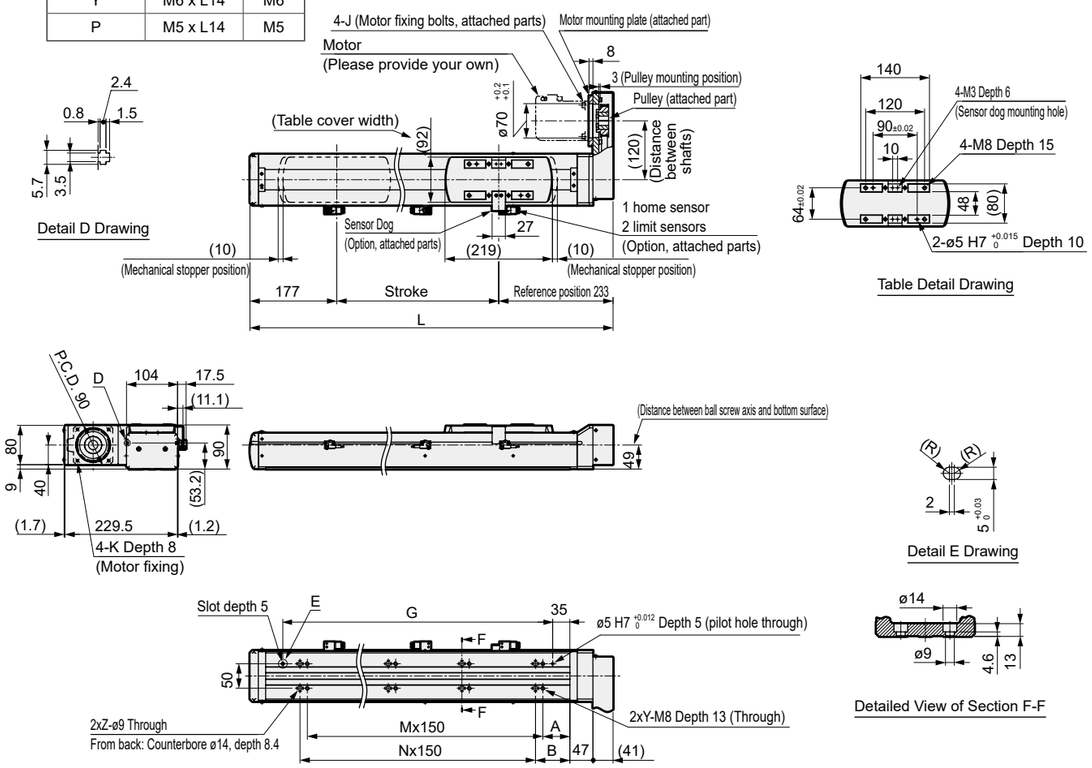
Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EKS-10 LL

Mounting Motor Specification	J	K
M	M6 x L14	M6
Y	M6 x L14	M6
P	M5 x L14	M5



Stroke Code	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500
Stroke (mm)	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
L	510	610	710	810	910	1010	1110	1210	1310	1410	1510	1610	1710	1810	1910
A	45	80	55	105	80	55	105	80	55	105	80	55	105	80	55
B	120	95	70	120	95	70	120	95	70	120	95	70	120	95	70
G	320	420	520	620	720	820	920	1020	1120	1220	1320	1420	1520	1620	1720
M	2	2	3	3	4	5	5	6	7	7	8	9	9	10	11
N	1	2	3	3	4	5	5	6	7	7	8	9	9	10	11
Y	3	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Z	2	3	4	4	5	6	6	7	8	8	9	10	10	11	12
Weight (kg)	15.6	17.7	19.8	21.8	23.9	25.9	28	30.1	32.1	34.2	36.2	38.3	40.4	42.4	44.5

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Pulley	Motor mounting plate Fixing bolt	Motor mounting bolts	
			Size	Quantity
M	Shipped included	Shipped included	M6	4
Y			M6	4
P			M5	4

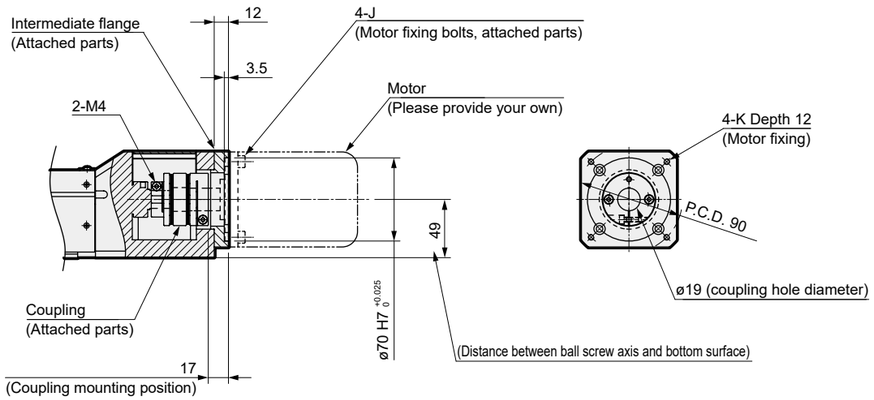
[Home Sensor, Limit Sensor]

Manufacturer	Model	Included quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 428.

Common Options

Dimensions when motor is straight mounted



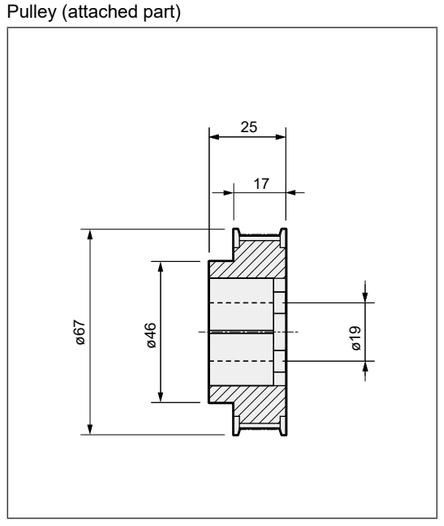
Motor Mounting Section Detail Drawing

Mounting Motor Specification	J	K
M	M6 x L14	M6
Y	M6 x L14	M6
P	M5 x L14	M5

When motor is fold-back mounted

Motor shaft fixing method

Pulley (attached part)



MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

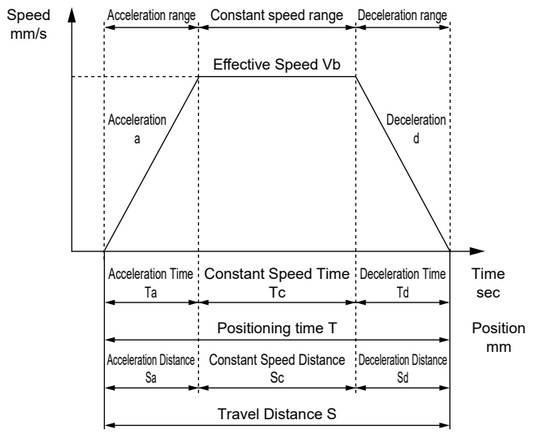
Model Selection

STEP1 Confirmation of Payload

Payload varies depending on the mounting orientation, screw lead, and acceleration/deceleration. Select the size and screw lead by referring to the payload table by acceleration/deceleration (P. 426, 427).

STEP2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time. Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$=\{2 \times a \times d \times S / (a + d)\}^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb / a
	Deceleration Time	Td	s	= Vb / d
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	$= (a \times Ta^2) / 2$
	Deceleration Distance	Sd	mm	$= (d \times Td^2) / 2$
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Please use an acceleration/deceleration of 2 G or less.
*1 G ≈ 9.8 m/s².

STEP3 Confirmation of Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 420 to 425).

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

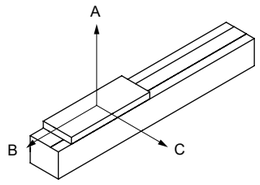
[For confirmation via iPad or smartphone]

* May not display correctly depending on the smartphone's usage environment.

MEMO

Allowable Moment and Allowable Overhang Length for Each Mounting Orientation (EKS Series)

[Horizontal Installation]



[Allowable Overhang Length]

●EKS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	10	4.5	400	130	220
			9.5	400	60	100
			19	370	20	40
		16	3.5	400	140	220
			7	400	60	100
			14	270	30	40
	1	10	4.5	400	130	210
			9.5	210	60	100
			19	90	20	40
		16	3.5	360	140	200
			7	160	60	90
			14	60	20	40
	2	10	3	400	210	310
			6	220	100	150
			12	90	40	70
		16	2	370	240	290
			4	170	110	140
			8.5	70	50	70
Fold-back	0.15	10	4.5	400	130	220
			9.5	400	60	100
			19	370	20	40
		16	3.5	400	140	220
			7	400	60	100
			14	270	30	40
	1	10	4.5	400	130	210
			9.5	210	60	100
			19	90	20	40
		16	3.5	360	140	200
			7	160	60	90
			14	60	20	40
	2	10	2.5	400	240	350
			5	250	120	170
			10.5	110	50	80
		16	1.5	400	270	330
			3.5	200	130	160
			7.5	80	60	80

*For 10 mm screw lead, stroke : 550 mm
Rated speed : at 500 mm/s
For 16 mm screw lead, stroke : 550 mm
Rated speed : This is the value at 800 mm/s.

●EKS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	10	6.5	500	160	340
			13	500	70	160
			26	460	30	70
		20	1.5	500	360	500
			3.5	500	170	330
			7.5	500	80	160
	1	10	6	500	160	310
			12.5	270	70	150
			25.5	120	30	70
		20	1.5	500	360	500
			3.5	380	170	270
			7.5	170	80	130
	2	10	1.5	500	500	500
			3.5	500	280	470
			7.5	300	130	230
		20	1	500	490	500
			2.5	330	240	300
			5.5	150	110	150
Fold-back	0.15	10	6.5	500	160	340
			13	500	70	160
			26	460	30	70
		20	1.5	500	360	500
			3.5	500	170	330
			7.5	500	80	160
	1	10	5.5	500	190	370
			11	320	90	180
			22	140	40	80
		20	1.5	500	360	500
			3.5	380	170	270
			7.5	170	80	130
	2	10	1.5	500	500	500
			3	500	350	500
			6	380	170	290
		20	1	500	500	500
			2.5	360	270	320
			5	160	130	160

*For 10 mm screw lead, stroke : 600 mm
Rated speed : at 500 mm/s
For 16 mm screw lead, stroke : 600 mm
Rated speed : This is the value at 1000 mm/s.

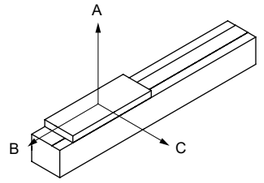
●EKS-06

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	20	11.5	600	120	210
			23.5	450	50	100
			47.5	170	20	40
		30	5	600	290	520
			10	600	140	250
			20.5	530	60	110
	1	20	6.5	490	210	320
			13.5	220	100	160
			27	90	40	70
		30	3.5	600	430	520
			7	350	200	260
			14	150	90	130
	2	20	2	600	600	600
			4.5	460	330	400
			9	210	160	200
		30	1.5	600	600	600
			3.5	420	400	380
			7.5	190	190	200
Fold-back	0.15	20	11	600	120	230
			22	480	50	100
			44.5	190	20	40
		30	4.5	600	310	560
			9.5	600	150	270
			19	580	70	120
	1	20	5	600	290	430
			10	310	140	210
			20.5	130	60	100
		30	2.5	600	550	600
			5.5	450	270	330
			11	200	120	160
	2	20	1	600	600	600
			2	600	600	600
			4.5	460	330	400
		30	1	600	600	600
			2.5	600	600	570
			5	300	290	290

*For screw lead 20 mm, stroke : 650 mm
Rated speed : 1000 mm/s
For 30 mm screw lead, stroke : 650 mm
Rated speed : The value at 1500 mm/s.

Allowable Moment and Allowable Overhang Length for Each Mounting Orientation (EKS Series)

[Horizontal Installation]



[Allowable Overhang Length]

●EKS-08

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	20	20.5	800	190	320
			41.5	760	90	140
			83.5	310	30	60
		40	4.5	800	680	800
			9.5	800	330	540
			19	800	150	260
	1	20	12	800	340	480
			24.5	380	160	230
			49	160	70	110
		40	4	800	780	770
			8	550	380	380
			16.5	250	180	190
	2	20	3.5	800	800	800
			7	800	610	710
			14	430	300	350
		40	2	800	800	800
			4	690	760	600
			8.5	320	370	300
Fold-back	0.15	20	19.5	800	200	330
			39.5	800	90	150
			79.5	340	40	60
		40	4.5	800	720	800
			9	800	350	570
			18	800	160	270
	1	20	9.5	800	440	610
			19	500	210	300
			38.5	220	90	140
		40	3	800	800	800
			6.5	680	470	470
			13.5	320	220	230
	2	20	1.5	800	800	800
			3	800	800	800
			6.5	800	660	760
		40	1.5	800	800	800
			3	800	800	800
			6	470	530	420

*For screw lead 20 mm, stroke : 700 mm
Rated speed : 1000 mm/s
For 40 mm screw lead, stroke : 700 mm
Rated speed : The value at 2000 mm/s.

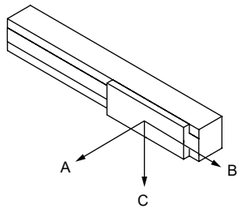
●EKS-10

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	25	42.5	1000	200	340
			85.5	760	90	150
			171.5	300	30	60
		50	10	1000	680	1000
			20	1000	330	560
			40	1000	150	260
	1	25	16	1000	560	770
			32	590	270	380
			64.5	260	120	180
		50	4.5	1000	1000	1000
			9.5	970	710	690
			19	450	340	350
	2	25	4	1000	1000	1000
			8	1000	1000	1000
			16	770	560	640
		50	1.5	1000	1000	1000
			3.5	1000	1000	1000
			7	820	980	740
Fold-back	0.15	25	40	1000	210	360
			80.5	810	90	160
			161.5	330	30	60
		50	9	1000	730	1000
			18.5	1000	350	600
			37.5	1000	160	280
	1	25	11	1000	830	1000
			22	890	400	560
			44	410	190	280
		50	3	1000	1000	1000
			6.5	1000	1000	1000
			13	690	510	510
	2	50	1	1000	1000	1000
			2.5	1000	1000	1000

*For screw lead 25 mm, stroke : 900 mm
Rated speed : When at 1250 mm/s
For 50 mm screw lead, stroke : 900 mm
Rated speed : The value at 2500 mm/s.

Allowable Moment and Allowable Overhang Length for Each Mounting Orientation (EKS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

●EKS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	10	2.5	360	210	400
			5.5	150	90	400
			11	50	30	400
		16	2	360	220	400
			4	150	90	400
			8.5	50	30	350
	1	10	2.5	360	230	400
			5	160	100	400
			10	50	30	180
		16	1.5	340	250	400
			3.5	150	110	310
			7.5	50	40	120
	2	10	2	340	250	400
			4.5	150	110	270
			9.5	50	40	110
		16	1.5	300	270	400
			3.5	130	120	200
			7	50	40	80
Fold-back	0.15	10	2.5	360	210	400
			5.5	150	90	400
			11	50	30	400
		16	2	360	220	400
			4	150	90	400
			8.5	50	30	350
	1	10	2.5	360	230	400
			5	160	100	400
			10	50	30	180
		16	1.5	340	250	400
			3.5	150	110	310
			7.5	50	40	120
	2	10	2	340	250	400
			4.5	150	110	270
			9.5	50	40	110
		16	1.5	300	270	400
			3.5	130	120	200
			7	50	40	80

*For screw lead 10 mm, stroke : 550 mm
Rated speed : at 500 mm/s
For 16 mm screw lead, stroke : 550 mm
Rated speed : This is the value at 800 mm/s.

●EKS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	10	4.5	430	200	500
			9.5	190	80	500
			19.5	70	30	500
		20	1.5	500	340	500
			3.5	320	160	500
			7.5	130	60	500
	1	10	4.5	410	210	500
			9	180	90	390
			18	60	30	160
		20	1.5	490	340	500
			3.5	220	150	360
			7.5	90	60	150
	2	10	1.5	500	500	500
			3.5	420	260	500
			7.5	190	120	290
		20	1	500	470	500
			2.5	240	220	320
			5.5	100	90	140
Fold-back	0.15	10	4.5	430	200	500
			9.5	190	80	500
			19.5	70	30	500
		20	1.5	500	340	500
			3.5	320	160	500
			7.5	130	60	500
	1	10	4.5	410	210	500
			9	180	90	390
			18	60	30	160
		20	1.5	490	340	500
			3.5	220	150	360
			7.5	90	60	150
	2	10	1.5	500	500	500
			3	500	340	500
			6	250	150	370
		20	1	500	500	500
			2.5	270	250	350
			5	120	110	150

*For screw lead 10 mm, stroke : 600 mm
Rated speed : at 500 mm/s
For 16 mm screw lead, stroke : 600 mm
Rated speed : This is the value at 1000 mm/s.

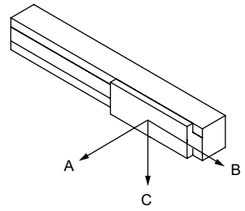
●EKS-06

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	20	5	480	250	600
			10.5	210	100	600
			21.5	70	30	340
		30	5	510	260	600
			10	220	110	600
			20.5	70	40	370
	1	20	4.5	420	290	600
			9	180	130	320
			18.5	60	40	120
		30	3.5	450	400	600
			7	200	180	320
			14	70	70	120
	2	20	2	600	600	600
			4.5	330	300	450
			9	140	130	200
		30	1.5	600	600	600
			3.5	310	360	400
			7.5	130	160	170
Fold-back	0.15	20	5	480	250	600
			10.5	200	100	600
			21.5	70	30	340
		30	4.5	550	280	600
			9.5	240	120	600
			19	90	40	420
	1	20	4.5	420	290	600
			9	180	130	320
			18.5	60	40	120
		30	2.5	590	510	600
			5.5	270	240	420
			11	110	100	180
	2	20	1	600	600	600
			2	600	600	600
			4.5	330	300	450
		30	1	600	600	600
			2.5	490	570	600
			5	220	260	290

*For screw lead 20 mm, stroke : 650 mm
Rated speed : 1000 mm/s
For 30 mm screw lead, stroke : 650 mm
Rated speed : The value at 1500 mm/s.

Allowable Moment and Allowable Overhang Length for Each Mounting Orientation (EKS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

●EKS-08

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	20	11.5	570	320	800
			23.5	250	140	800
			47.5	90	50	480
		40	4.5	800	640	800
			9.5	520	300	800
			19	220	130	800
	1	20	10.5	510	370	800
			21	220	160	430
			42	80	60	170
		40	4	700	740	800
			8	330	350	520
			16.5	140	150	220
	2	20	3.5	800	800	800
			7	640	580	800
			14	290	270	420
		40	2	800	800	800
			4	510	710	670
			8.5	230	330	310
Fold-back	0.15	20	11.5	570	320	800
			23.5	250	140	800
			47.5	90	50	480
		40	4.5	800	680	800
			9	560	320	800
			18	240	140	800
	1	20	9.5	560	410	800
			19	250	180	470
			38.5	90	70	190
		40	3	800	800	800
			6.5	410	440	650
			13.5	180	190	290
	2	20	1.5	800	800	800
			3	800	800	800
			6.5	690	630	800
		40	1.5	800	800	800
			3	750	800	800
			6	350	490	460

*For screw lead 20 mm, stroke : 700 mm
Rated speed : 1000 mm/s
For 40 mm screw lead, stroke : 700 mm
Rated speed : The value at 2000 mm/s.

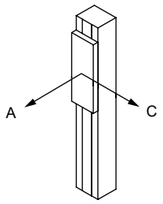
●EKS-10

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight	0.15	25	21	730	390	1000
			42	310	170	1000
			84	110	60	550
		50	10	1000	640	1000
			20	530	290	1000
			40	220	120	1000
	1	25	16	700	520	1000
			32	310	230	550
			64.5	120	90	220
		50	4.5	1000	1000	1000
			9.5	600	670	920
			19	270	300	410
	2	25	4	1000	1000	1000
			8	1000	1000	1000
			16	550	520	750
		50	1.5	1000	1000	1000
			3.5	1000	1000	1000
			7	620	920	800
Fold-back	0.15	25	21	710	390	1000
			42	310	170	1000
			84	110	60	550
		50	9	1000	680	1000
			18.5	580	310	1000
			37.5	240	130	1000
	1	25	11	1000	790	1000
			22	490	370	850
			44	210	150	380
		50	3	1000	1000	1000
			6.5	910	1000	1000
			13	420	470	650
	2	50	1	1000	1000	1000
			2.5	1000	1000	1000

*For screw lead 25 mm, stroke : 900 mm
Rated speed : When at 1250 mm/s
For 50 mm screw lead, stroke : 900 mm
Rated speed : The value at 2500 mm/s.

Allowable Moment and Allowable Overhang Length for Each Mounting Orientation (EKS Series)

[Vertical Installation]



[Allowable Overhang Length]

●EKS-04

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight	0.15	10	2	290	290
			4	130	130
			8.5	50	50
		16	1.5	270	270
			3.5	120	120
			7	50	50
	1	10	2	270	270
			4	120	120
			8.5	50	50
		16	1.5	270	270
			3	120	120
			6.5	50	50
	2	10	2	280	280
			4	130	130
			8	50	50
		16	1	290	290
			2.5	130	130
			5.5	50	50
Fold-back	0.15	10	2	290	290
			4	130	130
			8.5	50	50
		16	1.5	270	270
			3.5	120	120
			7	50	50
	1	10	2	270	270
			4	120	120
			8.5	50	50
		16	1.5	270	270
			3	120	120
			6.5	50	50
	2	10	1.5	350	350
			3	160	160
			6.5	70	70
		16	1	360	360
			2	170	170
			4.5	70	70

*For screw lead 10 mm, stroke : 550 mm
Rated speed : at 500 mm/s
For 16 mm screw lead, stroke : 550 mm
Rated speed : This is the value at 800 mm/s.

●EKS-05

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight	0.15	10	3	320	320
			6	140	140
			12.5	60	60
		20	1.5	420	420
			3	190	190
			6	80	80
	1	10	3	320	320
			6	140	140
			12	60	60
		20	1	400	400
			2.5	190	190
			5.5	80	80
	2	10	1	500	500
			2.5	370	370
			5	170	170
		20	1.5	280	280
			3.5	120	120
			-	-	-
Fold-back	0.15	10	2.5	350	350
			5.5	160	160
			11.5	60	60
		20	1	460	460
			2.5	210	210
			5.5	90	90
	1	10	2.5	370	370
			5	170	170
			10.5	70	70
		20	1	500	500
			2	240	240
			4.5	100	100
	2	10	1	500	500
			2	470	470
			4	220	220
		20	1.5	330	330
			3	150	150
			-	-	-

*For screw lead 10 mm, stroke : 600 mm
Rated speed : at 500 mm/s
For 16 mm screw lead, stroke : 600 mm
Rated speed : This is the value at 1000 mm/s.

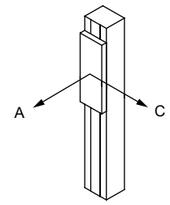
●EKS-06

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight	0.15	20	3	440	440
			6	200	200
			12.5	80	80
		30	2	600	600
			4	340	340
			8	150	150
	1	20	2.5	450	450
			5.5	210	210
			11	90	90
		30	1.5	600	600
			3	330	330
			6.5	150	150
	2	20	1.5	600	600
			3	370	370
			6	170	170
		30	1	600	600
			2	420	420
			4.5	190	190
Fold-back	0.15	20	2.5	510	510
			5.5	240	240
			11	100	100
		30	1.5	600	600
			3.5	390	390
			7	180	180
	1	20	2	560	560
			4.5	260	260
			9	110	110
		30	1	600	600
			2.5	440	440
			5	200	200
	2	20	1	600	600
			2.5	450	450
			-	-	-
		30	1.5	600	600
			3	310	310
			-	-	-

*For screw lead 20 mm, stroke : 650 mm
Rated speed : 1000 mm/s
For 30 mm screw lead, stroke : 650 mm
Rated speed : The value at 1500 mm/s.

Allowable Moment and Allowable Overhang Length for Each Mounting Orientation (EKS Series)

[Vertical Installation]



[Allowable Overhang Length]

●EKS-08

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight	0.15	20	6	670	670
			12	320	320
			24.5	140	140
		40	2.5	800	800
			5.5	520	520
			11.5	240	240
	1	20	5	690	690
			10.5	330	330
			21.5	150	150
		40	2	800	800
			4	510	510
			8.5	240	240
	2	20	2	800	800
			4	800	800
			8.5	380	380
		40	1	800	800
			2.5	670	670
			5.5	320	320
Fold-back	0.15	20	5.5	730	730
			11	350	350
			22.5	160	160
		40	2.5	800	800
			5	610	610
			10	290	290
	1	20	4.5	800	800
			9	400	400
			18	180	180
		40	1.5	800	800
			3.5	630	630
			7	300	300
	2	20	1.5	800	800
			3.5	800	800
			-	-	-
		40	1	800	800
			2	800	800
			4	450	450

*For screw lead 20 mm, stroke : 700 mm
Rated speed : 1000 mm/s
For 40 mm screw lead, stroke : 700 mm
Rated speed : The value at 2000 mm/s.

●EKS-10

Motor Mounting	Acceleration/ Deceleration G	Screw Lead	Payload kg	Overhang mm A	Overhang mm C
Straight	0.15	25	9	940	940
			18.5	450	450
			37	200	200
		50	4	1000	1000
			8.5	750	750
			17	350	350
	1	25	7	1000	1000
			14	530	530
			28	240	240
		50	2.5	1000	1000
			5	850	850
			10.5	400	400
	2	25	2	1000	1000
			4.5	1000	1000
			9.5	720	720
		50	1	1000	1000
			2.5	1000	1000
			5	730	730
Fold-back	0.15	25	8	1000	1000
			16	510	510
			32.5	230	230
		50	3.5	1000	1000
			7	890	890
			14.5	420	420
	1	25	5	1000	1000
			10.5	720	720
			21	340	340
		50	1.5	1000	1000
			3.5	1000	1000
			7.5	580	580
	2	50	1	1000	1000
			2	1000	1000

*For screw lead 25 mm, stroke : 900 mm
Rated speed : When at 1250 mm/s
For 50 mm screw lead, stroke : 900 mm
Rated speed : The value at 2500 mm/s.

Payload Table by Acceleration/Deceleration

[EKS Series (Motor Straight Mounting)]

* The table below lists the maximum payload at each acceleration/deceleration. Please check the model that meets your desired operating conditions

When installed horizontally

Unit: kg

Model	Screw Lead	Acceleration/Deceleration (G)					
		0.15	0.3	0.5	1	1.5	2
EKS-04	10	19	19	19	19	18	12
	16	14	14	14	14	11.5	8.5
EKS-05	10	26	26	26	25.5	13.5	7.5
	20	7.5	7.5	7.5	7.5	7.5	5.5
EKS-06	20	47.5	47.5	42	27	15	9
	30	20.5	20.5	20.5	14	10	7.5
EKS-08	20	83.5	83.5	83.5	49	25.5	14
	40	19	19	19	16.5	11	8.5
EKS-10	25	171.5	171.5	118.5	64.5	33.5	16
	50	40	40	40	19	11	7

* Support for 2 G or more may be available. Please contact us.

When wall-mounted

Unit: kg

Model	Screw Lead	Acceleration/Deceleration (G)					
		0.15	0.3	0.5	1	1.5	2
EKS-04	10	11	10.5	10.5	10	10	9.5
	16	8.5	8.5	8	7.5	7	7
EKS-05	10	19.5	19	19	18	13.5	7.5
	20	7.5	7.5	7.5	7.5	7.5	5.5
EKS-06	20	21.5	21	20	18.5	15	9
	30	20.5	19.5	18	14	10	7.5
EKS-08	20	47.5	46.5	45	42	25.5	14
	40	19	19	19	16.5	11	8.5
EKS-10	25	84	79.5	76	64.5	33.5	16
	50	40	40	40	19	11	7

* Support for 2 G or more may be available. Please contact us.

When vertically mounted

Unit: kg

Model	Screw Lead	Acceleration/Deceleration (G)					
		0.15	0.3	0.5	1	1.5	2
EKS-04	10	8.5	8.5	8.5	8.5	8.5	8
	16	7	7	7	6.5	6.5	5.5
EKS-05	10	12.5	12.5	12.5	12	8	5
	20	6	6	6	5.5	5	3.5
EKS-06	20	12.5	12.5	12	11	8.5	6
	30	8	8	7.5	6.5	5.5	4.5
EKS-08	20	24.5	24	23.5	21.5	14.5	8.5
	40	11.5	11	10.5	8.5	7	5.5
EKS-10	25	37	35.5	33.5	28	19	9.5
	50	17	16	14.5	10.5	7.5	5

* Support for 2 G or more may be available. Please contact us.

Payload Table by Acceleration/Deceleration

[EKS Series (Motor Fold-back Mounting)]

* The table below lists the maximum payload at each acceleration/deceleration. Please check the model that meets your desired operating conditions

When installed horizontally

Unit: kg

Model	Screw Lead	Acceleration/Deceleration (G)					
		0.15	0.3	0.5	1	1.5	2
EKS-04	10	19	19	19	19	15.5	10.5
	16	14	14	14	14	10.5	7.5
EKS-05	10	26	26	26	22	11.5	6
	20	7.5	7.5	7.5	7.5	7.5	5
EKS-06	20	44.5	44.5	41	20.5	10	4.5
	30	19	19	19	11	7.5	5
EKS-08	20	79.5	79.5	79.5	38.5	17	6.5
	40	18	18	18	13.5	8.5	6
EKS-10	25	161.5	150	92.5	44	16.5	0.5
	50	37.5	37.5	37.5	13	6	2.5

* Support for 2 G or more may be available. Please contact us.

When wall-mounted

Unit: kg

Model	Screw Lead	Acceleration/Deceleration (G)					
		0.15	0.3	0.5	1	1.5	2
EKS-04	10	11	10.5	10.5	10	10	9.5
	16	8.5	8.5	8	7.5	7	7
EKS-05	10	19.5	19	19	18	11.5	6
	20	7.5	7.5	7.5	7.5	7.5	5
EKS-06	20	21.5	21	20	18.5	10	4.5
	30	19	19	18	11	7.5	5
EKS-08	20	47.5	46.5	45	38.5	17	6.5
	40	18	18	18	13.5	8.5	6
EKS-10	25	84	79.5	76	44	16.5	0.5
	50	37.5	37.5	37.5	13	6	2.5

* Support for 2 G or more may be available. Please contact us.

When vertically mounted

Unit: kg

Model	Screw Lead	Acceleration/Deceleration (G)					
		0.15	0.3	0.5	1	1.5	2
EKS-04	10	8.5	8.5	8.5	8.5	8.5	6.5
	16	7	7	7	6.5	6	4.5
EKS-05	10	11.5	11.5	11.5	10.5	6.5	4
	20	5.5	5.5	5	4.5	4.5	3
EKS-06	20	11	11	10.5	9	5.5	2.5
	30	7	7	6.5	5	4.5	3
EKS-08	20	22.5	21.5	20.5	18	9.5	3.5
	40	10	10	9	7	5.5	4
EKS-10	25	32.5	30.5	28	21	8.5	-
	50	14.5	14	12.5	7.5	4	2

* Support for 2 G or more may be available. Please contact us.

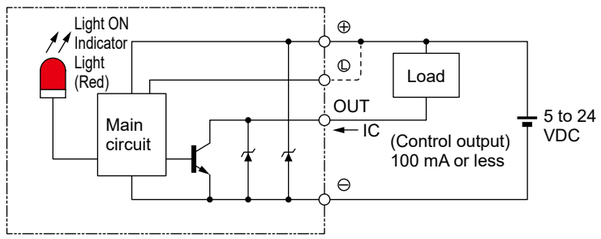
Home Sensor, Limit Sensor (Motorless Specification Option)

[Specifications]

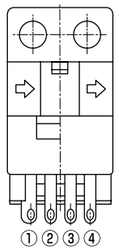
Item		Specifications
Manufacturer	Manufacturer name	OMRON
	Model	EE-SX674
Hysteresis		0.025 mm or less
Light source (peak emission wavelength)		GaAs infrared emitting diode (940 nm)
Indicator Light		Lights up when light is received (red)
Power Supply Voltage		5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption		12 mA or less (when L terminal is open)
Control output	Type	NPN type (NPN open collector)
	Output	5 to 24 VDC 100 mA or less
	Off-state current	0.5 mA or less
	Residual voltage	0.8 V or less (at 100 mA load current)
		0.4 V or less (at 40 mA load current)
Ambient illuminance		Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1000 lx or less
Ambient Temperature Range	Operating	-25 to +55°C, however, no freezing or condensation
	Storage	-30 to +80°C, however, no freezing or condensation
Ambient humidity range	Operating	5 to 85%RH, however, no freezing or condensation
	Storage	5 to 95%RH, however, no freezing or condensation
Enclosure		IP50 IEC60529 standard
Connection Method		Connector type (Direct soldering possible)

* For connectors, please refer to "Photomicrosensor Accessories" in OMRON's "EE-SX47" catalog.

Output circuit



Wiring Diagram



Terminal arrangement

①	⊕	Vcc
②	L	L
③	OUT	OUTPUT
④	⊖	GND (OV)

List of Accessories

When motor is straight mounted

Attached parts: Intermediate flange, coupling, motor mounting bolts attached

List of Attached Parts

Model Number	Mounting Motor Specifications	Motor Size	Attached Parts			
			Bolts for mounting intermediate flange		Motor mounting bolts	
			Size	Quantity	Size	Quantity
EKS-04	M	50 W 100 W	M3	2	M4	4
	Y				M4	
	P				M3	
EKS-05	M	100 W	M3	2	M4	4
	Y				M4	
	P				M3	
EKS-06	M	200 W	M4	4	M5	4
	Y				M5	
	P				M4	
EKS-08	M	400 W	M4	4	M5	4
	Y				M5	
	P				M4	
EKS-10	M	750 W	M5	4	M6	4
	Y				M6	
	P				M5	

When motor is fold-back mounted

Attached parts: Motor mounting plate, pulley, timing belt, belt tension adjustment jig, motor mounting bolts attached

List of Attached Parts

Model Number	Mounting Motor Specifications	Motor Size	Attached Parts			
			Bolts for mounting motor plate		Motor mounting bolts	
			Size	Quantity	Size	Quantity
EKS-04	M	50 W 100 W	M3	4	M4	4
	Y				M4	
	P				M3	
EKS-05	M	100 W	M3	4	M4	4
	Y				M4	
	P				M3	
EKS-06	M	200 W	M4	4	M5	4
	Y				M5	
	P				M4	
EKS-08	M	400 W	M4	4	M5	4
	Y				M5	
	P				M4	
EKS-10	M	750 W	M5	4	M6	4
	Y				M6	
	P				M5	

To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Common Precautions: Electric Actuator EKS-L Series

During Design and Selection

Danger

■ Do not use in places where dangerous goods such as ignitable substances, inflammable substances or explosives are present.
There is a possibility of ignition, fire, or explosion.

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

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

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (80% humidity or more, with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited.
Use in such environments can cause damage and malfunction.

■ Make sure that the product is D type grounded (ground resistance of 100 Ω or less).
In case of electric leakage, there is a risk of electric shock or malfunction.

■ When installing the actuator in a direction other than horizontal, use a motor with brake.
Without a brake, when the servo is OFF (including emergency stop and alarms) or when the power is OFF, there is a risk of injury or workpiece damage due to the falling of the moving part.

■ When vertically installing the actuator, do everything possible to keep the motor on top.
If the motor is on the lower side, there is no problem in normal operation, but if stopped for a long period, grease may separate and flow into the motor, which may rarely cause a malfunction.

■ Do not use this product in a location where the ambient temperature could suddenly change and cause dew to condense.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Take possibility of power source breakdown into consideration.
Take measures to prevent injury to people or damage to equipment even if the power source fails.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
Design so that restarting does not cause harm to people or damage to the equipment.
Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
Consider the possibility of failure of the installed motor.
Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature: 0°C to 40°C, storage humidity: 20% to 80%, Operating ambient temperature: 0°C to 40°C, Operating humidity: 20% to 80%)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Indicate the maintenance conditions in the device's instruction manual.
The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products and motors with their systems, machines and equipment.

■ Set up the wiring so as not to apply inductive noise.
Avoid places where large currents or strong magnetic fields are generated.
Do not use the same conduit or wiring (with multi-core cables) as the power lines of large motors other than this product.
Do not use the same conduit/wiring as the inverter power supply or wiring section used for robots, etc., apply a frame ground to the power supply, and insert a filter at the output section.

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

■ Be sure to separate the power supply of the output of this product and the power supply of inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current may enter the output section and cause damage.
If a separate power supply cannot be used, connect a surge-absorbing element in parallel directly to all inductive loads.

■ When installing an external stopper or retention mechanism (brake, etc.), place it so as not to affect origin position detection.
The home position is detected when the power is turned on. If the detection operation is obstructed by an external stopper or holding mechanism, there is a risk that an unintended position may be recognized as the home position.

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

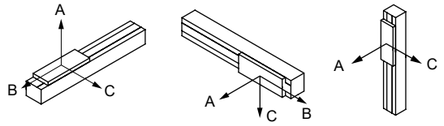
EKSModel Selection Check Sheet → **CKD** (Contact)

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

Customer:

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions:

Desired Model	EKS-	
Basic Specifications	Max. Stroke:	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s^2 (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Slider Type	
	Load weight : kg	
	Mounting Orientation: Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

MEMO

Servo motor compatible
EBS
EBR
ETS
ETS Multi Axis
ECS
ETV
ECV
EKS
ESM
Ending

Electric Shuttle Mover
Servo Motor Compatible
Motorless Specification

ESM

Overhead Transfer System (Belt Drive)

CONTENTS

Product Introduction	436
● Model Number Indication	438
● Specifications	439
● External Dimension Drawings	440
● Circuit Example for Air Gripper Use	444
● Consumable and Repair Parts	444
● Detection Sensor	445
● Unit Selection	446
⚠ Precautions for Use	448

Overhead Conveyor System

Overhead transfer system made by combining rails

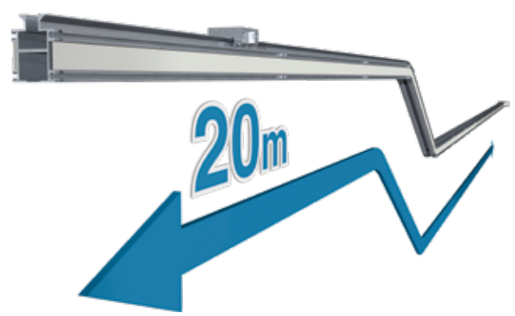
Space saving | Productivity improved | Easy adjustment

By connecting units such as straight and curved sections, overhead transfer is achieved with a single motor. Effectively utilizes space and contributes to space savings.

Long stroke

High versatility | Productivity improved

Breaking the conventional concept of electric actuators, it supports an unprecedented long stroke. It can also be used in applications where linear motors are considered.



List of supported motor manufacturers * Refer to each model page compatible model and capacity

Servo Motor

Mitsubishi Electric Corporation | Yaskawa Electric Corporation | Keyence Corporation

Solution Examples

Effective Use of Space

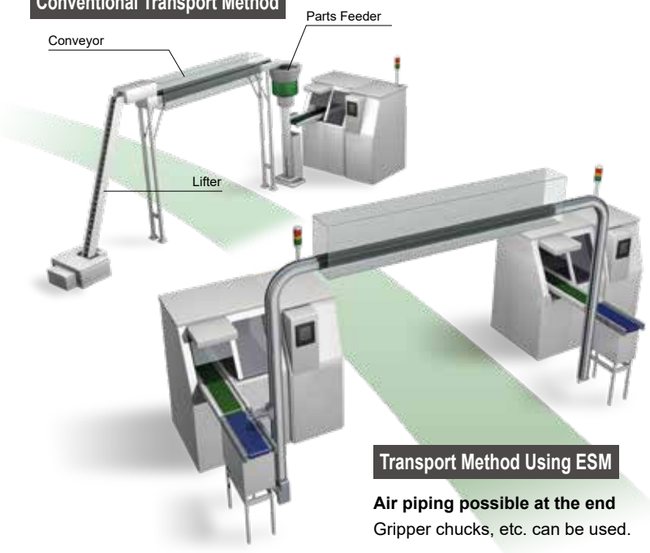
Transfer between equipment for the next process

Transferring workpieces from one piece of equipment to another while maintaining conventional passageways.

Example of Effects 2D Transport

- High speed transport possible
  (straight part: Max. 2,000 mm/s
  Curve section: Max. 1,500 mm/s)
- Multi-point stop at any position
  (repeatability ±0.5 mm)
- Control of soft start and stop
- Configure path using a combination of straight line and curve unit
- Easy layout change after installation

Conventional Transport Method



Transport Method Using ESM

Air piping possible at the end
Gripper chucks, etc. can be used.

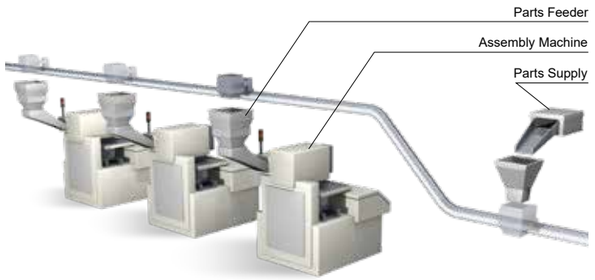
Want to improve production efficiency

Supplying parts to identical devices in parallel

Supplying assembly parts to multiple identical devices in a row, unified with a single actuator.

Example of Effects Long Stroke/Multi-point Positioning

* The waste of the production line was eliminated, and the productivity was improved.
* Reduced staff workload.
* The assembly machines are linearly arranged, enabling effective use of plant space.



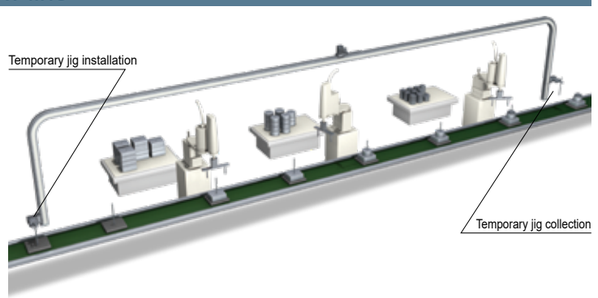
Do not want to make large-scale capital investments or modifications

Temporary pin collection on the free-flow line

At the start of assembly, the pins that temporarily held the workpiece are collected at the end. Return to the starting location.

Example of Effects Long Stroke/High Speed

* The transport workload of the staff has been reduced.
* The device layout has been improved with little change.



Electric Shuttle Mover

ESM Series

● 3D conveyor system

RoHS

Model No. Notation Method

① Motor Drive Unit

ESM - HDU - M ❶

❶ Mounting Motor Specifications	
M	Select the mounted motor specification from the table at right.
Y	*Contact CKD regarding other motor manufacturers and models.

Mounting Motor Specification and Recommended Motor Model Number (Rated Output 750 W)

Manufacturer	Code	Motor
Mitsubishi Electric Corporation	M	HG-KR73
Yaskawa Electric Corporation	Y	SGM7 J-08
Keyence Corporation	Y	SV2-□075

② Tension Unit

ESM - TTU

③ Carrier Unit

ESM - CA

④ Straight Unit

ESM - ST - 100 ❶

❶ Straight Unit Length	
100 to 2000	100 mm to 2000 mm

* Production is possible from 100 mm to 2000 mm, selectable in 1 mm increments.

⑤ Curve Unit

ESM - VC - 90-1 ❶

❶ Angle	
Jan-90	Inside 90 degrees
Feb-90	Outside 90 degrees
Jan-45	Inside 45 degrees
Feb-45	Outside 45 degrees

* A maximum of 180 degrees in total can be used for one set.
Example: 90 degrees: Up to 2 units, 45 degrees: Up to 4 units

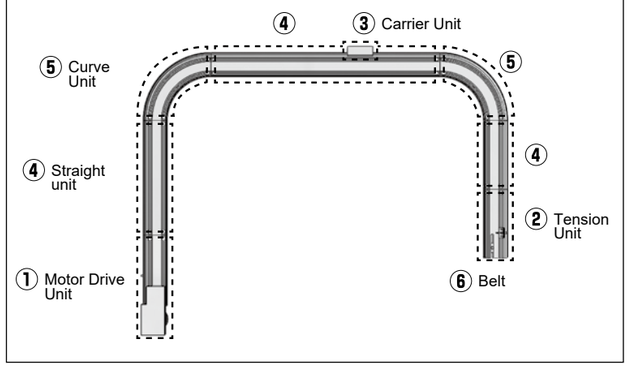
⑥ Belt

ESM - B - 01370 ❶

❶ Belt length	
01370 to 40570	1370 mm to 40570 mm

* For belt length selection, please refer to P. 446, 447 of the model selection guide.
* Please round to the nearest whole number.

Unit Example



● Other units

ESM - PP1 ❶

❶ Model No.	Content
PP1*1	PP Unit (Air Supply Unit)
SE	Detection sensor (see P. 445 for details)
T-NT*2	T-shaped plate nut

*1 This is an air intake unit that attaches to the carrier. Used for air supply at the end. The PP unit (air supply unit) cannot be used with the curve unit directly connected to the motor drive unit.
*2 This is a bracket for mounting the main body.

* All units other than "Other Units" are necessary to configure one set.

Specifications

Motor Power Supply Voltage	Three-phase 200 V
Max. Payload kg	4
Max. Speed mm/s	Straight section: 2000 or less Curve section: 1500 or less
Max. transporting distance *1 m	20
Vertical difference *2 m	3
Repeatability mm	±0.5
Lubrication	Not allowed
Applicable Motor *3	AC Servo Motor 750 W See P. 438 for recommended motors
Detection Sensor *4	Proximity Switch OMRON E2 E-X2D1-N
Operating Environment	General factory indoor (room temperature 5 to 40°C)

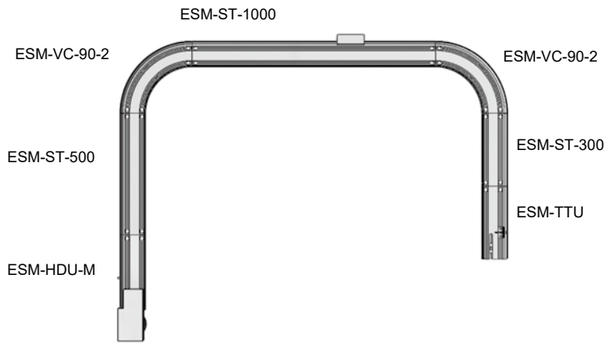
*1 For strokes exceeding 20 m, please consult with us.
*2 Height difference is the value obtained by subtracting the lowest height from the highest height in the transport path.
*3 For motors other than the recommended ones, please consult with us.
*4 If home and both-side overrun detection is required, 3 pieces are necessary.
(Please order the required quantity. For the model No., refer to P. 438, and for specifications, refer to P. 445.)
* Please use with acceleration/deceleration of 0.4 G or less. * 1 G ≈ 9.8 m/s².
* This product does not have a motor attached. The motor and driver should be prepared, mounted, and adjusted by the customer.
* This product is sold as a unit. Please perform installation and adjustment yourself.
* The PP unit (air supply unit) cannot be used with the curve unit directly connected to the motor drive unit.
* Cannot be used on its side or upside down.

Weight

Unit Name	Unit Model Number	Weight (kg)
Carrier Unit	ESM-CA	0.7
Motor Drive Unit	ESM-HDU-M	4
Straight Unit	ESM-ST-100 *1	0.5
Tension Unit	ESM-TTU	2
Curve Unit	ESM-VC-90-1	3.7
	ESM-VC-90-2	3.9
	ESM-VC-45-1	1.9
	ESM-VC-45-2	2

*1 If the stroke length increases by 100 mm, the weight increases by 0.5 kg.

Unit Combination Example



	Unit Model Number	Stroke	Belt length (mm)
1	ESM-CA	-	-
2	ESM-HDU-M	150	HDU+TTU=1170
3	ESM-ST-500	500	1000
4	ESM-VC-90-2	550	910
5	ESM-ST-1000	1000	2000
6	ESM-VC-90-2	550	910
7	ESM-ST-300	300	600
8	ESM-TTU	150	-

● Transport distance: 3200 mm
● Belt length: 6590 mm

Belt Length Selection Method and Example

Calculate the belt length using the unit combination above as an example. (For details, please refer to P. 446)

1. Belt length of motor drive unit and tension unit section: 1170 mm (fixed value)

2. Calculate twice the stroke length of the straight section.
(Stroke length of [ESM-ST-500] +
Stroke length of [ESM-ST-1000] +
Stroke length of [ESM-ST-300]) x 2
= (500+1000+300)x2
= 3600 mm

3. 90-degree curve unit belt length: 910 mm
Since there are 2 units, 910 x 2 = 1820 mm

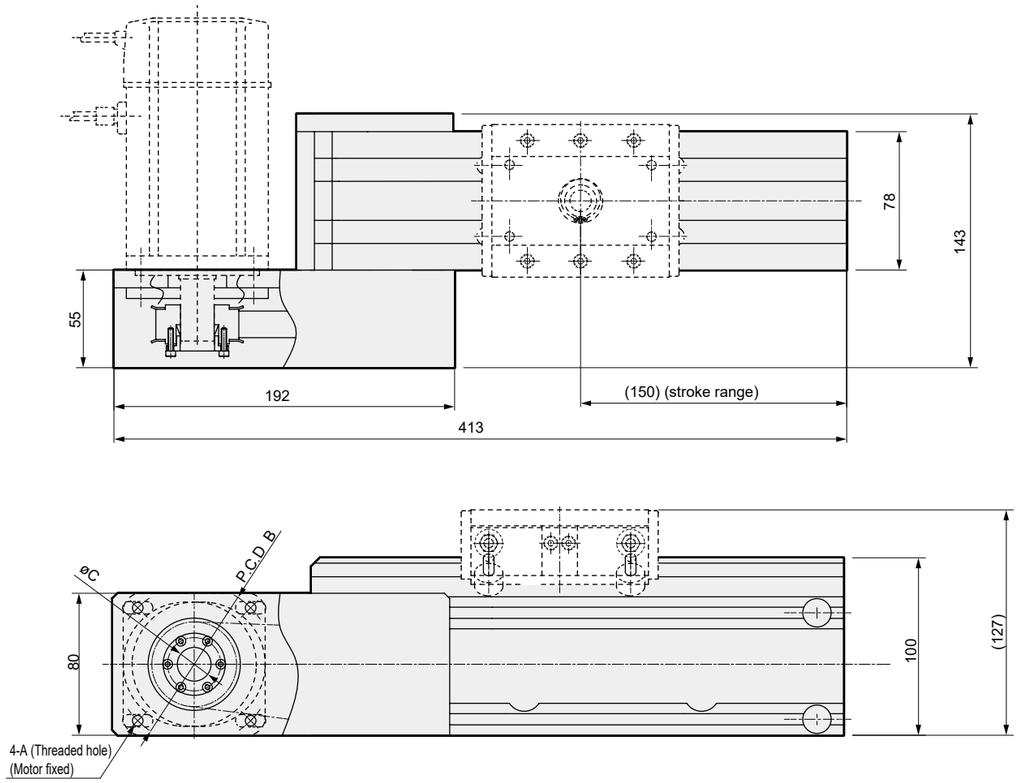
4. 'Add the belt length given by Item 1, Item 2, and Item 3 above' (Round off the first digit)

Belt length of motor drive unit and tension unit section + "Twice the stroke length of the straight section" + "Belt length of curve unit x number of units"
= 1170 mm + 3600 mm + 1820 mm
= 6590 mm

Therefore, the belt length is : 6590 mm
Belt model No. : ESM-B-06590

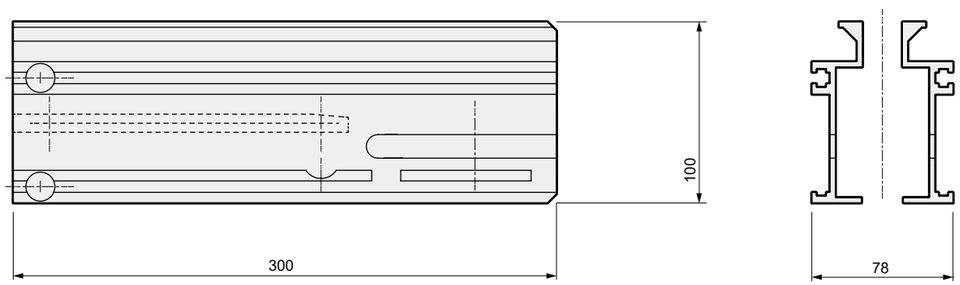
External Dimension Drawings

● Motor drive unit (ESM-HDU-□)



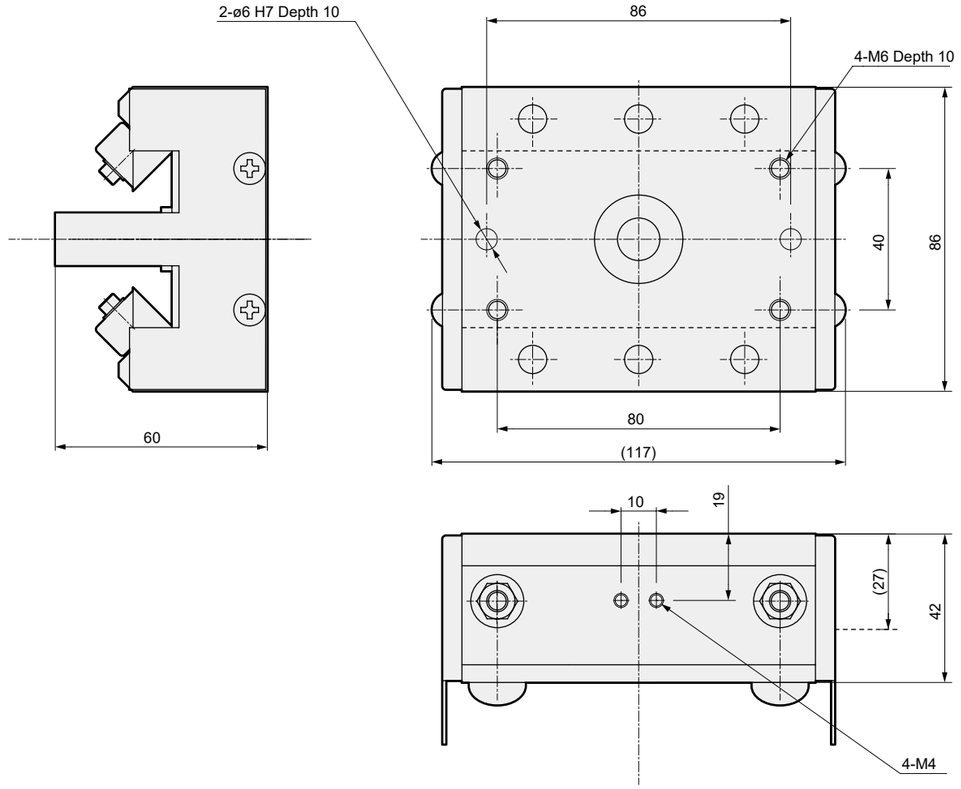
Mounting Motor Specification	A	B	C
M	M6	ø90	ø19
Y	M6	ø90	ø19

● Tension unit (ESM-TTU)

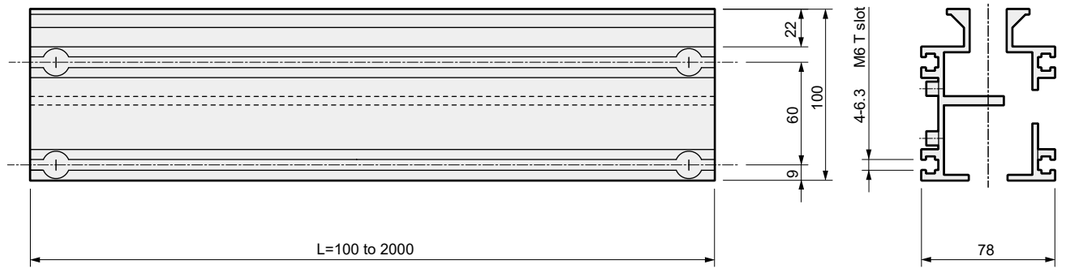


External Dimension Drawings

● Carrier unit (ESM-CA)



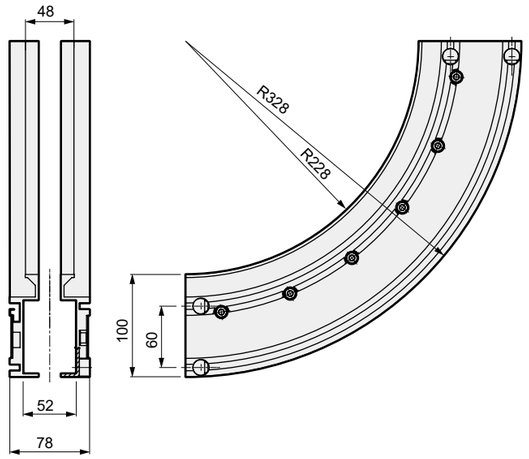
● Straight unit (ESM-ST-□)



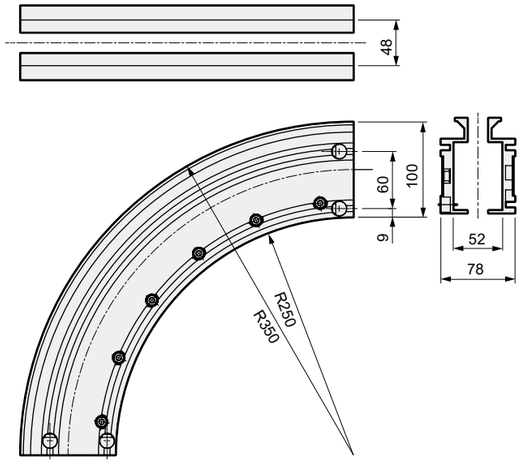
* 7 square nuts for mounting are attached every 2 m.

External Dimension Drawings

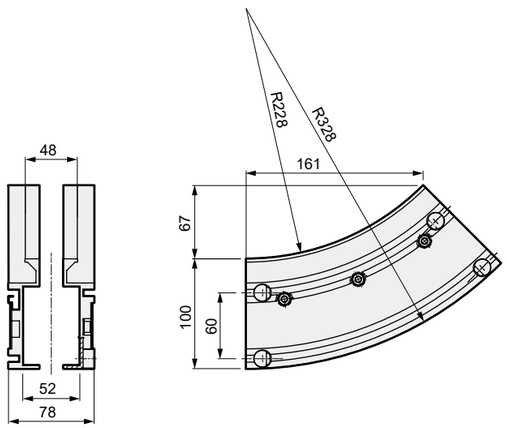
● Curve Unit: Inside (ESM-VC-90-1)



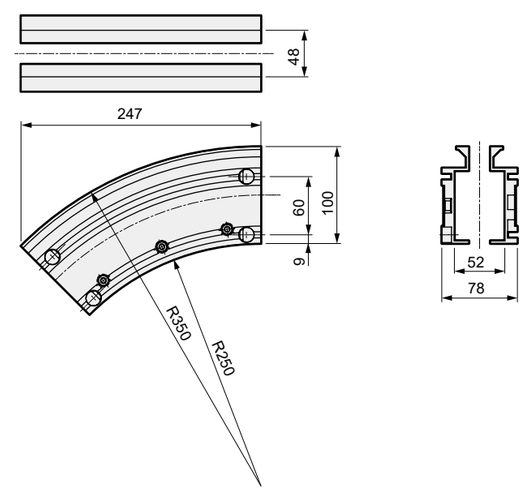
● Curve Unit: Outside (ESM-VC-90-2)



● Curve Unit: Inside (ESM-VC-45-1)



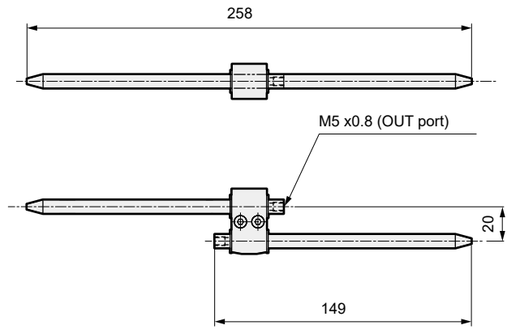
● Curve Unit: Outside (ESM-VC-45-2)



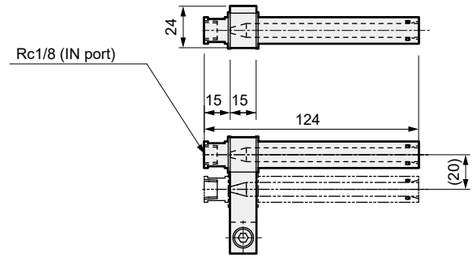
External Dimension Drawings

● PP unit (ESM-PP1, air supply unit)

●Carrier unit side nozzle

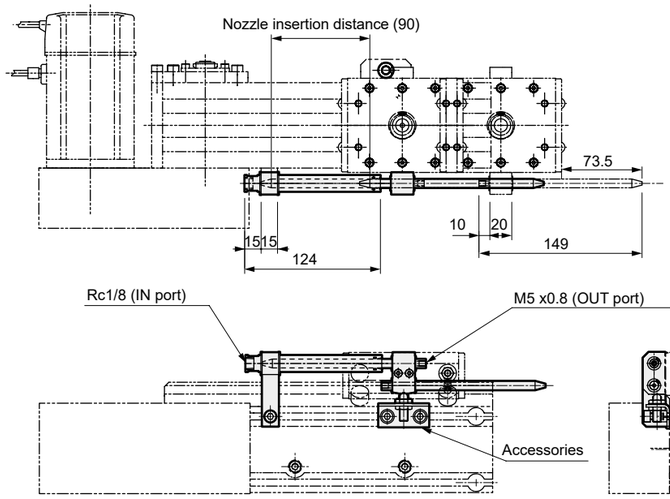


● Motor drive unit, tension unit side nozzle

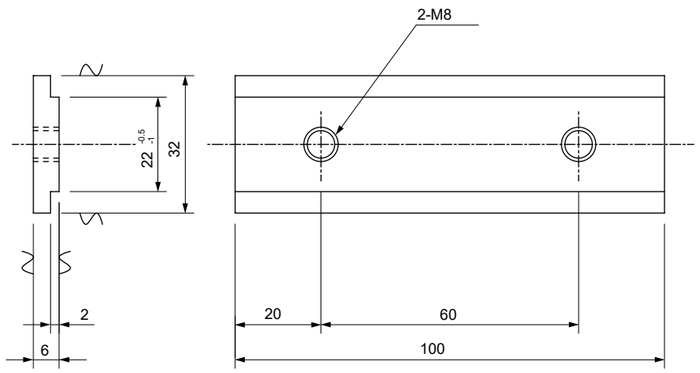


* The PP unit (air supply unit) cannot be used with the curve unit directly connected to the motor drive unit.

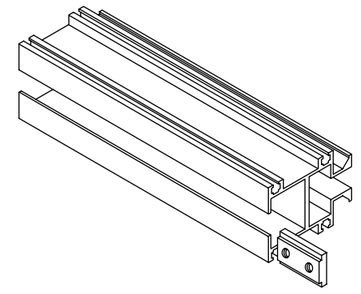
● Configuration diagram when PP unit is installed (Reference)



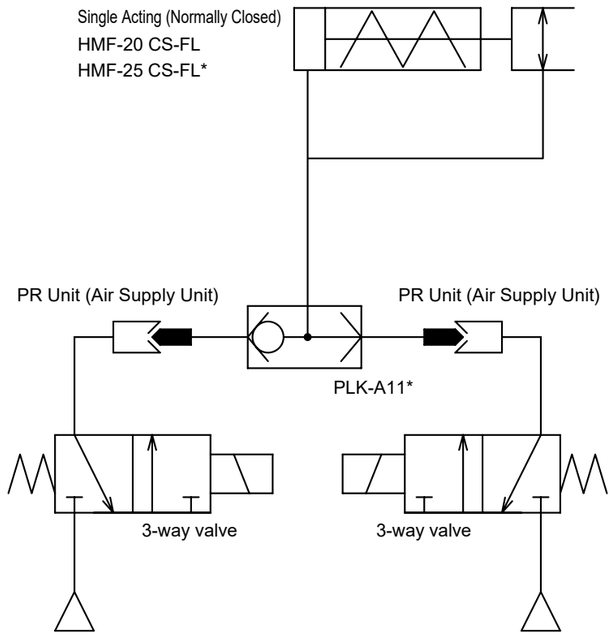
● T-shaped plate nut



[Mounting Reference Example]



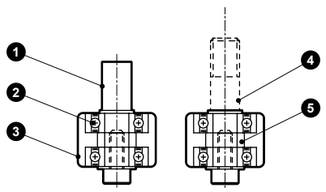
Circuit Example for Air Gripper Use



* For details and specifications, please contact us.

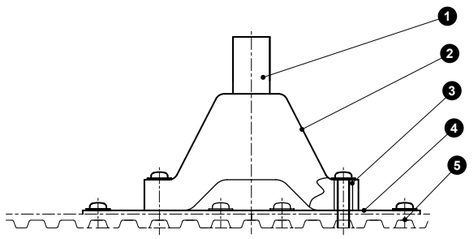
Consumable and Repair Parts

● Roller set: ESM-RO



Part Number	Part Name	Quantity
1	Roller shaft A	4
2	Small diameter ball bearing	16
3	Roller	8
4	Roller shaft B	4
5	Color	8

● Joint set: ESM-JO



Part Number	Part Name	Quantity
1	Drive pin	1
2	Drive bracket	1
3	Color	4
4	Joint plate	1
5	Joint nut	6

Parts	Model No.	Description
Carrier side belt	Refer to belt (6) on P. 438.	Belt processed to customer dimensions
Motor side belt	ESM-B-K	1 for motor pulley
Square nut	ESM-S-NT	Square nut 10 pcs/bag (set)

* Store the rubber and urethane parts of each set in a place with low temperature and humidity, avoiding direct sunlight, oil, water, ozone, etc.

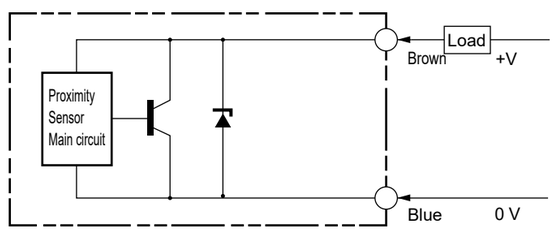
Detection Sensor

Type	Manufacturer	Model
Proximity Sensor	OMRON	E2 E-X2D1-N

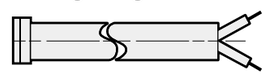
Performance

Item	Specification
Cylindrical type detection head size	M8
Type	Shielded type
Detection method	Inductive type
Sensing distance	2 mm ±10%
Setting distance	0 to 1.6 mm
Hysteresis	15% or less of sensing distance
Detectable object	Magnetic metal (sensing distance decreases for non-magnetic metals)
Standard sensing object	Iron 8 x8 x1 mm
Response frequency	DC: 1.5 kHz (average value)
Power Supply Voltage	12 to 24 VDC, Ripple (p-p) 10% or less
Operating voltage range	10 to 30 VDC
Leakage Current	0.8 mA or less
Control output (Output format)	DC 2-wire type
Control output (Switching capacity)	3 to 100 mA
Indicator Light	Operation indicator (red), setting indicator (green)
Ambient Temperature Range	Operating: -25 to 70°C, Storage: -40 to 85°C (no freezing or condensation)
Ambient humidity range	Operating: 35 to 95% RH, Storage: 35 to 95% RH (no condensation)
Temperature influence	Variation in sensing distance within ±15% in the temperature range of -25 to +70°C (Based on sensing distance at 23°C)
Cable length	2 m

Output circuit



Wiring Diagram



Terminal arrangement

Color	Arrangement
Brown	+V
Blue	0 V

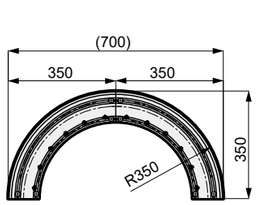
STEP-1 Confirming the stroke and belt length of each unit

Unit Name	Model No.	Stroke (mm)	Belt length (mm)
Motor Drive Unit	ESM-HDU	150	1170 (including tension unit section) (Fixed length)
Straight Unit	Example ESM-ST-100 ESM-ST-200 ESM-ST-1200 ESM-ST-2000	100 200 1200 2000	200 400 2400 4000 (Stroke x2)
Tension Unit	ESM-TTU	150	- (See motor drive unit)
Inner 90-degree curve unit	ESM-VC-90-1	360	910 (fixed length)
Outer 90-degree curve unit	ESM-VC-90-2	550	910 (fixed length)
Inner 45-degree curve unit	ESM-VC-45-1	180	455 (fixed length)
Outer 45-degree curve unit	ESM-VC-45-2	275	455 (fixed length)

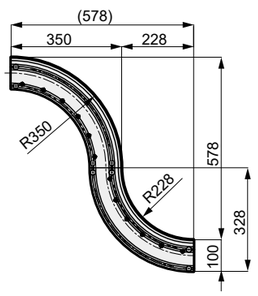
STEP-2 Shortest combination dimension of curve unit

* A maximum of 180 degrees in total can be used for one set.

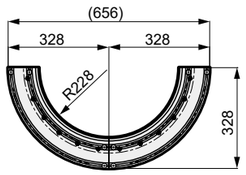
● 90° Outside - 90° Outside



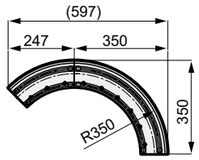
● 90° Outside - 90° Inside



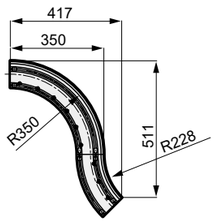
● 90° Inside - 90° Inside



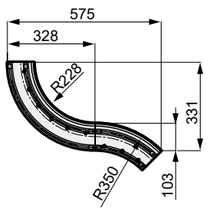
● 45° Outside - 90° Outside



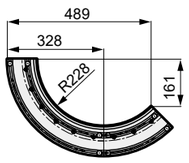
● 90° Outside - 45° Inside



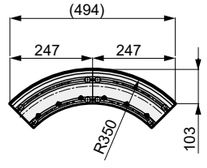
● 90° Inside - 45° Outside



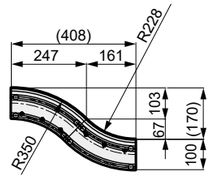
● 90° Inside - 45° Inside



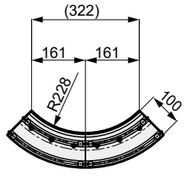
● 45° Outside - 45° Outside



● 45° Outside - 45° Inside

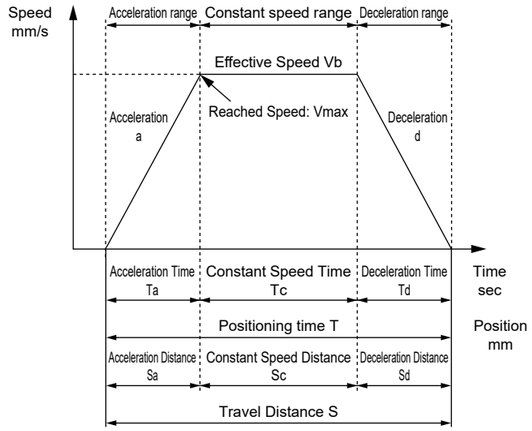


● 45° Inside - 45° Inside



STEP-3 Confirming Cycle Time

Calculate the cycle time for the selected product according to the example below and check if it meets the requirements. Select the rotation speed and rotation acceleration/deceleration from the specification table of each model (P. 438, 439) and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	= {2 xaxdxS/(a+d)} 1/2
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	=Vb/a [0.5 sec or more]
	Deceleration Time	Td	s	=Vb/d [0.5 sec or more]
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	=(axTa²)/2
	Deceleration Distance	Sd	mm	=(dxTd²)/2
	Constant Speed Distance	Sc	mm	= S - (Sa+Sd)
	Positioning Time	T	s	= Ta+Tc+Td

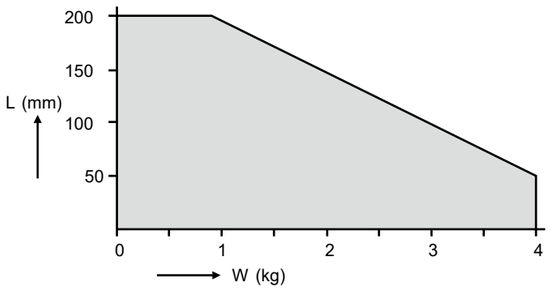
- Do not use at speeds higher than specified.
- The setting of acceleration/deceleration by acceleration/deceleration time varies depending on The set speed and stroke.
- Depending on the acceleration/deceleration and stroke, a trapezoidal velocity profile may not be formed (the set speed may not be reached). Please compare Vmax with the set speed.
- Please use with an acceleration/deceleration of 0.4 G or less.
- 1 G ≈ 9.8 m/s².

Model Selection

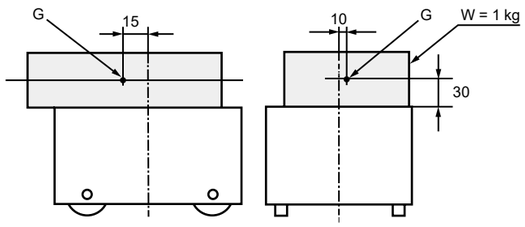
STEP-4 Confirming Max. Allowable Load

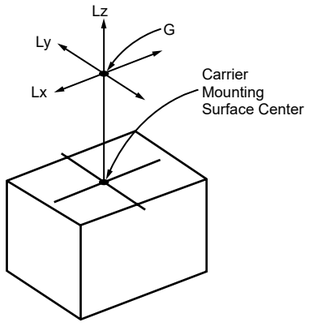
The maximum allowable load varies depending on the overhang of the load's center of gravity.

* Allowable payload varies depending on the amount of overhang. Please use within the range of the graph below.
* For calculation of overhang amount L, please refer to the selection examples.



● Selection Examples





W :Payload
G :Load's center of gravity
Lx :Deviation of G in the X direction
Ly :Deviation of G in the Y direction
Lz :Deviation of G in the Z direction
L :Overhang amount
L =Lx+Ly+Lz

W=1 kg

Lx=15 mm
Ly=10 mm
Lz=30 mm
L=15+10+30=55 mm

For the deviation of the load's center of gravity position, if W=1 kg, then L=55 mm is within the range of the graph and is acceptable.

To Use This Product Safely

Be sure to read this before use.
For general precautions regarding electric actuators, please see P. 15 of the opening section.

Individual Precautions: Electric Shuttle Mover ESM Series

During Design and Selection

Danger

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

■ Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.

■ When mounting the product, be sure to securely hold and fix it (including the workpiece).
There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

■ Always keep the travel speed of the carrier unit within the specified speed.

■ It is not possible to fix the carrier unit and use the rail portion as a mobile unit.

■ Do not damage the rail with a workpiece, etc., that has been dropped by mistake during mounting or removal of a workpiece, etc. This can cause malfunction.

■ Snagging a foreign object between the carrier unit and the rail will cause a malfunction.

■ Provide a safety cover to prevent the operating area and position locking.

■ Use this product in a working environment where people work normally in a general factory.
(Operating temperature 5 to 40°C, operating humidity 35 to 80% RH, no condensation)

■ This product cannot be used in water, oil, or powder, or in places where the product will be exposed to cutting fluid or cutting chips. Otherwise operation faults may occur.

■ This product cannot be used in corrosive environments.

■ Use within the product's specified operating range.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
● Use in such environments can cause damage and malfunction.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Consider the possibility of power source failure.
● In case of breakdown in the power source, take countermeasures without causing trouble or damage to the operator or equipment.

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

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

■ Cannot be used on its side or upside down.

Caution

■ A belt runs inside the rail. Be careful not to let chips, etc., enter during assembly.

■ Carrier unitDo not use in a range where the cylinder could collide with the stroke end and break.

■ Clearly state the maintenance conditions in the equipment's instruction manual.
● The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ Regarding installing, setting up, adjusting and maintaining the product, read through the instruction manual and operate correctly.

■ The product is manufactured in conformity with the related standards. Never modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

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

Electric Actuator Stepping Motor Compatible

CONTENTS

■ Slider Type (Ball Screw Driven)	EBS-L	453
■ Rod type with built-in guide	EBR-L	495
■ Slider Type (Ball Screw Driven)	ETS	533
■ Slider Type (Ball Screw Drive, Low Particle Emission Specification)	ECS	563

EBS-L

Slider Type (Ball Screw Drive)

Electric Actuator
Stepping Motor Compatible
Motorless Specification

CONTENTS

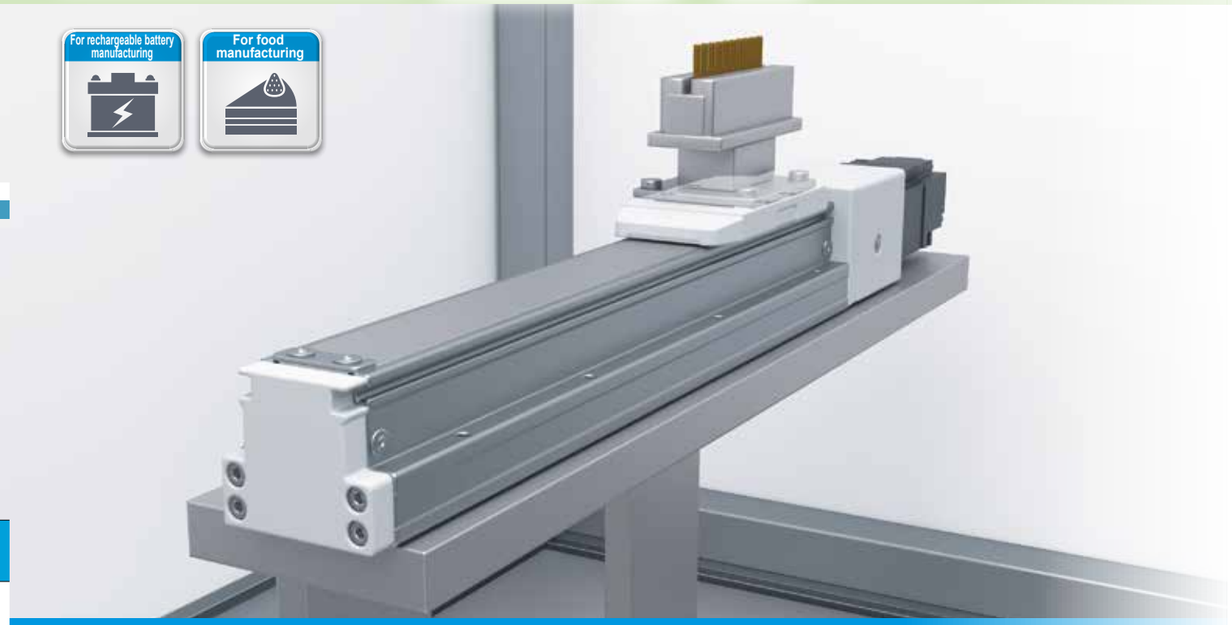
Product Introduction 454
System Table 458
● Specifications, Model No. Notation, External Dimension Drawings
・EBS-04 L 460
・EBS-05 L 466
・EBS-08 L 472
● Model Selection 478
● Technical Data 480
⚠ Precautions for Use 490
Model Selection Checklist 492

Servo motor compatible
EBS
EBR
ETS
ECS

Slider type (ball screw drive)
Compatible with stepping motor

EBS-L Series

For rechargeable battery manufacturing | For food manufacturing



Compact & High Rigidity

Line-up	Body Size / Motor size	04 □42	05 □42	08 □56	08 □60	Catalog page
EBS-L		●	●	●	●	458
Metal stopper specifications EBS-L-X		●	●	●	●	458
Compatible with rechargeable battery manufacturing processes EBS-L-P4		●	●	●	●	CC-1226AA
Supports food manufacturing processes EBS-L-FP1		●	●	●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

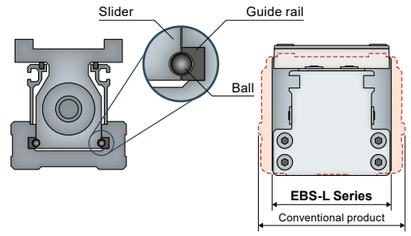
Stepping Motor

Oriental Motor Co., Ltd. MinebeaMitsumi Incorporated Dyadic Systems Co., Ltd.

Compact, high-rigidity body

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

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

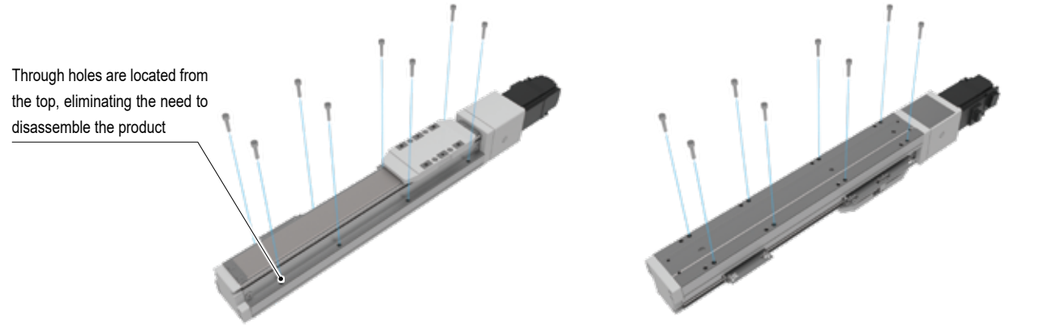


	Body Width	Static Allowable Moment MP	MY	MR
Conventional Product	65 mm	80 N·m	70 N·m	75 N·m
EBS-05 L	54 mm	103 N·m	103 N·m	144 N·m
	11 mm DOWN	28% UP	47% UP	92% UP

Mounting holes provided on top and bottom surfaces

Easy maintenance | Reduced man-hours

It is a structure that can be installed from both the top and bottom surfaces without disassembling the product. Especially when installing from the top surface, work time can be significantly reduced.

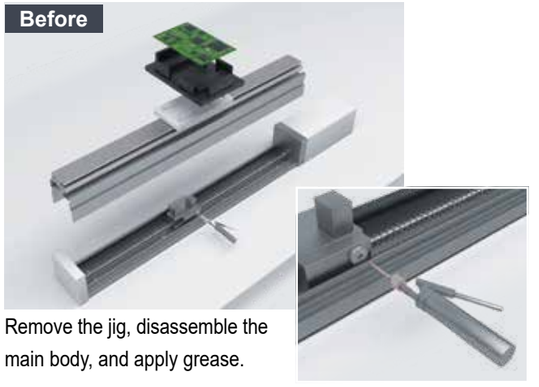


Top mounting without disassembling the body

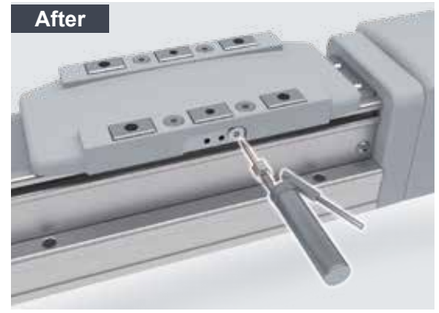
Equipped with external grease fitting port

Easy maintenance | Reduced man-hours

Grease fitting ports that can be directly greased from the outside are equipped on both sides. Maintenance of the guide and ball screw is possible by greasing from one location without disassembling the main body.



Remove the jig, disassemble the main body, and apply grease.



Direct greasing from the outside

Optimal Electric Actuator for More Accurate Homing

EBS-L-X Series (Metal Stopper Specification)

By establishing an accurate zero point based on a mechanical reference, it is possible to perform accurate homing by pushing against the mechanical end.

Optimal electric actuator for food production processes

EBS-L-FP1 Series

For food manufacturing

Food-grade (NSF H1) lubricants can be used safely and securely. Contributes to low dust generation by supporting vacuum treatment from the suction port.

FP Food Process™

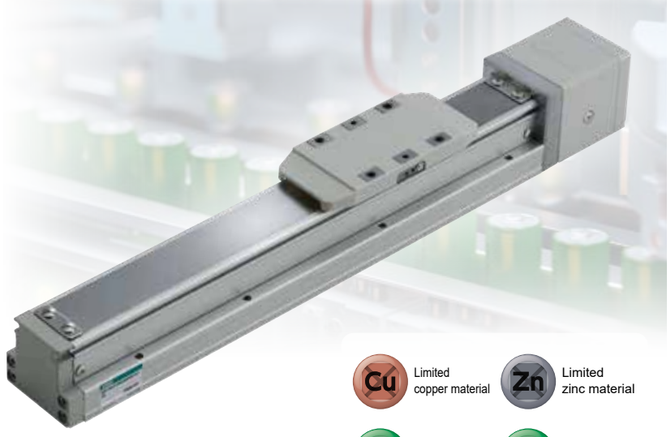
Food Grade (NSF H1) Lubricant Used

Optimal electric actuator for rechargeable battery production processes

EBS-L-P4 Series

For rechargeable battery manufacturing | Material restrictions | Dry environment DEW POINT -80°C

The use of copper, zinc, nickel-based materials and electrolytic nickel plating is restricted. Grease compatible with ultra-low dew point environments is used, and lubrication of the sliding parts is maintained for long periods, even in dry environments.



- Cu: Limited copper material
- Zn: Limited zinc material
- Ni: Limited nickel-based material
- ENi: Limited electrolytic nickel plating

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

System Table

Type	Model No.		Applicable Motor Size	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) *2 Horizontal *1	Max. Payload (kg) *2 Vertical	Stroke (mm) and Max. Speed (mm/s) *3	Listed Page
Slider Type		EBS-04 L□-06	□42	44	6	20	5	50 mm: 300 mm/s (⏱ 1.03 sec); 500: ⏱ 1.70 sec	460
		EBS-04 L□-12			12	12	2	50 mm: 600 (⏱ 0.56 sec); 500: ⏱ 0.89 sec	
		EBS-05 L□-02	□42	54	2	30	10	50 mm: 100 (⏱ 3.01 sec); 600: ⏱ 6.01 sec; 800: 90 80 70 60 (⏱ 13.34 sec)	466
		EBS-05 L□-05			5	30	10	50 mm: 250 (⏱ 1.23 sec); 600: ⏱ 2.43 sec; 800: 225 200 175 150 (⏱ 5.35 sec)	
		EBS-05 L□-10			10	15	5	50 mm: 500 (⏱ 0.65 sec); 600: ⏱ 1.25 sec; 800: 450 400 350 300 (⏱ 2.70 sec)	
		EBS-05 L□-20			20	10	2.5	50 mm: 1000 (⏱ 0.40 sec); 600: ⏱ 0.70 sec; 800: 900 800 700 600 (⏱ 1.39 sec)	
		EBS-08 L□-05	□56 □60	82	5	50	15	50 mm: 250 (⏱ 1.23 sec); 600: ⏱ 2.43 sec; 1000: 225 200 175 150 (⏱ 6.02 sec); 1100: 75 50 (⏱ 22.01 sec)	472
		EBS-08 L□-10			10	30	8	50 mm: 500 (⏱ 0.65 sec); 600: ⏱ 1.25 sec; 1000: 450 400 350 300 250 200 150 (⏱ 3.03 sec); 1100: 100 (⏱ 11.01 sec)	
		EBS-08 L□-20			20	12	2.5	50 mm: 1000 (⏱ 0.40 sec); 600: ⏱ 0.70 sec; 1000: 900 800 700 600 500 400 300 (⏱ 1.56 sec); 1100: 200 (⏱ 5.52 sec)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.
*3 The maximum speed is based on the assumption that the customer-mounted motor can output a rotational speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*4 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration. Please note that this is not the value at max. payload.

Model Number Configuration

Slider Type

EBS - 05 L E - 02 0300 NNN - A A N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

04	Body width 44 mm
05	Body width 54 mm
08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

02	2 mm
05	5 mm
06	6 mm
10	10 mm
12	12 mm
20	20 mm

❺ Stroke

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

❻ Mounting Motor Specifications

A	Refer to the list on the page at right
B	
C	

❼ Motor Size

A	□42
B	□56
C	□60

❽ Origin sensor

N	None
C	Yes

❾ Limit sensor

N	None
B	Yes

❿ Metal Stopper Specification (EBS-X)

	Standard
X	Adopted

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	06	0050 to 0500 (50 mm to 500 mm)
	12	
05	02	50 to 800 (50 mm to 800 mm)
	05	
	10	
	20	
08	05	0050 to 1100 (50 mm to 1100 mm)
	10	
	20	

* This product is available only for the actuator (and motor mounting part) and does not include a motor. The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Stepping Motor List

Code	Manufacturer name	Series	□42	□56	□60
A	Oriental Motor Co., Ltd.	AZ	AZM46□0□	-	AZM66□0□ AZM69□0□
		AR	ARM46□0□	-	ARM66□0□ ARM69□0□
B	MinebeaMitsumi Inc.	A17 PM/A23 KM	A17 PM□□□□CSTBCN	A23 KM□□□□CSTBCN	-
B	Dyadic Systems Co., Ltd.	RMJ	RMJ0411	-	-
C		RMJ	-	RMJ0611, RMJ1211	-

Electric Actuator with Motor Specification Slider Type

EBS-04LE

Motor Straight Mounting Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBS - 04 ❶ L ❷ E ❸ - 06 ❹ 0300 ❺ NNN - A ❻ A ❼ N ❽ N ❾ - X ❿

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

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

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper pecifications(EBS-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 459.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	1030	
Static Allowable Moment	N·m	MP: 62 MY: 62 MR: 92	
Drive part weight	kg	0.3	
Other inertia	kg·cm²	0.045	
Coefficient of friction		0.03	
Mechanical efficiency		0.8	
Sliding resistance	N	6	
Ball screw length		Stroke + 200	
Operating ambient temperature, humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Storage Ambient Temperature, Humidity		0 to 40 °C (no freezing), 35 to 80% RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.

Stroke and Max. Speed

(mm/s)

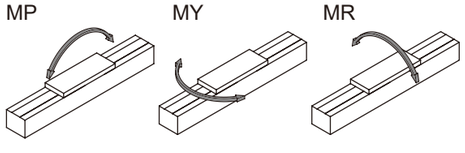
Screw Lead \ Stroke	50 to 500
6	300
12	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

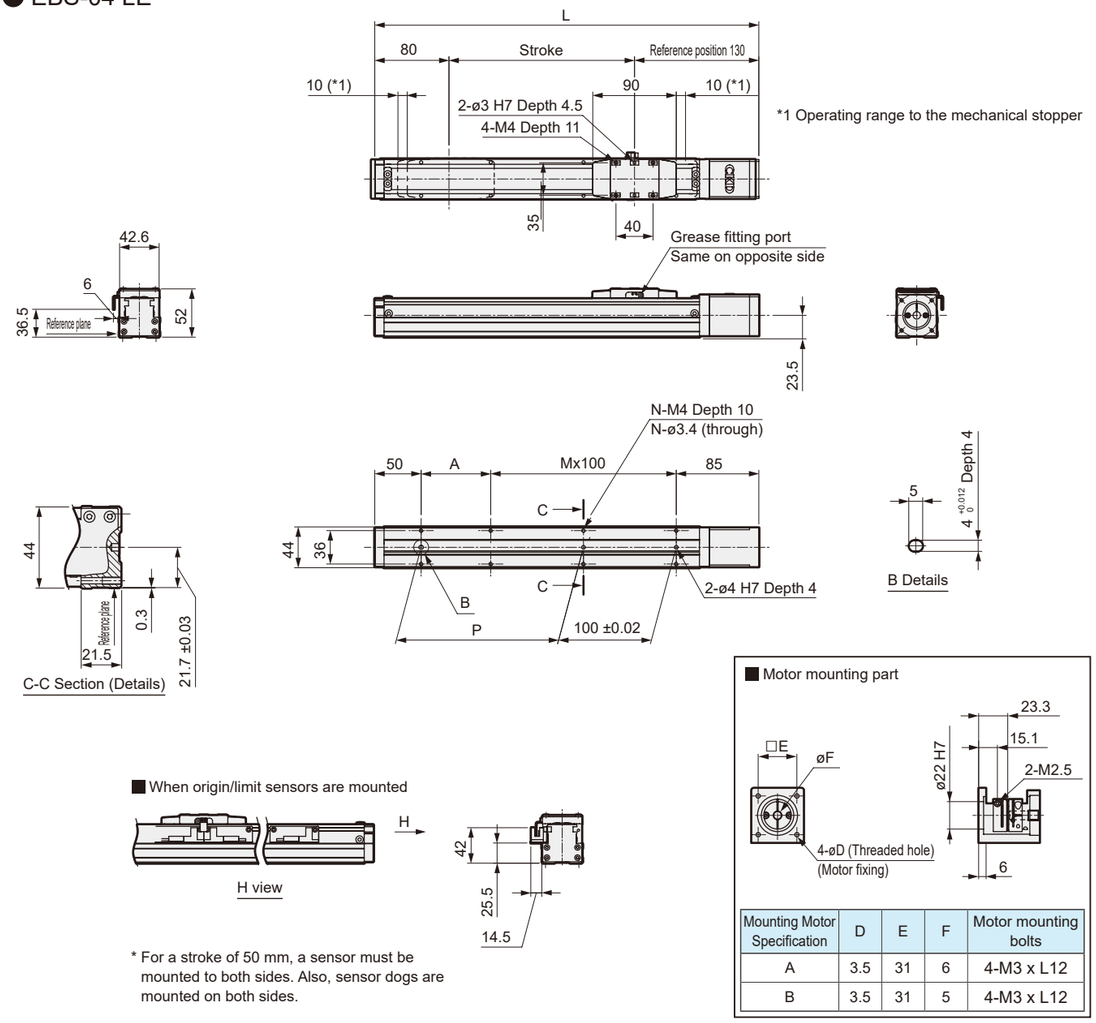
* Refer to P. 480 for details.

Moment Direction



External Dimension Drawing Motor Straight Mounting

● EBS-04 LE



■ When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs are mounted on both sides.

■ Motor mounting part

Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	260	310	360	410	460	510	560	610	660	710
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.1	1.3	1.5	1.7	1.8	2.0	2.2	2.4	2.6

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Shipped attached	M3	4
B		M3	4

[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

Electric Actuator (Motorless Specification) Slider Type

EBS-04L□

Motor Fold-back Mounting Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBS - 04 L R - 06 0300 NNN - A A N N - X

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

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

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

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

* For motor model Nos., please refer to P. 459.

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 500	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Static allowable load	N	1030	
Static Allowable Moment	N·m	MP : 62 MY : 62 MR : 92	
Drive part weight	kg	0.3	
Other inertia	kg·cm²	0.09	
Coefficient of friction		0.03	
Mechanical efficiency		0.8	
Sliding resistance	N	6	
Ball screw length		Stroke + 200	
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 500
6	300
12	600

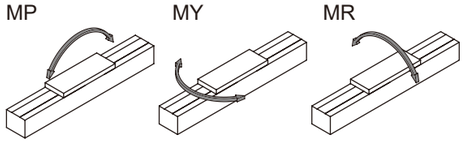
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* Refer to P. 480 for details.

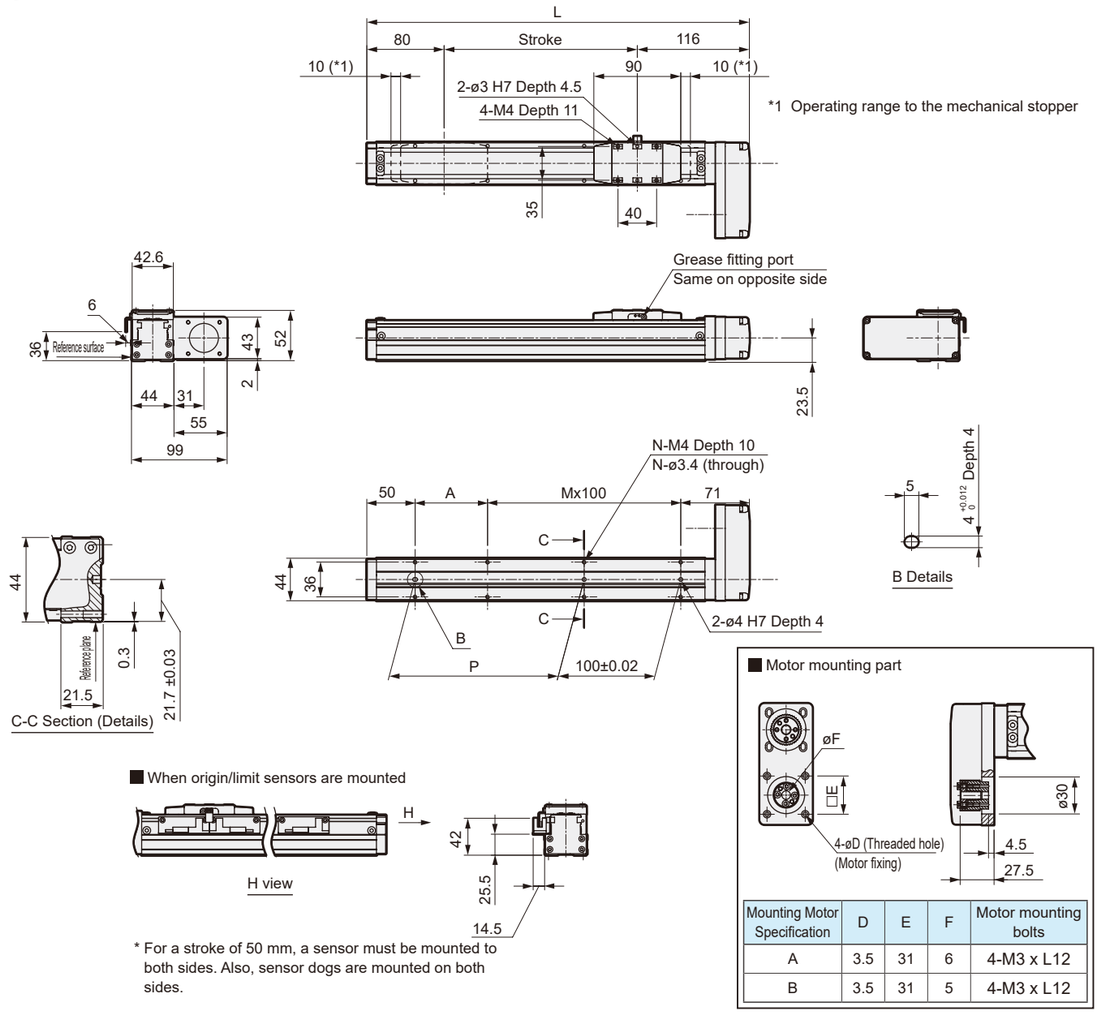
Moment Direction

MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● EBS-04 LR



■ When origin/limit sensors are mounted

* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs are mounted on both sides.

■ Motor mounting part

Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

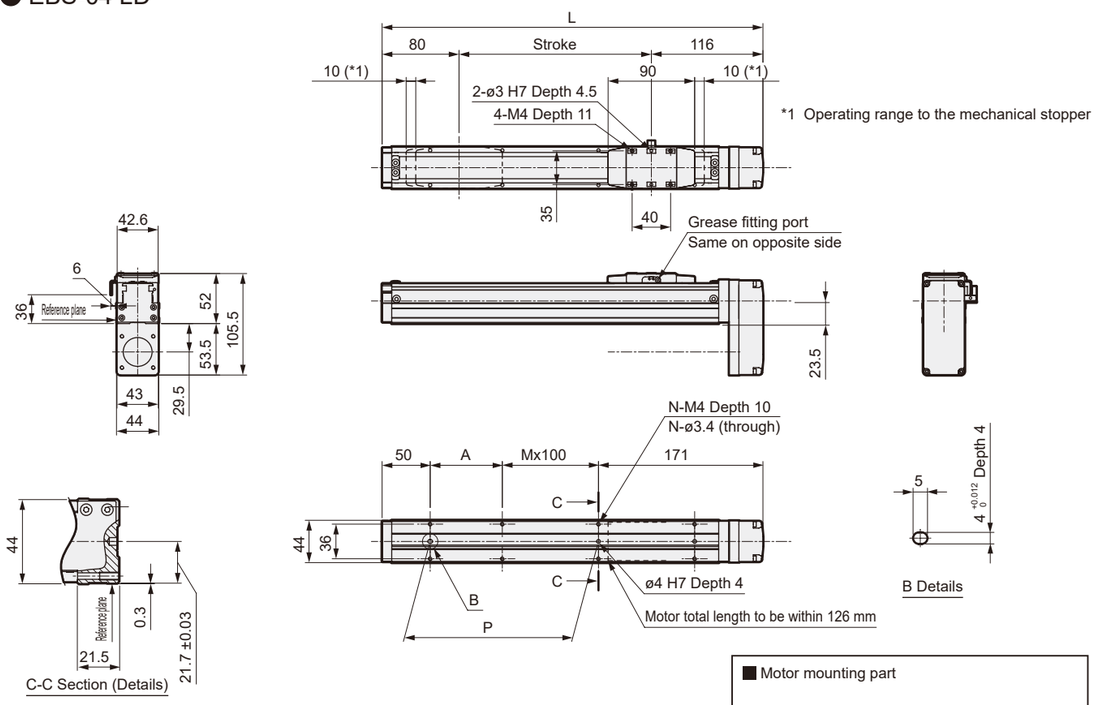
[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

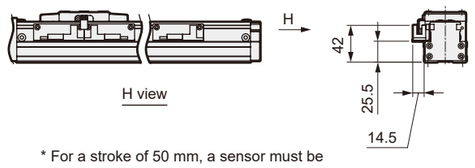
* For sensor specifications, please refer to P. 488.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBS-04 LD

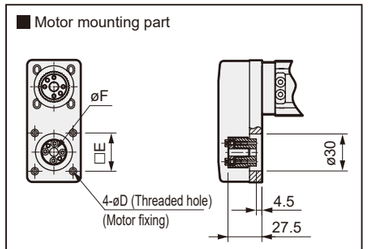


■ When origin/limit sensors are mounted



* For a stroke of 50 mm, a sensor must be mounted to both sides. Also, sensor dogs are mounted on both sides.

■ Motor mounting part



Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4
N	4	4	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

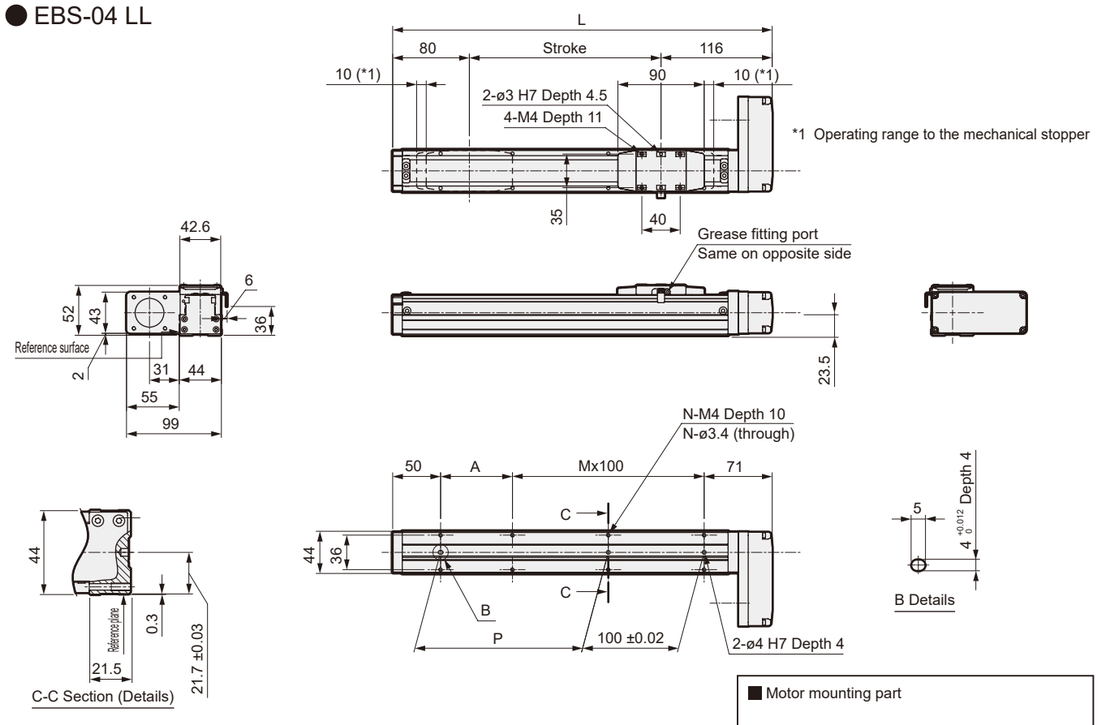
[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

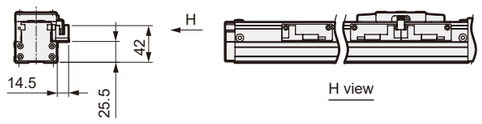
* For sensor specifications, please refer to P. 488.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBS-04 LL

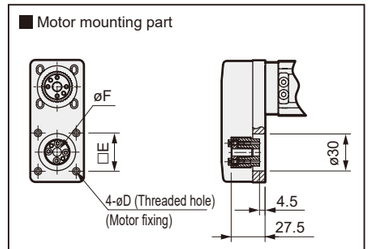


■ When origin/limit sensors are mounted



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

■ Motor mounting part



Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500
Stroke (mm)	50	100	150	200	250	300	350	400	450	500
L	246	296	346	396	446	496	546	596	646	696
A	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5
N	6	6	8	8	10	10	12	12	14	14
P	25	75	125	175	225	275	325	375	425	475
Weight (kg)	1.0	1.2	1.4	1.7	1.8	1.9	2.1	2.3	2.5	2.7

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

Electric Actuator (Motorless Specification) Slider Type

EBS-05LE

Motor Straight Mounting Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBS - 05 L E - 02 0300 NNN - A A N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

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

❺ Stroke

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

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 459.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw lead	mm	2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Static allowable load	N	1168			
Static Allowable Moment	N·m	MP : 103 MY : 103 MR : 144			
Drive part weight	kg	0.7			
Other inertia	kg·cm²	0.09			
Coefficient of friction		0.03			
Mechanical efficiency		0.8			
Sliding resistance	N	6			
Ball screw length		Stroke + 200			
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

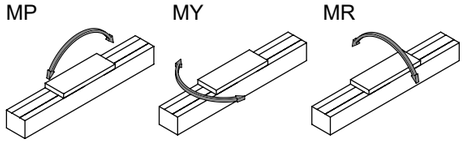
Screw Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1000	900	800	700	600

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

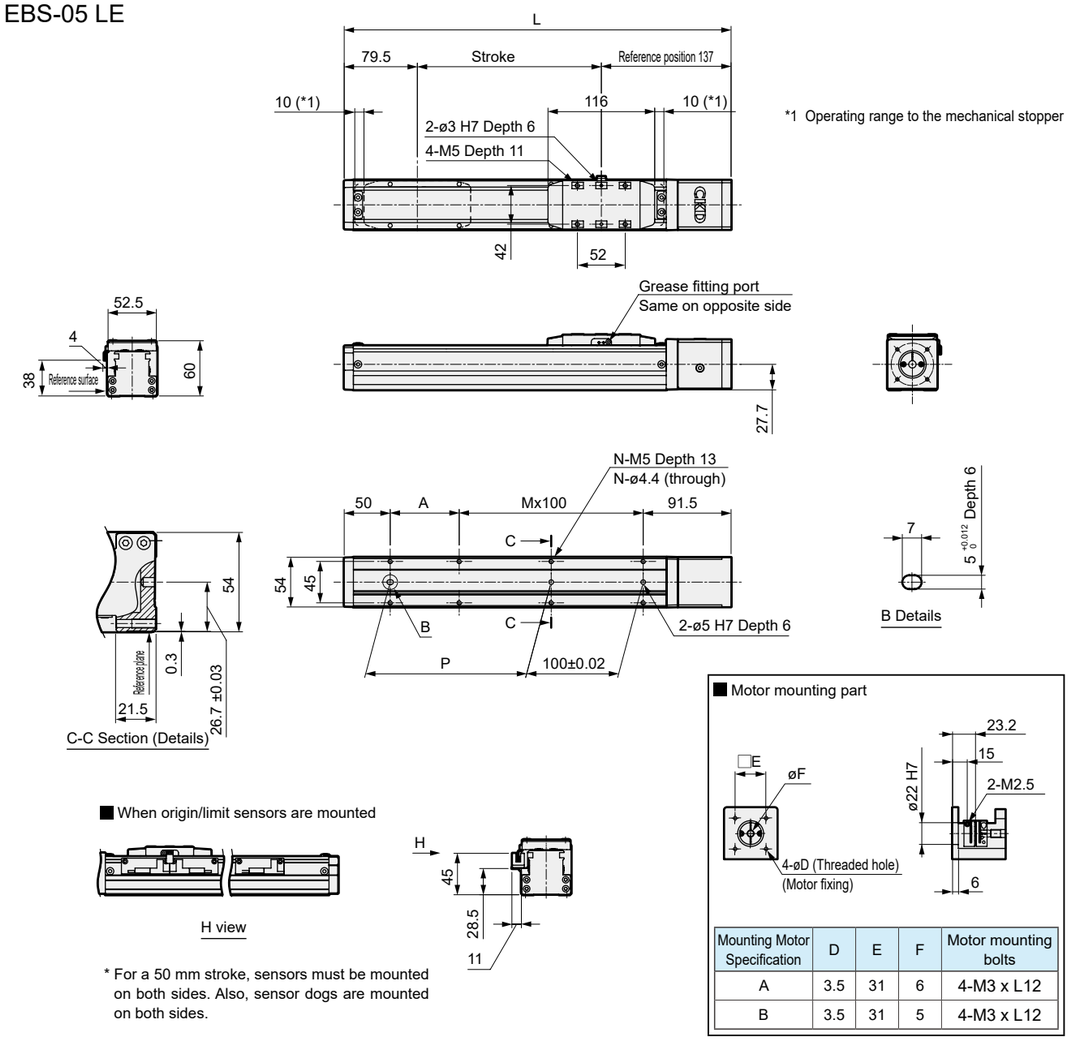
* Refer to P. 480 for details.

Moment Direction



External Dimension Drawing Motor Straight Mounting

● EBS-05 LE



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	266.5	316.5	366.5	416.5	466.5	516.5	566.5	616.5	666.5	716.5	766.5	816.5	866.5	916.5	966.5	1016.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	1.9	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.2	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Shipped attached	M3	4
B		M3	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

Electric Actuator (Motorless Specification) Slider Type

EBS-05L□

Reverse Parallel Motor Mount Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBS - 05 L R - 02 0300 NNN - A A N N - X

❶ 05 ❷ L ❸ R ❹ 02 ❺ 0300 ❻ A ❼ A ❽ N ❾ N ❿ X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

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

❺ Stroke

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

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 459.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 800			
Screw Lead		2	5	10	20
Max. Payload	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Static allowable load	N	1168			
Static Allowable Moment	N·m	MP : 103 MY : 103 MR : 144			
Drive part weight	kg	0.7			
Other inertia	kg·cm²	0.09			
Coefficient of friction		0.03			
Mechanical efficiency		0.8			
Sliding resistance	N	6			
Ball screw length		Stroke + 200			
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.

Stroke and Max. Speed

(mm/s)

Lead \ Stroke	50 to 600	650	700	750	800
2	100	90	80	70	60
5	250	225	200	175	150
10	500	450	400	350	300
20	1000	900	800	700	600

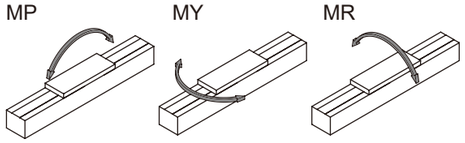
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* Refer to P. 480 for details.

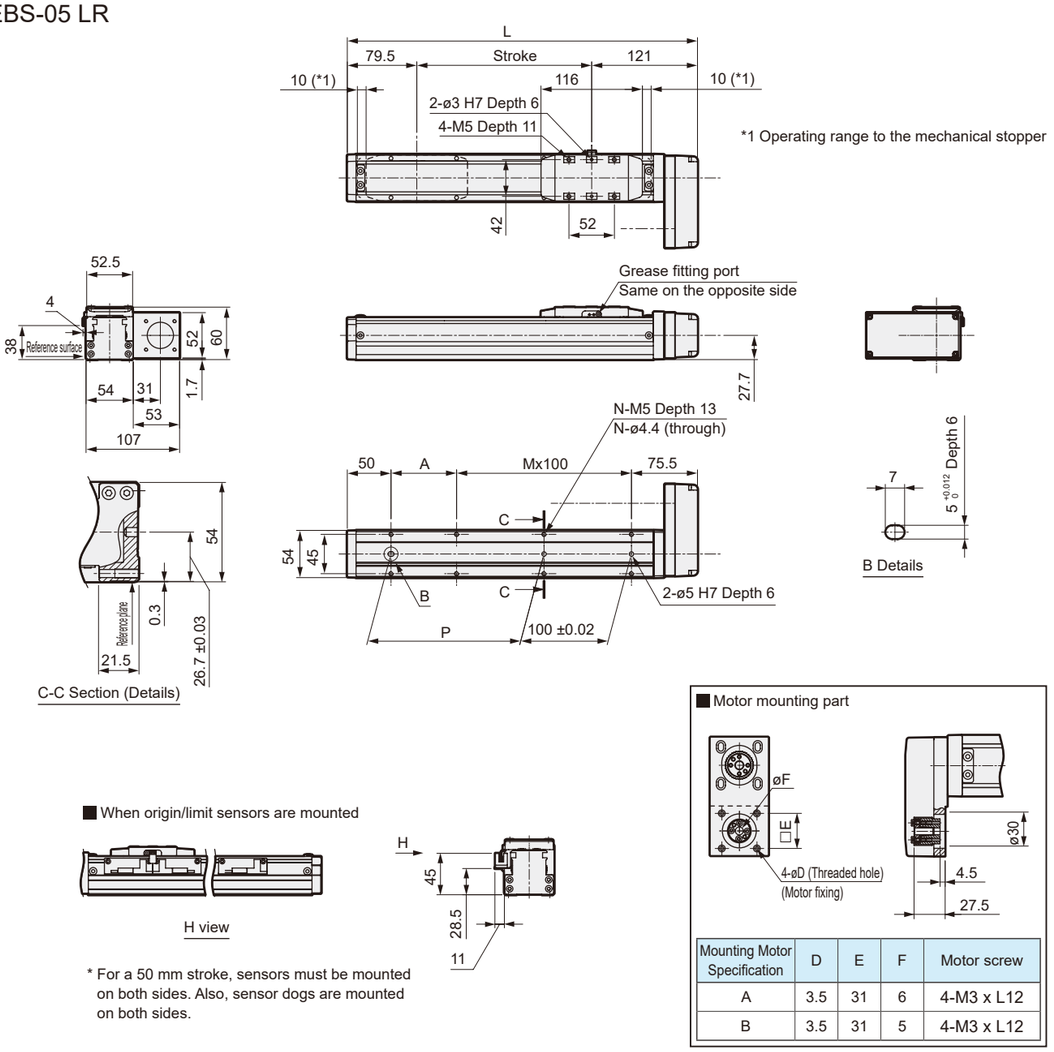
Moment Direction

MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● EBS-05 LR



■ When origin/limit sensors are mounted

* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

■ Motor mounting part

Mounting Motor Specification	D	E	F	Motor screw
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

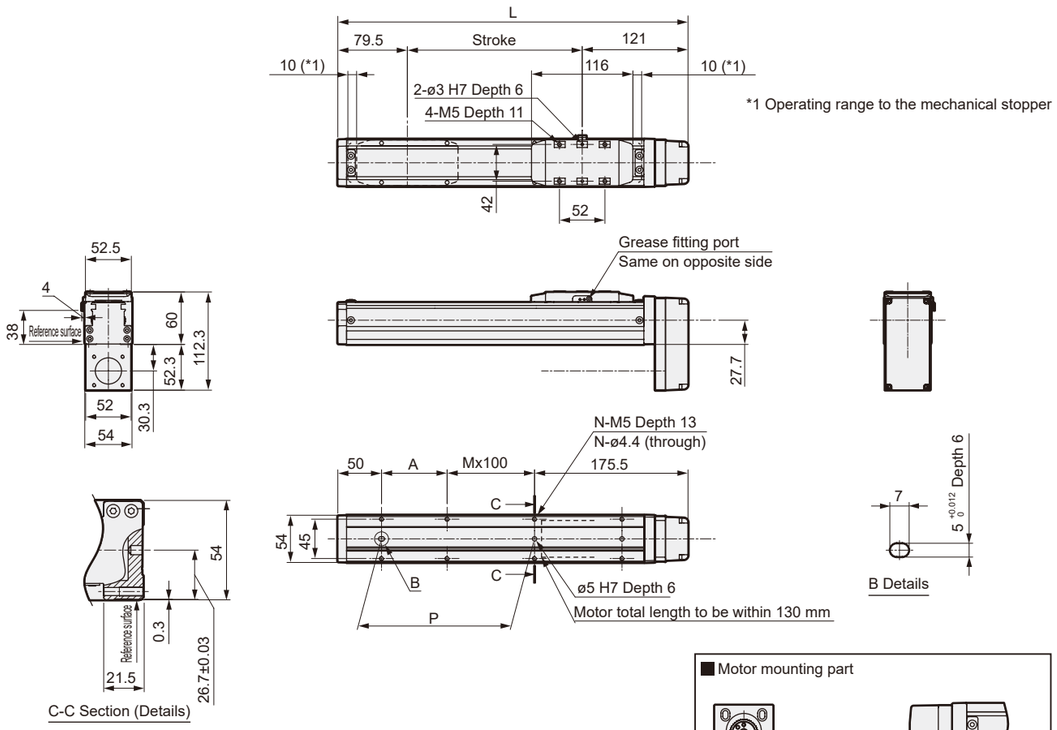
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBS-05 LD



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

Mounting Motor Specification	D	E	F	Motor screw
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

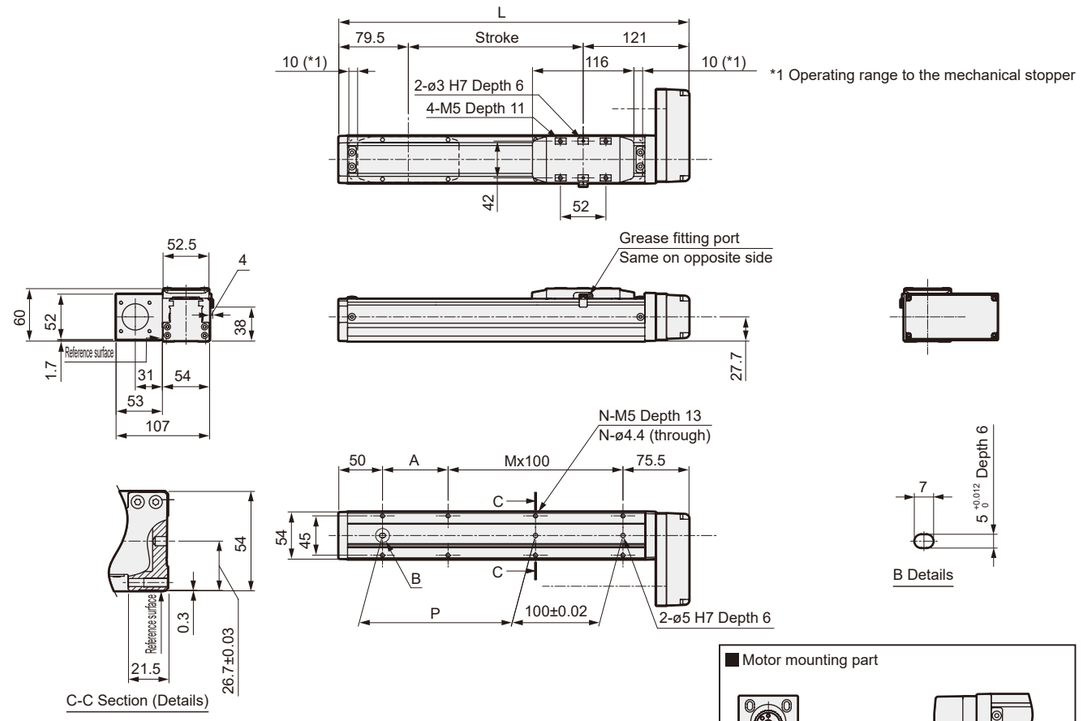
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBS-05 LL



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

Mounting Motor Specification	D	E	F	Motor screw
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	250.5	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5
A	25	75	25	75	25	75	25	75	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20
P	25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	3.0	3.1	3.3	3.4	3.5	3.7	3.8	4.0

List of Accessories

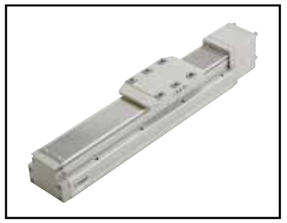
[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.



Electric Actuator (Motorless Specification) Slider Type

EBS-08LE

Inline Motor Mount Type

● Stepping Motor Size : □56, □60

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - A B N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

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

❻ Mounting Motor Specifications

A	Select the Mounting
B	Motor Specifications from
C	the Table on the right.

❼ Motor Size

B	□56
C	□60

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

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

* Refer to P. 459 for motor model No.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw lead	mm	5	10	20
Max. Payload *1	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1000
Rated thrust *1	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Static allowable load	N	2781		
Static Allowable Moment	N·m	MP : 203 MY : 203 MR : 336		
Drive part weight	kg	1.6		
Other inertia	kg·cm²	0.24		
Coefficient of friction		0.03		
Mechanical efficiency		0.8		
Sliding resistance	N	20		
Ball screw length		Stroke + 200		
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1000	900	800	700	600	500	400	300	200

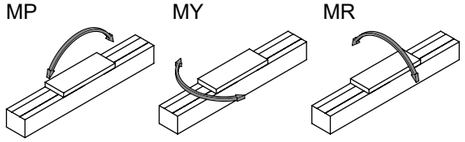
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* Refer to P. 480 for details.

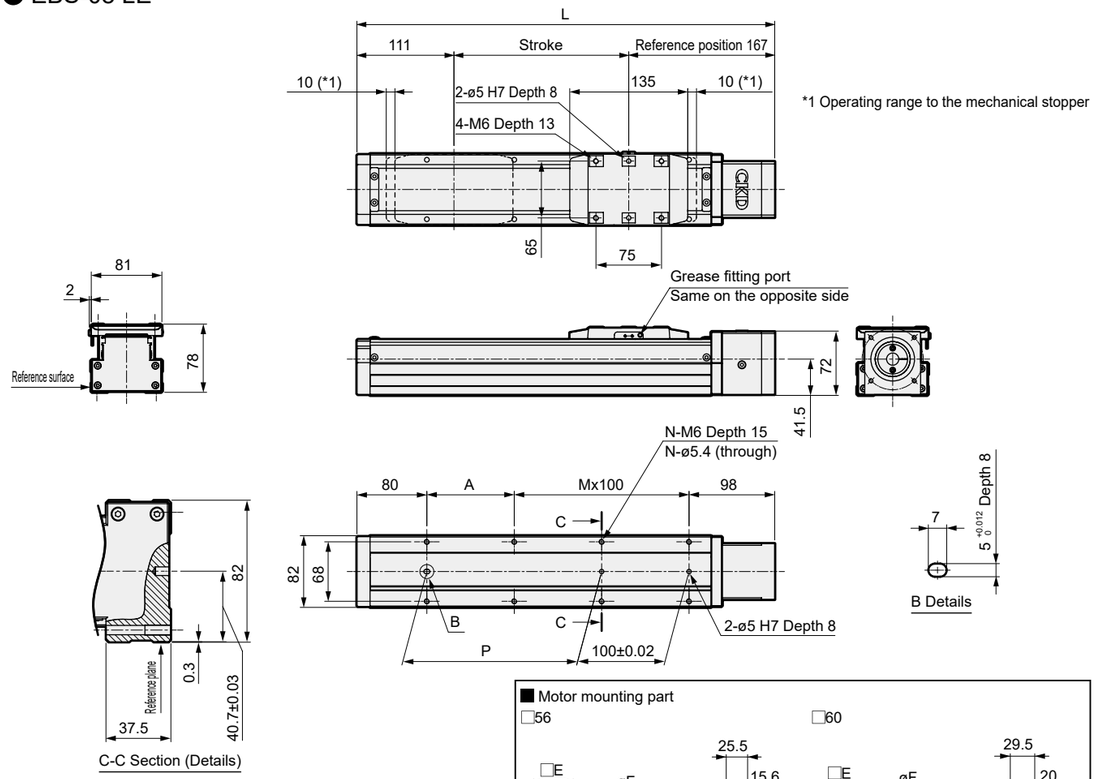
Moment Direction

MP MY MR

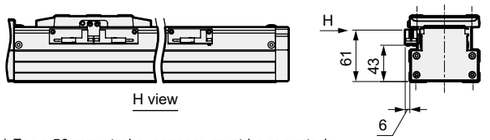


External Dimension Drawing Motor Straight Mounting

● EBS-08 LE

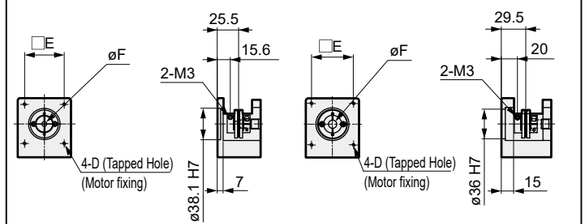


■ When origin/limit sensors are mounted



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

■ Motor mounting part



Mounting Motor Specification		D	E	F	Motor screw
A	□60	M4 Depth 10	50	10	4-M4 x L16
B	□56	M4 Depth 8	47.14	6.35	4-M4 x L12
C	□56	M4 Depth 8	47.14	8	4-M4 x L12

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	328	378	428	478	528	578	628	678	728	778	828	878	928	978	1028	1078	1128	1178	1228	1278	1328	1378
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.3	4.6	4.9	5.2	5.6	5.9	6.2	6.6	6.9	7.2	7.5	7.9	8.2	8.5	8.8	9.2	9.5	9.8	10.2	10.5	10.8	11.1

List of Accessories

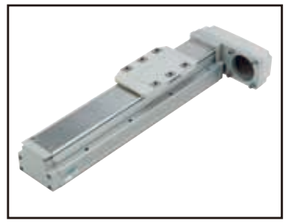
[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Shipped attached	M4	4
B		M4	4
C		M4	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.



Electric Actuator (Motorless Specification) Slider Type

EBS-08L□

Reverse Parallel Motor Mount Type

● Stepping Motor Size : □56, □60

RoHS

Model No. Notation Method

EBS - 08 L E - 05 0300 NNN - A B N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

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

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	
C	

❼ Motor Size

B	□56
C	□60

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal stopper specifications (EBS-X)

	Standard
X	Adopted

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

* Refer to P. 459 for motor model No.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 1100		
Screw Lead		5	10	20
Max. Payload	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1000
Rated thrust	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Static allowable load	N	2781		
Static Allowable Moment	N·m	MP : 203 MY : 203 MR : 336		
Drive part weight	kg	1.6		
Other inertia	kg·cm²	0.52		
Coefficient of friction		0.03		
Mechanical efficiency		0.8		
Sliding resistance	N	20		
Ball screw length		Stroke + 200		
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

Lead \ Stroke	50 to 700	750	800	850	900	950	1,000	1050	1100
5	250	225	200	175	150	125	100	75	50
10	500	450	400	350	300	250	200	150	100
20	1000	900	800	700	600	500	400	300	200

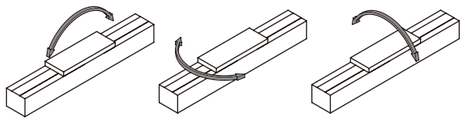
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

Allowable Overhang Length

* Refer to P. 480 for details.

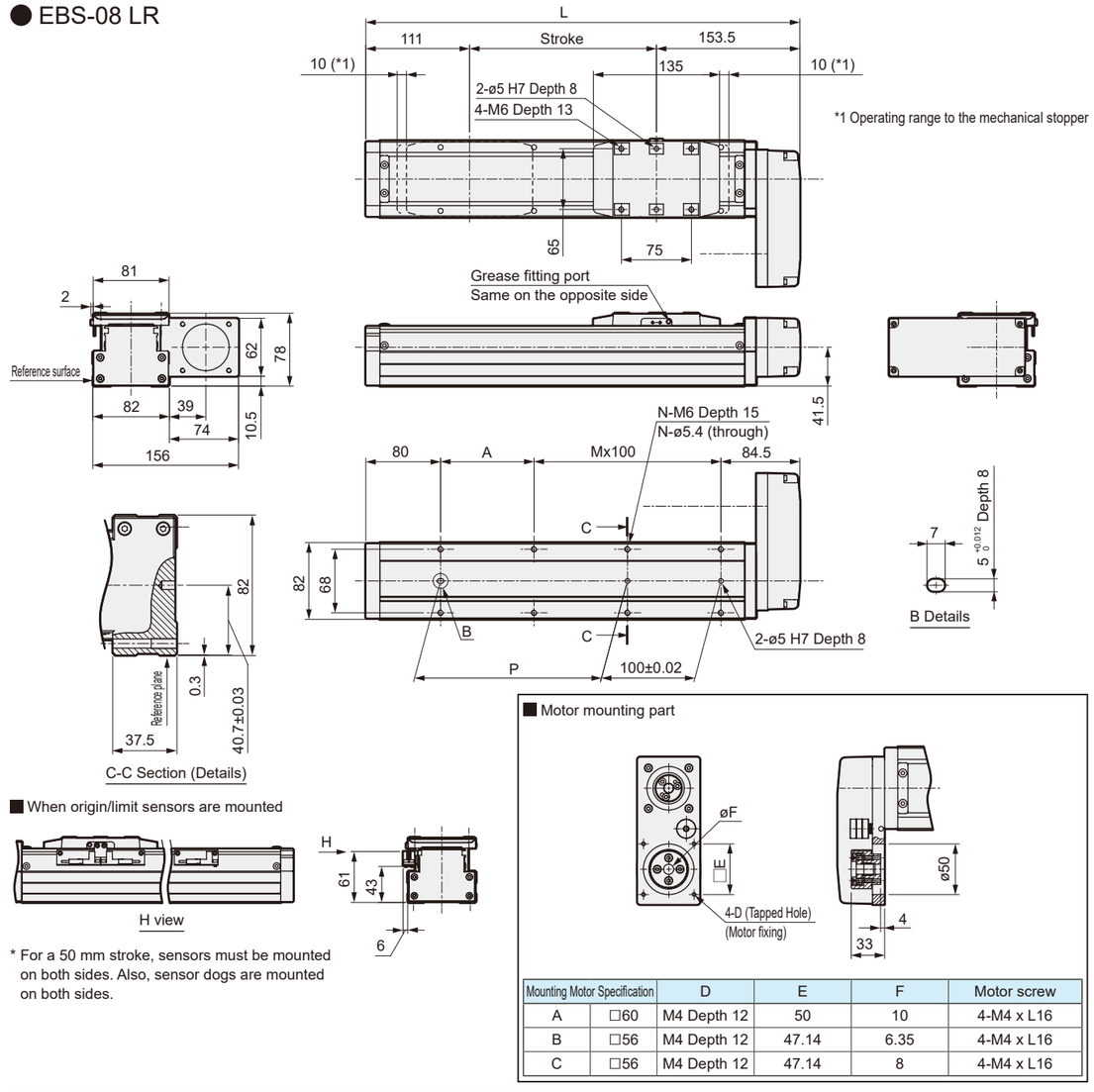
Moment Direction

MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● EBS-08 LR



■ When origin/limit sensors are mounted

* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

Mounting Motor Specification		D	E	F	Motor screw
A	□60	M4 Depth 12	50	10	4-M4 x L16
B	□56	M4 Depth 12	47.14	6.35	4-M4 x L16
C	□56	M4 Depth 12	47.14	8	4-M4 x L16

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M4	4
B		M4	4
C		M4	4

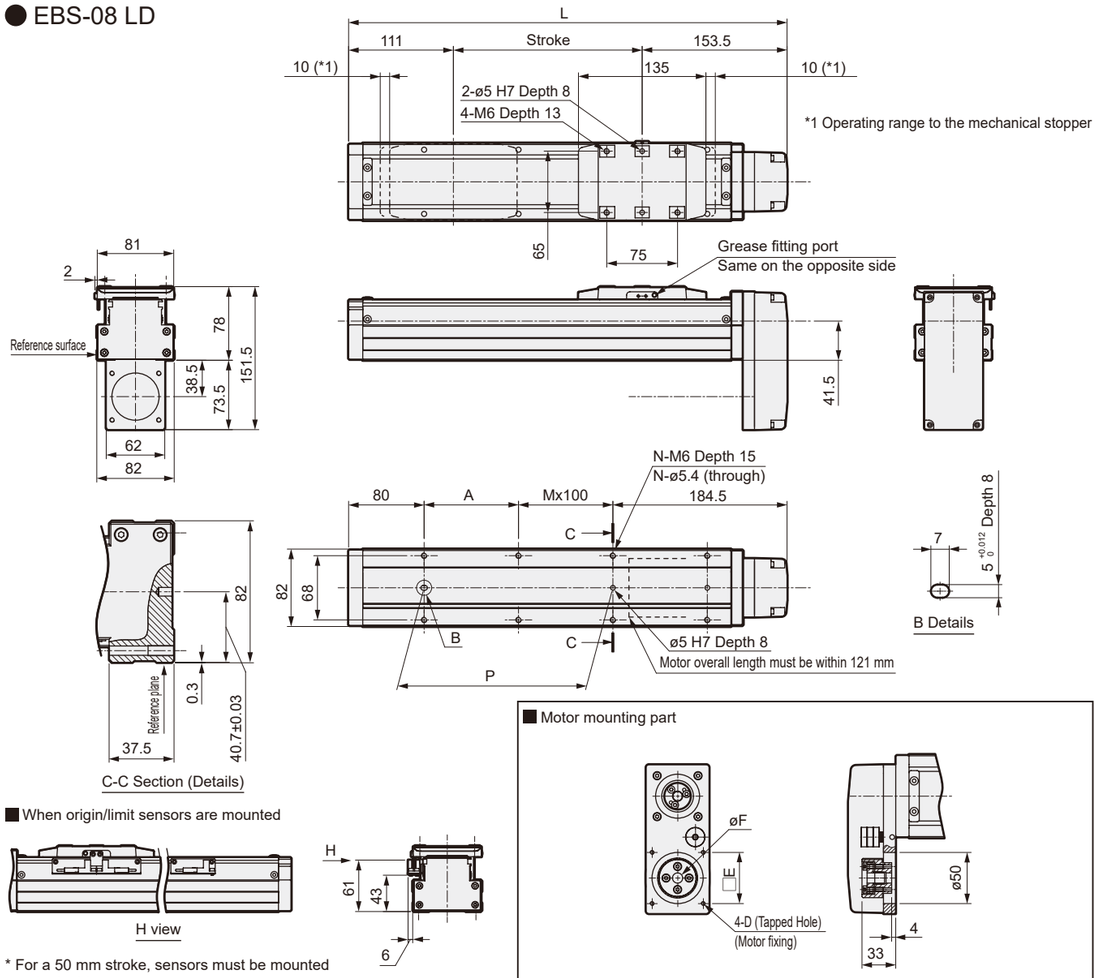
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBS-08 LD



* For a 50 mm stroke, sensors must be mounted on both sides.
Also, sensor dogs are mounted on both sides.

Mounting Motor Specification		D	E	F	Motor screw
A	□60	M4 Depth 12	50	10	4-M4 x L16
B	□56	M4 Depth 12	47.14	6.35	4-M4 x L16
C	□56	M4 Depth 12	47.14	8	4-M4 x L16

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
N	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M4	4
B		M4	4
C		M4	4

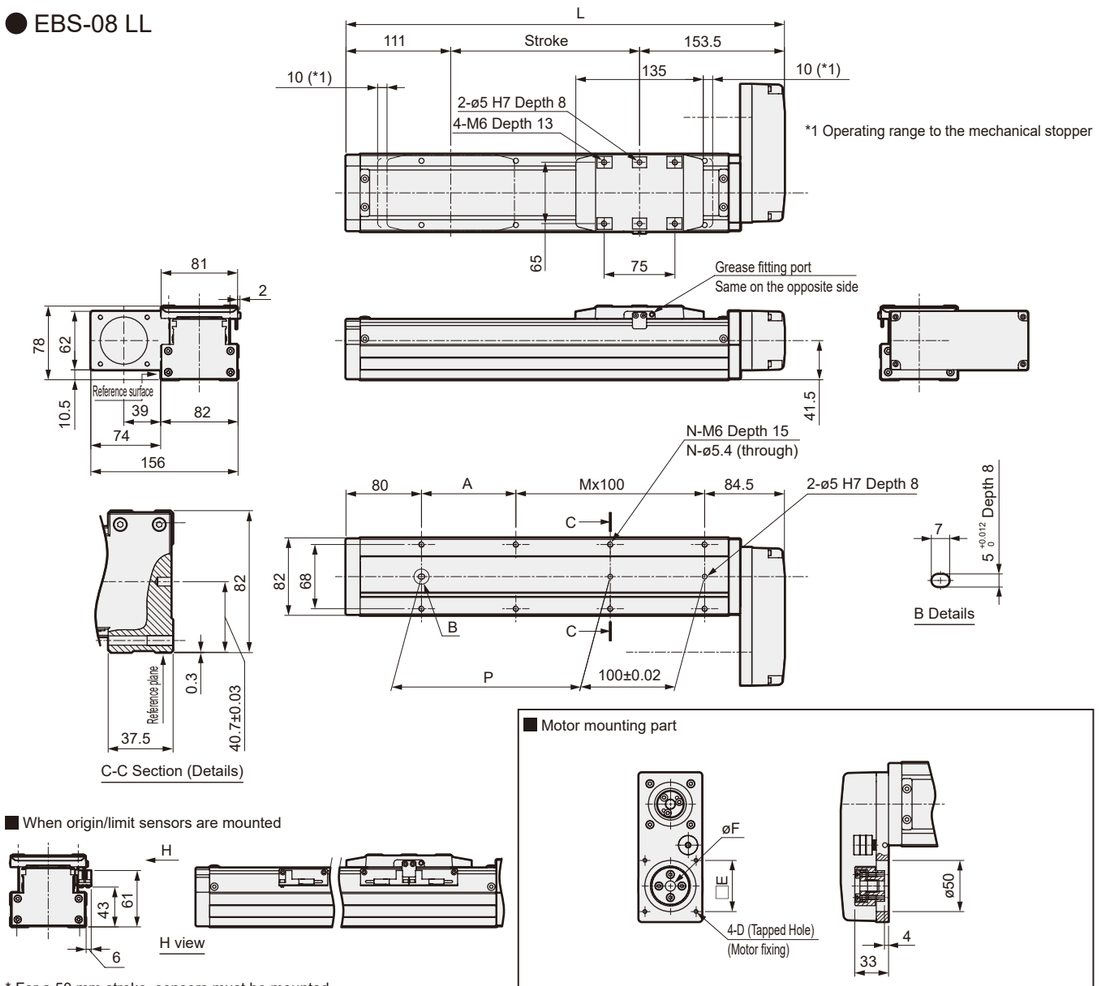
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBS-08 LL



* For a 50 mm stroke, sensors must be mounted on both sides. Also, sensor dogs are mounted on both sides.

Mounting Motor Specification		D	E	F	Motor screw
A	□60	M4 Depth 12	50	10	4-M4 x L16
B	□56	M4 Depth 12	47.14	6.35	4-M4 x L16
C	□56	M4 Depth 12	47.14	8	4-M4 x L16

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400	0450	0500	0550	0600	0650	0700	0750	0800	0850	0900	0950	1,000	1050	1100
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
L	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5	714.5	764.5	814.5	864.5	914.5	964.5	1014.5	1064.5	1114.5	1164.5	1214.5	1264.5	1314.5	1364.5
A	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100	50	100
M	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11
N	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
P	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1,000	1050	1100
Weight (kg)	4.5	4.8	5.1	5.4	5.8	6.1	6.4	6.8	7.1	7.4	7.7	8.1	8.4	8.7	9.0	9.4	9.7	10.0	10.4	10.7	11.0	11.3

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M4	4
B		M4	4
C		M4	4

[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Quantity
OMRON	EE-SX674	3

* For sensor specifications, please refer to P. 488.

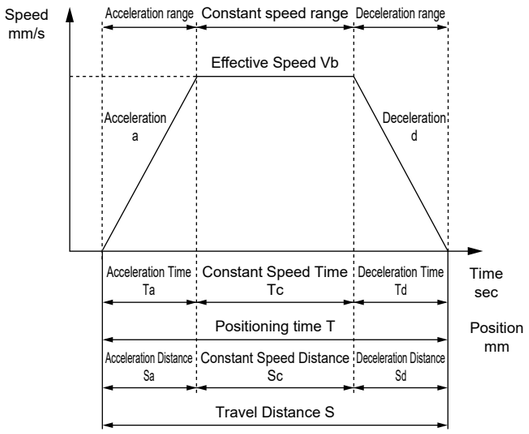
Model Selection

STEP1 Confirmation of Payload

Payload varies depending on mounting orientation, screw lead, and motor performance. Select the size and screw lead by referring to the System Table (P. 458) and the specification table for each model. For motor performance, please contact each motor manufacturer. For motor selection, please use the actuator information (mechanical efficiency, etc.) provided in the specifications column.

STEP2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required cycle time. Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$=\{2 \times a \times d \times S/(a+d)\}^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb / a
	Deceleration Time	Td	s	= Vb / d
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	$=(a \times Ta^2)/2$
	Deceleration Distance	Sd	mm	$=(d \times Td^2)/2$
	Constant Speed Distance	Sc	mm	= S - (Sa+Sd)
	Positioning Time	T	s	= Ta+Tc+Td

* Do not use at speeds exceeding the specifications.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Use at acceleration and deceleration of 1 G or less for horizontal use and 0.5 G or less for vertical use.
* Settling time varies depending on the usage conditions, but it may take about 0.2 s.
* 1 G ≈ 9.8 m/s².
* The customer sets the speed and acceleration/deceleration from the selected motor. For selecting a motor and calculating speed and acceleration/deceleration, please use the actuator information (mechanical efficiency, etc.) provided in the specifications section.

STEP3 Confirmation of Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 480 to 485).

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

[For confirmation via iPad or smartphone]

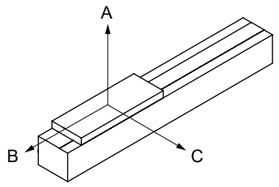
* May not display correctly depending on the smartphone's usage environment.

MEMO

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

Allowable Overhang Length (EBS Series)

[Horizontal Installation]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	6	5	800	160	225
			10	570	70	100
			20	250	30	40
		12	4	800	180	210
			8	380	80	100
			12	230	50	60
	0.5	6	5	800	160	220
			10	400	70	100
			15	240	40	60
		12	4	580	180	200
			8	260	80	90
			12	150	50	50
	1	6	5	520	160	210
			10	240	70	90
			15	140	40	50
		12	4	350	180	180
			8	150	80	80
			12	80	50	40

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* The value when the actuator's running life is 5,000 km.
(Screw Lead: 2 mm is the value for a travel life of 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed: The value at 3,000 rpm.

● EBS-05

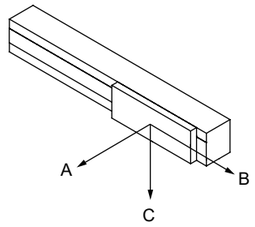
Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	2	10	1,000	160	225
			20	1,000	75	105
			30	815	45	65
		5	10	1,000	125	170
			20	500	55	75
			30	305	35	45
		10	5	1,000	235	285
			10	580	110	135
			15	360	70	80
		20	2.5	1,000	400	385
			5	615	195	180
			10	265	90	75
	0.5	2	10	1,000	160	225
			20	890	75	105
			30	570	45	65
		5	10	765	125	165
			20	345	55	75
			30	205	35	45
		10	5	875	235	280
			10	405	110	125
			15	245	70	75
		20	2.5	925	400	365
			5	425	195	165
			10	180	90	70
	1	2	10	1,000	160	220
			20	545	75	100
			30	340	45	60
		5	10	465	125	160
			20	200	55	70
			30	115	35	40
		10	5	535	235	255
			10	240	110	115
			15	140	70	65
		20	2.5	565	400	315
			5	250	190	140
			10	95	85	55

● EBS-08

Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	10	1,000	400	620
			25	1,000	150	235
			50	560	65	105
		10	10	1,000	360	480
			20	840	170	230
			30	530	110	140
		20	2.5	1,000	1,000	1,000
			5	1,000	610	670
			10	950	295	315
	0.5	5	10	1,000	400	620
			25	920	150	235
			50	420	65	105
		10	10	1,000	360	480
			20	625	170	225
			30	390	110	140
		20	2.5	1,000	1,000	1,000
			5	1,000	610	620
			10	670	295	290
	1	5	10	1,000	400	600
			25	565	150	220
			50	250	65	95
		10	10	820	360	435
			20	380	170	200
			30	230	110	120
		20	2.5	1,000	1,000	1,000
			5	870	610	520
			10	400	295	240

Allowable Overhang Length (EBS Series)

[When Wall-Mounted]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	6	5	180	130	800
			10	65	40	470
			15	25	20	240
		12	4	180	150	730
			8	60	50	280
			12	25	20	130
	0.5	6	5	180	130	800
			10	60	40	330
			15	25	20	170
		12	4	170	140	520
			8	60	50	200
			12	25	20	90
	1	6	5	170	130	490
			10	60	40	200
			15	25	20	100
		12	4	150	140	320
			8	50	50	120
			12	20	20	50

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* The value when the actuator's running life is 5,000 km.
(Screw Lead: 2 mm is the value for a travel life of 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed: The value at 3,000 rpm.

● EBS-05

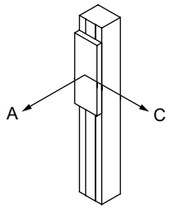
Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	2	10	175	125	1,000
			20	55	40	1,000
			30	15	10	540
		5	5	310	230	1,000
			10	125	90	965
			20	30	20	335
		10	5	245	200	1,000
			10	90	75	460
			15	40	30	230
		20	2.5	350	355	1,000
			5	145	145	500
			10	45	45	150
	0.5	2	10	175	125	1,000
			20	55	40	775
			30	15	10	385
		5	5	310	230	1,000
			10	120	90	685
			20	30	20	240
		10	5	240	200	805
			10	90	75	330
			15	40	30	160
		20	2.5	330	355	855
			5	135	145	355
			10	40	40	105
	1	2	10	175	125	1,000
			20	55	40	480
			30	15	10	235
		5	5	300	230	955
			10	120	90	425
			20	30	20	145
		10	5	220	200	500
			10	80	75	200
			15	35	30	95
		20	2.5	290	355	530
			5	115	145	220
			10	30	40	60

● EBS-08

Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	5	10	580	370	1,000
			25	185	120	1,000
			50	55	35	465
		10	10	450	325	1,000
			20	190	135	795
			30	100	75	455
		20	2.5	1,000	1,000	1,000
			5	630	565	1,000
			10	280	250	850
	0.5	5	10	580	370	1,000
			25	185	120	855
			50	55	35	330
		10	10	445	325	1,000
			20	185	135	565
			30	100	75	325
		20	2.5	1,000	1,000	1,000
			5	585	565	1,000
			10	260	250	605
	1	5	10	555	370	1,000
			25	180	120	530
			50	50	35	200
		10	10	405	325	800
			20	165	135	350
			30	90	70	195
		20	2.5	1,000	1,000	1,000
			5	500	560	845
			10	220	250	370

Allowable Overhang Length (EBS Series)

[Vertical Installation]



[Allowable Overhang Length]

● EBS-04

Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.3	6	1	800	-	780
			3	240	-	230
			5	120	-	120
		12	1	690	-	630
			1.5	440	-	410
			2	320	-	300
	0.5	6	1	800	-	780
			3	240	-	230
			5	120	-	120
		12	1	680	-	620
			1.5	400	-	440
			2	320	-	290

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* The value when the actuator's running life is 5,000 km.
(Screw Lead: 2 mm is the value for a travel life of 1,000 km.)
* The overhang direction is a load in a single direction only.
* Dimensions A, B, and C are from the center of the table top surface.
* Stroke: 350 mm, Motor rotation speed: The value at 3,000 rpm.

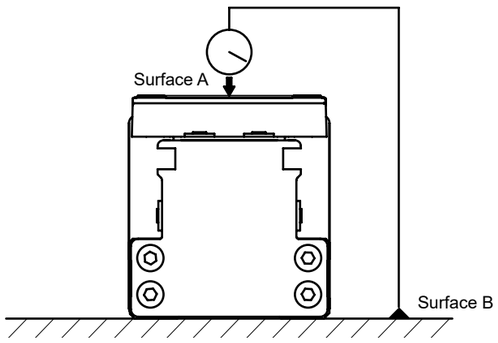
● EBS-05

Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	C
Straight · Fold-back	0.3	2	2.5	640	640
			5	295	295
			10	120	120
		5	2.5	500	490
			5	225	225
			10	85	85
		10	1	1,000	1,000
			2.5	435	410
			5	195	180
		20	0.5	1,000	1,000
			1	910	760
			2.5	335	280
	0.5	2	2.5	640	640
			5	295	295
			10	120	120
		5	2.5	500	500
			5	225	225
			10	85	85
		10	1	1,000	1,000
			2.5	430	410
			5	190	180
		20	0.5	1,000	1,000
			1	870	740
			2.5	315	275

● EBS-08

Motor Mounting	Acceleration / Deceleration G	Screw Lead	Payload kg	Overhang mm A	C
Straight · Fold-back	0.3	5	5	775	760
			10	360	350
			15	220	220
		10	3	1,000	1,000
			5	680	630
			8	405	375
		20	0.5	1,000	1,000
			1	1,000	1,000
			2.5	1,000	930
	0.5	5	5	775	760
			10	360	350
			15	220	220
		10	3	1,000	1,000
			5	670	630
			8	400	375
		20	0.5	1,000	1,000
			1	1,000	1,000
			2.5	1,000	890

Slider Parallelism (EBS Series) *Reference Value

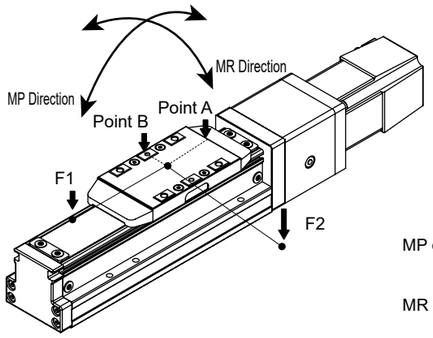


(mm)

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

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

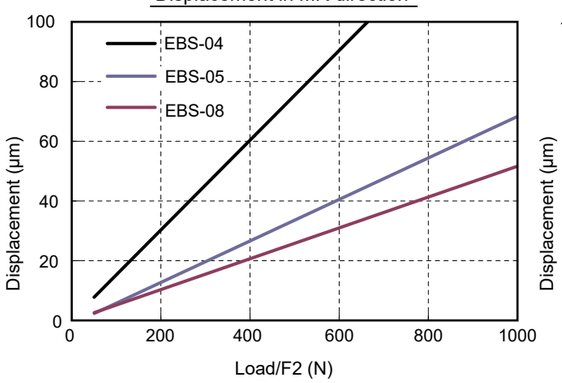
Table Displacement (EBS Series) *Reference Value



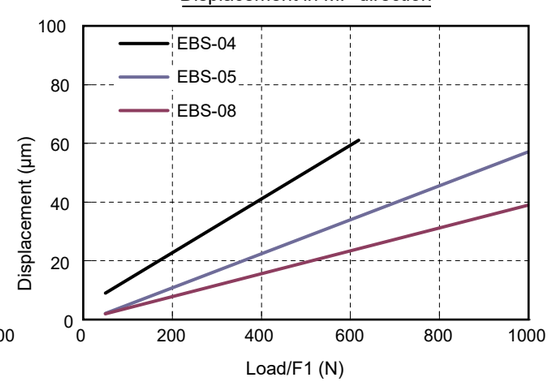
MP direction : Displacement at the table end (point A) when a load (F1) is applied at a position 100 mm away from the table center

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

Displacement in MR direction



Displacement in MP direction



List of Accessories

Motor Mounting Bolts (Common for all motor mounting directions)

Model Number	Mounting Motor Specification	Motor Size	Size	Quantity
EBS-04	A	□42	M3	4
	B		M3	4
EBS-05	A	□42	M3	4
	B		M3	4
EBS-08	A	□56 □60	M4	4
	B		M4	4
	C		M4	4

Coupling

Model Number	Part Name	Quantity
LE (Motor mounting direction: straight)	Coupling (Shipped attached)	1 pc

Timing belt, pulley (motor side)

Model Number	Shipment Form	Quantity
L□ (Motor fold-back mounting)	Shipped included *1	1 pc each

*1 The pulley on the main body side is pre-assembled.

Sensor mounting plate

Model Number	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included *1	3 pcs

*1 Screws for the mounting plate are also attached. The sensor dog is assembled on all products.

Home Sensor, Limit Sensor

Model Number	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included *2	3 pcs. *3

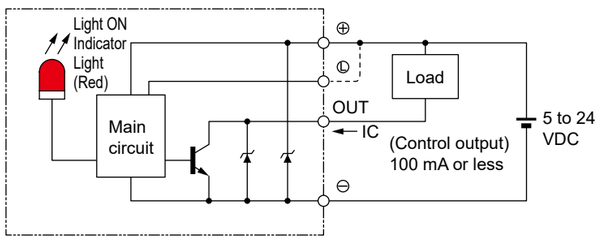
*2 Screws for sensor mounting are also attached.
*3 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None."

Home Sensor, Limit Sensor

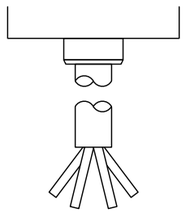
[Specifications]

Item		Specifications
Manufacturer	Manufacturer name	OMRON
	Model	EE-SX674
Hysteresis		0.025 mm or less
Light source (peak emission wavelength)		GaAs infrared emitting diode (940 nm)
Indicator Light		Lights up when light is received (red)
Power Supply Voltage		5 to 24 VDC ±10 % Ripple (p-p) 10 % or less
Current Consumption		12 mA or less (when L terminal is open)
Control output	Type	NPN type (NPN open collector)
	Output	5 to 24 VDC 100 mA or less
	Off-state current	0.5 mA or less
	Residual voltage	0.8 V or less (at 100 mA load current)
		0.4 V or less (at 40 mA load current)
Ambient illuminance		Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1,000 lx or less
Ambient Temperature Range	Operating	-25 to + 55°C, however, no freezing or condensation
	Storage	-30 to + 80°C, however, no freezing or condensation
Ambient humidity range	Operating	5 to 85 % RH, however, no freezing or condensation
	Storage	5 to 95 % RH, however, no freezing or condensation
Enclosure		IP50 IEC60529 standard
Cord length		2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Maintenance Parts

■ Maintenance parts (origin sensor, limit sensor)

Model Number	Applicable Models	Part
EBS-04-SENSOR-N-KIT	EBS-04	Body, cable, mounting plate (1 piece each) *1
EBS-08-SENSOR-N-KIT	EBS-05, EBS-08	Body, cable, mounting plate (1 piece each) *1

*1 Screws for mounting plate and sensor are also attached.

■ Maintenance parts (grease nozzle)

Model Number	Applicable Models
EBS-NOZZLE	All models

■ Maintenance parts (steel belt)

Model Number	Applicable Models
EBS-04-STEELBELT (4-digit stroke code)	EBS-04 (corresponding stroke product)
EBS-05-STEELBELT (4-digit stroke code)	EBS-05 (corresponding stroke product)
EBS-08-STEELBELT (4-digit stroke code)	EBS-08 (corresponding stroke product)

To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Common Precautions: Electric Actuator EBS-LE Series

During Design and Selection

Danger

■ Do not use in places where dangerous goods such as ignitable substances, inflammable substances or explosives are present.
There is a possibility of ignition, fire, or explosion.

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

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

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (80 % humidity or more, with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited.
Use in such environments can cause damage and malfunction.

■ Make sure that the product is D type grounded (ground resistance of 100 Ω or less).
In case of electric leakage, there is a risk of electric shock or malfunction.

■ When installing the actuator in a direction other than horizontal, use a motor with brake.
Without a brake, when the servo is OFF (including emergency stop and alarms) or when the power is OFF, there is a risk of injury or workpiece damage due to the falling of the moving part.

■ When vertically installing the actuator, do everything possible to keep the motor on top.
If the motor is on the lower side, there is no problem in normal operation, but if stopped for a long period, grease may separate and flow into the motor, which may rarely cause a malfunction.

■ Do not use this product in a location where the ambient temperature could suddenly change and cause dew to condense.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Take possibility of power source breakdown into consideration.
Take measures to prevent injury to people or damage to equipment even if the power source fails.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
Design so that restarting does not cause harm to people or damage to the equipment. Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device. Consider the possibility of failure of the installed motor. Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature: -10 °C to 50 °C, storage humidity: 35 % to 80 %, Operating temperature: 0 °C to 40 °C, Operating humidity: 35 % to 80 %)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Indicate the maintenance conditions in the device's instruction manual.
The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products and motors with their systems, machines and equipment.

■ Set up the wiring so as not to apply inductive noise.
Avoid places where large currents or strong magnetic fields are generated. Do not use the same conduit or wiring (with multi-core cables) as the power lines of large motors other than this product.
Do not use the same conduit/wiring as the inverter power supply or wiring section used for robots, etc., apply a frame ground to the power supply, and insert a filter at the output section.

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

■ Be sure to separate the power supply of the output of this product and the power supply of inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current may enter the output section and cause damage.
If a separate power supply cannot be used, connect a surge-absorbing element in parallel directly to all inductive loads.

■ When installing an external stopper or retention mechanism (brake, etc.), place it so as not to affect origin position detection.
The home position is detected when the power is turned on. If the detection operation is obstructed by an external stopper or holding mechanism, there is a risk that an unintended position may be recognized as the home position.

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

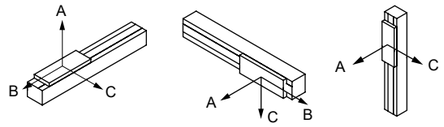
EBSModel Selection Checklist → **CKD** (Contact)

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

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	EBS-	
Basic Specifications	Max. Stroke :	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s² (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Slider Type	
	Load weight : kg	
	Mounting Orientation: Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

MEMO

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

EBR-L

Rod Type with Built-in Guide

Electric Actuator
Stepping Motor Compatible
Motorless Specification

CONTENTS

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● Specifications, Model No. Notation, External Dimension Drawings	
・EBR-04 L	500
・EBR-05 L	506
・EBR-08 L	512
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⚠ Precautions for Use	528
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Servo motor compatible
EBS
EBR
ETS
ECS

Rod-type
stepping motor compatible

EBR-L Series

Built-in guide makes it ideal for press-fitting and lifting/lowering.

Line-up	Body Size / Motor size	04 □42	05 □42	08 □56	08 □60	Catalog page
EBR-L		●	●	●	●	498
Metal stopper specifications EBR-L-X		●	●	●	●	498
Compatible with rechargeable battery manufacturing processes EBR-L-P4		●	●	●	●	CC-1226AA
Supports food manufacturing processes EBR-L-FP1		●	●	●	●	CC-1271AA

List of supported motor manufacturers

* Refer to each model page compatible model and capacity

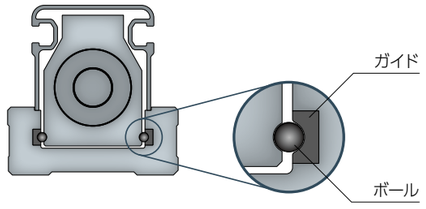
Stepping Motor

Oriental Motor Co., Ltd. MinebeaMitsumi Incorporated Dyadic Systems Co., Ltd.

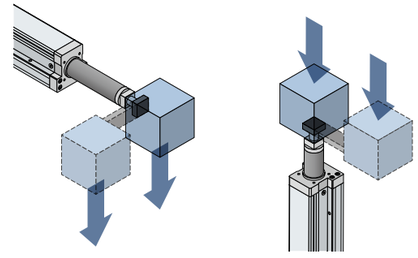
Compact, high-rigidity body

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

The guide that supports the load uses an outer rail. The wide guide integrated with the body achieves both high rigidity and space-saving. It has a structure that is strong against offset workpieces and achieves a longer stroke than conventional products.



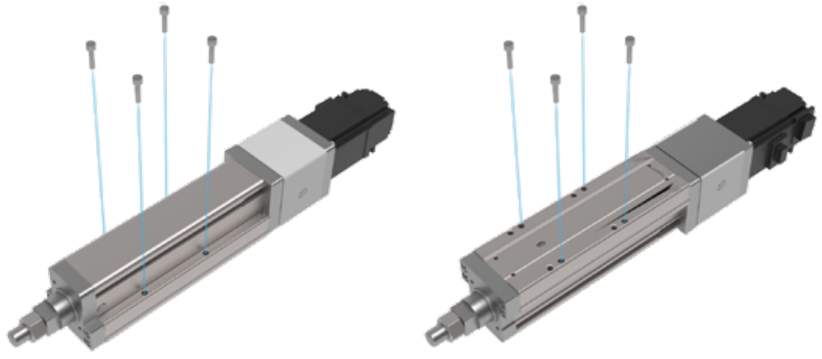
Can handle offset workpieces

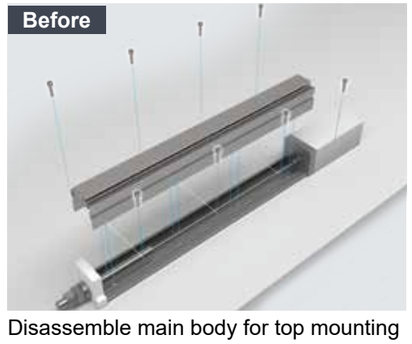


Mounting holes provided on top and bottom surfaces

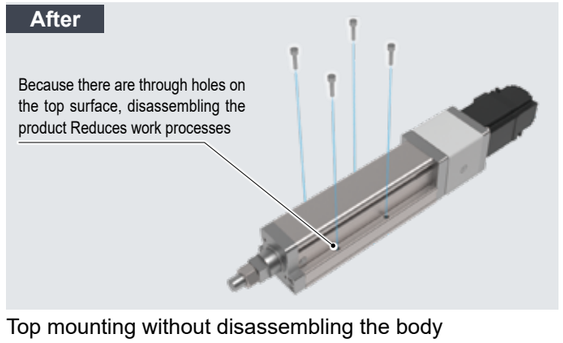
Easy maintenance | Reduced man-hours

It is a structure that allows direct installation from both the top and bottom surfaces without disassembling the product. Especially when installing from the top surface, work time can be significantly reduced.





Disassemble main body for top mounting



Top mounting without disassembling the body

System Table

Type	Model No.		Applicable Motor Size	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) *2 Horizontal *1	Max. Payload (kg) *2 Vertical	Stroke (mm) and Max. Speed (mm/s) *3	Page
Rod Type with Built-in Guide		EBR-04 L□-06	□42	44	6	20	5	50 mm: 300 mm/s; 100: 250; 150: 250; 200: 250; *4 250: 0.86 sec; 300: 250; 350: 250; *4 400: 1.63 sec	500
		EBR-04 L□-12			12	12	2	50 mm: 600; 100: 510; 150: 510; 200: 510; *4 250: 0.48 sec; 300: 510; 350: 510; *4 400: 0.84 sec	
		EBR-05 L□-02	□42	54	2	30	10	50 mm: 100 mm/s; 100: 85; 150: 85; 200: 85; *4 250: 2.51 sec; 300: 85; 350: 85; *4 400: 4.71 sec	506
		EBR-05 L□-05			5	30	10	50 mm: 250; 100: 200; 150: 200; 200: 200; *4 250: 1.03 sec; 300: 200; 350: 200; *4 400: 2.02 sec	
		EBR-05 L□-10			10	15	5	50 mm: 500; 100: 400; 150: 400; 200: 400; *4 250: 0.55 sec; 300: 400; 350: 400; *4 400: 1.04 sec	
		EBR-05 L□-20			20	10	2.5	50 mm: 1,000; 100: 850; 150: 850; 200: 850; *4 250: 0.35 sec; 300: 850; 350: 850; *4 400: 0.56 sec	
		EBR-08 L□-05	□56 □60	82	5	50	15	50 mm: 250; 100: 200; 150: 200; 200: 200; *4 250: 1.03 sec; 300: 200; 350: 200; *4 400: 2.52 sec; 450: 200; 500: 200; *4 550: 3.52 sec	512
		EBR-08 L□-10			10	30	8	50 mm: 500; 100: 400; 150: 400; 200: 400; *4 250: 0.55 sec; 300: 400; 350: 400; *4 400: 1.29 sec; 450: 400; 500: 400; *4 550: 1.79 sec	
		EBR-08 L□-20			20	12	2.5	50 mm: 1000; 100: 850; 150: 850; 200: 850; *4 250: 0.35 sec; 300: 850; 350: 850; *4 400: 0.67 sec; 450: 850; 500: 850; *4 550: 0.91 sec	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.
*3 The maximum speed is based on the assumption that the customer-mounted motor can output a rotational speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*4 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration. Please note that this is not the value at max. payload.

Model Number Configuration

Rod Type with Built-in Guide

EBR - 05 L E - 00 - 02 0050 NNN - A A N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

04	Body width 44 mm
05	Body width 54 mm
08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Inline Mount
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

02	2 mm
05	5 mm
06	6 mm
10	10 mm
12	12 mm

❺ Stroke

0050 to 0700	50 mm (every 50 mm) 700 mm

❻ Mounting Motor Specifications

A, B, C	Refer to the list on the page at right

❼ Motor Size

A	□42
B	□56
C	□60

❽ Origin sensor

N	None
C	Yes

❾ Limit sensor

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❹ Screw Lead	❺ Stroke
04	06	0050 to 0400 (50 mm to 400 mm)
	12	
05	02	0050 to 0400 (50 mm to 400 mm)
	05	
	10	
	20	
08	05	0050 to 0700 (50 mm to 700 mm)
	10	
	20	

* This product is provided as an actuator (and motor mounting parts) only; the motor is not included. The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Stepping Motor List

Code	Manufacturer name	Series	□42	□56	□60
A	Oriental Motor Co., Ltd.	AZ	AZM46□0□	-	AZM66□0□ AZM69□0□
		AR	ARM46□0□	-	ARM66□0□ ARM69□0□
B	MinebeaMitsumi Inc.	A17PM/A23 KM	A17PM□□□□CSTBCN	A23KM□□□□CSTBCN	-
B	Dyadic Systems Co., Ltd.	RMJ	RMJ0411	-	-
C		RMJ	-	RMJ0611, RMJ1211	-

Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-04LE

Inline Motor Mount Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBR - 04 L E - 00 - 06 0050 NNN - A A N N - X

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

0050 to 0400	50 mm (in 50 mm increments) to 400 mm

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 499.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 400	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Drive part weight	kg	0.6	
Other inertia	kg·cm²	0.045	
Coefficient of friction		0.03	
Mechanical efficiency		0.8	
Sliding Resistance	N	6	
Ball screw length		Stroke + 200	
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.
* For allowable load at overhang, please refer to P. 520.

Stroke and Max. Speed

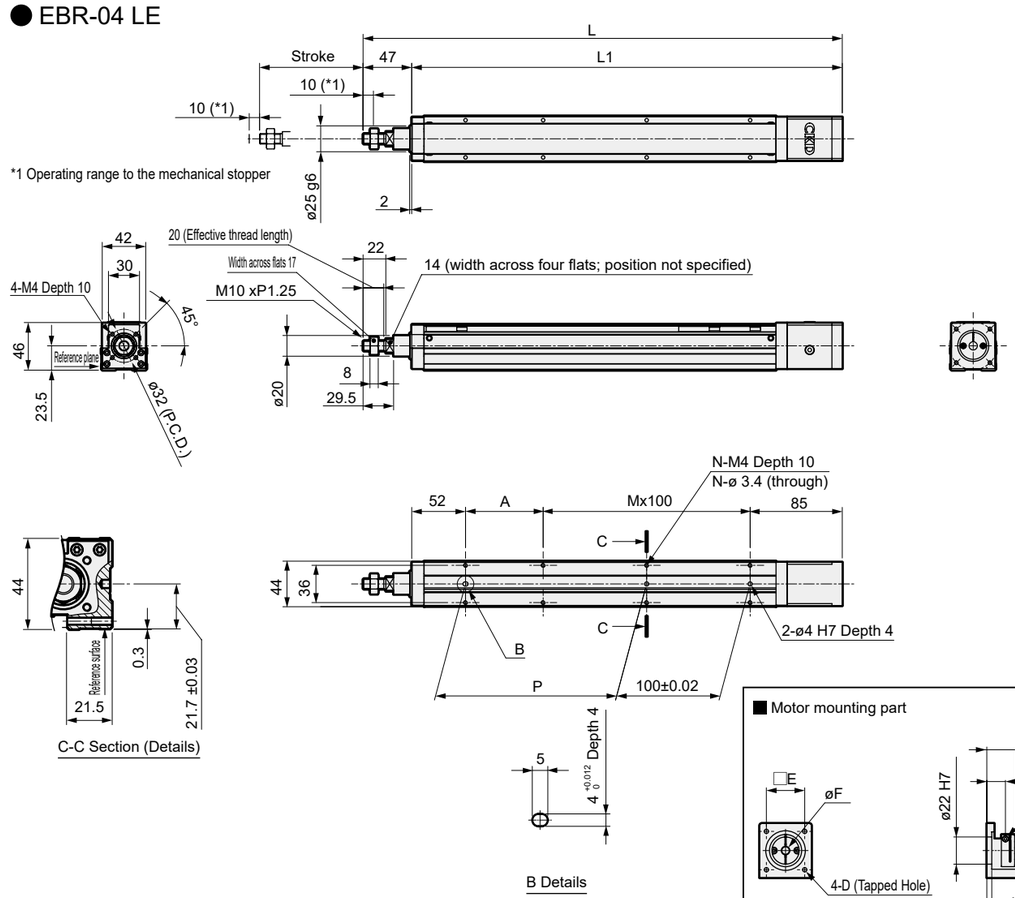
(mm/s)

Screw Lead \ Stroke	50 to 250	300	350	400
6	300	250		
12	600	510		

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Straight Mounting

● EBR-04 LE



Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

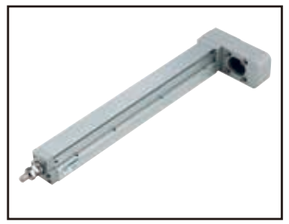
[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Shipped attached	M3	4
B		M3	4

[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.



Electric actuator (motorless specifications) Rod with Built-in Guide

EBR-04L□

Reverse Parallel Motor Mount Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBR - 04 L R - 00 - 06 0050 NNN - A A N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

04	Body width 44 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Fold-back Mounting
D	Bottom Side Fold-back Mounting
L	Left Side Fold-back Mounting

❹ Screw Lead

06	6 mm
12	12 mm

❺ Stroke

0050 to 0400	50 mm (in 50 mm increments) 400 mm

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 499.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping motor	
Drive Method		Ball screw ø10	
Stroke	mm	50 to 400	
Screw lead	mm	6	12
Max. Payload *1	kg Horizontal	20	12
	kg Vertical	5	2
Max. Speed	mm/s	300	600
Rated thrust *1	N	141	71
Repeatability	mm	±0.01	
Lost Motion	mm	0.1 or less	
Drive part weight	kg	0.6	
Other inertia	kg·cm²	0.09	
Coefficient of friction		0.03	
Mechanical efficiency		0.8	
Sliding Resistance	N	6	
Ball screw length		Stroke + 200	
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)	
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)	
Atmosphere		No corrosive gas, explosive gas, or dust	

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.

* For allowable load at overhang, please refer to P. 520.

Stroke and Max. Speed

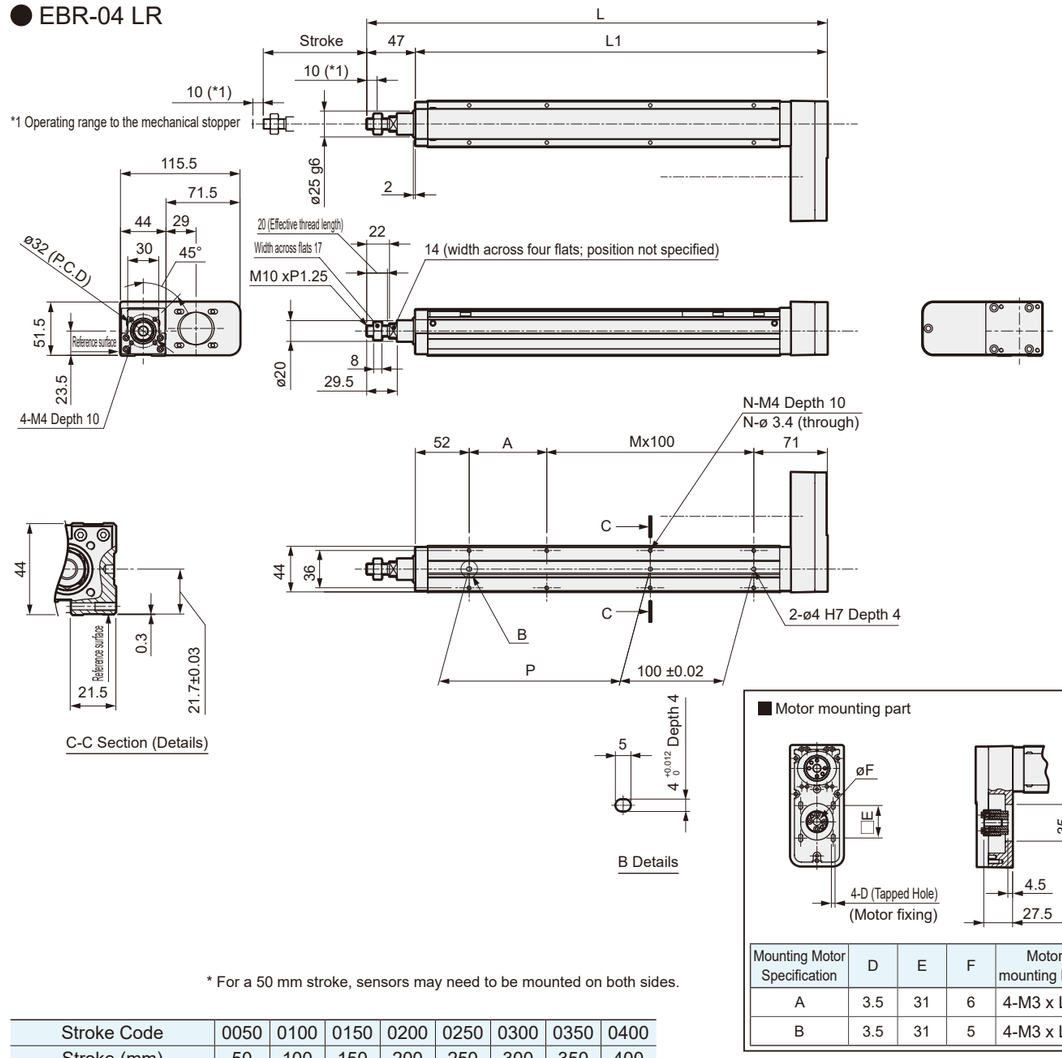
(mm/s)

Screw Lead \ Stroke	50 to 250	300	350	400
6	300	250		
12	600	510		

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EBR-04 LR



* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

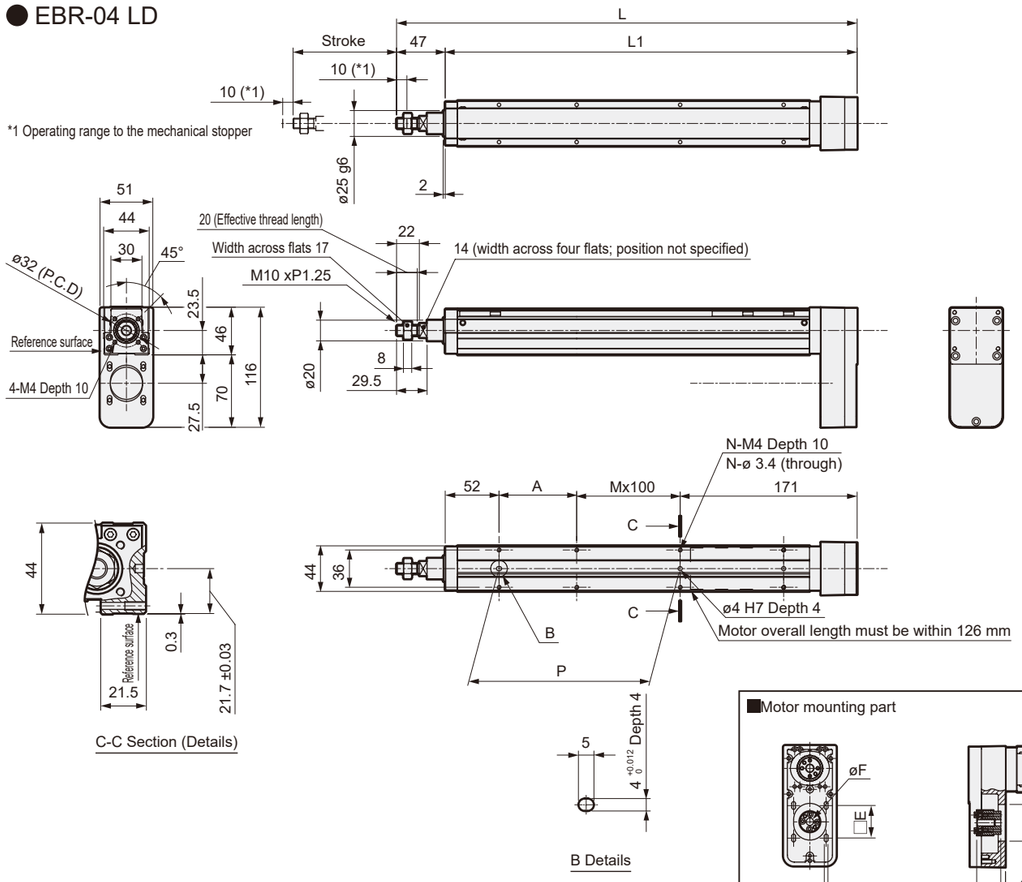
[Home Sensor, Limit Sensor]

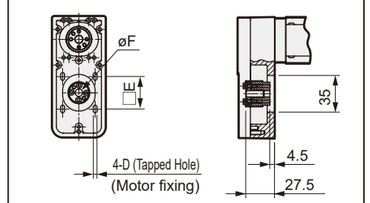
Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2 M	3

* For sensor specifications, please refer to P. 524.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBR-04 LD





Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

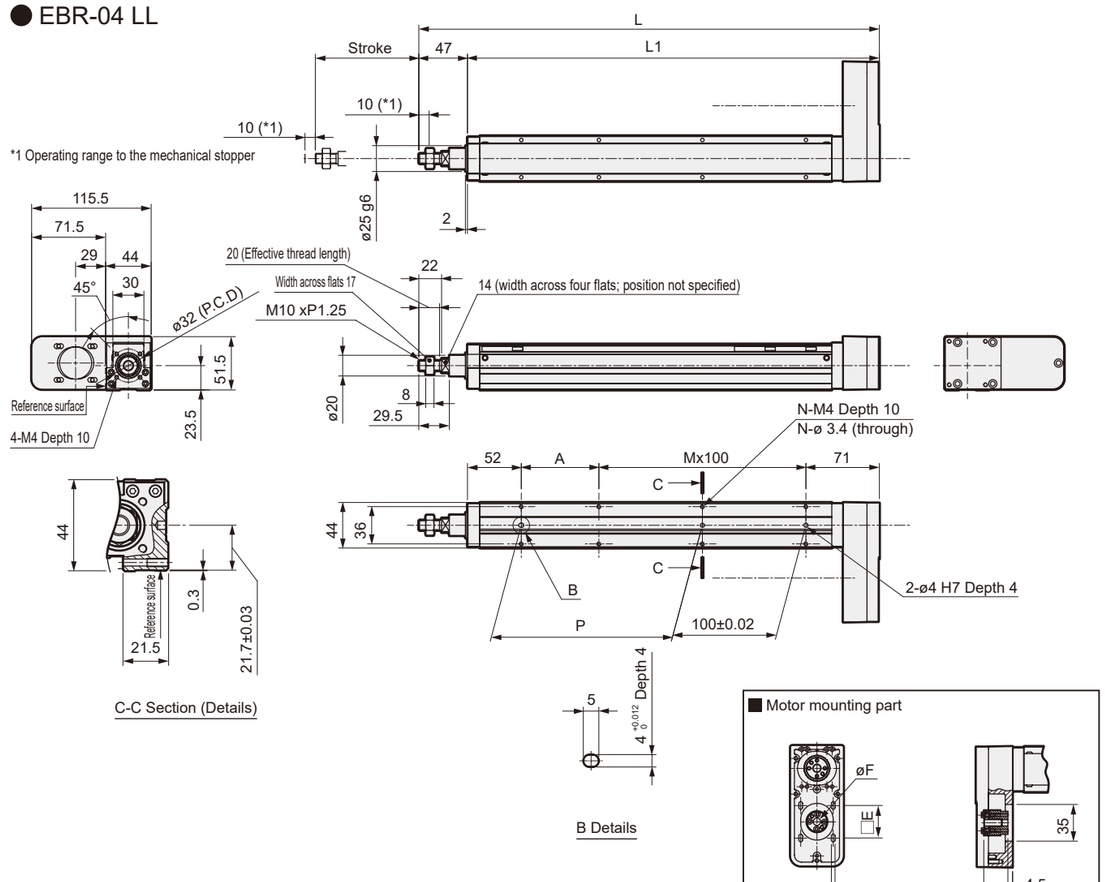
[Home Sensor, Limit Sensor]

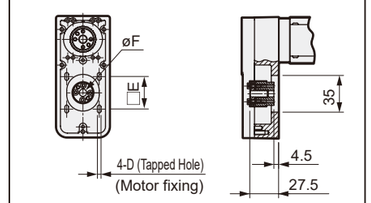
Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBR-04 LL





Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

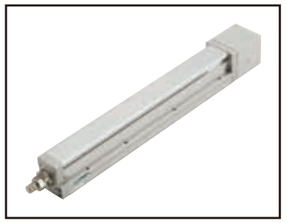
[Motor mounting parts]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

[Home Sensor, Limit Sensor]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32N-2 M	3

* For sensor specifications, please refer to P. 524.



Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-05LE

Inline Motor Mount Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBR - 05 L E - 00 - 02 0050 NNN - A A N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor mounting method

E	Inline Mount

❹ Screw Lead

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

❺ Stroke

0050 to 0400	50 mm (in 50 mm increments) to 400 mm

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 499.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping Motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 400			
Screw lead	mm	2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part weight	kg	0.9			
Other inertia	kg·cm²	0.09			
Coefficient of friction		0.03			
Mechanical efficiency		0.8			
Sliding Resistance	N	6			
Ball screw length		Stroke + 200			
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.
* For allowable load at overhang, please refer to P. 520.

Stroke and Max. Speed

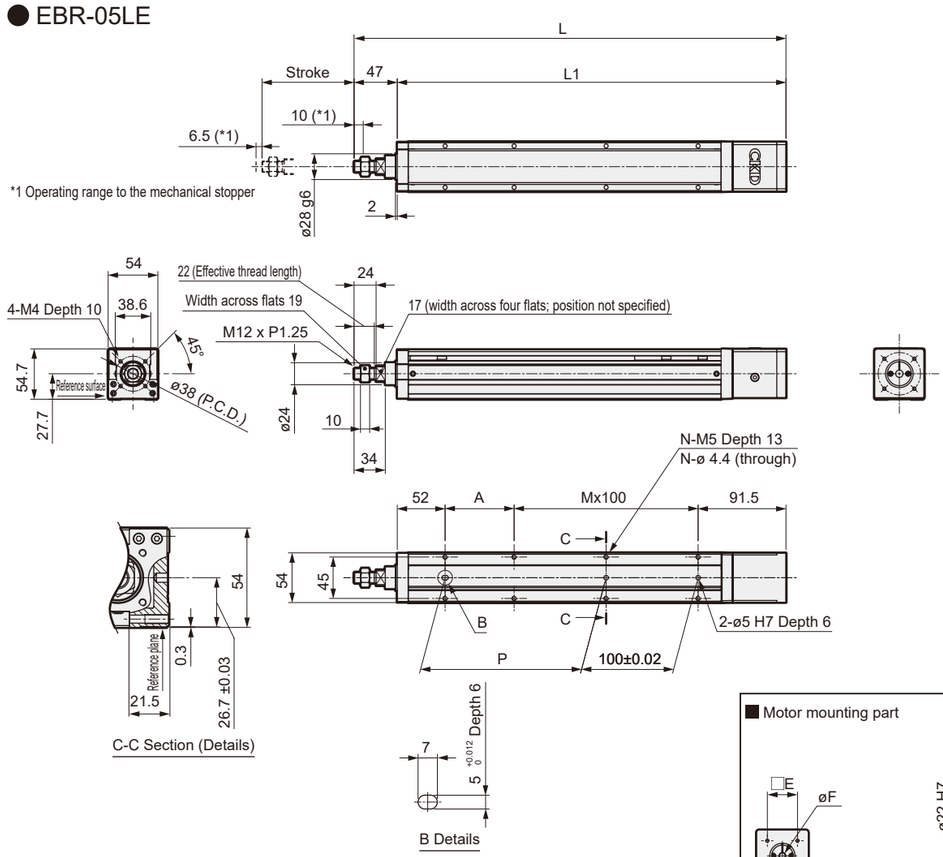
(mm/s)

Screw Lead \ Stroke	50 to 250	300 to 400
2	100	85
5	250	200
10	500	400
20	1,000	850

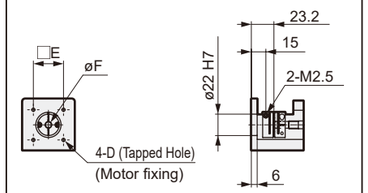
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Straight Mounting

● EBR-05LE



■ Motor mounting part



Mounting Motor Specification	D	E	F	Motor mounting bolts
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

Stroke Code	0050	0100	0150	0200	0250	0300	0350	0400
Stroke (mm)	50	100	150	200	250	300	350	400
L	315.5	365.5	415.5	495.5	515.5	565.5	616.5	665.5
L1	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5
A	25	75	25	75	25	75	25	75
M	1	1	2	2	3	3	4	4
N	6	6	8	8	10	10	12	12
P	25	75	125	175	225	275	325	375
Weight (kg)	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.0

List of Accessories

[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Shipped attached	M3	4
B		M3	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.

Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-05L□

Reverse Parallel Motor Mount Type

● Stepping Motor Size : □42

RoHS

Model No. Notation Method

EBR - 05 L R - 00 - 02 0050 NNN - A A N N - X

❶ Body Size

05	Body width 54 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

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

❺ Stroke

0050 to 0400	50 mm (in 50 mm increments) 400 mm

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	

❼ Motor Size

A	□42

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 499.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□42 Stepping motor			
Drive Method		Ball screw ø12			
Stroke	mm	50 to 400			
Screw Lead		2	5	10	20
Max. Payload *1	kg Horizontal	30	30	15	10
	kg Vertical	10	10	5	2.5
Max. Speed	mm/s	100	250	500	1,000
Rated thrust *1	N	854	341	170	85
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part weight	kg	0.9			
Other inertia	kg·cm²	0.09			
Coefficient of friction		0.03			
Mechanical efficiency		0.8			
Sliding Resistance	N	6			
Ball screw length		Stroke + 200			
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.

* For allowable load at overhang, please refer to P. 520.

Stroke and Max. Speed

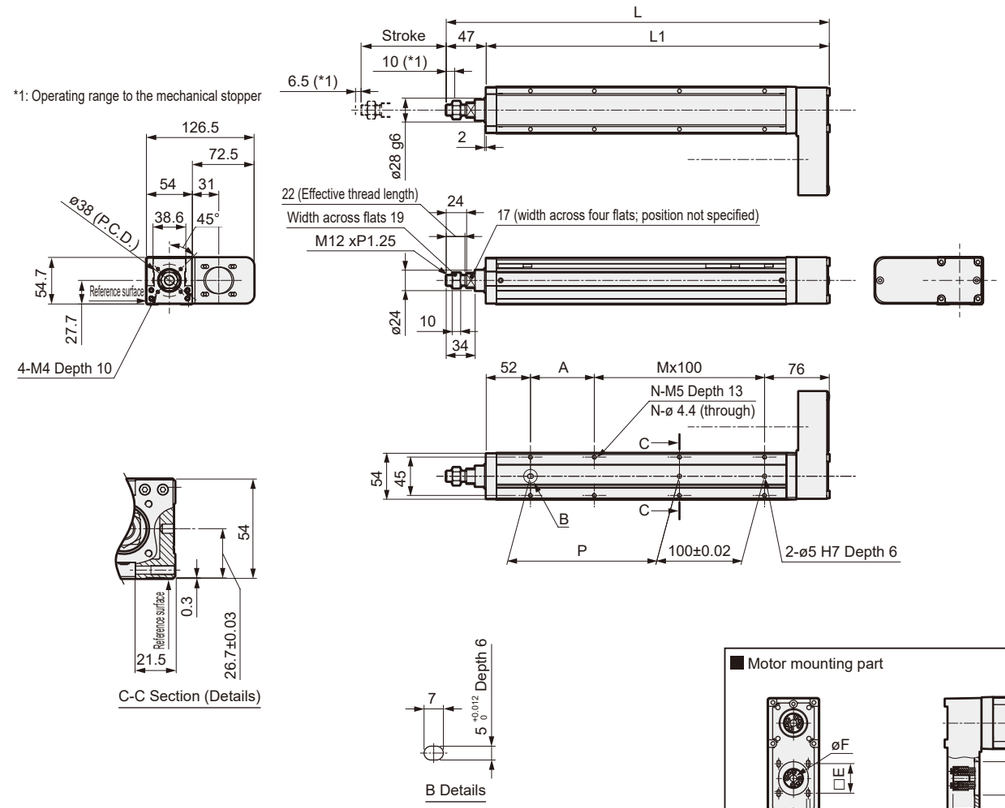
(mm/s)

Lead \ Stroke	50 to 250	300	350	400
2	100	85		
5	250	200		
10	500	400		
20	1,000	850		

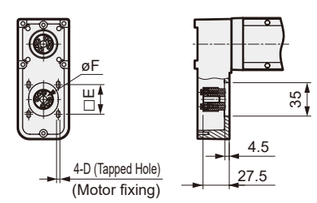
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
Please use lead 2 at 0.5 G or less.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EBR-05LR



■ Motor mounting part



Mounting Motor Specification	D	E	F	Motor screw
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

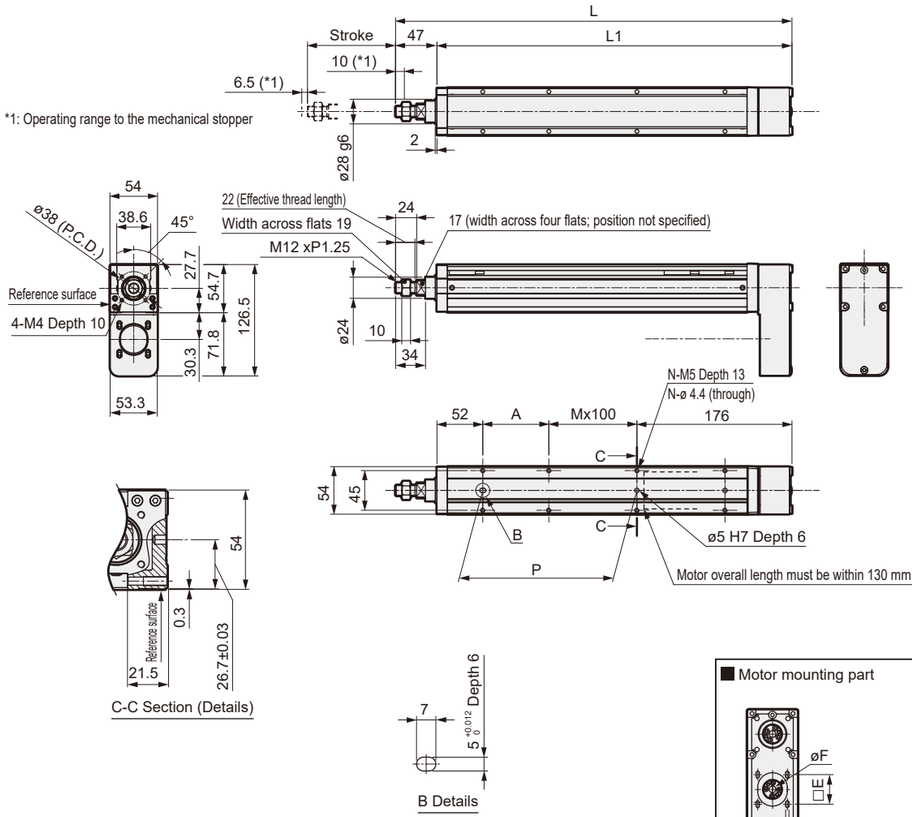
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

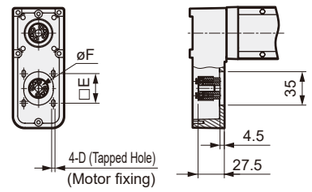
* For sensor specifications, please refer to P. 524.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBR-05LD



■ Motor mounting part



Mounting Motor Specification	D	E	F	Motor screw
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

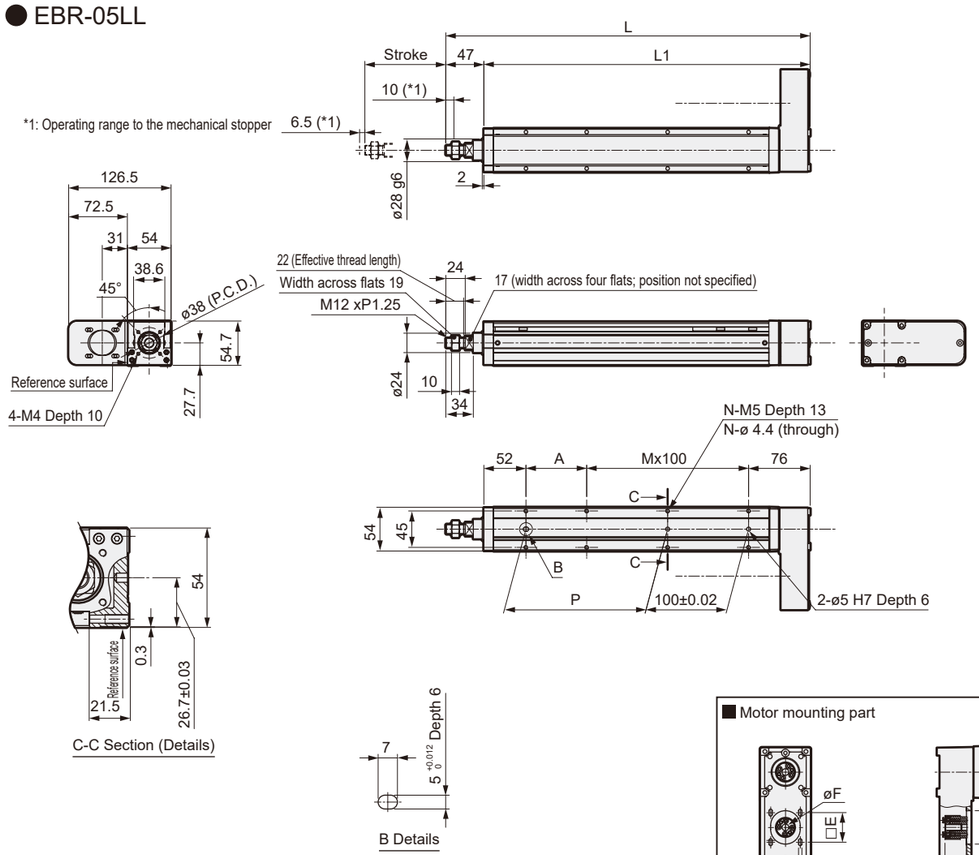
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

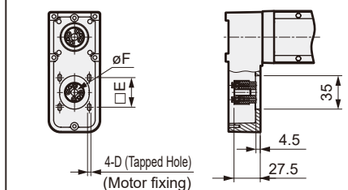
* For sensor specifications, please refer to P. 524.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBR-05LL



■ Motor mounting part



Mounting Motor Specification	D	E	F	Motor screw
A	3.5	31	6	4-M3 x L12
B	3.5	31	5	4-M3 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

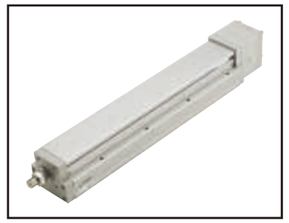
[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M3	4
B		M3	4

[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.



Electric Actuator (Motorless Specification) Rod Type with Built-in Guide

EBR-08LE

Inline Motor Mount Type

● Stepping Motor Size : □56, □60

RoHS

Model No. Notation Method

EBR - 08 L E - 00 - 05 0050 NNN - A B N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

E	Straight Mounting

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0700	50 mm (in 50 mm increments) to 700 mm

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	
C	

❼ Motor Size

B	□56
C	□60

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 499.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 700		
Screw lead	mm	5	10	20
Max. Payload *1	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust *1	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Drive part weight	kg	1.7		
Other inertia	kg·cm²	0.24		
Coefficient of friction		0.03		
Mechanical efficiency		0.8		
Sliding Resistance	N	20		
Ball screw length		Stroke + 200		
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.

* For allowable load at overhang, please refer to P. 520.

Stroke and Max. Speed

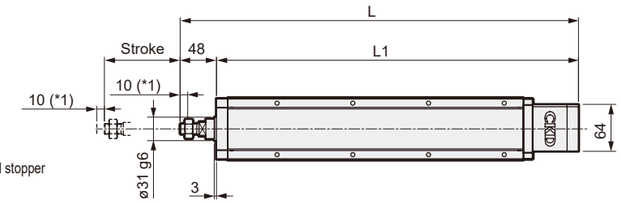
(mm/s)

Screw Lead \ Stroke	50 to 300	350 to 700
5	250	200
10	500	400
20	1,000	850

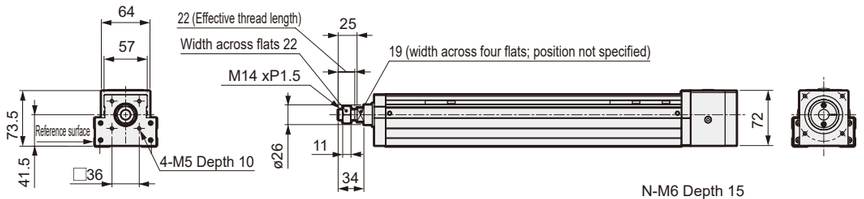
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.
The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

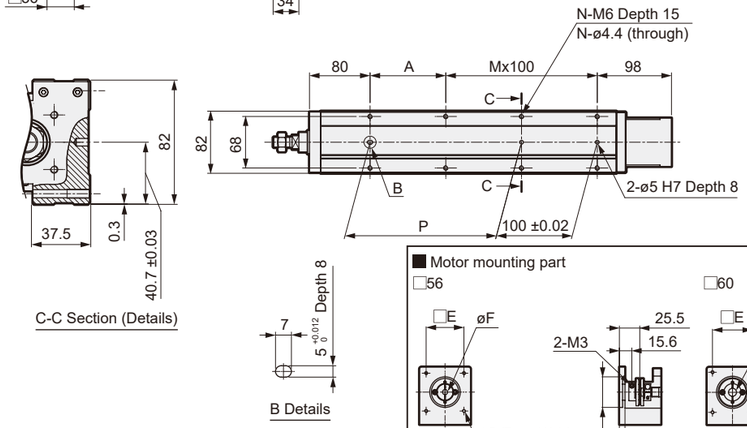
External Dimension Drawing Motor Straight Mounting

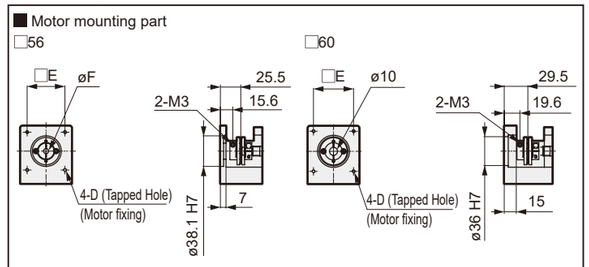
● EBR-08LE



*1 Operating range to the mechanical stopper







Mounting Motor Specification		D	E	F	Motor mounting bolts
A	□60	M4 Depth 10	50	10	4-M4 x L16
B	□56	M4 Depth 8	47.14	6.35	4-M4 x L12
C	□56	M4 Depth 8	47.14	8	4-M4 x L12

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

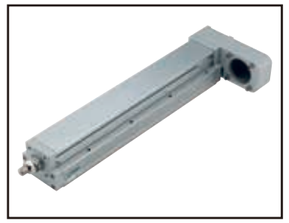
[Motor mounting parts]

Mounting Motor Specification	Coupling	Motor mounting bolt	
		Size	Quantity
A	Shipped attached	M4	4
B		M4	4
C		M4	4

[Home Sensor, Limit Sensor]

Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.



Electric actuator (motorless specifications) Rod with built-in guide

EBR-08L□

Reverse Parallel Motor Mount Type

● Stepping Motor Size : □56, □60

RoHS

Model No. Notation Method

EBR - 08 L R - 00 - 05 0050 NNN - A B N N - X

❶ Body Size

08	Body width 82 mm

❷ Motor

L	None

❸ Motor Mounting Direction

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❹ Screw Lead

05	5 mm
10	10 mm
20	20 mm

❺ Stroke

0050 to 0700	50 mm (in 50 mm increments) 700 mm

❻ Mounting Motor Specifications

A	Select the Mounting Motor Specifications from the Table on the right.
B	
C	

❼ Motor Size

B	□56
C	□60

❽ Origin sensor *1

N	None
C	Yes

❾ Limit sensor *1

N	None
B	Yes

❿ Metal Stopper Specification (EBR-X)

	Standard
X	Adopted

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

* For motor model Nos., please refer to P. 499.

*1 Origin sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor		
Drive Method		Ball screw ø16		
Stroke	mm	50 to 700		
Screw Lead		5	10	20
Max. Payload	kg Horizontal	50	30	12
	kg Vertical	15	8	2.5
Max. Speed	mm/s	250	500	1,000
Rated thrust	N	683	341	174
Repeatability	mm	±0.01		
Lost Motion	mm	0.1 or less		
Drive part weight	kg	1.7		
Other inertia	kg·cm²	0.52		
Coefficient of friction		0.03		
Mechanical efficiency		0.8		
Sliding Resistance	N	20		
Ball screw length		Stroke + 200		
Operating ambient temperature, humidity		0 to 40°C (no freezing), 35 to 80%RH (no condensation)		
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing), 35 to 80%RH (no condensation)		
Atmosphere		No corrosive gas, explosive gas, or dust		

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer. Please select the model with your motor.

* For allowable load at overhang, please refer to P. 520.

Stroke and Max. Speed

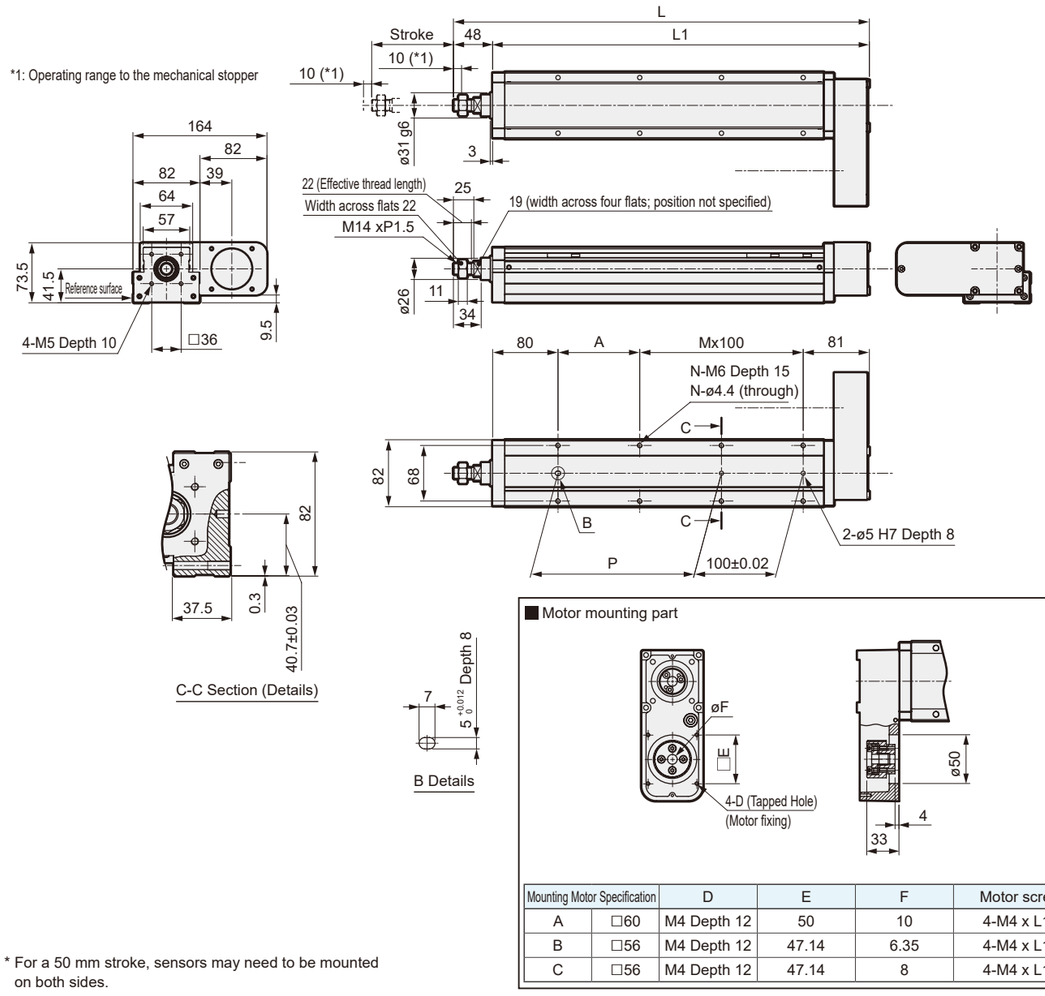
(mm/s)

Screw Lead \ Stroke	50 to 300	350 to 700
5	250	200
10	500	400
20	1,000	850

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not move at speeds beyond the limit.

External Dimension Drawing Motor Right Side Fold-back Mounting

● EBR-08LR



Mounting Motor Specification		D	E	F	Motor screw
A	□60	M4 Depth 12	50	10	4-M4 x L16
B	□56	M4 Depth 12	47.14	6.35	4-M4 x L16
C	□56	M4 Depth 12	47.14	8	4-M4 x L16

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M4	4
B		M4	4
C		M4	4

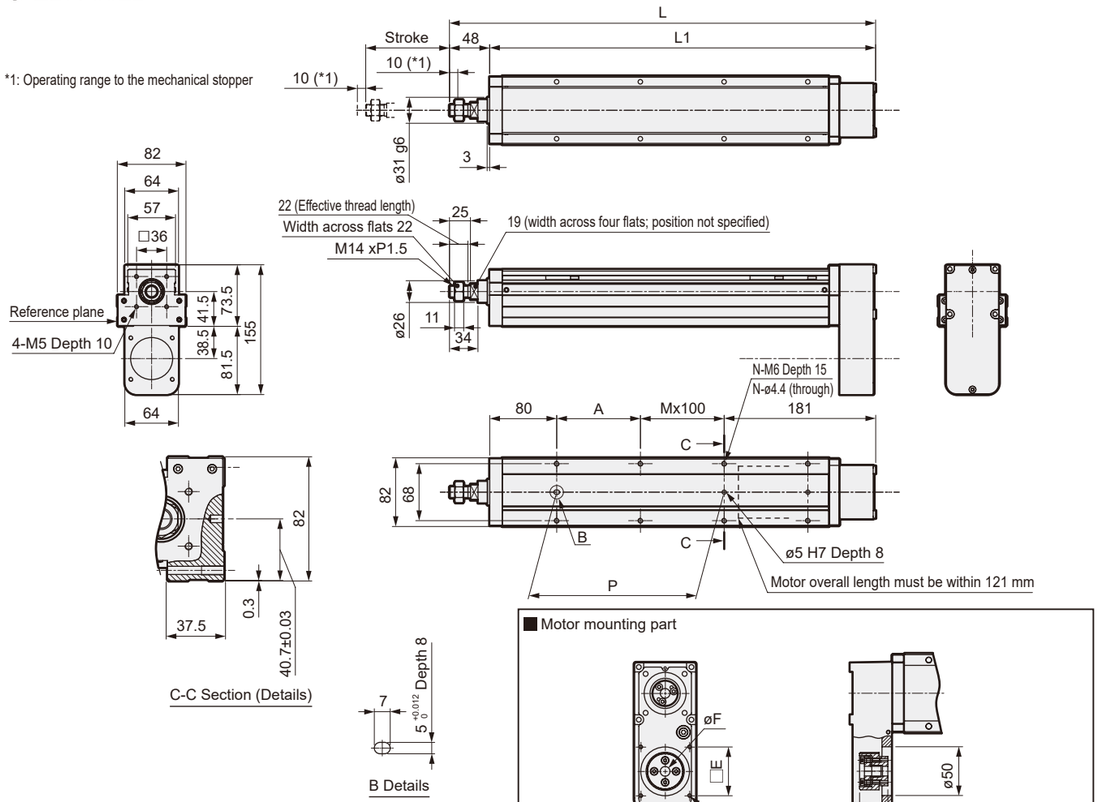
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● EBR-08LD



Mounting Motor Specification		D	E	F	Motor screw
A	□60	M4 Depth 12	50	10	4-M4 x L16
B	□56	M4 Depth 12	47.14	6.35	4-M4 x L16
C	□56	M4 Depth 12	47.14	8	4-M4 x L16

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M4	4
B		M4	4
C		M4	4

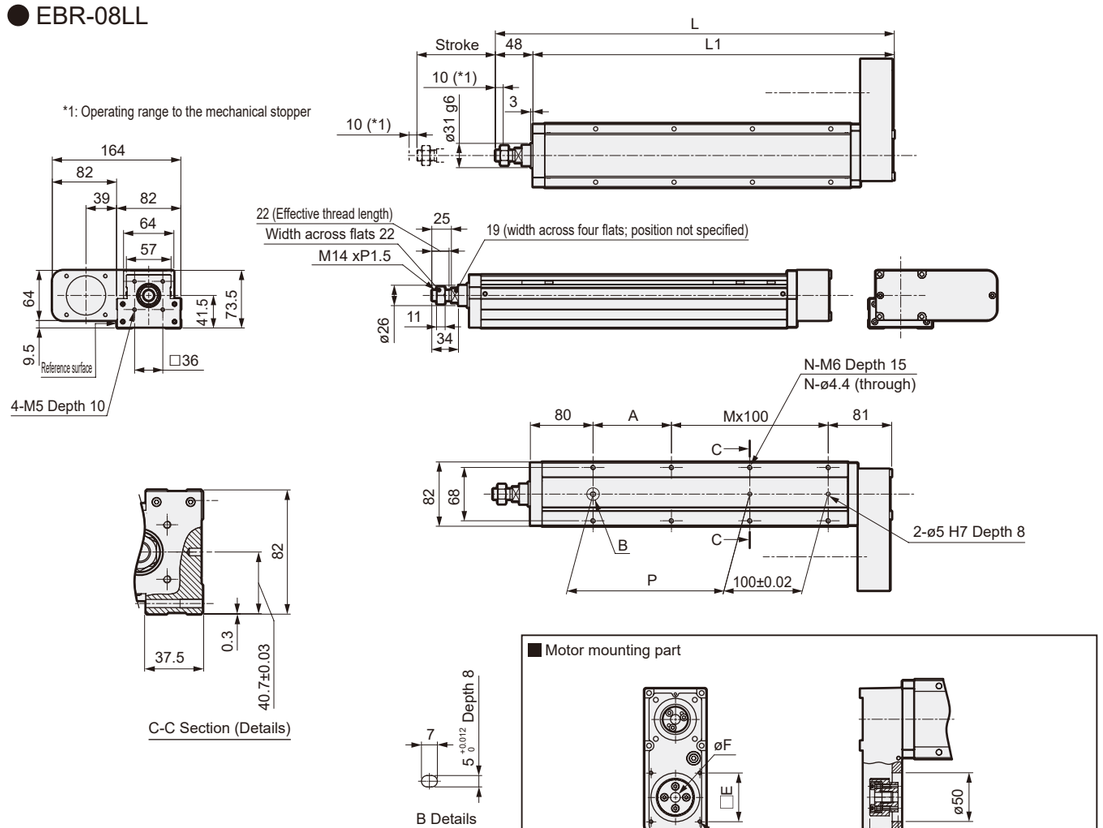
[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.

External Dimension Drawing Motor Left Side Fold-back Mounting

● EBR-08LL



Mounting Motor Specification		D	E	F	Motor screw
A	□60	M4 Depth 12	50	10	4-M4 x L16
B	□56	M4 Depth 12	47.14	6.35	4-M4 x L16
C	□56	M4 Depth 12	47.14	8	4-M4 x L16

* For a 50 mm stroke, sensors may need to be mounted on both sides.

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

List of Accessories

[Fold-back Type]

Mounting Motor Specification	Timing belt, pulley	Motor mounting bolt	
		Size	Quantity
A	Shipped included	M4	4
B		M4	4
C		M4	4

[When home sensor and limit sensor are selected]

Sensor		
Manufacturer	Model	Attached Quantity
KITA	KT-32 N-2 M	3

* For sensor specifications, please refer to P. 524.

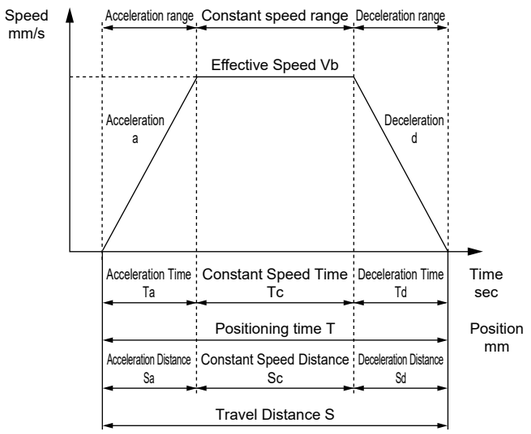
Model Selection

STEP1 Confirmation of Payload

Payload varies depending on mounting orientation, screw lead, and motor performance. Select the size and screw lead by referring to the System Table (P. 498) and the specification table for each model. For motor performance, please contact each motor manufacturer. For motor selection, please use the actuator information (mechanical efficiency, etc.) provided in the specifications column.

STEP2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time. Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s²	
	Set Deceleration	d	mm/s²	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	= {2 x a x d x S / (a + d)}$^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb / a
	Deceleration Time	Td	s	= Vb / d
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	= (a x Ta²) / 2
	Deceleration Distance	Sd	mm	= (d x Td²) / 2
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Use at acceleration and deceleration of 1 G or less for horizontal use and 0.5 G or less for vertical use.
* The settling time varies depending on the operating conditions, but it may take about 0.2 s.
* 1 G ≈ 9.8 m/s².
* The speed and acceleration are set from the motor selected by the customer. For motor selection and calculation of speed and acceleration, please use the actuator information (mechanical efficiency, etc.) provided in the specifications column.

STEP3 Confirmation of Allowable Load Weight

Confirm that the load mass during operation is within the allowable load mass range (P. 520, P. 521). If the allowable load weight is exceeded, please increase the size or use an external guide in combination.

For details on selection, please check the "Model Selection System" on the CKD website or contact our sales representative.

Introduction to the Model Selection System on our website

[For confirmation via PC]

(https://www.ckd.co.jp/kiki/en/selection_system/)

[For confirmation via iPad or smartphone]

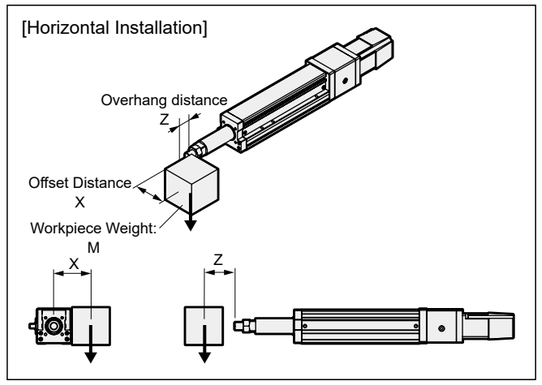
* May not display correctly depending on the smartphone's usage environment.

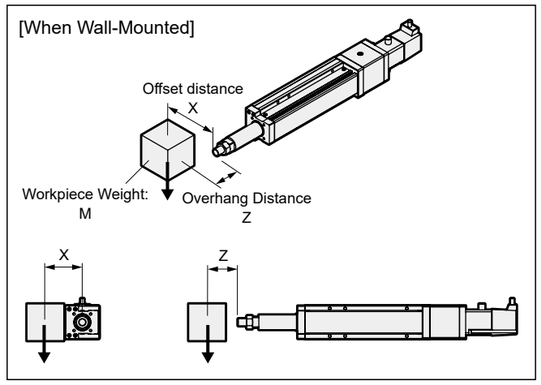
MEMO

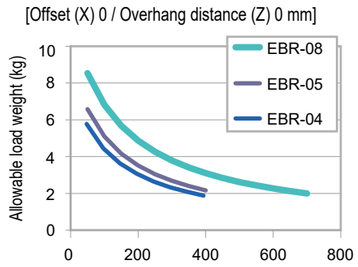
Servo motor compatible
EBS
EBR
ETS
ECS
Ending

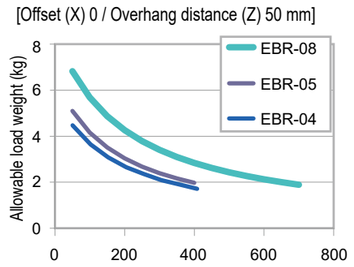
Allowable Load Weight

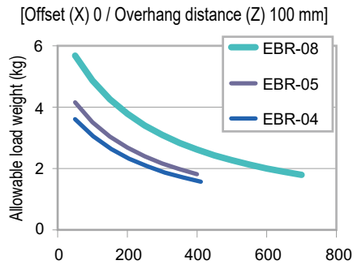
[When mounted horizontally/wall-mounted]

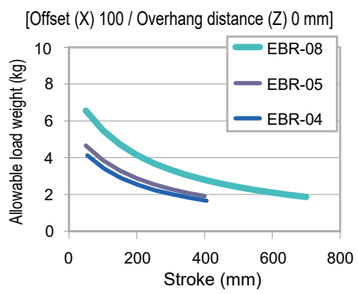


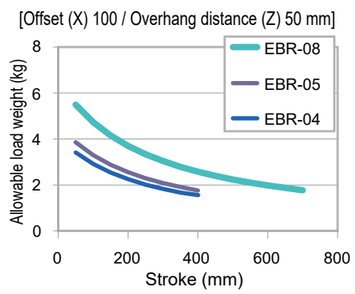


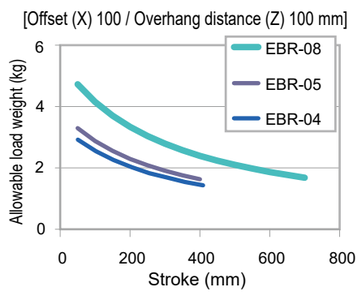








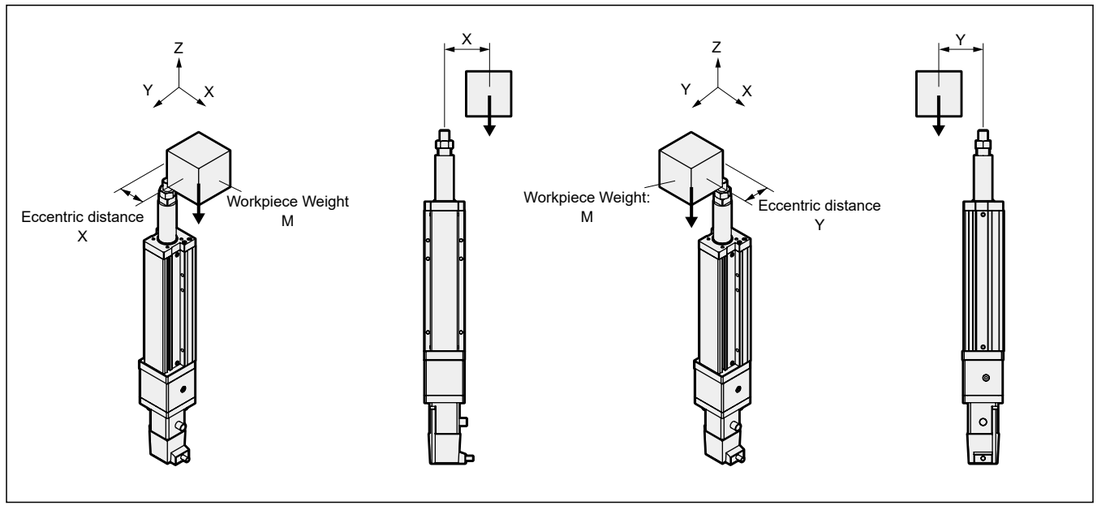


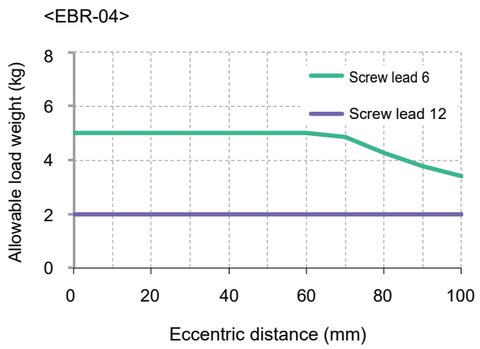


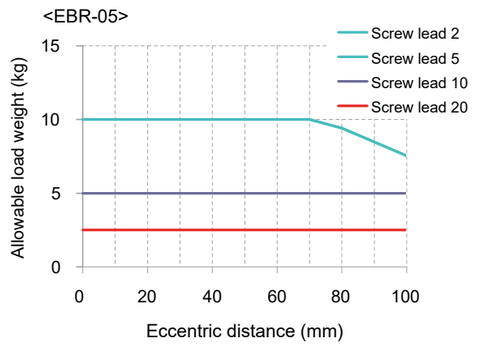
* The value when the actuator's running life is 5,000 km. (Acceleration/deceleration 0.5 G, speed 300 mm/s). Screw lead: 2 mm is the value when the running life is 1,000 km.
* The allowable load mass is the allowable value for the actuator body and may be limited by the motor used by the customer.

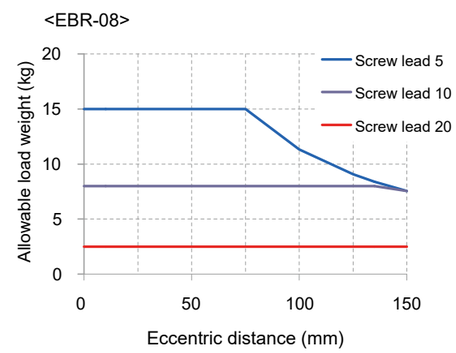
Allowable Load Weight

[Vertical Installation]



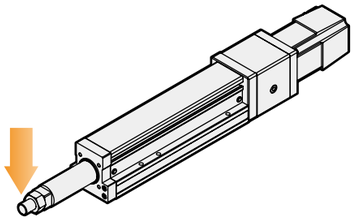




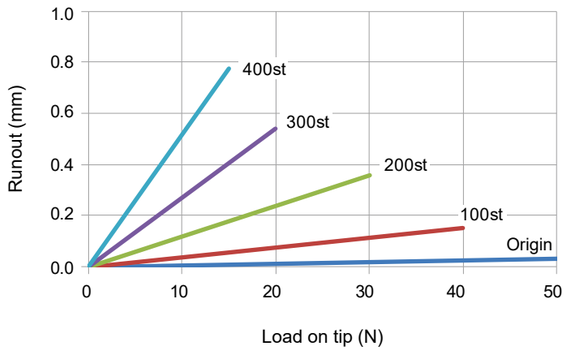


* The value when the actuator's running life is 5,000 km. (Acceleration/deceleration 0.5 G, speed 300 mm/s). Screw lead: 2 mm is the value when the running life is 1,000 km.
* The allowable load mass is the allowable value for the actuator body and may be limited by the motor used by the customer.

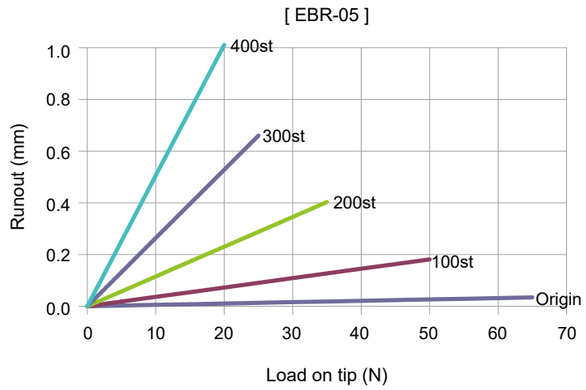
Rod Tip Runout (EBR Series) *Reference Value



[EBR-04]

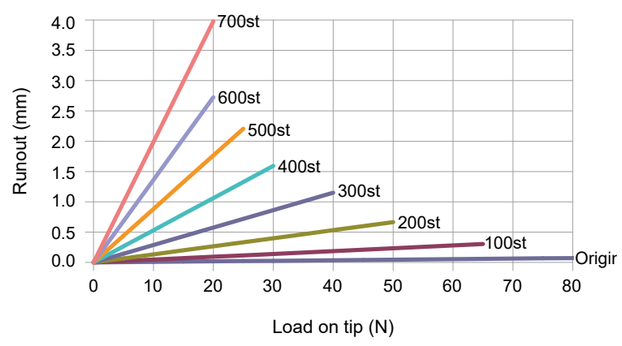


[EBR-05]



Rod Tip Runout (EBR Series) *Reference Value

[EBR-08]



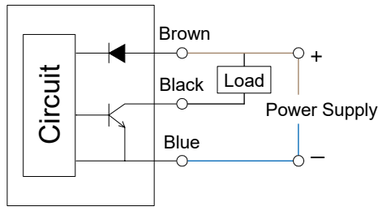
Servo motor compatible
EBS
EBR
ETS
ECS
Ending

Home Sensor, Limit Sensor

[Specifications]

Item		Specifications
Manufacturer	Manufacturer name	KITA
	Model	KT-32 N-2 M
Output Method		NPN Output
Load Voltage		10 to 30 VDC
Load Current		100 mA or less
Current Consumption		17 mA at DC24
Internal Voltage Drop		Max 1.5 V
Leakage Current		Max 0.01 mA
Indicator Light		Red
Shock Resistance		50 G
Ambient Temperature		-10 to 70°C
Enclosure		IP67 IEC60529 standard
Cord length		2 m

Output circuit



List of Accessories

Motor Mounting Bolts (Common for all motor mounting directions)

Model Number	Mounting Motor Specification	Motor Size	Size	Quantity
EBR-04	A	□42	M3	4
	B		M3	4
EBR-05	A	□42	M3	4
	B		M3	4
EBR-08	A	□56 □60	M4	4
	B		M4	4
	C		M4	4

Coupling

model No.	Attached Part Name	Quantity
LE (Motor mounting direction: straight)	Coupling (Shipped attached)	1 pc

Timing belt, pulley (motor side)

Model Number	Shipment Form	Quantity
L□ (Motor fold-back mounting)	Shipped included *1	1 pc each

*1 The pulley on the main body side is pre-assembled.

Home Sensor, Limit Sensor

model No.	Shipment Form	Quantity
When sensor "Yes" is selected	Shipped included	3 pcs. *1

*1 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None."

Maintenance Parts

■ Maintenance parts (origin sensor, limit sensor)

Model Number	Applicable Models	Part
EBR-SENSOR-N	All EBR models	Body

■ Maintenance parts (grease nozzle)

Model Number	Applicable Models
EBS-NOZZLE	All models

MEMO

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Common Precautions: Electric Actuator EBR-LE Series

During Design and Selection

Danger

■ Do not use in places where dangerous goods such as ignitable substances, inflammable substances or explosives are present.
There is a possibility of ignition, fire, or explosion.

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

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

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (80 % humidity or more, with condensation), there is a risk of electric leakage or fire. Oil drops and oil mist are also strictly prohibited.
Use in such environments can cause damage and malfunction.

■ Make sure that the product is D type grounded (ground resistance of 100 Ω or less).
In case of electric leakage, there is a risk of electric shock or malfunction.

■ When installing the actuator in a direction other than horizontal, use a motor with brake.
Without a brake, when the servo is OFF (including emergency stop and alarms) or when the power is OFF, there is a risk of injury or workpiece damage due to the falling of the moving part.

■ When vertically installing the actuator, do everything possible to keep the motor on top.
If the motor is on the lower side, there is no problem in normal operation, but if stopped for a long period, grease may separate and flow into the motor, which may rarely cause a malfunction.

■ Do not use this product in a location where the ambient temperature could suddenly change and cause dew to condense.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Take possibility of power source breakdown into consideration.
Take measures to prevent injury to people or damage to equipment even if the power source fails.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
Design so that restarting does not cause harm to people or damage to the equipment.
Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
Consider the possibility of failure of the installed motor.
Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature: -10 °C to 50 °C, Storage humidity: 35 % to 80 %, Operating Temperature: 0 °C to 40 °C, Operating humidity: 35 % to 80 %) This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Indicate the maintenance conditions in the device's instruction manual.
The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products and motors with their systems, machines and equipment.

■ Set up the wiring so as not to apply inductive noise.
Avoid places where large currents or strong magnetic fields are generated.
Do not use the same conduit or wiring (with multi-core cables) as the power lines of large motors other than this product.
Do not use the same conduit/wiring as the inverter power supply or wiring section used for robots, etc., apply a frame ground to the power supply, and insert a filter at the output section.

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

■ Be sure to separate the power supply of the output of this product and the power supply of inductive loads that generate surges, such as solenoid valves and relays.
If the power supply is shared, surge current may enter the output section and cause damage.
If a separate power supply cannot be used, connect a surge-absorbing element in parallel directly to all inductive loads.

■ When installing an external stopper or retention mechanism (brake, etc.), place it so as not to affect origin position detection.
The home position is detected when the power is turned on. If the detection operation is obstructed by an external stopper or holding mechanism, there is a risk that an unintended position may be recognized as the home position.

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

EBR Model Selection Checklist → **CKD** (Contact)

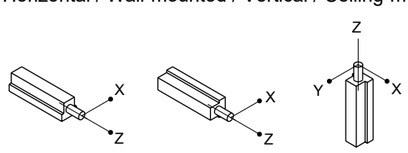
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	(EBR)-	
Basic Specifications	Max. Stroke :	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s² (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Rod Type	
	Load weight : kg	
	Mounting Orientation: Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from rod center to load's center of gravity	
	X direction : mm Y direction : mm Z direction : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature :	°C, Ambient Humidity : %
	Atmosphere :	
Motor Used	Manufacturer :	, Model No. :
	Motor capacity, size:	
Special Notes		

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

ETS

Slider Type (Ball Screw Drive)

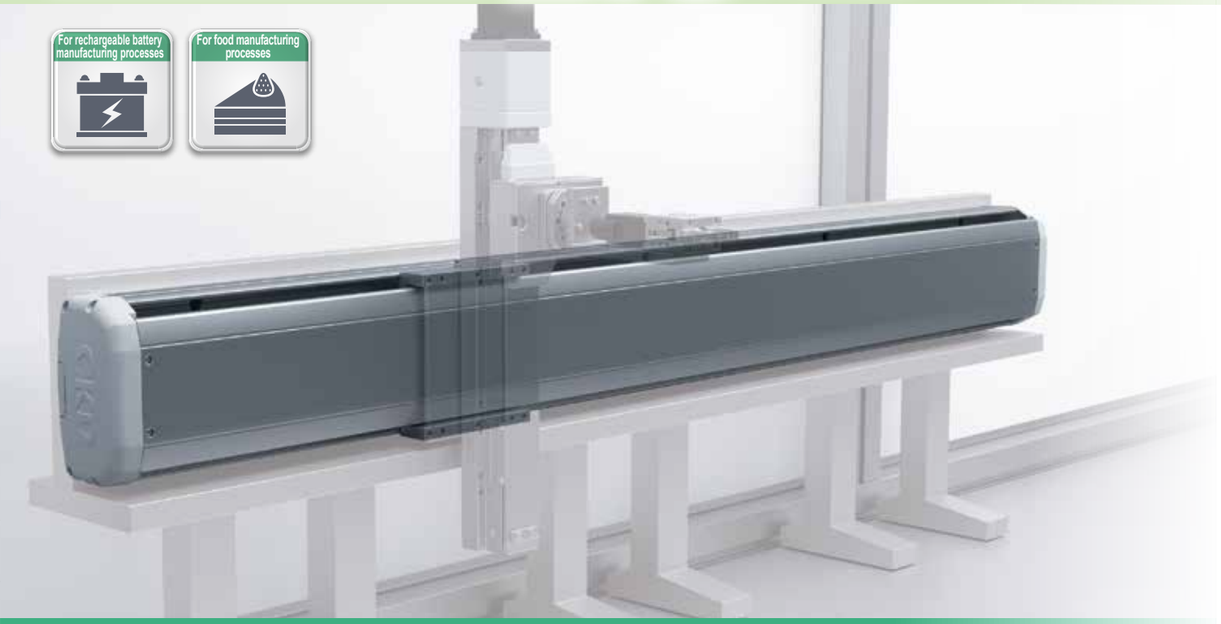
Electric Actuator
Stepping Motor Compatible
Motorless Specification

CONTENTS

Product Introduction 534
System Table 536
● Specifications, Model No. Notation, External Dimension Drawings
・ETS-13 540
・ETS-14 546
● Model Selection 552
● Technical Data 554
⚠ Precautions for Use 559
Model Selection Checklist 560

Slider type (ball screw drive)
Compatible with stepping motor

ETS Series



For high-load transfer

Line-up	Body Size	13		14		Catalog page
	Motor size	□56	□60	□56	□60	
ETS		●	●	●	●	536
Metal stopper specifications ETS-X		●	●	●	●	536
Compatible with rechargeable battery manufacturing processes ETS-P4		●	●	●	●	CC-1226AA
Supports food manufacturing processes ETS-FP1		●	●	●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page compatible model and capacity

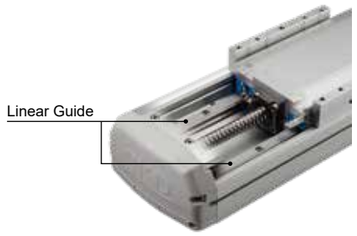
Stepping Motor

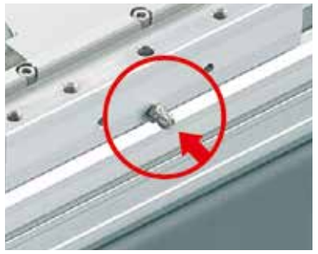
Oriental Motor Co., Ltd. MinebeaMitsumi Incorporated Dyadic Systems Co., Ltd.

Supports high-load transfer

High rigidity · Reduced man-hours

It has a high-rigidity structure with two built-in linear guides to firmly support the load. A grease nipple is equipped on the side of the actuator. It is possible to grease the ball screw and guide all at once from the outside without disassembling the main body. Significantly reduces maintenance man-hours.



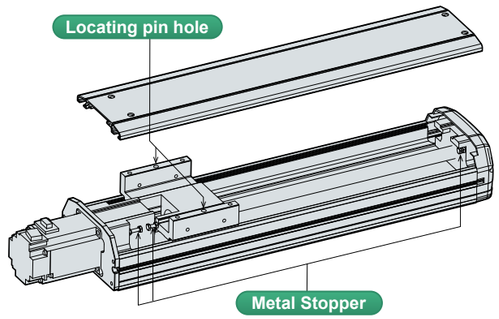


* Select by model No.

Wide Variations

High versatility · Reduced man-hours · Productivity improved · Reduced design hours · Reduced number of parts

A metal stopper specification is available. By establishing an accurate zero point based on a mechanical reference, it is possible to perform accurate homing by pushing against the mechanical end.

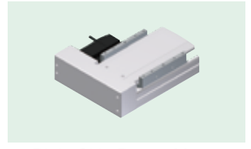


Motor fold-back variations

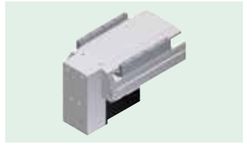
High versatility · Space saving · Reduced design hours

We have prepared a total of 4 motor fold-back variations that can be selected according to the equipment.

Straight Mounting



Right Side Return Mount



Bottom Side Return Mount

Left Side Fold-back Mounting

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

System Table

Type	Model No.		Applicable Motor Size	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) *2 Horizontal *1	Max. Payload (kg) *2 Vertical	Stroke (mm) and Max. Speed (mm/s) *3	Page
Slider Type		ETS-13	□56 □60	135	5	70	17	50 mm: 250 (1.40 sec / 2.60 sec *4); 100: 225 (1.40 sec / 2.60 sec *4); 150: 200 (1.40 sec / 2.60 sec *4); 200: 175 (5.34 sec *4); 250: 150 (5.34 sec *4); 300: 125 (8.60 sec *4)	540
					10	47	12	50 mm: 500 (0.80 sec / 1.40 sec *4); 100: 450 (0.80 sec / 1.40 sec *4); 150: 400 (0.80 sec / 1.40 sec *4); 200: 350 (2.77 sec *4); 250: 300 (2.77 sec *4); 300: 250 (4.40 sec *4)	
					16	30	6	50 mm: 800 (0.58 sec / 0.95 sec *4); 100: 720 (0.58 sec / 0.95 sec *4); 150: 640 (0.58 sec / 0.95 sec *4); 200: 560 (1.75 sec *4); 250: 480 (1.75 sec *4); 300: 400 (2.83 sec *4)	
					20	24	4	50 mm: 1000 (0.50 sec / 0.80 sec *4); 100: 900 (0.50 sec / 0.80 sec *4); 150: 800 (0.50 sec / 0.80 sec *4); 200: 700 (1.49 sec *4); 250: 600 (1.49 sec *4); 300: 500 (2.30 sec *4)	
		ETS-14	□56 □60	135	5	110	33	50 mm: 250 (1.40 sec / 2.60 sec *4); 100: 225 (1.40 sec / 2.60 sec *4); 150: 200 (1.40 sec / 2.60 sec *4); 200: 175 (5.34 sec *4); 250: 150 (5.34 sec *4); 300: 125 (8.60 sec *4)	546
					10	88	22	50 mm: 500 (0.80 sec / 1.40 sec *4); 100: 450 (0.80 sec / 1.40 sec *4); 150: 400 (0.80 sec / 1.40 sec *4); 200: 350 (2.77 sec *4); 250: 300 (2.77 sec *4); 300: 250 (4.40 sec *4)	
					16	48	10	50 mm: 800 (0.58 sec / 0.95 sec *4); 100: 720 (0.58 sec / 0.95 sec *4); 150: 640 (0.58 sec / 0.95 sec *4); 200: 560 (1.75 sec *4); 250: 480 (1.75 sec *4); 300: 400 (2.83 sec *4)	
					20	40	8	50 mm: 1000 (0.50 sec / 0.80 sec *4); 100: 900 (0.50 sec / 0.80 sec *4); 150: 800 (0.50 sec / 0.80 sec *4); 200: 700 (1.49 sec *4); 250: 600 (1.49 sec *4); 300: 500 (2.30 sec *4)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

*3 The maximum speed is based on the assumption that the customer-mounted motor can output a rotational speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*4 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration. Please note that this is not the value at max. payload.

Model Number Configuration

Model No. Notation Method

ETS - ❶13 - ❷05 ❸040 - ❹E ❺A ❻C N ❼C ❽B ❾N ❿P - ⓫X

❶ Body Size	
13	Body width 135 mm
14	Body width 135 mm

❷ Screw Lead	
05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke	
005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor Mounting Direction	
E	Straight Mounting
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications	
A, B, C	Refer to the list on the page at right

❻ Motor Size	
B	□56
C	□60

❼ Origin sensor (1 pc) *1	
N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side (Shipped included)
D	Outside, opposite motor side (Shipped included)

❽ Limit sensor (2 pcs) *2	
N	None
A	Inside
B	Outside

❾ Grease Nipple	
N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole	
N	None
P	Yes

⓫ Metal Stopper Specification (ETS-X)	
	Standard
X	Adopted

*1 Sensor dogs are assembled at shipment regardless of the presence of the sensor.

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❷ Screw Lead	❸ Stroke
13	05	005 to 105
	10	
	16	
	20	
14	05	005 to 105
	10	
	16	
	20	

Model No. Notation Example

ETS-13-05040-EACNCBNP-X

❶ Body Size : 13 Series
❷ Screw lead : 5 mm
❸ Stroke : 400 mm
❹ Motor Mounting Direction : Straight Mounting
❺ Mounting motor specification : A (Refer to the table on the page at right)
❻ Motor Size : □60
❼ Origin sensor : Outside motor side
❽ Limit sensor : Outside
❾ Grease nipple : None (Body mounting direction: Standard)
❿ Locating pin hole : Yes
⓫ Metal Stopper Specification (ETS-X) : Adopted

* This product is available only for the actuator (and motor mounting part) and does not include a motor.}Z. The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Stepping Motor List

Code	Manufacturer name	Series	□56	□60
A	Oriental Motor Co., Ltd.	AZ	-	AZM66□0□ AZM69□0□
		AR	-	ARM66□0□ ARM69□0□
B	MinebeaMitsumi Incorporated	A17 PM/A23 KM	A23 KM□□□□CSTBCN	-
C	Dyadic Systems Co., Ltd.	RMJ	RMJ0611, RMJ1211	-

Electric Actuator Ball Screw Drive Slider Type

ETS-13 Series

Motor Straight Mounting Type

● Stepping Motor Size : □56, □60

Model No. Notation Method

ETS - 13 - 05 005 - E A B N N N N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

13	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor Mounting Direction

E	Straight Mounting

❺ Mounting Motor Specifications

A	Select the mounting motor specification from the table below.
B	
C	

❻ Motor Size

B	□56
C	□60

❼ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❽ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❾ Grease nipple *3, *4

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole

N	None
P	Yes

⓫ Metal Stopper Specification (ETS-X)

	Standard
X	Adopted

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

* Refer to P. 539 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped attached)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.

Specifications

Applicable Motor Size *1		□56, □60 Stepping Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. Payload *1	Horizontal kg	70	47	30	24
	Vertical kg	17	12	6	4
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part mass	kg	1.0			
Other inertia	kg·cm²	0.074			
Coefficient of friction		0.03			
Mechanical efficiency		0.8			
Ball screw length		Stroke + 200			
Dynamic allowable load	N	4822			
Static Allowable Moment	N·m	MP: 175 MY: 174 MR: 153			
Dynamic allowable moment	N·m	MP: 45.1 MY: 45.1 MR: 191.7			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

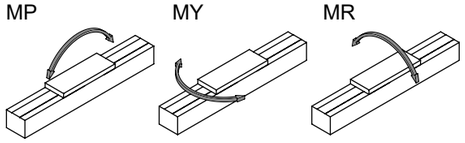
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 554 for details.

Moment Direction

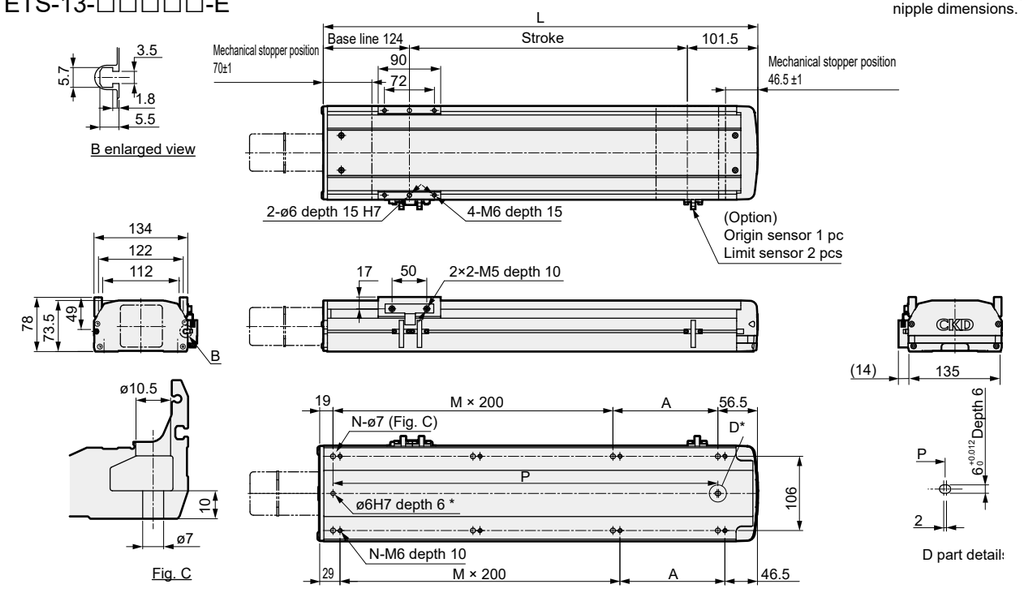
MP MY MR



External Dimension Drawing Motor Straight Mounting

● ETS-13-□□□□□-E

● Refer to P. 557 for grease nipple dimensions.

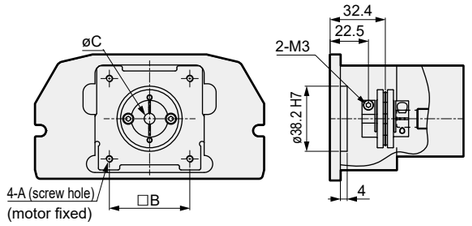


* Locating pin hole (option)

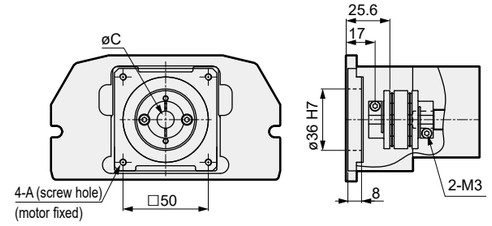
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5	675.5	725.5	775.5	825.5	875.5	925.5	975.5	1025.5	1075.5	1125.5	1175.5	1225.5	1275.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	5.9	6.5	6.9	7.4	7.9	8.4	8.9	9.3	9.9	10.3	10.9	11.3	11.8	12.3	12.8	13.3	13.8	14.3	14.8	15.2	15.8

Motor Mounting Part

● ETS-13 (□56)



● ETS-13 (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped attached	□56 □60	M4	4
B			M4	4
C			M4	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

Electric Actuator Ball Screw Drive Slider Type

ETS-13 Series

Motor Fold-back Mounting Type

● Stepping Motor Size : □56, □60

Model No. Notation Method

ETS - 13 - 05 005 - R A B N N N N N - X

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

❶ Body Size

13	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

A	Select the mounting motor specification from the table below.
B	
C	

❻ Motor Size

B	□56
C	□60

❼ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❽ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❾ Grease Nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole

N	None
P	Yes

⓫ Metal Stopper Specification (ETS-X)

	Standard
X	Adopted

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

* Refer to P. 539 for motor model No.

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped attached)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L" is selected, "L" cannot be selected for the grease nipple.

Specifications

Applicable Motor Size *1		□56, □60 Stepping Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. payload *1	Horizontal kg	70	47	30	24
	Vertical kg	17	12	6	4
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part mass	kg	1.0			
Other inertia	kg·cm²	0.870			
Coefficient of friction		0.05			
Mechanical efficiency		0.8			
Ball screw length		Stroke + 200			
Dynamic allowable load N		4822			
Static Allowable Moment N·m		MP : 175 MY : 174 MR : 153			
Dynamic allowable moment N·m		MP : 45.1 MY : 45.1 MR : 191.7			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

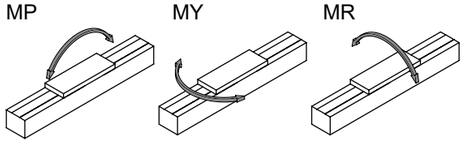
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 554 for details.

Moment Direction

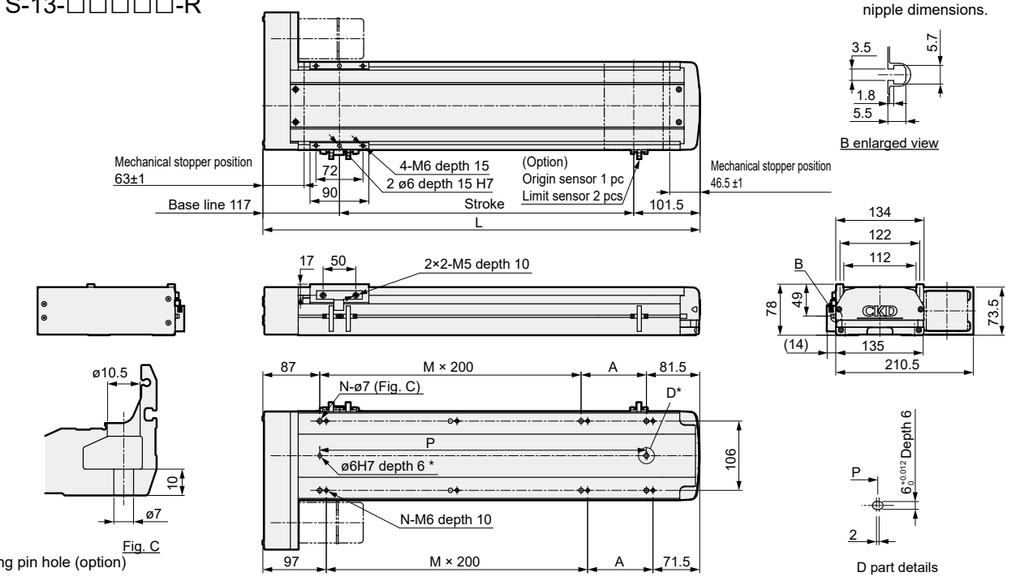
MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● ETS-13-□□□□□-R

● Refer to P. 557 for grease nipple dimensions.

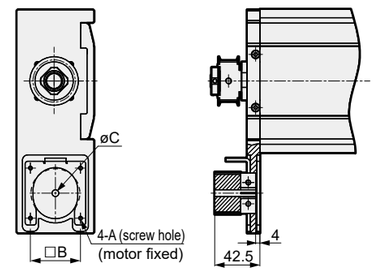


* Locating pin hole (option)

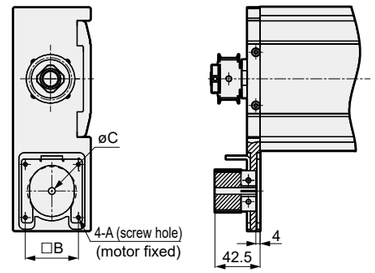
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor Mounting Part

● ETS-13 (□56)



● ETS-13(□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped included	□56 □60	M4	4
B			M4	4
C			M4	4

[Home Sensor / Limit Sensor]

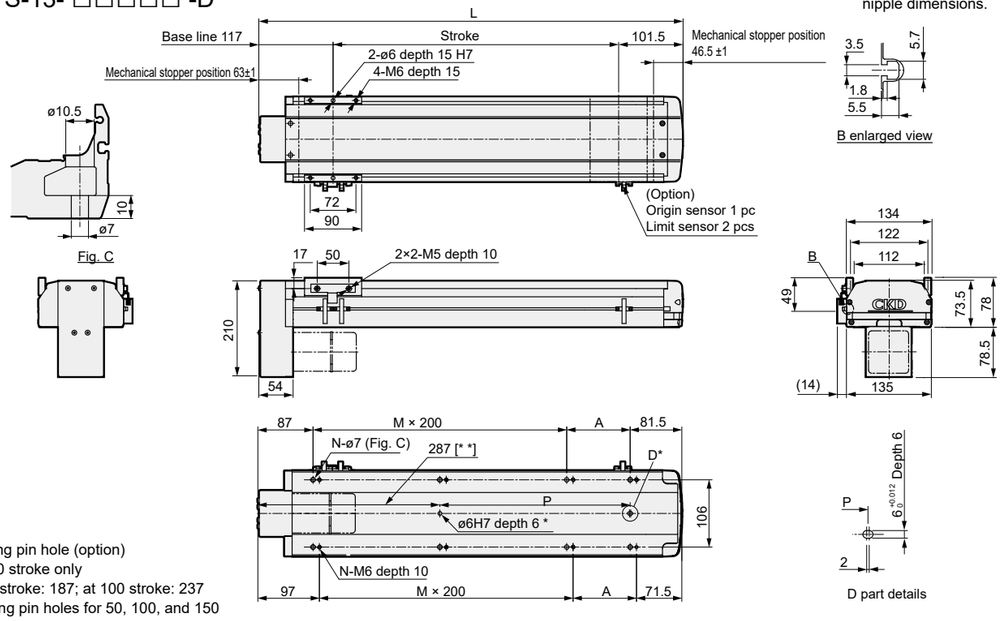
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● ETS-13- □□□□□ -D

● Refer to P. 557 for grease nipple dimensions.

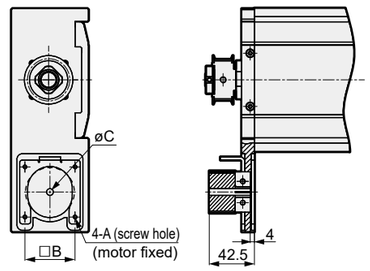


* Locating pin hole (option)
** For 50 stroke only
** At 50 stroke: 187; at 100 stroke: 237
Locating pin holes for 50, 100, and 150 strokes are round holes only.

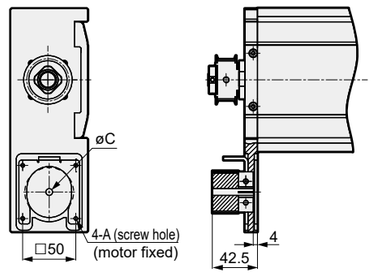
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	3	3	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	0	0	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor Mounting Part

● ETS-13 (□56)



● ETS-13(□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped included	□56 □60	M4	4
B			M4	4
C			M4	4

[Home Sensor / Limit Sensor]

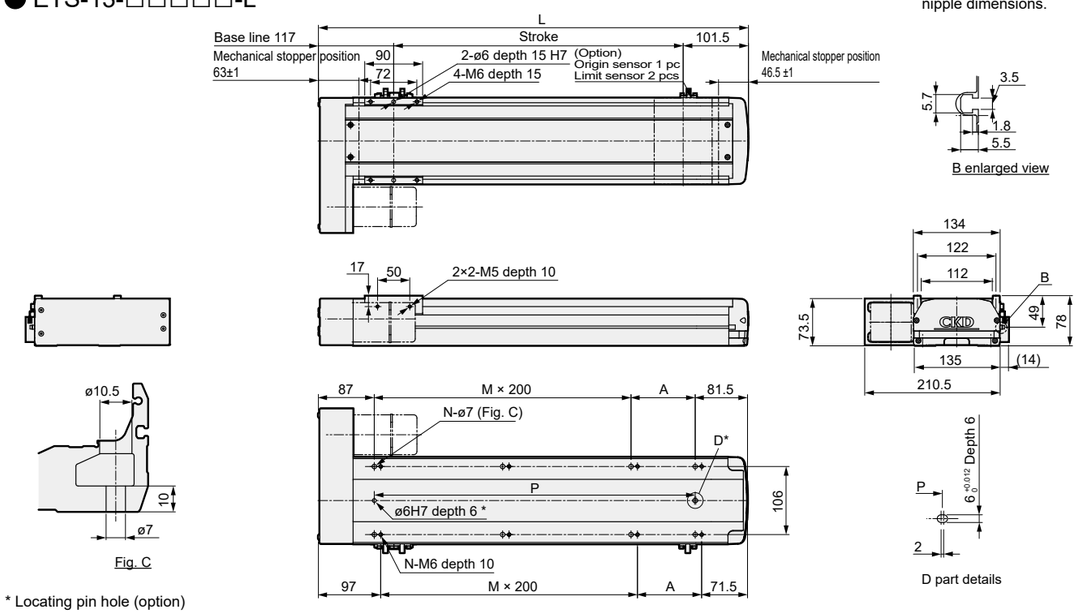
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETS-13-□□□□□-L

● Refer to P. 557 for grease nipple dimensions.

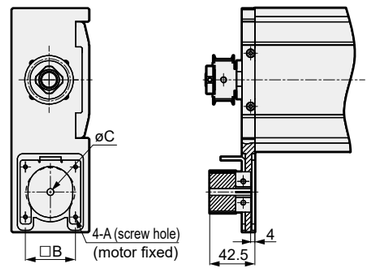


* Locating pin hole (option)

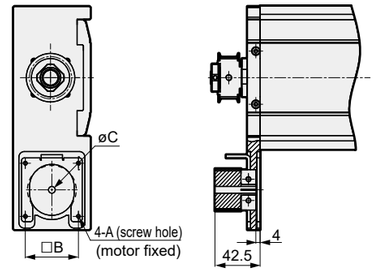
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	268.5	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5
A	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100
M	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	3	4	4	4	5	5
N	4	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14
P	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
Weight (kg)	6.7	7.3	7.7	8.2	8.7	9.2	9.7	10.1	10.7	11.1	11.7	12.1	12.6	13.1	13.6	14.1	14.6	15.1	15.6	16.0	16.6

Motor Mounting Part

● ETS-13 (□56)



● ETS-13(□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped included	□56 □60	M4	4
B			M4	4
C			M4	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

Electric Actuator Ball Screw Drive Slider Type

ETS-14 Series

Motor Straight Mounting Type

●Stepping Motor Size: □+56□60

Model No. Notation Method

ETS - 14 - 05 - 005 - E A B N N N N N - X

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor Mounting Direction

E	Straight Mounting

❺ Mounting Motor Specifications

A	Select the mounting motor specification from the table below.
B	
C	

❻ Motor Size

B	□56
C	□60

❼ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❽ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❾ Grease nipple *3, *4

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole

N	None
P	Yes

⓫ Metal Stopper Specification (ETS-X)

	Standard
X	Adopted

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped attached)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.

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

* Refer to P. 539 for motor model No.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. Payload *1	Horizontal kg	110	88	48	40
	Vertical kg	33	22	10	8
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part mass	kg	1.6			
Other inertia	kg·cm²	0.074			
Coefficient of friction		0.05			
Mechanical efficiency		0.8			
Ball screw length		Stroke + 200			
Dynamic allowable load N		6567			
Static Allowable Moment N·m		MP: 552.0 MY: 551.0 MR: 485.0			
Dynamic allowable moment N·m		MP: 262.7 MY: 262.7 MR: 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

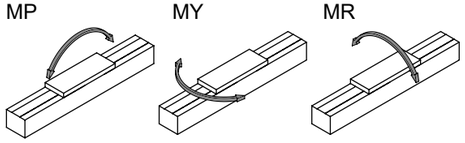
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 554 for details.

Moment Direction

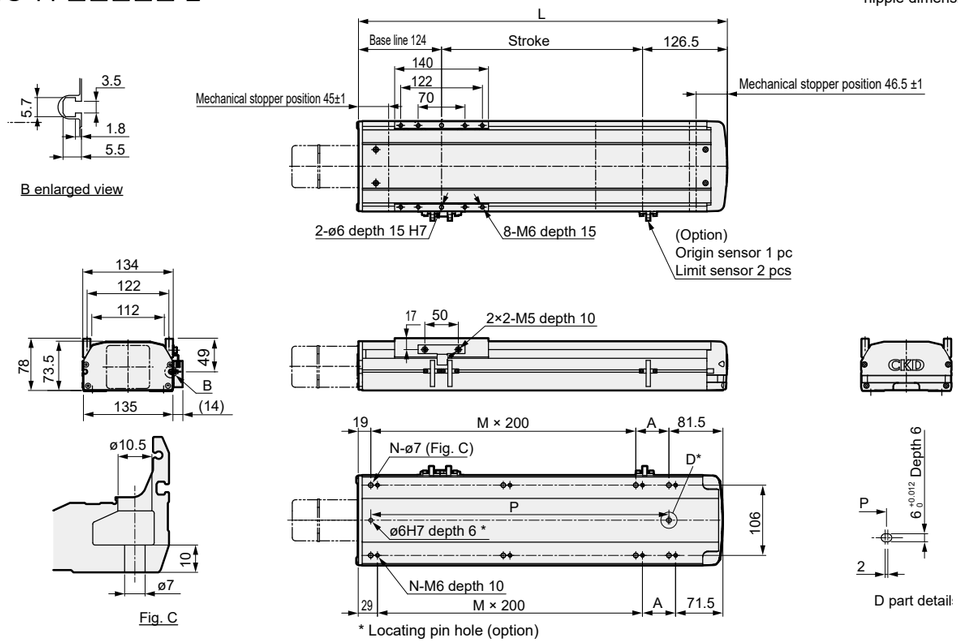
MP MY MR



External Dimension Drawing Motor Straight Mounting

● ETS-14-□□□□□-E

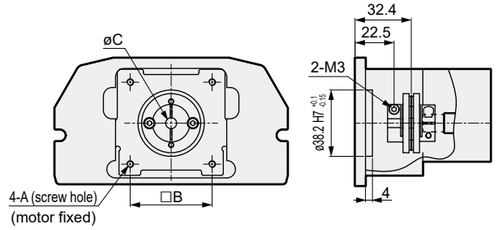
● Refer to P. 557 for grease nipple dimensions.



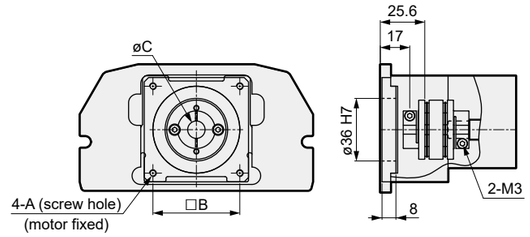
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	300.5	350.5	400.5	450.5	500.5	550.5	600.5	650.5	700.5	750.5	800.5	850.5	900.5	950.5	1000.5	1050.5	1100.5	1150.5	1200.5	1250.5	1300.5
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	6.1	6.7	7.1	7.6	8.1	8.6	9.1	9.5	10.1	10.5	11.1	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0	15.4	16.0

Motor Mounting Part

● ETS-14 (□56)



● ET4-14 (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L16
C	□56	M4	47.14	8	4-M4 x L16

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped attached	□56 □60	M4	4
B			M4	4
C			M4	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

Electric Actuator Ball Screw Drive Slider Type

ETS-14 Series

Motor Fold-back Mounting Type

● Stepping Motor Size : □56, □60

Model No. Notation Method

ETS - 14 - 05 - 005 - R A B N N N N N - X

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *5

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

A	Select the mounting motor specification from the table below.
B	
C	

❻ Motor Size

B	□56
C	□60

❼ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❽ Limit sensor (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❾ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole

N	None
P	Yes

⓫ Metal Stopper Specification (ETS-X)

	Standard
X	Adopted

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped attached)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard" means that it can be mounted from either the top or bottom side.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L" is selected, "L" cannot be selected for the grease nipple.

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

* Refer to P. 539 for motor model No.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke *1	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. Payload *1	Horizontal kg	110	88	48	40
	Vertical kg	33	22	10	8
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part mass	kg	1.6			
Other inertia	kg·cm²	0.870			
Coefficient of friction		0.05			
Mechanical efficiency		0.8			
Ball screw length		Stroke + 200			
Dynamic allowable load N		6567			
Static Allowable Moment N·m		MP: 552.0 MY: 551.0 MR: 485.0			
Dynamic allowable moment N·m		MP: 262.7 MY: 262.7 MR: 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

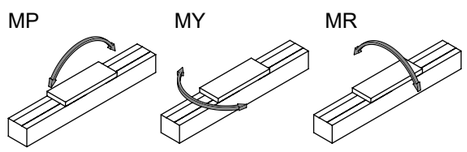
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm.

Allowable Overhang Length

* Refer to P. 554 for details.

Moment Direction

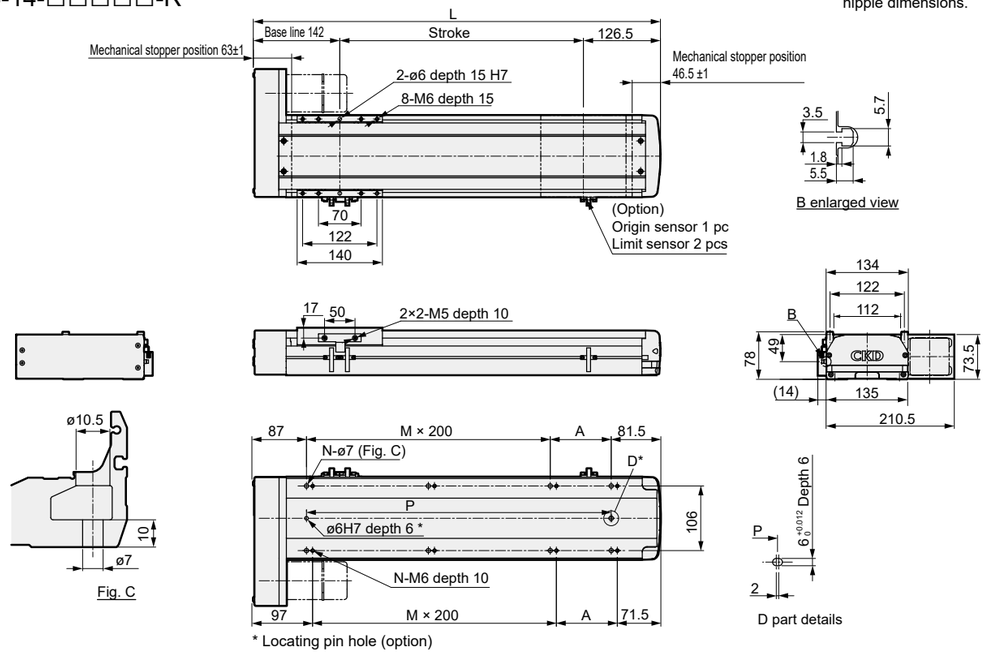
MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● ETS-14-□□□□□-R

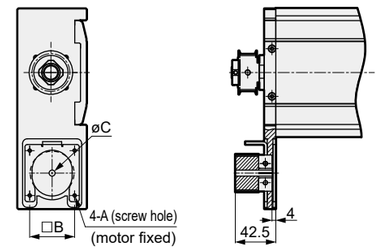
● Refer to P. 557 for grease nipple dimensions.



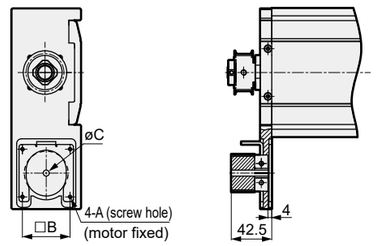
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor Mounting Part

● ETS-14 (□56)



● ETS-14 (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, Pulley	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped included	□56 □60	M4	4
B			M4	4
C			M4	4

[Home Sensor / Limit Sensor]

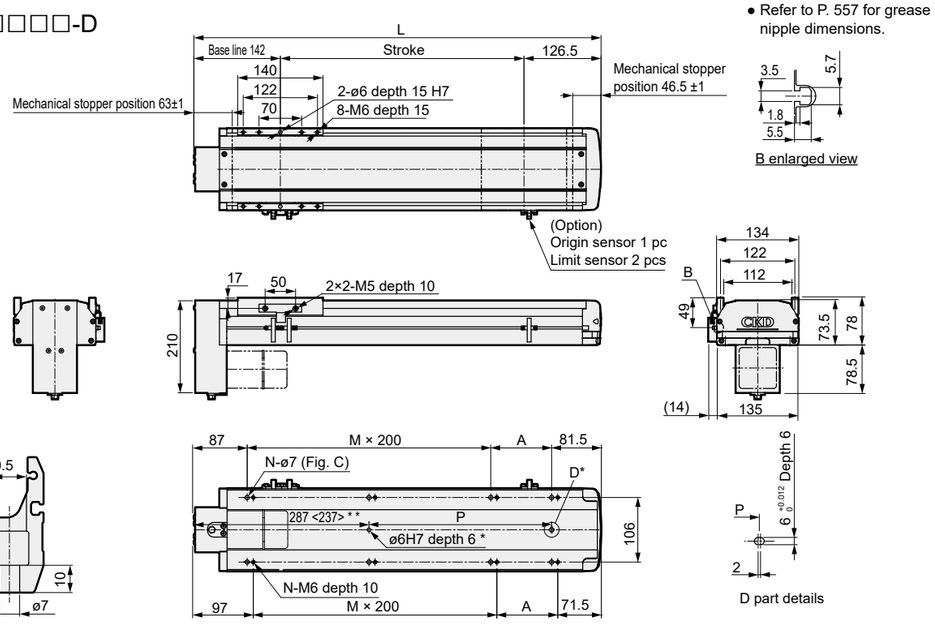
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

● ETS-14-□□□□□-D

● Refer to P. 557 for grease nipple dimensions.



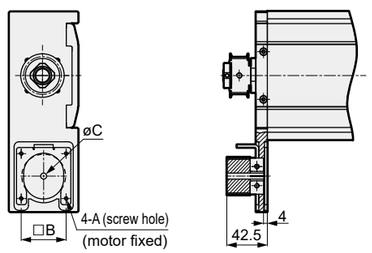
* Locating pin hole (option)

** Locating pin holes for 50 and 100 strokes are round holes only; for 50 stroke only.

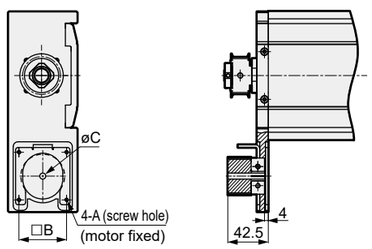
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	0	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor Mounting Part

● ETS-14 (□56)



● ETS-14 (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, Pulley	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped included	□56 □60	M4	4
B			M4	4
C			M4	4

[Home Sensor / Limit Sensor]

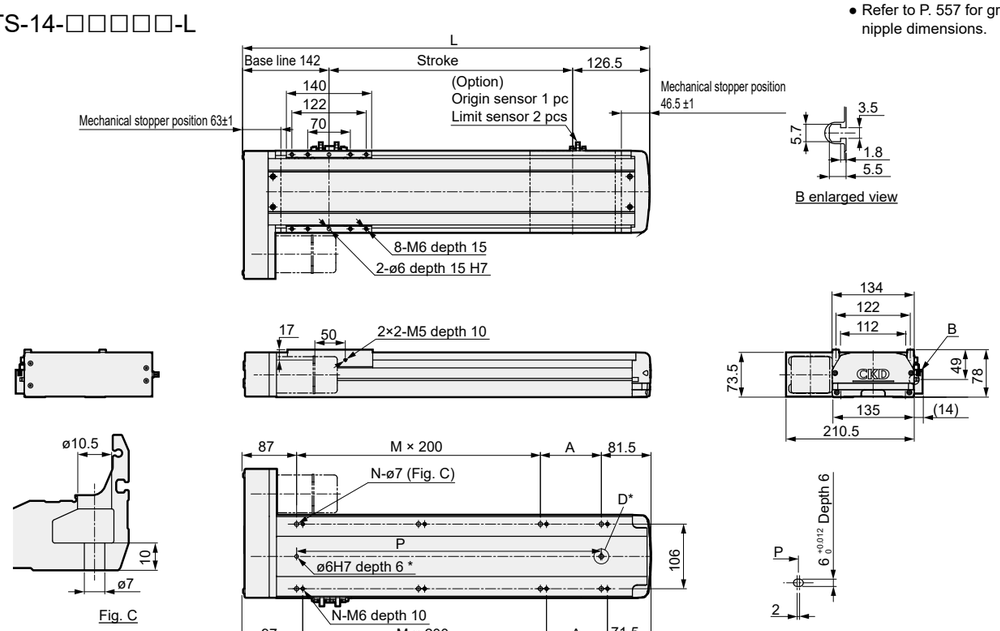
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

External Dimension Drawing Motor Left Side Fold-back Mounting

● ETS-14-□□□□□-L

● Refer to P. 557 for grease nipple dimensions.

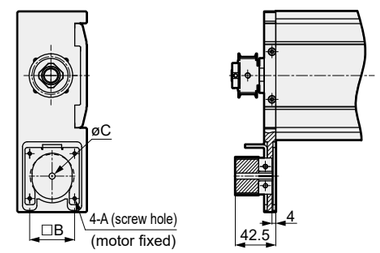


* Locating pin hole (option)

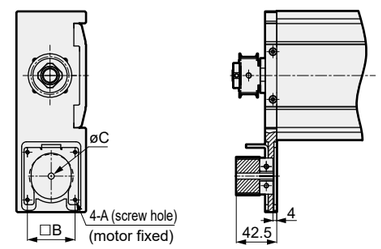
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	318.5	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5	918.5	968.5	1018.5	1068.5	1118.5	1168.5	1218.5	1268.5	1318.5
A	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150
M	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5
N	4	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14
P	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150
Weight (kg)	6.9	7.5	7.9	8.4	8.9	9.4	9.9	10.3	10.9	11.3	11.9	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8	16.2	16.8

Motor Mounting Part

● ETS-14 (□56)



● ETS-14 (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolts
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, Pulley	Motor Size	Motor mounting bolts	
			Size	Quantity
A	Shipped included	□56 □60	M5	4
B			M5	4
C			M4	4

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 556.

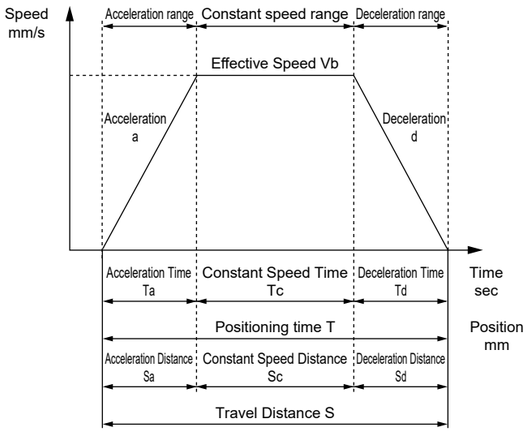
Model Selection

STEP-1 Confirmation of Payload

Payload varies depending on mounting orientation, screw lead, and motor performance. Select the size and screw lead by referring to the selection table (P. 536) and the specification table for each model. For motor performance, please contact each motor manufacturer. For motor selection, please use the actuator information (mechanical efficiency, etc.) provided in the specifications column.

STEP-2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time.
Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s^2	
	Set Deceleration	d	mm/s^2	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	= {2 x a x d x S / (a + d)}$^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb / a [0.2 sec or more]
	Deceleration Time	Td	s	= Vb / d [0.2 sec or more]
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	= (a x Ta²) / 2
	Deceleration Distance	Sd	mm	= (d x Td²) / 2
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* Acceleration/deceleration setting by acceleration/deceleration time varies with set speed and stroke.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Please use an acceleration/deceleration time of 0.2 sec or more.
* 1 G ≈ 9.8 m/s².
* The customer sets the speed and acceleration/deceleration from the selected motor. For selecting a motor and calculating speed and acceleration/deceleration, please use the actuator information (mechanical efficiency, etc.) provided in the specifications section.

STEP-3 Confirmation of Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 554, 555).

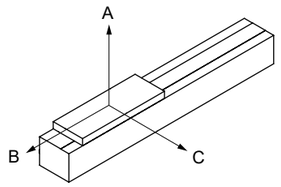
For details on selection, please contact our sales representative.

MEMO

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

Allowable Overhang Length (ETS Series)

[Horizontal Installation]



[Allowable Overhang Length]

●ETS-13

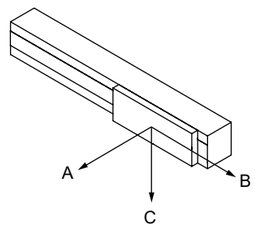
Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	40	800	65	230
			55	560	45	160
			70	430	34	120
		10	25	600	100	280
			35	420	70	195
			47	300	50	145
		16	10	900	230	520
			20	440	115	250
			30	280	75	170
		20	5	1200	430	850
			15	400	140	270
			24	250	85	160

●ETS-14

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	2300	250	240
			80	1600	180	170
			110	1150	120	115
		10	30	2000	500	450
			50	1400	280	250
			88	700	140	125
		16	10	2200	1200	1000
			20	1600	600	500
			48	900	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			40	850	280	230

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* When using in a ceiling-mounted configuration, select the maximum payload, dynamic allowable load, dynamic allowable moment, and overhang length as 1/3 of the specified values. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

[When Wall-Mounted]



[Allowable Overhang Length]

●ETS-13

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	40	240	70	850
			55	170	50	600
			70	125	35	450
		10	25	300	100	620
			35	210	70	420
			47	150	50	300
		16	10	530	230	900
			20	250	110	430
			30	170	70	280
		20	5	900	450	1300
			15	290	150	420
			24	170	90	260

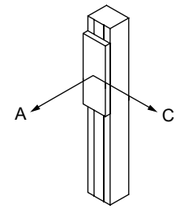
●ETS-14

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	60	240	250	1600
			80	170	180	1200
			110	115	120	1050
		10	30	420	460	1500
			50	240	250	1000
			88	120	130	700
		16	10	1050	1200	2650
			20	500	620	1450
			48	200	230	800
		20	10	1000	1200	1900
			20	500	600	1000
			40	230	290	600

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* When using in a ceiling-mounted configuration, select the maximum payload, dynamic allowable load, dynamic allowable moment, and overhang length as 1/3 of the specified values. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

Allowable Overhang Length (ETS Series)

[Vertical Installation]



[Allowable Overhang Length]

●ETS-13

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	5	600	-	600
			10	300	-	300
			12	250	-	250
		10	4	650	-	650
			6	430	-	430
			8	320	-	320
		16	1	1350	-	1350
			2	900	-	900
			6	350	-	350
		20	1	1050	-	1050
			2	900	-	900
			4	550	-	550

●ETS-14

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm A	B	C
Straight · Fold-back	0.2	5	20	755	-	755
			25	605	-	605
			33	455	-	455
		10	10	1350	-	1350
			15	900	-	900
			22	650	-	650
		16	2	2400	-	2400
			4	1700	-	1700
			10	1000	-	1000
		20	4	1800	-	1800
			6	1200	-	1200
			8	900	-	900

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* When using in a ceiling-mounted configuration, select the maximum payload, dynamic allowable load, dynamic allowable moment, and overhang length as 1/3 of the specified values. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

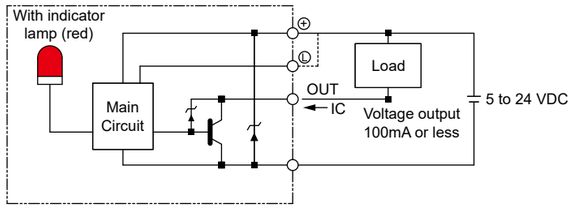
Home Sensor, Limit Sensor

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

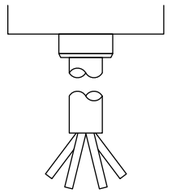
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared emitting diode (940 nm)
Indicator Light	Lights up when light is received (red)
Power Supply Voltage	5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption	35 mA or less (NPN type)
Control output	NPN type: NPN open collector Output 5 to 24 VDC 100 mA or less Off-state current 0.5 mA or less Residual voltage 0.8 V or less (at 100 mA load current) Residual voltage 0.4 V or less (at 40 mA load current)
Ambient illuminance	Illuminance at Light-Receiving Surface: Fluorescent Lamp: 1,000 lx or less
Ambient Temperature Range	Operating: -25 to +55°C Storage: -30 to +80°C (however, no freezing or condensation)
Ambient humidity range	Operating: 5 to 85%RH Storage: 5 to 95%RH (however, no freezing or condensation)
Enclosure	IP50 IEC60529 standard
Cord length	2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Sensor Dog External Dimension Drawing

Body Size	E/D	Motor Mounting Direction			
		R		L	
		Without grease nipple	With grease nipple	Without grease nipple	With grease nipple
ETS-13	Fig. 1	Fig. 1	Fig. 2	Fig. 1	Fig. 2
ETS-14	Fig. 1	Fig. 1	Fig. 3	Fig. 1	Fig. 4

Fig. 1

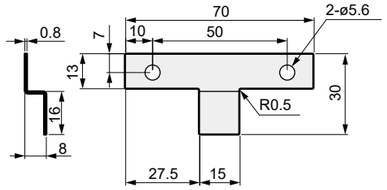


Fig. 2

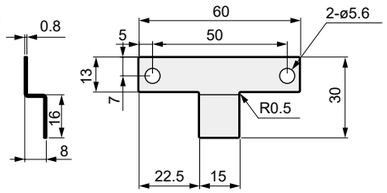


Fig. 3

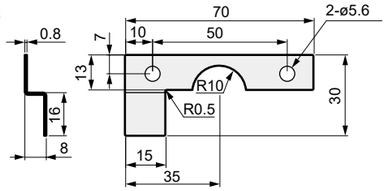
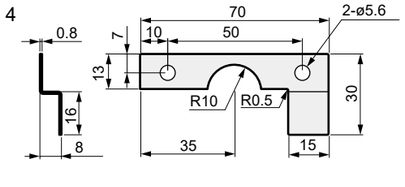


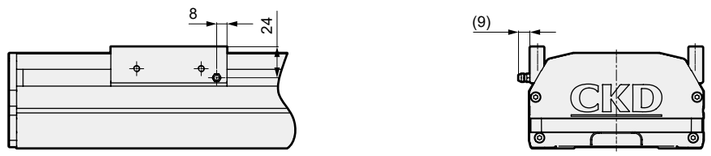
Fig. 4



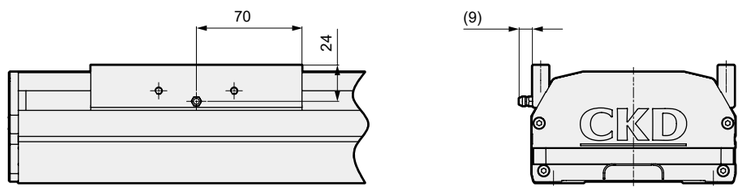
Grease Nipple Dimension Drawing

* Symmetrical with respect to the actuator.

●ETS-13



● ETS-14



List of Accessories

Basic Type

Motor Mounting Bolts (Common for all motor mounting directions)

Model No.	Mounting Motor Specification	Motor Size	Size	Quantity
ETS-13 ETS-14	A	□56 □60	M4	4
	B		M4	4
	C		M4	4

By Motor Mounting Direction

Model No.	Attached Part Name	Quantity
E (External direct mounting)	Coupling (Shipped attached)	1 pc
R (Right fold-back mounting) L (Left fold-back mounting) D (Bottom fold-back mounting)	Timing Belt	1 pc.
	Pulley	1 pc

When home/limit sensor is selected *1

Sensor mounting direction	Shipment Form	Quantity
Inner sensor	Shipped assembled in fixed position	3 pcs. *2
Outer sensor	Shipped included *3	

*1 The shipping form for the home and limit sensors varies depending on whether they are mounted inside or outside.
*2 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None".
*3 Sensor mounting screws are also attached.

Maintenance Parts

● Maintenance parts (external mounted sensor)

Basic Price Model Number	Applicable Models	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Individual Precautions: Electric Actuator ETS Series

During Design and Selection

Danger

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

■ Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.

■ When mounting the product, be sure to securely hold and fix it (including the workpiece).
There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
● If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
● Use in such environments can cause damage and malfunction.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature : -10 °C to 50 °C, Storage humidity : 35 % to 80 %, Operating Temperature : 0 °C to 40 °C, Operating humidity : 35 % to 80 %)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Consider the possibility of power source failure.
● In case of breakdown in the power source, take countermeasures without causing trouble or damage to the operator or equipment.

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

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Clearly state the maintenance conditions in the equipment's instruction manual.
● The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ Regarding installing, setting up, and/or adjusting the actuator, read through the instruction manual and operate correctly.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

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

ETSModel Selection Check Sheet → **CKD**(Contact)

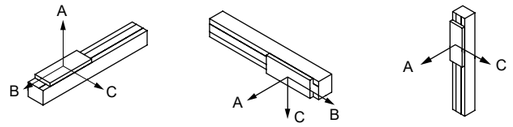
Please fill out this form and send it to your nearest sales office. We will respond with the model selection results.

MEMO

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	(ETS)-	
Basic Specifications	Max. Stroke :	mm, Ball screw lead : mm
Operating Conditions	Moving stroke :	mm, travel time : s
	Set Speed :	mm/s
	Set acceleration/deceleration :	mm/s² (set acceleration/deceleration time : s)
	Repeatability : ±	mm
Load Conditions	Slider Type	
	Load weight :	kg
	Mounting Orientation : Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm Direction B : mm Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

ECS

Slider Type
(Ball Screw Drive, Low Particle Emission Specification)

Electric Actuator
Stepping Motor
Motorless Specification

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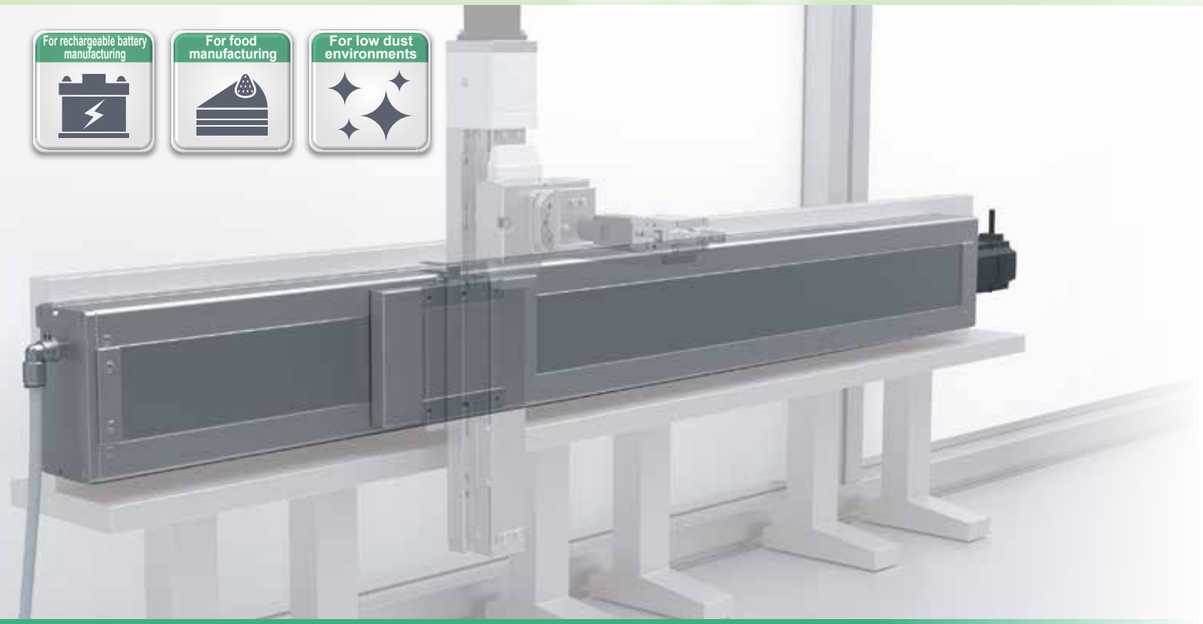
● Specifications, Model No. Notation, External Dimension Drawings
・ECS-14 570
● Model Selection 576
● Technical Data 578
⚠ Precautions for Use 584
Model Selection Checklist 585

Servo motor compatible
EBS
EBR
ETS
ECS

Slider type (ball screw drive, low dust generation)
Compatible with stepping motor

ECS Series



For High-Load Transport (Low Particle Emission Model)

Line-up	Body Size / Motor size	14 □56	14 □60	Catalog page
Low dust specification **ECS**		●	●	566
Supports low dust specifications and rechargeable battery manufacturing processes **ECS-P4**		●	●	CC-1226AA
Low dust specifications / compatible with food manufacturing processes **ECS-FP1**		●	●	CC-1271AA

List of supported motor manufacturers * Refer to each model page for the compatible model and capacity

Stepping Motor

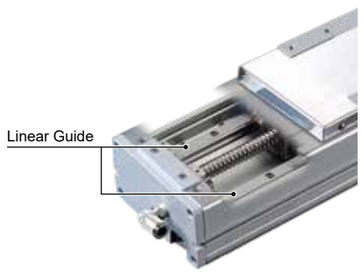
Oriental Motor Co., Ltd. MinebeaMitsumi Incorporated Dyadic Systems Co., Ltd.

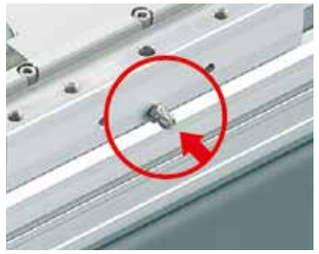
Servo motor compatible
EBS
EBR
ETS
ECS
Ending

High rigidity | Reduced man-hours | Easy maintenance

Supports high-load transfer

It has a high-rigidity structure with two built-in linear guides to firmly support the load. A grease nipple is equipped on the side of the actuator. It is possible to grease the ball screw and guide all at once from the outside without disassembling the main body. Significantly reduces maintenance man-hours.



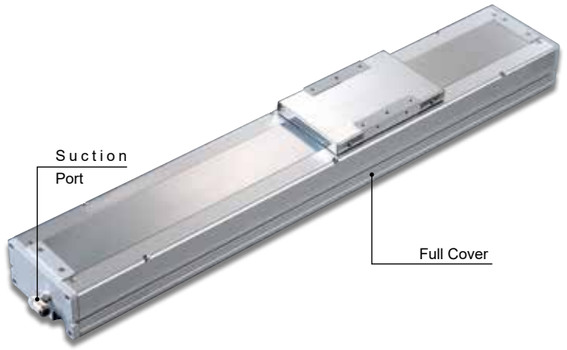


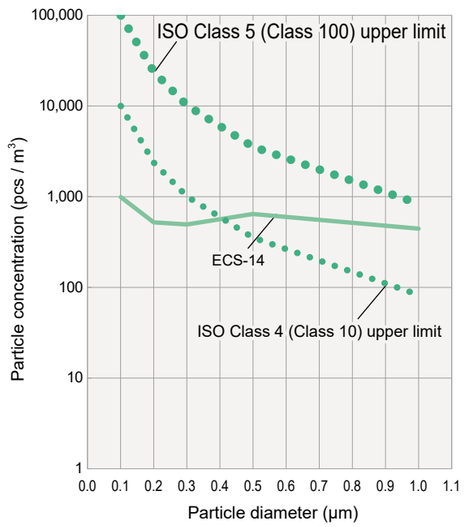
*Select by model No.

Low Particle Generation

Low Particle Emission Structure

The actuator body has a full cover with few gaps, and dust is exhausted outside through a suction port. Ideal for liquid crystal panel production lines and food lines.





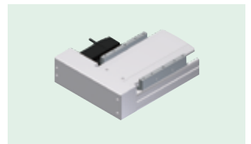
* Please refer to the catalog text for data acquisition conditions. This is not a guaranteed value.

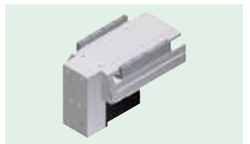
High versatility | Space saving | Reduced design hours

Motor fold-back variations

We have prepared a total of 4 motor fold-back variations that can be selected according to the equipment.

Straight Mounting


Right Side Return Mount


Bottom Side Return Mount

Left Side Fold-back Mounting

System Table

Type	Model No.		Applicable Motor Size	Body Width (mm)	Screw Lead (mm)	Max. Payload (kg) *2 Horizontal *1	Max. Payload (kg) *2 Vertical	Stroke (mm) and Max. Speed (mm/s) *3	Page
Low Particle Emission Type		ECS-14	□56 □60	135	5	110	33	50 mm: 250 (1.40 sec / 2.60 sec *4); 100: 225 (1.40 sec / 2.60 sec *4); 150: 200 (1.40 sec / 2.60 sec *4); 200: 175 (5.34 sec *4); 250: 150 (5.34 sec *4); 300: 125 (8.60 sec *4)	570
					10	88	22	50 mm: 500 (0.80 sec / 1.40 sec *4); 100: 450 (0.80 sec / 1.40 sec *4); 150: 400 (0.80 sec / 1.40 sec *4); 200: 350 (2.77 sec *4); 250: 300 (2.77 sec *4); 300: 250 (4.40 sec *4)	
					16	48	10	50 mm: 800 (0.58 sec / 0.95 sec *4); 100: 720 (0.58 sec / 0.95 sec *4); 150: 640 (0.58 sec / 0.95 sec *4); 200: 560 (1.75 sec *4); 250: 480 (1.75 sec *4); 300: 400 (2.83 sec *4)	
					20	40	8	50 mm: 1000 (0.50 sec / 0.80 sec *4); 100: 900 (0.50 sec / 0.80 sec *4); 150: 800 (0.50 sec / 0.80 sec *4); 200: 700 (1.49 sec *4); 250: 600 (1.49 sec *4); 300: 500 (2.30 sec *4)	

*1 The payload when wall mounted is the same as for horizontal installation.
*2 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.
*3 The maximum speed is based on the assumption that the customer-mounted motor can output a rotational speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.
*4 ⏱ shows the Positioning time. This is the case when a specific stroke is operated under horizontal installation, at max. speed, and max. acceleration/deceleration. Please note that this is not the value at max. payload.

Model Number Configuration

Model No. Notation Method

ECS - 14 - 05 040 - E A C N C B N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction *1

E	Straight Mounting
R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

A B C	Refer to the list on the page at right

❻ Motor Size

B	□56
C	□60

❼ Origin sensor (1 pc) *1

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side (Shipped included)
D	Outside, opposite motor side (Shipped included)

❽ Limit sensor (2 pcs) *2

N	None
A	Inside
B	Outside

❾ Grease nipple

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole

N	None
P	Yes

*1 Sensor dogs are assembled at shipment regardless of the presence of the sensor.

Screw Lead / Stroke Compatibility Table by Body Size

❶ Body Size	❷ Screw Lead	❸ Stroke
14	05	005 to 105
	10	
	16	
	20	

Model Number Display Example

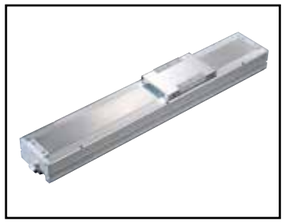
ECS-14-05040-EACNCBNP

❶ Body Size : 14 Series
❷ Screw lead : 5 mm
❸ Stroke : 400 mm
❹ Motor Mounting Direction : Straight Mounting
❺ Mounting motor specification : A (Refer to the table on the page at right)
❻ Motor Size : □60
❼ Origin sensor : Outside motor side
❽ Limit sensor : Outside
❾ Grease nipple : None (Body mounting direction: Standard)
❿ Locating pin hole : Yes

*This product is available only for the actuator (and motor mounting part) and does not include a motor. The motor and driver should be prepared, mounted, and adjusted by the customer.

Recommended Stepping Motor List

Code	Manufacturer name	Series	56□	□60
A	Oriental Motor Co., Ltd.	AZ	-	AZM66□0□ AZM69□0□
		AR	-	ARM66□0□ ARM69□0□
B	MinebeaMitsumi Incorporated	A17 PM/A23 KM	A23 KM□□□□CSTBCN	-
C	Dyadic Systems Co., Ltd.	RMJ	RMJ0611, RMJ1211	-



Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-14 Series

Inline Motor Mount Type

● Stepping motor size : □56, □60

Model No. Notation Method

ECS - 14 - 05 - 040 - E A B N N N N P

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor Mounting Direction

E	Straight Mounting

❺ Mounting Motor Specifications

A	Select the mounting motor specification from the table below.
B	
C	

❻ Motor Size

B	□56
C	□60

❼ Origin sensor (1 pc) *1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❽ limit sensors (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❾ Grease nipple *3, *4

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole

N	None
P	Yes

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped attached)
If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.

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

* Refer to P. 569 for motor model No.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. Payload *1	Horizontal kg	110	88	48	40
	Vertical kg	33	22	10	8
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part mass	kg	1.6			
Other inertia	kg·cm²	0.074			
Coefficient of friction		0.05			
Mechanical efficiency		0.8			
Ball screw length		Stroke + 200			
Dynamic allowable load	N	6567			
Static Allowable Moment	N·m	MP: 552 MY: 551 MR: 485			
Dynamic allowable moment	N·m	MP: 262.7 MY: 262.7 MR: 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80%RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (no freezing) 35 to 80%RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

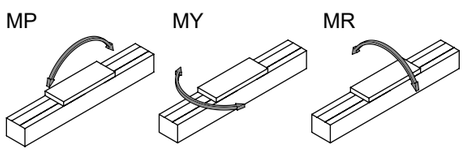
Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 578 for details.

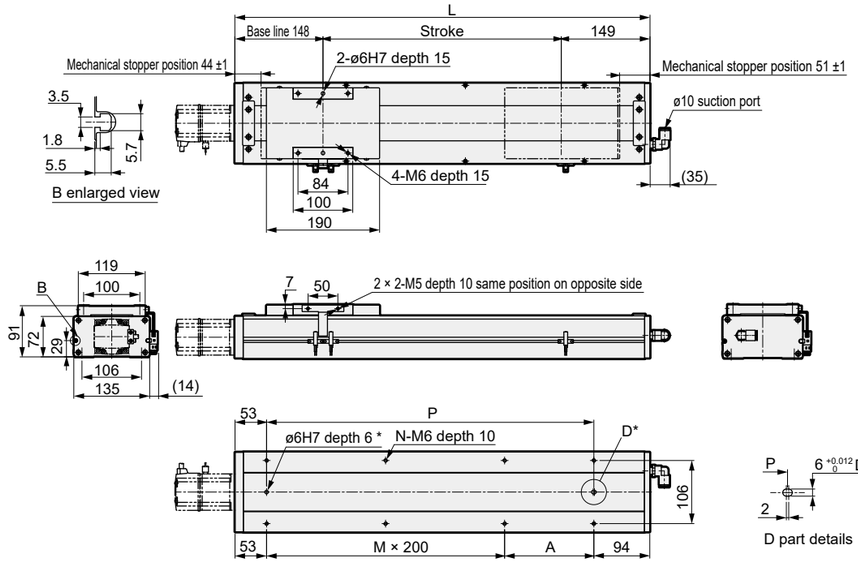
Moment Direction



External Dimension Drawing Motor Straight Mounting

● ECS-14-□□□□□-E

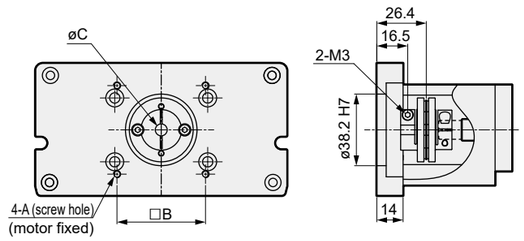
● Refer to P. 581 for grease nipple dimensions.



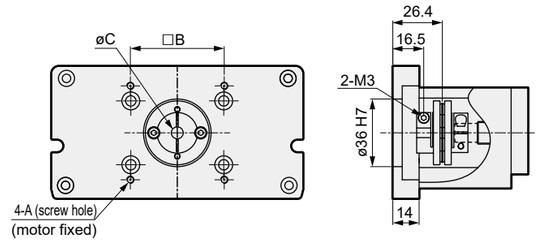
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	347	397	447	497	547	597	647	697	747	797	847	897	947	997	1047	1097	1147	1197	1247	1297	1347
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	10.5	11.1	11.7	12.3	12.9	13.5	14.1	14.7	15.3	15.9	16.5	17.1	17.7	18.3	18.9	19.5	20.1	20.7	21.3	21.9	22.5

Motor Mounting Part

● ECS-14-E (□56)



● ECS-14-E (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolt
A	□60	M4 Depth 14	50	10	4-M4 x L16
B	□56	M4 Depth 14	47.14	6.35	4-M4 x L16
C	□56	M4 Depth 14	47.14	8	4-M4 x L16

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Coupling	Fitting	Motor Size	Motor mounting bolts Size	Quantity
A	Shipped attached	Shipped included	□56 □60	M4	4
B				M4	4
C				M4	4

* For fitting details, please refer to P. 582.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 580.

Electric Actuator Ball Screw Drive Slider Type Low Particle Emission Specification

ECS-14 Series

Reverse Parallel Motor Mount Type

● Stepping motor size : □56, □60

Model No. Notation Method

ECS - 14 - 05 - 050 - R A B N N N N P

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿

❶ Body Size

14	Body width 135 mm

❷ Screw Lead

05	5 mm
10	10 mm
16	16 mm
20	20 mm

❸ Stroke

005 to 105	50 mm (every 50 mm) 1050 mm

❹ Motor mounting direction*5

R	Right Side Return Mount
D	Bottom Side Return Mount
L	Left Side Fold-back Mounting

❺ Mounting Motor Specifications

A	Select the mounting motor specification from the table below.
B	
C	

❻ Motor Size

B	□56
C	□60

❼ Origin sensor (1 pc)*1, *2, *3

N	None
A	Inside, motor side
B	Inside, opposite motor side
C	Outside, motor side
D	Outside, opposite motor side

❽ limit sensors (2 pcs) *1, *2, *3

N	None
A	Inside
B	Outside

❾ Grease nipple *3, *4, *5

N	None (Body mounting direction: Standard)
R	Right direction
L	Left direction

❿ Positioning pin hole

N	None
P	Yes

*1 The home sensor and limit sensor are a set. If either is "None," please select "None" for the other as well.
*2 If the sensor is mounted on the inside, the position cannot be adjusted by the customer. (Shipped attached) If the sensor is mounted on the outside, the position can be adjusted by the customer. (Shipped included)
*3 If you wish to use the home sensor, limit sensor, and grease nipple in the same direction, please contact us.
*4 Here, "Body mounting direction: Standard means mounting from the bottom.
*5 If "R" is selected for the motor mounting direction, "R" cannot be selected for the grease nipple. If "L" is selected, "L" cannot be selected for the grease nipple.

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

* Refer to P. 569 for motor model No.

Specifications

Applicable Motor Size		□56, □60 Stepping Motor			
Drive Method		Ball screw ø16			
Ball Screw Accuracy Grade		C7			
Stroke	mm	50 to 1050			
Screw lead	mm	5	10	16	20
Max. Payload *1	Horizontal kg	110	88	48	40
	Vertical kg	33	22	10	8
Max. Speed	mm/s	250	500	800	1000
Rated thrust *1	N	1388	694	433	347
Repeatability	mm	±0.01			
Lost Motion	mm	0.1 or less			
Drive part mass	kg	1.6			
Other inertia	kg·cm²	0.870			
Coefficient of friction		0.05			
Mechanical efficiency		0.8			
Ball screw length		Stroke + 200			
Dynamic allowable load	N	6567			
Static Allowable Moment	N·m	MP : 552 MY : 551 MR : 485			
Dynamic allowable moment	N·m	MP : 262.7 MY : 262.7 MR : 261.0			
Operating ambient temperature, humidity		0 to 40°C (no freezing) 35 to 80% RH (no condensation)			
Storage Ambient Temperature, Humidity		-10 to 50°C (No freezing) 35 to 80% RH (no condensation)			
Atmosphere		No corrosive gas, explosive gas, or dust			

*1 The rated thrust and maximum payload values are the allowable values for the actuator body. The actual thrust and payload may be limited by the motor used by the customer.

Stroke and Max. Speed

(mm/s)

Screw Lead \ Stroke	100 to 750	800	850	900	950	1050
5	250	225	200	175	150	125
10	500	450	400	350	300	250
16	800	720	640	560	480	400
20	1000	900	800	700	600	500

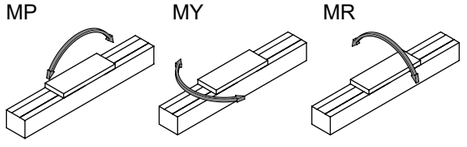
* The max. speed is the speed when the motor mounted by the customer can output a rotation speed of 3000 rpm. The max. speed is restricted by the stroke. Do not operate at speeds exceeding the limit.

Allowable Overhang Length

* Refer to P. 578 for details.

Moment Direction

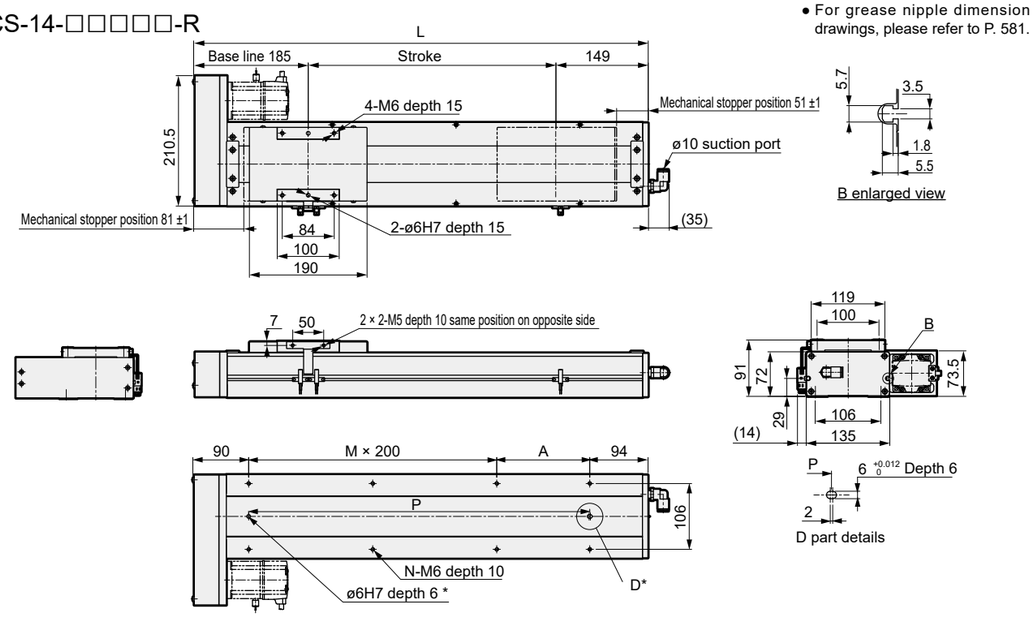
MP MY MR



External Dimension Drawing Motor Right Side Fold-back Mounting

● ECS-14-□□□□□-R

• For grease nipple dimension drawings, please refer to P. 581.

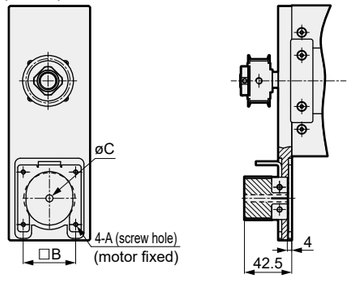


* positioning pin hole (option)

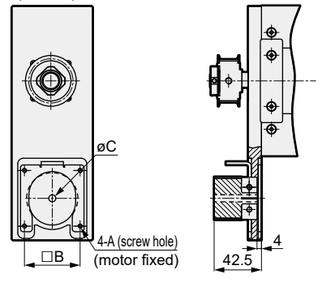
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.3

Motor Mounting Part

● ECS-14-R (□56)



● ECS-14-R (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolt
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Size	Motor mounting bolts Size	Quantity
A	Shipped included	Shipped included	□56 □60	M4	4
B				M4	4
C				M4	4

* For fitting details, please refer to P. 582.

[Home Sensor / Limit Sensor]

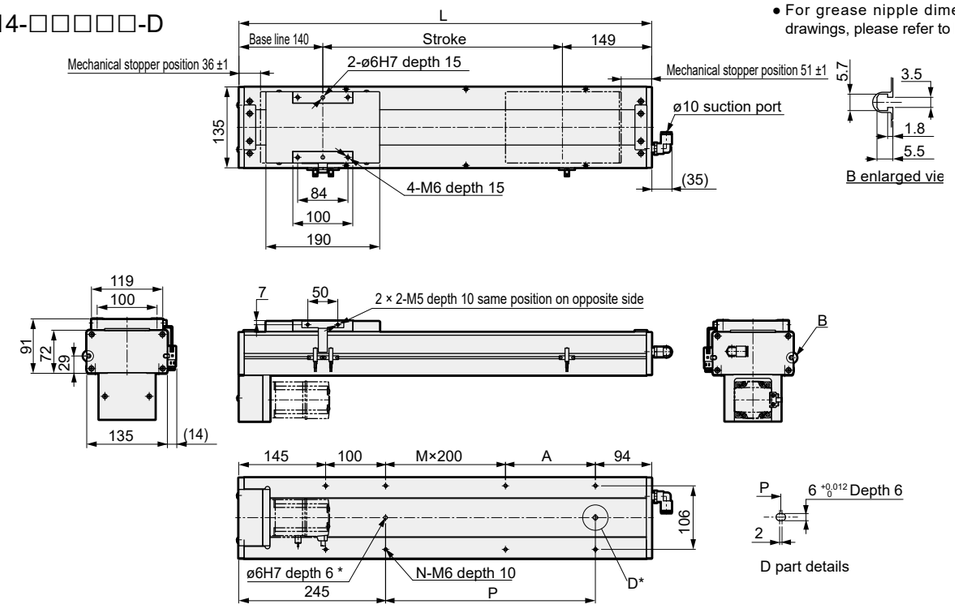
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 580.

External Dimension Drawing Motor Bottom Side Fold-back Mounting

●ECS-14-□□□□□-D

• For grease nipple dimension drawings, please refer to P. 581.

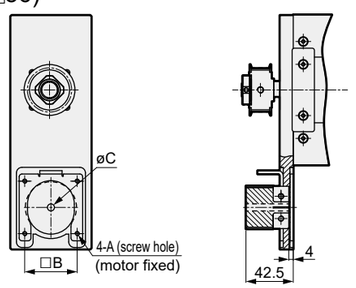


* positioning pin hole (option) The only positioning pin hole on stroke 50 is a round hole.

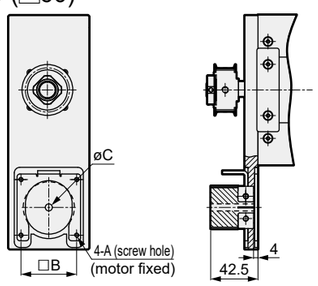
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	339	389	439	489	539	589	639	689	739	789	839	889	939	989	1039	1089	1139	1189	1239	1289	1339
A	0	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Weight (kg)	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.3

Motor Mounting Part

● ECS-14-D (□56)



● ECS-14-D (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolt
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Size	Motor mounting bolts	
				Size	Quantity
A	Shipped included	Shipped included	□56 □60	M4	4
B				M4	4
C				M4	4

* For fitting details, please refer to P. 582.

[Home Sensor / Limit Sensor]

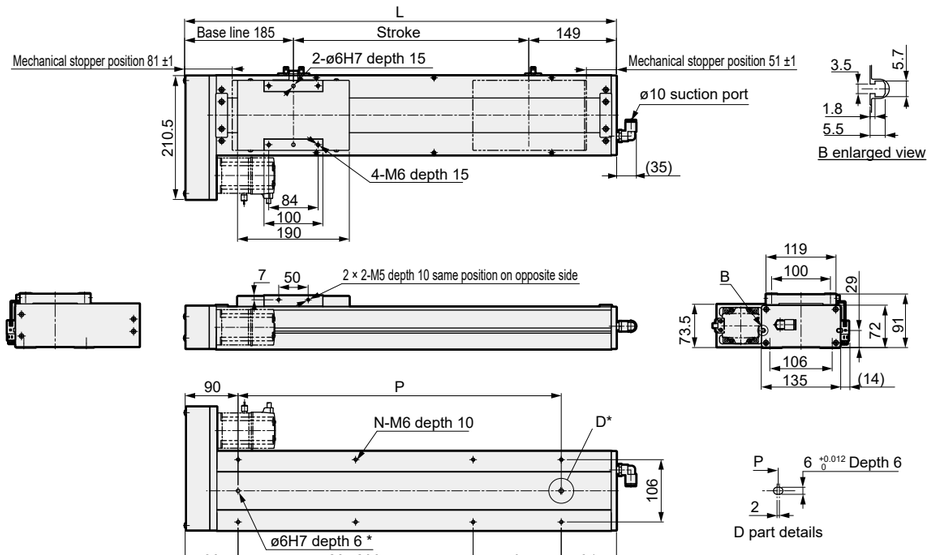
Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 580.

External Dimension Drawing Motor Left Side Fold-back Mounting

●ECS-14-□□□□□-L

• For grease nipple dimension drawings, please refer to P. 581.

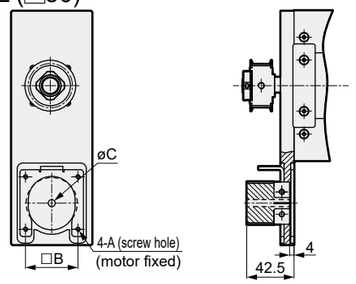


* positioning pin hole (option)

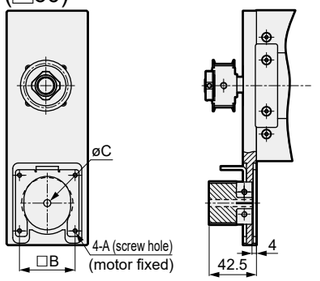
Stroke (mm)	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
L	384	434	484	534	584	634	684	734	784	834	884	934	984	1034	1084	1134	1184	1234	1284	1334	1384
A	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200	50	100	150	200
M	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5
N	4	6	6	6	6	8	8	8	8	10	10	10	10	12	12	12	12	14	14	14	14
P	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
Weight (kg)	11.0	11.6	12.2	12.8	13.4	14.0	14.7	15.3	15.9	16.5	17.1	17.8	18.4	19.0	19.6	20.2	20.9	21.5	22.1	22.7	23.3

Motor Mounting Part

● ECS-14-L (□56)



● ECS-14-L (□60)



Mounting Motor Specification		A	B	C	Motor mounting bolt
A	□60	M4	50	10	4-M4 x L20
B	□56	M4	47.14	6.35	4-M4 x L20
C	□56	M4	47.14	8	4-M4 x L20

List of Accessories

[Motor Mounting Parts]

Mounting Motor Specification	Timing belt, pulley	Fitting	Motor Size	Motor mounting bolts	
				Size	Quantity
A	Shipped included	Shipped included	□56 □60	M4	4
B				M4	4
C				M4	4

* For fitting details, please refer to P. 582.

[Home Sensor / Limit Sensor]

Manufacturer	Model	Quantity
OMRON	EE-SX672	3

* For sensor specifications, please refer to P. 580.

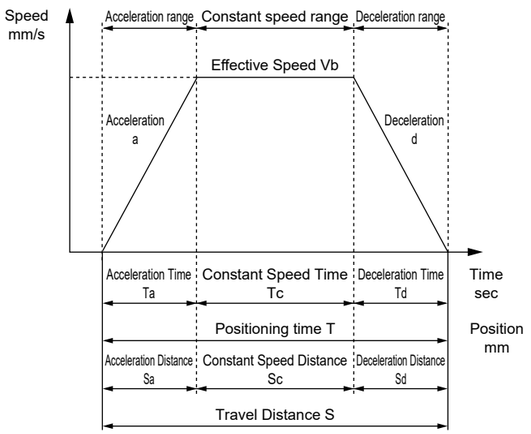
Model Selection

STEP-1 Confirmation of Payload

Payload varies depending on mounting orientation, screw lead, and motor performance. Select the size and screw lead by referring to the selection table (P. 566) and the specification table for each model. For motor performance, please contact each motor manufacturer. For motor selection, please use the actuator information (mechanical efficiency, etc.) provided in the specifications column.

STEP-2 Confirmation of Positioning Time

Calculate the positioning time for the selected product according to the example below and check if it meets the required tact time. Select the speed and acceleration/deceleration from the specification table for each model and the motor selected by the customer.



	Content	Code	Unit	Remarks
Setting Value	Set Speed	V	mm/s	
	Set Acceleration	a	mm/s^2	
	Set Deceleration	d	mm/s^2	
	Travel Distance	S	mm	
Calculated Value	Reached Speed	Vmax	mm/s	$= \{2 \times a \times d \times S / (a + d)\}^{1/2}$
	Effective Speed	Vb	mm/s	The smaller of V and Vmax
	Acceleration Time	Ta	s	= Vb/a [0.2 sec or more]
	Deceleration Time	Td	s	= Vb/d [0.2 sec or more]
	Constant Speed Time	Tc	s	= Sc / Vb
	Acceleration Distance	Sa	mm	$= (a \times Ta^2) / 2$
	Deceleration Distance	Sd	mm	$= (d \times Td^2) / 2$
	Constant Speed Distance	Sc	mm	= S - (Sa + Sd)
	Positioning Time	T	s	= Ta + Tc + Td

* Do not use at speeds exceeding the specifications.
* Acceleration/deceleration setting by acceleration/deceleration time varies with set speed and stroke.
* Depending on the acceleration/deceleration and stroke, a trapezoidal velocity waveform may not be formed (the set speed may not be reached). In that case, select the smaller of the set speed (V) and the reached speed (Vmax) as the effective speed (Vb).
* Please use an acceleration/deceleration time of 0.2 sec or more.
* 1 G ≈ 9.8 m/s².
* The customer sets the speed and acceleration/deceleration from the selected motor. For selecting a motor and calculating speed and acceleration/deceleration, please use the actuator information (mechanical efficiency, etc.) provided in the specifications section.

STEP-3 Confirming Allowable Overhang Length

Confirm that the overhang length of the load during operation is within the allowable overhang length (P. 578).

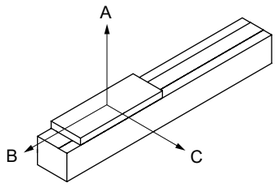
For details on selection, please contact our sales representative.

MEMO

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

Allowable Overhang Length (ECS Series)

[Horizontal Installation]



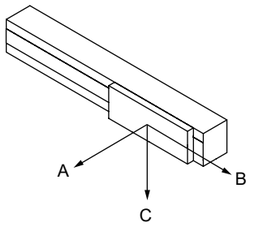
[Allowable Overhang Length]

●ECS-14

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm		
				A	B	C
Straight · Fold-back	0.2	5	60	2300	250	240
			80	1600	180	170
			95	1150	145	140
		10	30	2000	500	450
			50	1400	280	250
			75	1000	170	160
		16	10	2200	1200	1000
			20	1600	600	500
			44	800	260	220
		20	10	2300	1200	1000
			20	1400	600	500
			35	1000	330	290

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* When using in a ceiling-mounted configuration, select the maximum payload, dynamic allowable load, dynamic allowable moment, and overhang length as 1/3 of the specified values. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

[When Wall-Mounted]



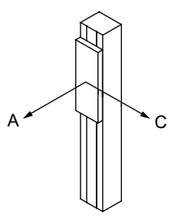
[Allowable Overhang Length]

●ECS-14

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm		
				A	B	C
Straight · Fold-back	0.2	5	60	240	250	1600
			80	170	180	1200
			95	140	145	1050
		10	30	420	460	1500
			50	240	250	1000
			75	150	160	700
		16	10	1050	1200	2650
			20	500	620	1450
			44	230	270	800
		20	10	1000	1200	1900
			20	500	600	1000
			35	270	300	600

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* When using in a ceiling-mounted configuration, select the maximum payload, dynamic allowable load, dynamic allowable moment, and overhang length as 1/3 of the specified values. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

[Vertical Installation]



[Allowable Overhang Length]

●ECS-14

Motor Mounting	Acceleration/ Deceleration Time Sec	Screw Lead	Payload kg	Overhang mm	
				A	C
Straight · Fold-back	0.2	5	20	755	755
			25	605	605
			27	560	560
		10	10	1350	1350
			15	900	900
			18	750	750
		16	2	2400	2400
			4	1700	1700
			7	1300	1300
		20	6	1200	1200

* The above values are the allowable values for the actuator body, and the actual payload may be limited by the motor used by the customer.
* When using in a ceiling-mounted configuration, select the maximum payload, dynamic allowable load, dynamic allowable moment, and overhang length as 1/3 of the specified values. Please use the overhang length to the load's center of gravity within each A, B, and C direction.

MEMO

Servo motor compatible
EBS
EBR
ETS
ECS
Ending

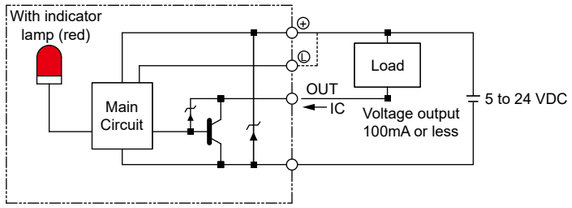
Home Sensor, Limit Sensor

	Manufacturer	Model
Outer mounting sensor	OMRON	EE-SX672
Inner mounting sensor	OMRON	EE-SX674

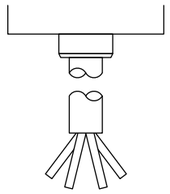
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared emitting diode (940 nm)
Indicator Light	Lights up when light is received (red)
Power Supply Voltage	5 to 24 VDC ±10% Ripple (p-p) 10% or less
Current Consumption	35 mA or less (NPN type)
Control output	NPN type : NPN open collector output 5 to 24 VDC 100 mA or less Off-state current 0.5 mA or less, residual voltage 0.8 V or less (at load current 100 mA) Residual voltage: 0.4 V or less (with 40 mA load current)
Ambient illuminance	Illuminance at Light-Receiving Surface : Fluorescent Lamp : 1,000 lx or less
Ambient Temperature Range	Operating : -25 to +55°C Storage : -30 to +80°C (however, no freezing or condensation)
Ambient humidity range	Operating : 5 to 85 %RH Storage : 5 to 95 %RH (however, no freezing or condensation)
Enclosure	IP50 IEC60529 standard
Cord length	2 m (Connector with cord (EE-1006 2 M))

Output circuit



Wiring Diagram



Terminal arrangement

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

Sensor Dog Dimension Drawing

E/D	Motor Mounting Direction			
	R		L	
	Without grease nipple	With grease nipple	Without grease nipple	With grease nipple
	Fig. 1	Fig. 1	Fig. 2	Fig. 1	Fig. 2

Fig. 1

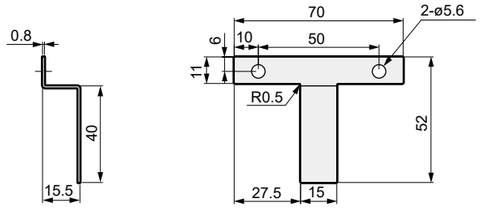
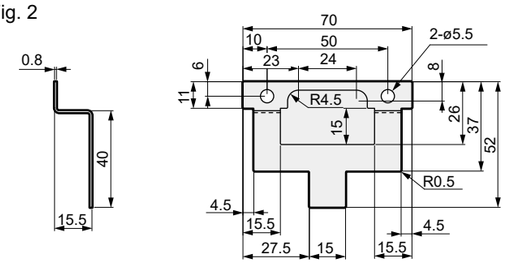
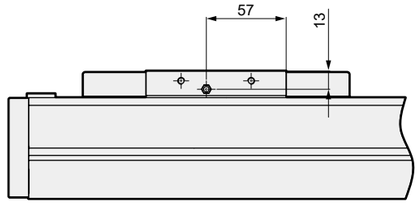


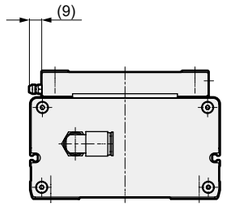
Fig. 2



Grease Nipple Dimension Drawing

* Symmetrical with respect to the actuator.





List of Accessories

Basic Type

Motor Mounting Bolts (Common for all motor mounting directions)

Mounting Motor Specification	Motor Size	Size	Quantity
A	□56 □60	M4	4
B		M4	4
C		M4	4

By Motor Mounting Direction

Model No.	Attached Part Name	Attached Quantity
E (External direct mounting)	Coupling (Assembled shipment)	1 pc
R (Right fold-back mounting) L (Left fold-back mounting) D (Bottom fold-back mounting)	Timing Belt	1 pc.
	Pulley	1 pc

When home/limit sensor is selected *1

Sensor mounting direction	Shipment Form	Quantity
Inner sensor	Shipped assembled in fixed position	3 pcs. *2
Outer sensor	Shipped attached *3	

*1 The shipping form for the home and limit sensors varies depending on whether they are mounted inside or outside.
*2 If "None" is selected for either the home sensor or the limit sensor, the other will also be "None".
*3 Sensor mounting screws are also attached.

Fitting for Suction Port

Fitting Model Number	Shipment Form	Quantity
GWL10-8	Shipped attached	1 pc.

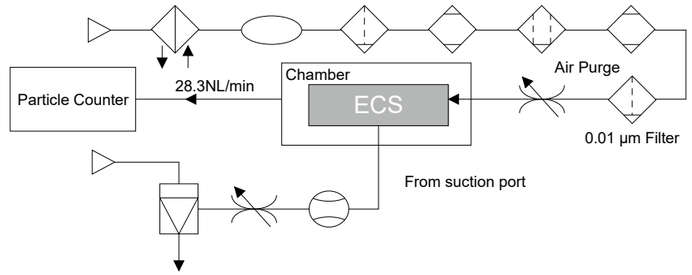
Maintenance Parts

● Maintenance parts (external mounted sensor)

Basic Price Model Number	Applicable Models	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

Particle Emission Characteristics Reference Data

Test Circuit



Measurement Method

① Test sample set in acrylic resin chamber.

② Clean air supplied in the same quantity as the particle counter intake rate (28.3 NL/min).

③ Set in a clean bench of ISO Class 4 (Class 10) within the chamber.

④ Test sample activated, particle concentration change over time measured up to required measurement time.

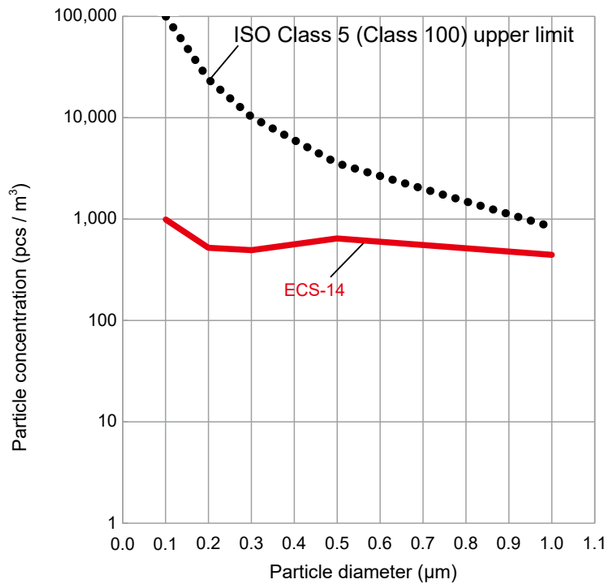
⑤ Test sample operating speed

Measurement Conditions

Item		Content
Test Sample	Model No.	For ECS-14-20040, operating speed 800 mm/sec
	Acceleration/Deceleration Time	0.3 sec
	Air Suction Volume	60.0 NL/min for ECS-14-20040
Chamber	Internal Volume	28.3 Nℓ
Particle Counter	Name	Laser dust monitor
	Minimum measurable particle size	0.1 μm
	Suction Volume	28.3 NL/min
Setting Conditions	Sampling	10 min
	Interval	40 min
	Measurement Time	50 h

Particle Emission Data

Data is measured under the above conditions and is not guaranteed.



To Use This Product Safely

Be sure to read this before use.
For general information on Electric Actuators, please refer to Intro 15.

Individual Precautions: Electric Actuator ECS Series

During Design and Selection

Danger

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

■ Ensure that the product is free of water droplets and oil droplets. This can cause fire or failure.

■ When mounting the product, be sure to securely hold and fix it (including the workpiece).
There is a risk of injury due to the product tipping over, falling, or malfunctioning.

Warning

■ Use within the product's specified operating range.

■ If there is a risk of danger to the human body, install a protective cover.
● If the moving parts of the electric actuator pose a particular danger to the human body, design the structure so that people cannot enter the drive range of the electric actuator or directly touch that area.

■ Design a safety circuit or equipment so that damage to equipment, injury to persons, etc., does not occur when the machine stops in the event of a system failure such as emergency stop or power outage.

■ Install indoors with low humidity.
In places exposed to rain or high humidity (over 85% RH, with condensation), there is a risk of electric leakage and fire. Oil drops and oil mist are also strictly prohibited.
● Use in such environments can cause damage and malfunction.

■ Use and store in accordance with the working/storage temperatures and where there is no condensation.
(Storage temperature : -10 °C to 50 °C, Storage humidity : 35 % to 80 %, Operating Temperature : 0 °C to 40 °C, Operating humidity : 35 % to 80 %)
This can cause abnormal product stoppage or reduced service life. If heat accumulates, ventilate.

■ Install in a location free from direct sunlight, dust, and corrosive gas/explosive gas/inflammable gas/combustibles, and away from heat sources. In addition, this product has not been considered for chemical resistance.
This can cause failure, explosion, or fire.

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

■ Consider the possibility of power source failure.
● Take measures so that even if the power source fails, it will not cause injury to people or damage to the equipment.

■ Take the operational status into consideration if the machine is reactivated after emergency or abnormal stops.
● Design the system so that restarting does not cause harm to people or damage to equipment.
Also, if it is necessary to reset the electric actuator to the starting position, design a safe control device.
Consider the possibility of failure of the installed motor.
Take measures to prevent injury to personnel or damage to equipment in the event of a power source failure.

■ Avoid using this product where vibration and impact are present.

■ Do not apply a load to the product that is greater than or equal to the allowable load listed in the materials for selection.

Caution

■ Do not use in a range where the moving table could collide with the stroke end and break.

■ Regarding installing, setting up, adjusting and maintaining the product, read through the instruction manual and operate correctly.

■ Indicate the maintenance conditions in the device's instruction manual.
● The functionality of this product may be significantly reduced and safety may not be ensured depending on the usage conditions, environment, and maintenance. If maintenance is performed correctly, the product's functions can be fully utilized.

■ The product is manufactured in conformity with the related standards. Never disassemble or modify.

■ Refer to the instruction manual of the motor mounted to the product and control for your safety before wiring and designing.

■ The customer is responsible for confirming the compatibility of CKD products with the customer's systems, machines and equipment.

■ Do not pressurize from the suction port. Lubricating grease may scatter, potentially reducing product life.

■ The required air suction volume for this product varies by model. Please use the required air suction volume for your model.

ECS-14
60 NL/min or less

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

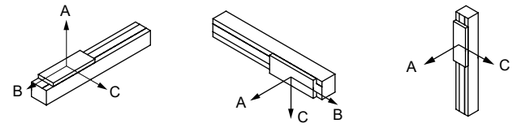
ECSModel Selection Check Sheet → CKD (Contact)

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

Customer :

Company		Department	
Name		E-mail	
TEL		FAX	

Selection Conditions :

Desired Model	(ECS)-	
Basic Specifications	Max. Stroke : mm, Ball screw lead :	mm
Operating Conditions	Moving stroke : mm, travel time : s	
	Set Speed : mm/s	
	Set acceleration/deceleration : mm/s² (set acceleration/deceleration time :	s)
	Repeatability : ± mm	
Load Conditions	Slider Type	
	Load weight : kg	
	Mounting Orientation: Horizontal / Wall-mounted / Vertical / Ceiling-mounted / Other 	
	Distance from slider center to load's center of gravity	
	Direction A : mm	
	Direction B : mm	
	Direction C : mm	
	Pressing load : None / Yes (N) During operation / When stopped Direction of force on slider center ( )	
Operating Environment	Ambient Temperature : °C, Ambient Humidity : %	
	Atmosphere :	
Motor Used	Manufacturer : , Model No. :	
	Motor capacity, size :	
Special Notes		

Standard-Compliant Products, ISO

Listed Page

CE Marking Ending 30

RoHS Compliance Ending 32

ISO9001/ISO14001 Certification Acquisition Ending 34

CE Marking

CKD offers a variety of European standard compliant equipment to support customers in achieving CE Marking for their machinery products.

CE : Displayed on European standard compliant products

What is CE Marking?

- CE Marking is a mark that proves a product conforms to the essential requirements of all applicable EC directives.
- CE marking is a product passport within the EU, and products displaying the CE marking can be freely circulated within the EU.
- Machinery exported to the EU is required to comply with the Machinery Directive, EMC Directive, Low Voltage Directive, etc., but since CE marking is, in principle, mandatory for final products that flow directly to the market, marking on built-in components is not originally required. However, if built-in components (CKD equipment products) are certified for European standards, it makes CE Marking easier for the final product (your machinery product).

Content of Each EC Directive

CKD's main products, such as solenoid valves, sensors, and ABSODEX, are required to conform to the following directives, and many models are European standard compliant.

Directive	Requirements	Applicable
Machinery Directive (2006/42/EC)	Essential safety requirements for machinery	■ Machinery with drive parts Equipment such as solenoid valves are not subject to this, but ensuring compliance with standards makes CE Marking easier for customers.
EMC Directive (2014/30/EU)	Measures for both the generation of electromagnetic disturbance (EMI/emission) and the ability to eliminate electromagnetic disturbance (EMS/immunity)	■ Equipment that generates electromagnetic disturbance or equipment that is affected by electromagnetic disturbance Solenoid valves composed of simple solenoids do not generate electromagnetic disturbance, but ensuring compliance with standards makes CE Marking easier for customers.
Low Voltage Directive (2014/35/EU)	Electrical safety regarding electric shock, etc.	■ Components operating at 50 VAC to 1000 VAC and 75 VDC to 1500 VDC
Pressure Equipment Directive (2014/68/EU)	Safety regarding the hazards of fluid energy possessed by pressure equipment	■ When certain conditions are exceeded within pressure equipment
Simple Pressure Vessels Directive (2014/29/EU)	Safety regarding leakage and explosion of containers	■ Welded containers where the product of maximum operating pressure and volume (PV·S) exceeds 50 bar-liters Our air tanks (AT type) do not conform, so they cannot be exported to the EU.
RoHS Directive (2011/65/EU)	Restriction of 6 environmentally hazardous substances	■ Electrical/Electronic Equipment
2011/65/EU and (EU) 2015/863	Restriction of 10 environmentally hazardous substances	■ Electrical/Electronic Equipment

The countries to which CE marking applies are EU (European Union) member states, EFTA (European Free Trade Association) member states, and Turkey.

CKD's Compliance with European Standard Compliant Products

⚠Compliant products may not be available depending on the specification and detailed model number combination; for details, please contact our sales representative. For the latest information, please visit our website.
Home Page Address https://www.ckd.co.jp/en/productinfo/eu/

CKD RoHS Compliance

At CKD, our theme is the development of environmentally friendly products.

RoHS

RoHS is the abbreviation for Restriction Of the use of certain Hazardous Substances in electrical and electronic equipment. This is the directive prohibiting use of certain hazardous substances issued by the EU.

- ◆CKD products are approved as in conformity to RoHS directive in order of priority from July 1, 2006.
- ◆RoHS-compliant products are designed to reduce environmental load and can be distributed in the EU countries.

Environmental Policy

Based on the CKD Environmental Policy established in 2001, our company is engaged in environmental management system activities company-wide to protect the global environment.

CKD's Environmental Policy

1. Promote development and sales of low environmental load
2. Clarify and comply with the requirements of environmental laws and regulations, and promote the realization of carbon neutrality and the prevention of environmental pollution.
   a) Reduce CO_2 emissions b) Promote resource conservation
   c) Reduce waste d) Reduce environmental pollutants

Response to RoHS of CKD

For our main equipment products, we have been progressively implementing RoHS compliance since July 2006. This catalog indicates RoHS-compliant products with the "RoHS-compliant" mark.

(Note) For the latest compliance status, please check our website.

Technical Data

RoHSDirective

(Directive 2011/65/EU of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment)

This directive assimilates laws related to limiting the use of hazardous substances in electrical and electronics components set forth by each EU member state, contributes to the protection of human health, and provides sufficient means for processing and recycling waste electrical and electric products.

1 Scope of Application

1. Large household electrical appliances
2. Small appliances
3. IT Components and Telecommunications Components
4. Civilian Components
5. Lighting Components
6. Electric tools
7. Toys, leisure goods and sports components
8. Medical components, in-vitro diagnostics components
9. Monitoring and control components, industrial monitoring and control equipment
10. Vending machines
11. Other electrical and electronic equipment not falling into the above categories

Our components products mainly correspond to category 9, industrial monitoring and control equipment. (Some medical devices in Category 8 and non-applicable products also exist)

2 Directive Contents

Regulated substances (2011/65/EU)
- Lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBs)
- Polybrominated diphenyl ethers (PBDE)

Additional regulated substances ((EU) 2015/863)
- Specific phthalates (DEHP, DBP, BBP, DIBP)

Electrical and electronic equipment containing the above substances, products in Categories 8 and 9, will not be able to be brought into the EU from July 22, 2021, and other categories from July 22, 2019, in principle.

Regarding ISO9001/ISO14001 Certification Acquisition

We deliver reliable quality that is gentle to people, machines, and the environment.

CKD has obtained ISO 9001 and ISO 14001 certification and established a quality and environmental management system. With safety, the environment, and energy saving as our primary themes, our entire company is dedicated to creating safe, reliable products and quality that pose no harm to people, machinery, society, or the global environment.

ISO 9001
マネジメントシステム登録証
CKD株式会社
JQA

ISO 14001
マネジメントシステム登録証
CKD株式会社
JQA

MEMO

MEMO

MEMO

MEMO

MEMO

MEMO

MEMO

Model No. [Alphabetical Index]

Model No.	Model Name	Catalog No./Page
HS	Fluid Actuated Valve for Gas Combustion System	1024
HSV	(SV) Manual Valve/Standard	RJ-012AA

■Listed Page
This is the specification/model number page for models listed in this catalog.

■Listed Catalog No.

RJ-002AA ... Pneumatic Cylinder ①
RJ-003AA ... Pneumatic Cylinder ②
RJ-004AA ... Pneumatic Cylinder ③
RJ-005AA ... Pneumatic Cylinder ④
RJ-006AA ... Pneumatic Cylinder ⑤
RJ-007AA ... Air Preparation, Pressure Control, and Auxiliary Components
RJ-008AA ... Sensors/Controllers
RJ-009AA ... Main Line Equipment/Gas Generators
RJ-010AA ... Precision Components/Vacuum Components
RJ-011AA ... Directional Control Valve ①
RJ-012AA ... Directional Control Valve ②
RJ-013AA ... Fluid Control Valve
RJ-014AA ... Electric Actuator ROBODEX Pluse
RJ-015AA ... Electric Actuator ROBODEX Std.
RJ-016AA ... Dry Fine Equipment
CB-019SAA ... Indexman General
CB-031AA ... Wet Fine Equipment General
CB-054AA ... ABSODEX General
CB-055AA ... Electric Actuator Motorless General
CC-1055AA ... Life Science Equipment
CC-1276AA ... Outdoor Products WP Series
CC-1590AA ... Gas Combustion System
CC-1637AA ... Pharmaceutical Manufacturing Process Equipment
CC-297AA ... Automatic Watering Control Equipment
Others list the single item catalog No. for each series.

■Symbols
(SV)...Single Valve (WR)…Wiring Reduced Manifolds (IM) …Individual Manifold
(MX)...Mixed Manifold (BM)…Block Manifolds (MN)…Manifold

Model No.	Model Name	Catalog No./Page
1		
1219	Micro-mist Separator/Micro Naught Type (For Oil Mist Removal)	RJ-007AA
1238	Micro-mist Separator/Micro Naught Type (For Oil Mist Removal)	RJ-007AA
1326	Heavy Duty Air Filter	RJ-007AA
1126-□-□Y	Submicron Air Filter (For Tar Removal)	RJ-007AA
1126-□-E	Air Filter	RJ-007AA
1138-□-□Y	Submicron Air Filter (For Tar Removal)	RJ-007AA
1138-□-E	Air Filter	RJ-007AA
1226(J)	Micro-mist Separator/Micro Naught Type (For Oil Mist Removal)	RJ-007AA
1226(J)-□-X	Micro-mist Separator/Odor Naught Type (For Odor Removal)	RJ-007AA
1238-□-X	Micro-mist Separator/Odor Naught Type (For Odor Removal)	RJ-007AA
1326-□-□Y	Submicron Air Filter (For Tar Removal)	RJ-007AA
2		
2215	Regulator	RJ-007AA
2216	Regulator	RJ-007AA
2302 to 2304-□C	Dial Air Regulator	RJ-007AA
2302 to 2304-□C-R	Remote Control Dial Air Regulator	RJ-007AA
2415	Reverse Regulator (Built-in Check Valve)	RJ-007AA
2415-P11	Reverse Regulator (Built-in Check Valve)/Ozone Resistant	RJ-007AA
2419	Reverse Regulator (Built-in Check Valve)	RJ-007AA
2619	Regulator	RJ-007AA
2QV	Quick Valve with One-touch Fitting	RJ-007AA
3		
3003E to 3005E	Lubricator/Economist Type	RJ-007AA
3003E-□C-V	Lubricator/Auto Fill Type	RJ-007AA
3GA1/2/3	(SV)Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
3GA1/2/3	(SV)Air Operated 3-Port Valve (Master Valve)/Direct Piping	RJ-012AA
3GB1/2	(SV)Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-012AA
3GD1/2/3	(SV)Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
3GD1/2□0 EJ	(SV)Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
3GD1/2□0 EX	(SV)Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
3GE1/2	(SV)Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-012AA
3GE1/2□0 EJ	(SV)Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Base Piping	RJ-012AA
3GE1/2□0 EX	(SV)Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Base Piping	RJ-012AA
3KA1	(SV)Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
3KA1	(SV)Air Operated 3-Port Valve (Master Valve)/Direct Piping	RJ-012AA
3MA0	(SV)Direct Acting 3-Port Valve/Direct Piping	RJ-012AA
3MB0	(SV)Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
3PA1/2	(SV)Direct Acting 3-Port Valve/Direct Piping	RJ-012AA
3PB1/2	(SV)Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
3QB1	(SV)Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
3QE1	(SV)Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
3QRA1	(SV)Direct Acting 3-Port Valve/Direct Piping	RJ-012AA
3QRB1	(SV)Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
3QV	Quick Valve with One-touch Fitting	RJ-007AA
4		
4001, 4002	Desiccant Air Dryer/Manual Air Dryer	RJ-009AA
4F0/1/2/3	(SV)Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
4F0/1/2/3	(SV)Air Operated 5-Port Valve (Master Valve)/Direct Piping	RJ-012AA
4F2/3	(SV)Pilot Operated 5-Port Valve Outdoor Specification	CC-1276AA
4F3□0EX	(SV)Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
4F3□0E	(SV)Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
4F4/5/6/7	(SV)Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
4F4/5/6/7	Air Operated 5-Port Valve (Master Valve)/Sub-plate Piping	RJ-012AA
4F4/5/6/7□0EX	(SV)Explosion-proof Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
4F4/5/6/7□0E	(SV)Explosion-proof Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
4GA1/2/3	(SV)Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
4GA1/2/3	(SV)Air Operated 5-Port Valve (Master Valve)/Direct Piping	RJ-012AA
4GA4	(SV)Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
4GB1/2/3	(SV)Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
4GB1/2/3	(SV)Air Operated 5-Port Valve (Master Valve)/Base Piping	RJ-012AA
4GB4	(SV)Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
4GD1/2/3	(SV)Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
4GD1/2/3/4□0EJ	(SV)Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
4GD1/2/3/4□0EX	(SV)Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
4GE1/2/3	(SV)Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
4GE1/2/3/4□0EJ	(SV)Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Base Piping	RJ-012AA
4GE1/2/3/4□0EX	(SV)Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Base Piping	RJ-012AA
4KA1/2/3/4	(SV)Pilot Operated 5-Port Valve Direct Piping	RJ-012AA
4KA1/2/3/4	(SV)Air Operated 5-Port Valve (Master Valve)/Direct Piping	RJ-012AA
4KB1/2/3/4	(SV)Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
4KB1/2/3/4	(SV)Air Operated 4, 5-Port Valve (Master Valve)/Sub-plate Piping	RJ-012AA
4SA0	(SV)Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
4SB0	(SV)Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-011AA
5		
5100-4C	Heavy Duty Drain	RJ-009AA
6		
6119-2C	Moisture Indicator	RJ-009AA
A		
A100 to 800-W	Piping Adapter/Standard White Series	RJ-007AA
A101 to 801-W	L-type Piping Adapter/Standard White Series	RJ-007AA
A1019	Air Filter	RJ-007AA
A1338	Heavy Duty Air Filter	RJ-007AA
A1338-□Y	Submicron Air Filter (For Tar Removal)	RJ-007AA
A2-3400	Cryogenic 2-Port Solenoid Valve	RJ-013AA
A2-5201	Direct Acting 2-Port Solenoid Valve (For High Frequency Operation)	RJ-013AA
A2-5202	Pilot Operated 2-Port Solenoid Valve (For High Frequency Operation)	RJ-013AA
A2-5800	Cryogenic 2-Port Solenoid Valve	RJ-013AA
A3019	Lubricator/Economist Type	RJ-007AA
AB21	Direct Acting 2-Port Solenoid Valve (Multilex)	RJ-013AA
AB31	Direct Acting 2-Port Solenoid Valve Single Unit (Multilex)	RJ-013AA
AB31-Z	Direct Acting 2-Port Solenoid Valve for Dry Air (Multilex)	RJ-013AA
AB41	Direct Acting 2-Port Solenoid Valve Single Unit (Multilex)	RJ-013AA
AB41E2	Explosion-proof Direct Acting 2-Port Solenoid Valve (Multilex)/d2G2	RJ-013AA
AB41E4	Explosion-proof Direct Acting 2-Port Solenoid Valve (Multilex)/d2G4	RJ-013AA
AB41E4-ZAA	Explosion-proof Direct Acting 2-Port Solenoid Valve for Dry Air (Multilex)/d2G4	RJ-013AA

Model No. [Alphabetical Index]

Model No.	Model Name	Catalog No./Page
A		
AB41EX2	Explosion-proof Direct Acting 2-Port Solenoid Valve (Multilex)/Exd II BT2	RJ-013AA
AB41EX4	Explosion-proof Direct Acting 2-Port Solenoid Valve (Multilex)/Exd II BT4	RJ-013AA
AB41-ZAA	Direct Acting 2-Port Solenoid Valve for Dry Air (Multilex)	RJ-013AA
AB42	Direct Acting 2-Port Solenoid Valve Single Unit (Multilex)	RJ-013AA
AB42E4	Explosion-proof Direct Acting 2-Port Solenoid Valve (Multilex)/d2G4	RJ-013AA
AB71	Direct Acting 2-Port Solenoid Valve (Multilex)/Large Bore	RJ-013AA
ABP	Air Booster	RJ-007AA
AD11	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Diaphragm Driven	RJ-013AA
AD11E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, d2G4	RJ-013AA
AD11EX4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, Exd II BT4	RJ-013AA
AD12	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Diaphragm Driven	RJ-013AA
AD12E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, d2G4	RJ-013AA
AD21	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Diaphragm Driven	RJ-013AA
AD21E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, d2G4	RJ-013AA
AD21EX4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, Exd II BT4	RJ-013AA
AD22	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Diaphragm Driven	RJ-013AA
AD22E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, d2G4	RJ-013AA
ADK11	Pilot Kick Operated 2-Port Solenoid Valve (Multilex)/ Diaphragm Driven	RJ-013AA
ADK11E4	Explosion-proof Pilot Kick Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, d2G4	RJ-013AA
ADK11EX4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, Exd II BT4	RJ-013AA
ADK11-Z	Pilot Kick Operated 2-Port Solenoid Valve for Dry Air (Multilex)	RJ-013AA
ADK12	Pilot Kick Operated 2-Port Solenoid Valve (Multilex)/ Diaphragm Driven	RJ-013AA
ADK12E4	Explosion-proof Pilot Kick Operated 2-Port Solenoid Valve (Multilex)/Diaphragm Driven, d2G4	RJ-013AA
ADK21	Pilot Kick Operated 2-Port Solenoid Valve (Multilex)/ Diaphragm Driven	RJ-013AA
AES (Facilea)	Image Processing Visual Programming Tool	CC-1548AA
AES (Facilea AI)	Image Processing AI Tool	CC-1623AA
AESM (ExiaStudio)	Device Visual Programming Tool	CC-1579AA
AF2	Medium Size Main Line Filter	RJ-009AA
AF30□□	Large Size Main Line Filter (Standard Type)	RJ-009AA
AF40□□	Medium Size Main Line Filter (For Oil-Free)	RJ-009AA
AF50□□	Large Size Main Line Filter (For Oil-Free)	RJ-009AA
AFB-RB	Active Fine Buffer	RJ-010AA
AG3□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air (Multilex)	RJ-013AA
AG3□	Direct Acting 3-Port Solenoid Valve Single Unit (Multilex)	RJ-013AA
AG4□E4-Z	Explosion-proof Direct Acting 3-Port Solenoid Valve for Dry Air (Multilex)/d2G4	RJ-013AA
AG4□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air (Multilex)	RJ-013AA
AG41	Direct Acting 3-Port Solenoid Valve Single Unit (Multilex)	RJ-013AA
AG41E4	Explosion-proof Direct Acting 3-Port Solenoid Valve (Multilex)/d2G4	RJ-013AA
AG41EX4	Explosion-proof Direct Acting 3-Port Solenoid Valve (Multilex)/Exd II BT4	RJ-013AA
AG43	Direct Acting 3-Port Solenoid Valve Single Unit (Multilex)	RJ-013AA
AG43E4	Explosion-proof Direct Acting 3-Port Solenoid Valve (Multilex)/d2G4	RJ-013AA
AG43 EX4	Explosion-proof Direct Acting 3-Port Solenoid Valve (Multilex)/Exd II BT4	RJ-013AA
AG44	Direct Acting 3-Port Solenoid Valve Single Unit (Multilex)	RJ-013AA
AG44 E4	Explosion-proof Direct Acting 3-Port Solenoid Valve (Multilex)/d2G4	RJ-013AA
AG44 EX4	Explosion-proof Direct Acting 3-Port Solenoid Valve (Multilex)/Exd II BT4	RJ-013AA
AGD	Air Operated Valve for Process Gas	RJ-016AA
AHB	Air-Hydro Booster	RJ-002, 003, 004, 005, 006
AL	Air Lamp/Logic Valve	RJ-007AA
AM4 F0	Ⓜ Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
AMD	Air Operated Valve for Chemicals (2-Port)	CB-031AA
AMDS	Air Operated Valve for Chemicals/Integrated Suck-back Type	CB-031AA
AMG	Air Operated Valve for Chemicals (3-Port)	CB-031AA
AMS	Suck-back Valve for Chemicals	CB-031AA
AP11	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Piston Driven	RJ-013AA
AP11E2	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G2	RJ-013AA
AP11 E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G4	RJ-013AA
AP11EX2	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, Exd II BT2	RJ-013AA
AP11EX4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, Exd II BT4	RJ-013AA
AP12	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Piston Driven	RJ-013AA
AP12E2	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G2	RJ-013AA
AP12E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G4	RJ-013AA
AP21	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Piston Driven	RJ-013AA
AP21E2	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G2	RJ-013AA
AP21EX2	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven/ Exd II BT2	RJ-013AA
AP21E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G4	RJ-013AA
AP21EX4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, Exd II BT4	RJ-013AA
AP22	Pilot Operated 2-Port Solenoid Valve (Multilex)/ Piston Driven	RJ-013AA
AP22E2	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G2	RJ-013AA
AP22E4	Explosion-proof Pilot Operated 2-Port Solenoid Valve (Multilex)/Piston Driven, d2G4	RJ-013AA
APE	Mechanical Pressure Switch	RJ-007AA
APK11	Pilot Kick Operated 2-Port Solenoid Valve (Multilex)/ Piston Driven	RJ-013AA
APK21	Pilot Kick Operated 2-Port Solenoid Valve (Multilex)/ Piston Driven	RJ-013AA
APS	Compact Mechanical Pressure Switch	RJ-007AA
ASU	Portable Air Supply Unit	CC-1363AA
AT	Air Tank	RJ-007AA
AVB	Air Operated Valve for High Vacuum	RJ-016AA
AX1000T, 2000T, 4000T	Direct Drive Actuator ABSODEX	CB-054AA
AX1R, 2R, 4R	Direct Drive Actuator ABSODEX	CC-1614AA
AX6000M	Direct Drive Actuator ABSODEX	CB-054AA
AX9000TS, TH, MU	Driver for ABSODEX	CB-054AA
AXD	Driver for ABSODEX	CC-1614AA
AZ	Tube Cutter	RJ-007AA
B		
B	Booster	RJ-002, 003, 004, 005, 006
B□P51□	Ⓜ Pilot Operated 2, 3, 5-Port Valve/Metal Base	RJ-012AA
B110 to 820-W	Bracket/For Selex F.R.L/ Standard White Series	RJ-007AA
B2019	Regulator	RJ-007AA
B2019-P11	Regulator/Ozone Resistant	RJ-007AA
B513□	Ⓢ Ⓥ Pilot Operated 3-Port Valve/Sub-base Type	RJ-012AA
B5142	Ⓢ Ⓥ Pilot Operated 5-Port Valve/Sub-base Type	RJ-012AA
B6061	Relief Valve	RJ-007AA
B7019	F.R. Unit	RJ-007AA
BBS-A	Balancer Unit Automatic Pressure Adjustment Type	RJ-005AA
BBS-O	Balancer Unit Fixed Pressure Adjustment Type	RJ-005AA
BHA	Compact Cross Roller Parallel Gripper	RJ-006AA
BHA-FC	Mechanical Gripper	RJ-006AA
BHA-LN	Gripper with Linear Norm Sensor/Cross Roller Parallel Gripper with Sensor	RJ-005AA
BHE	Centering Gripper	RJ-006AA

Model No. [Alphabetical Index]

Model No.	Model Name	Catalog No./Page
B		
BHE-LN	Gripper with Linear Norm Sensor/Centering Gripper with Sensor	RJ-005AA
BHG	Compact Cross Roller Parallel Gripper with Rubber Cover	RJ-006AA
BHG-LN	Gripper with Linear Norm Sensor/Cross Roller Parallel Gripper with Rubber Cover and Sensor	RJ-005AA
BN	Air Blow Nozzle General Type	RJ-007AA
BNB	Air Blow Nozzle Blower Specification	RJ-007AA
BNE-F	Air Blow Nozzle Flat Type	RJ-007AA
BNE-R	Air Blow Nozzle Round Type	RJ-007AA
BSA2	Ultra Compact Cross Roller Parallel Gripper	RJ-006AA
BW7019	Filter Regulator/Outdoor Series	CC-1276AA
C		
C1000 to 8000-P6	F.R.L. Combination/Copper Ion Restricted (No copper/ PTFE Specification)	RJ-007AA
C1000 to 8000-W	F.R.L. Combination/Standard White Series	RJ-007AA
C1010 to 8010-W	W.L. Combination/Standard White Series	RJ-007AA
C1020 to 8020-W	F.R. Combination/Standard White Series	RJ-007AA
C1030 to 8030-W	F.M.R. Combination/Standard White Series	RJ-007AA
C1040 to 8040-W	W.M. Combination/Standard White Series	RJ-007AA
C1050 to 8050-W	R.M. Combination/Standard White Series	RJ-007AA
C1060 to 8060-W	F.M. Combination/Standard White Series	RJ-007AA
C25 N-B	Governor for Medium Pressure Gas	CC-1590AA
C3070 to 8070-W	F.F.M. Combination/Standard White Series	RJ-007AA
CAC4	Clamp Cylinder/Double Acting, Single Rod Type	RJ-005AA
CAC-N32/40	Lightweight Clamp Cylinder/ Double Acting, Single Rod Type	RJ-005AA
CAT	Cartridge Cylinder/Single Acting, Push Type	RJ-003AA
CAU30	Clean Air Unit	RJ-007AA
CAV2	Cell Cylinder/With Valve, Double Acting, Lubricated Type	RJ-005AA
CAW	Compact Arm	CC-1613AA
CCH	Check Valve for Liquids	RJ-013AA
CCN	Check Valve for Liquids (Nozzle Type)	RJ-013AA
CG	Air Fiber One-touch Fitting (Clean Type)	RJ-007AA
CHB	Air Operated Ball Valve 2-Port (Compact Rotary Valve)	RJ-013AA
CHBF	Air Operated Ball Valve 2-Port (Compact Rotary Valve)/Full Bore	RJ-013AA
CHC	Auto Gripper Changer	RJ-006AA
CHG	Air Operated Ball Valve 3-Port (Compact Rotary Valve)	RJ-013AA
CHL	Check Valve with One-touch Fitting	RJ-007AA
CHV2	Check Valve	RJ-007AA
CK	3-Jaw Long Stroke Chuck	RJ-006AA
CKA	3-Jaw Thin Chuck	RJ-006AA
CKF	Hollow Chuck	RJ-006AA
CKG	3-Jaw Bearing Chuck	RJ-006AA
CKH2	High Gripping Force Powerful Chuck	RJ-006AA
CKJ	Ultra Long Stroke Chuck	RJ-006AA
CKL2	Powerful Chuck	RJ-006AA
CKL2-FC	Mechanical Chuck	RJ-006AA
CKLB2	Bidirectional Powerful Chuck	RJ-006AA
CKS	Low Profile Chuck	RJ-006AA
CKV2	Compact cylinder with valve/ With Valve, Double Acting, Single Rod Type	RJ-005AA
CKW-HP1	3-Jaw Chuck	RJ-006AA
CKWL-HP1	3-Jaw Chuck	RJ-006AA
CMA2	Small Bore Size Cylinder/ Double Acting, Single Rod Type	RJ-002AA
CMK2	Small Bore Size Cylinder/ Double Acting, Single Rod Type	RJ-002AA
COV□2	Cell Cylinder/With Valve, Double Acting, Lubricated Type	RJ-005AA
CPD	Electronic Pressure Switch for Coolant (with Digital Display)	RJ-008AA
CPE	Mechanical Pressure Switch for Coolant (Low Pressure Type)	RJ-008AA
CSB	Air Operated Ball Valve 2-Port for Steam (Compact Rotary Valve)	RJ-013AA
CSBF	Air Operated Ball Valve 2-Port for Steam (Compact Rotary Valve)	RJ-013AA
CV3E	Low Pressure Air Operated 3-Port Valve (Coolant Valve)	RJ-013AA
CVE2, CVE22	Air Operated 2-Port Valve (Coolant Valve)	RJ-013AA
CVE3	Air Operated 3-Port Valve (Coolant Valve)	RJ-013AA
CVS3E	Low Pressure Air Operated 3-Port Valve (Coolant Valve)/ Solenoid Valve Mounted Type	RJ-013AA
CVSE2, CVSE22	Air Operated 2-Port Valve (Coolant Valve)/Solenoid Valve Mounted Type	RJ-013AA
CVSE3	Air Operated 3-Port Valve (Coolant Valve)/Solenoid Valve Mounted Type	RJ-013AA
CXU	Air Unit	RJ-007AA
D		
D101 to 801-W	Distributor/For Selex F.R.L/ Standard White Series	RJ-007AA
DB1000, 3000	Super Drain	RJ-009AA
DBS1006	Drain Sensor	RJ-009AA
DCKW	Electric Actuator with Motor Specification 3-Finger Gripper Type	RJ-014AA
DLSH	Electric Actuator with Motor Specification D Series 2-Finger Gripper Type	RJ-014AA
DMSDG	Electric Actuator with Motor Specification D Series Compact Guided Type	RJ-014AA
DSC	Speed Controller with Dial	RJ-007AA
DSG	Solenoid Valve for Gas Combustion System	CC-1590AA
DSG-W	Solenoid Valve for Gas Combustion System	CC-1590AA
DSSD2	Electric Actuator with Motor Specification D Series Rod Type	RJ-014AA
DSTG	Electric Actuator with Motor Specification D Series Guided Type	RJ-014AA
DSTK	Electric Actuator with Motor Specification D Series Stopper Type	RJ-014AA
DSTL	Electric Actuator with Motor Specification D Series Guided Type	RJ-014AA
DSTS	Electric Actuator with Motor Specification D Series Guided Type	RJ-014AA
DT3000, 3010-W	Snap Drain	RJ-009AA
DT4000, 4010-W	Snap Drain	RJ-009AA
DVL	Needle Valve with Dial	RJ-007AA
E		
E0, ET0	Cylinder Switch/Heat Resistant, Reed 2-wire	RJ-002, 003, 004, 005, 006
EBS-L	Electric Actuator Motorless Specification Slider	3, 453
EBS-G, -M	Electric Actuator Motorless Specification Slider	RJ-014AA
EBR-L	Electric Actuator Motorless Specification Slider	71, 495
EBR-G, -M	Electric actuator Motor specification Slider	RJ-014AA
ECG	Electric Actuator Motorless Specification Rod	RJ-014AA
ECMG	Single Axis Controller for Electric Actuator	RJ-014AA
ECR	Single Axis Controller for Electric Actuator	RJ-014AA
ECS	Multi Axis Controllers for Electric Actuators	233, 563
ECV	Single Axis Controller for Electric Actuator	325
EH	Electric Actuator Motorless Specification Slider type (belt drive/low dust specifications)	RJ-007AA
EKS-L	Fiber Tube Clean-room Type (For push-in fitting)	371
EKS-M	Electric Actuator Motorless Specification Slider Type (Ball Screw Driven)	CC-1457AA
EMB21, 41, 51	Electric Actuator with Motor Specification Slider Type	RJ-013AA
EJSG	Metal-free 2-Port Solenoid Valve	RJ-014AA
ESC4	Electric Actuator with Motor Specification Slider Type	RJ-014AA
ESM	Single Axis Controller for Electric Actuator	435
ETS	Electric Shuttle Mover (Belt Driven)	117, 533
ETV	Electric Actuator Motorless Specification Slider Type (Ball Screw Driven)	281
EV2100V, 2109V	Electric Actuator Motorless Specification Slider Type (Belt Driven)	RJ-007AA
EVR	Electro-Pneumatic Regulator/ Solenoid Valve Type Vacuum Compatible	RJ-007AA
EVD	Electro-Pneumatic Regulator/ Solenoid Valve Type Medium Flow	RJ-007AA
EVL	Electric Vacuum Valves	RJ-007AA
EVS2	Digital Electro-Pneumatic Regulator	RJ-007AA
EVT	Low Pressure Electro-Pneumatic Regulator	RJ-007AA
EXA	Pilot Operated 2-Port Solenoid Valve for Compressed Air	RJ-013AA
ExiaStudio (AESM)	Device Visual Programming Tool	CC-1579AA
F		
F□	Soft nylon tube	RJ-007AA

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Model No.	Model Name	Catalog No./Page
F		
F0V/H	Cylinder Switch/1-Color Indicator, Reed 2-wire	RJ-002, 003, 004, 005, 006
F1000 to 8000-P6	Air Filter/Copper Ion Restricted (No copper/PTFE Specification)	RJ-007AA
F1000 to 8000-W	Air Filter/Standard White Series	RJ-007AA
F2S, F3S	Cylinder Switch/1-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
F2, 3V/H	Cylinder Switch/1-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
F3 PH/V	Cylinder Switch/PNP Output Type Solid State 3-wire	RJ-002, 003, 004, 005, 006
F2, 3Y V/H	Cylinder Switch/2-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
F3000 to 8000-G4	Air Filter/Flame Resistant Series	RJ-007AA
FA□	Ultra Compact Joint/ Adjustable Socket	RJ-007AA
FA331 to 831	Exhaust Cleaner	RJ-007AA
FAC	Clean Exhaust Filter	RJ-007AA
Facilea (AES)	Image Processing Visual Programming Tool	CC-1548AA
Facilea AI (AES)	Image Processing AI Tool	CC-1623AA
FAW	Flex Arm	CC-1615AA
FBS	Ultra Compact Joint/Bushing	RJ-007AA
FBU2	Fine Buffer	RJ-010AA
FC□	Ultra Compact Joint/Clamp Fitting	RJ-007AA
FCD	Flat Cylinder Compact Demi/ Double Acting, Single Rod Type	RJ-003AA
FCH	Flat Cylinder Compact Demi/ Single Acting, Retracting Type	RJ-003AA
FCK	Shock Absorber, Adjustable Type	RJ-005AA
FCM	Compact Flow Controller Rapiflow	RJ-008AA
FCS	Flat Cylinder Compact Demi/ Single Acting, Push Type	RJ-003AA
FCS1000	Inline Clean Filter	RJ-007AA
FCS500	Inline Clean Filter	RJ-007AA
FFB	Direct Acting 2-Port Solenoid Valve Multi-fit	RJ-013AA
FFBM	Direct Acting 2-Port Solenoid Valve Multi-fit	RJ-013AA
FFG	Direct Acting 3-Port Solenoid Valve Multi-fit	RJ-013AA
FFGM	Direct Acting 3-Port Solenoid Valve Multi-fit	RJ-013AA
FFLD	Electric Actuator with Motor F Series 2-Finger Gripper Type (Built-in Controller)	RJ-014AA
FGRC	Electric Actuator with Motor F Series Rotary Type	RJ-014AA
FGS	Ultra Compact Joint/Gasket	RJ-007AA
FH100	Feather Gripper (Mini Parallel Gripper)	RJ-006AA
FH500	Feather Gripper (Mini Pivot Gripper)	RJ-006AA
FJ	Free Joint	RJ-005AA
FK	Simple Flow Controller	RJ-005AA
FLCR	Electric Actuator with Motor Specification F Series Table Type	RJ-014AA
FLS	Ultra Compact Joint/ Extension	RJ-007AA
FLSH	Electric Actuator with Motor Specification F Series 2-Finger Gripper Type	RJ-014AA
FM□	Ultra Compact Joint/Manifold	RJ-007AA
FM3000 to 8000	Air Filter/Medium Pressure Series	RJ-007AA
FMD	Flow Control Valve	CB-031AA
FMS	Metering Valve with Silencer	RJ-007AA
FNS	Ultra Compact Joint/Double Nipple	RJ-007AA
FPL	Ultra Compact Joint/Plug	RJ-007AA
FPV	Block Valve	RJ-007AA
FS□	Ultra Compact Joint/Socket	RJ-007AA
FSL100	Inline Filter	RJ-007AA
FSL200	Inline Filter	RJ-007AA
FSL500	Inline Filter	RJ-007AA
FSM2-D	Compact Flow Sensor Rapiflow	RJ-008AA
FSM3	Compact Flow Sensor Rapiflow	RJ-008AA
FSM-V	Ultra Compact Flow Sensor Rapiflow	RJ-008AA
FSM-V-D	Separate Display Unit Rapiflow	RJ-008AA
FSM-VFM	Compact Flow Sensor/Inline Filter	RJ-008AA
FSM-X	Ultra Compact Flow Switch Rapiflow	RJ-008AA
FT□	Ultra Compact Joint/Barb Fitting	RJ-007AA
FWD	Compact Pilot Operated Solenoid Valve for Water	RJ-013AA
FWS	Ultra Compact Joint/Partition Wall	RJ-007AA
FW4000, 8000	Air Filter/Outdoor Series	CC-1276AA
FX	Drain Separator	RJ-007AA
G		
G29D	Ultra Compact Pressure Gauge	RJ-007AA
G39D	Round Pressure Gauge	RJ-007AA
G401-W	Thin Pressure Gauge	RJ-007AA
G40D	Pressure Gauge with Safety Mark	RJ-007AA
G45D	Pressure Gauge with Limit Mark	RJ-007AA
G49D, 59D	General Purpose Pressure Gauge	RJ-007AA
G49D,59 D-P6	Pressure Gauge/Copper Ion Restricted (No copper/PTFE Specification)	RJ-007AA
G52D	Pressure Gauge with Switch	RJ-007AA
G53D	Pressure Gauge for Panel Mount	RJ-007AA
GA400	Differential Pressure Gauge	RJ-007AA
GAB312/352	Direct Acting 2-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAB312/352-Z	Direct Acting 2-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAB412	Direct Acting 2-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAB412-Z	Direct Acting 2-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAB422	Direct Acting 2-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAB452	Direct Acting 2-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAB452-Z	Direct Acting 2-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAG31□	Direct Acting 3-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAG31□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAG33□	Direct Acting 3-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAG33□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAG34□	Direct Acting 3-Port Solenoid Valve Actuator (Multilex)	RJ-013AA
GAG34□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Actuator (Multilex)	RJ-013AA
GAG35□	Direct Acting 3-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAG35□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAG41□	Direct Acting 3-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAG41□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAG43□	Direct Acting 3-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAG43□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAG44□	Direct Acting 3-Port Solenoid Valve Actuator (Multilex)	RJ-013AA
GAG44□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Actuator (Multilex)	RJ-013AA
GAG45□	Direct Acting 3-Port Solenoid Valve Manifold/Actuator (Multilex)	RJ-013AA
GAG45□-Z	Direct Acting 3-Port Solenoid Valve for Dry Air Manifold/ Actuator (Multilex)	RJ-013AA
GAMD	Air Operated Valve for Chemicals (Manifold/Branch Valve)	CB-031AA
GCKW	Electric Actuator with Motor Specification G Series 3-Finger Gripper	RJ-014AA
GCVE2	Modular Coolant Valve Air Operated Type	RJ-013AA
GCVSE2	Modular Coolant Valve Solenoid Valve Mounted Type	RJ-013AA
GEXA	Pilot Operated 2-Port Solenoid Valve Manifold with One-touch Fittings for Compressed Air	RJ-013AA
GFM	Float Star	RJ-010AA
GHV	Gas Combination Valve	CC-1590AA
GLC	Guideless Cylinder/Double Acting Type	RJ-005AA
GMF1	ⓂPilot Operated 5-Port ISO Compliant Valve/DIN Terminal Box Type/ISO Size ①	RJ-012AA
GMF1	ⓂPilot Operated 5-Port ISO Compliant Valve/I/O Connector Type/ISO Size ①	RJ-012AA
GMF2	ⓂPilot Operated 5-Port ISO Compliant Valve/DIN Terminal Box Type/ISO Size ②	RJ-012AA
GMF2	ⓂPilot Operated 5-Port ISO Compliant Valve/I/O Connector Type/ISO Size ②	RJ-012AA
GMFZ	ⓂPilot Operated 5-Port ISO Compliant Valve/DIN Terminal Box Type/ISO Size ① & ②	RJ-012AA
GMFZ	ⓂPilot Operated 5-Port ISO Compliant Valve/I/O Connector Type/ISO Size ① & ②	RJ-012AA
GMMD	Manual Valve Manifold for Chemicals	CB-031AA
GNAB□	Air Operated 2-Port Valve Manifold (Compact Cylinder Valve)	RJ-013AA
GNAD□	Diaphragm Cylinder Valve Manifold	RJ-013AA
GPS2	Seating Confirmation Switch/ Single Unit	RJ-008AA
GPS3	Digital Gap Switch/Single Unit	RJ-008AA
GRC	Table Type Rotary Actuator/ Basic Type	RJ-005AA

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Model No.	Model Name	Catalog No./Page
G		
GRV	Medium Pressure Gas Combination Valve	CC-1590AA
GSSD2	Electric Actuator with Motor Specification G Series Rod Type	RJ-014AA
GSTG	Electric Actuator with Motor Specification G Series Guided Type	RJ-014AA
GSTK	Electric Actuator with Motor Specification G Series Stopper Type	RJ-014AA
GSTL	Electric Actuator with Motor Specification G Series Guided Type	RJ-014AA
GSTS	Electric Actuator with Motor Specification G Series Guided Type	RJ-014AA
GSV	Solenoid Valve for Automatic Watering Control	CC-297AA
GSV2	Solenoid Valve for Automatic Watering Control	CC-297AA
GT9000	Refrigerated Air Dryer/	RJ-009AA
GW49 D	Outdoor Pressure Gauge	CC-1276AA
GW	New Joint	RJ-007AA
GX3200 D	Refrigerated Air Dryer/ Compact For Equipment Installation, Standard Inlet Air (35°C) Type	RJ-009AA
GX5200 D	Refrigerated Air Dryer/ Compact For Direct Compressor Connection, High Inlet Air (55°C) Type	RJ-009AA
H		
H0	Cylinder Switch/1-Color Indicator, Reed	RJ-002, 003, 004, 005, 006
H0Y	Cylinder Switch/2-Color Indicator, Reed	RJ-002, 003, 004, 005, 006
HAP-1C	Parallel Gripper	RJ-006AA
HAP-2 to 4CS	Parallel Gripper	RJ-006AA
HB	High Corrosion Resistance Direct Acting 2-Port Solenoid Valve	RJ-013AA
HBL	Pivot Gripper	RJ-006AA
HCA	High Speed Cylinder/Double Acting, Single Rod Type	RJ-005AA
HCM	High Energy Absorption Cylinder/Double Acting, Single Rod Type	RJ-005AA
HCP	Horizontal Parallel Gripper	RJ-006AA
HD-0.5 to 9	Desiccant Air Dryer/Compact Heatless Dryer	RJ-009AA
HDL	Wide Angle Gripper	RJ-006AA
HFP	Wide Parallel Gripper	RJ-006AA
HGP	Long Stroke Parallel Gripper	RJ-006AA
HJL	Toggle Gripper	RJ-006AA
HK1	Fluid Actuated Valve for Gas Combustion System	CC-1590AA
HKP	Cross Roller Parallel Gripper	RJ-006AA
HLA	Low Profile Parallel Gripper	RJ-006AA
HLB	Low Profile Parallel Gripper	RJ-006AA
HLC	Low Profile Long Stroke Parallel Gripper	RJ-006AA
HLD	Ultra Thin Parallel Gripper	RJ-006AA
HLF2	Low Profile Long Stroke Gripper	RJ-006AA
HMD	Low Profile Wide Angle Gripper	RJ-006AA
HMC-HP1	Wide Parallel Gripper	RJ-006AA
HMF	Compact Wide Parallel Gripper	RJ-006AA
HMFB	Large Wide Parallel Gripper with LM Guide	RJ-006AA
HMTB1	Metal-free Compact Lever Type 2-Port Solenoid Valve for Medical Equipment	CC-1055AA
HMTG1	Metal-free Compact Lever Type 3-Port Solenoid Valve for Medical Equipment	CC-1055AA
HMV	(SV)Manual Valve/Miniature	RJ-012AA
HMVE	(SV)Manual Valve/Miniature	RJ-012AA
HNB1	Compact Direct Acting 2-Port Solenoid Valve	RJ-013AA
HNG1	Compact Direct Acting 3-Port Solenoid Valve	RJ-013AA
HO	Worm Reducer	CC-1601AA
HPS	Adhesion Confirmation Switch/Single Unit	RJ-008AA
HRL-1	Hybrid Robot/Single Axis Unit Element for Pneumatic Robot	RJ-005AA
HS	Fluid Actuated Valve for Gas Combustion System	CC-1590AA
HSV	(SV)Manual Valve/Standard	RJ-012AA
HSVE	(SV)Manual Valve/Standard	RJ-012AA
HVB□12	High Vacuum Solenoid Valve	RJ-013AA
HVL12	Delayed Vacuum Solenoid Valve	RJ-013AA
HYA	Fine Pinch Valve	CC-1055AA
HYN	Direct Acting 2, 3-Port Valve (Fine Pinch Valve)	CC-1055AA
I		
IAGD□	Integrated Gas Supply System	RJ-016AA
IAVB	Vacuum Pressure Control System	RJ-016AA
J		
J100 to 800-W	Joiner/For Selex F.R.L/ Standard White Series	RJ-007AA
JL	Fitting (Elbow Joint)	RJ-007AA
JSB3	Brake Unit	RJ-005AA
JSC3(-N) JSC4(-N)	Brake Cylinder (Medium/ Large Bore)/Double Acting, Single Rod Type	RJ-005AA
JSG	Tie Rod Cylinder with Brake/ Double Acting, Single Rod Type	RJ-005AA
JSK2	Brake Cylinder (Small Bore ø20 to 40, Crimped Type)/ Double Acting Type	RJ-005AA
JSM2	Brake Cylinder (Small Bore ø20 to 40, Serviceable Type)/ Double Acting Type	RJ-005AA
K		
K0V/H	Cylinder Switch/1-Color Indicator, Reed 2-wire	RJ-002, 003, 004, 005, 006
K2, 3V/H	Cylinder Switch/1-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
K2, 3Y V/H	Cylinder Switch/2-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
K3P V/H	Cylinder Switch/PNP Output Type, Solid State 3-wire	RJ-002, 003, 004, 005, 006
K5V/H	Cylinder Switch/No Indication, Reed 2-wire	RJ-002, 003, 004, 005, 006
K60570	F.R.L. Kit	RJ-007AA
KBX	Electric Actuator with Motor Specification Slider Type Rod Type R-axis Type	CC-1275AA
KCA	Controller	CC-1275AA
KHE	SCARA Robot	CC-1436AA
KHL	SCARA Robot	CC-1436AA
KML	Fine Level Switch	CB-031AA
KX	Coiling Tube	RJ-007AA
KZV3	Pilot Operated 2-Port Solenoid Valve	RJ-013AA
L		
L1000 to 8000-W	Lubricator/Copper Ion Restricted (No copper/PTFE Specification)	RJ-007AA
L1000 to 8000-W	Lubricator/Standard White Series	RJ-007AA
LAD	Diaphragm Cylinder Valve	RJ-013AA
LBC	Air Bearing Actuator	RJ-010AA
LCG	Linear Slide Cylinder/Double Acting, Single Rod Type	RJ-004AA
LCM	Linear Slide Cylinder/Double Acting, Single Rod Type	RJ-004AA
LCR	Linear Slide Cylinder/Double Acting, Single Rod Type	RJ-004AA
LCW	Linear Slide Cylinder/Double Acting, Single Rod Type	RJ-004AA
LCX	Linear Slide Cylinder/Double Acting, Single Rod Type	RJ-004AA
LFC-KL	Lifter Cylinder	CC-902AA
LGD	Air Operated Valve for Process Gas	RJ-016AA
LHA	Linear Guide Gripper	RJ-006AA
LHAG	Linear Guide Gripper with Rubber Cover	RJ-006AA
LMB	Linear Guide Lock	RJ-005AA
LML	Linear Guide Lock	RJ-005AA
LN	Cylinder with Linear Norm Sensor/Sensor, Amplifier, Indicator	RJ-005AA
LSH	Linear Slide Gripper	RJ-006AA
LSH-HP1	Linear Slide Gripper	RJ-006AA
LSHL-HP1	Linear Slide Gripper	RJ-006AA
LSHM-HP2	Linear Slide Gripper with Length Measurement Function	RJ-006AA
LST-HP1	Low Profile Long Stroke Gripper	RJ-006AA
LSTM-HP2	Low Profile Long Stroke Gripper with Length Measurement Function	RJ-006AA
LW4000/LW8000	Lubricator Outdoor Series	CC-1276AA
LYX	Air Operated Valve for Chemicals	CB-031AA
M		
M0V/H	Cylinder Switch/1-Color Indicator, Reed 2-wire	RJ-002, 003, 004, 005, 006
M1000 to 8000-P6	Oil Mist Filter/Copper Ion Restricted (No copper/PTFE Specification)	RJ-007AA
M1000 to 8000-W	Oil Mist Filter/Standard White Series	RJ-007AA
M2, 3V/H	Cylinder Switch/1-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
M2, 3WV	Cylinder Switch/2-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
M3GA1/2/3	(M)Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
M3GA1/2/3	(VR)Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
M3GA1/2/3	(MN)Air Operated 3-Port Valve (Master Valve)/Direct Piping	RJ-012AA
M3GB1/2	(M)Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA
M3GB1/2	(VR)Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA
M3GD1/2/3	(M)Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
M3GD1/2/3	(VR)Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
M3GD1/2□0 EJ	(M)Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
M3GD1/2□0 EX	(M)Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
M3GE1/2	(M)Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA
M3GE1/2	(VR)Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA

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M		
M3GE1/2□0 EJ	Ⓜ Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Base Piping	RJ-012AA
M3GE1/2□0 EX	Ⓜ Intrinsically Safe Explosion-proof Pilot Operated 3-Port Valve/Base Piping	RJ-012AA
M3KA1	Ⓜ Pilot Operated 3-Port Valve/Direct Piping	RJ-012AA
M3KA1	Ⓜ Air Operated 3-Port Valve (Master Valve)/Direct Piping	RJ-012AA
M3MA0	Ⓜ Direct Acting 3-Port Valve/Direct Piping	RJ-012AA
M3MB0	Ⓜ Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
M3P V/H	Cylinder Switch/1-Color Indicator, PNP Output Type, Solid State 3-wire	RJ-002, 003, 004, 005, 006
M3PA1/2	Ⓜ Direct Acting 3-Port Valve/Direct Piping	RJ-012AA
M3PB1/2	Ⓜ Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
M3QB1	Ⓜ Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
M3QE1	Ⓜ Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
M3QZ1	Ⓜ Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
M3QRA	Ⓜ Direct Acting 3-Port Valve/Direct Piping	RJ-012AA
M3QRB	Ⓜ Direct Acting 3-Port Valve/Sub-plate Piping	RJ-012AA
M4F0/1/2/3	Ⓜ Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
M4F0/1/2/3	Ⓜ Air Operated 5-Port Valve (Master Valve)/Direct Piping	RJ-012AA
M4F3□0EX	Ⓜ Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
M4F3□0E	Ⓜ Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
M4F4/5/6/7	Ⓜ Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
M4F4/5/6/7	Air Operated 5-Port Valve (Master Valve)/Sub-plate Piping	RJ-012AA
M4F4/5/6/7□0EX	Ⓜ Explosion-proof Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
M4F4/5/6/7□0E	Ⓜ Explosion-proof Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
M4GA1/2/3	Ⓜ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
M4GA1/2/3	Ⓦ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
M4GA1/2/3	Ⓜ Air Operated 5-Port Valve (Master Valve)/Direct Piping	RJ-012AA
M4GA4	Ⓜ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
M4GA4	Ⓦ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
M4GB1/2/3	Ⓜ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
M4GB1/2/3	Ⓦ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
M4GB1/2/3	Ⓝ Air Operated 5-Port Valve (Master Valve)/Base Piping	RJ-012AA
M4GB4	Ⓜ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
M4GB4	Ⓦ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
M4GD1/2/3	Ⓜ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
M4GD1/2/3	Ⓦ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
M4GD1/2/3/4□0EJ	Ⓜ Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
M4GD1/2/3/4□0EX	Ⓜ Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
M4GE1/2/3	Ⓜ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
M4GE1/2/3	Ⓦ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
M4GE1/2/3/4□0EJ	Ⓜ Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Base Piping	RJ-012AA
M4GE1/2/3/4□0EX	Ⓜ Intrinsically Safe Explosion-proof Pilot Operated 5-Port Valve/Base Piping	RJ-012AA
M4KA1/2/3/4	Ⓜ Pilot Operated 5-Port Valve/Direct Piping	RJ-012AA
M4KA1/2/3/4	Ⓜ Air Operated 5-Port Valve (Master Valve)/Direct Piping	RJ-012AA
M4KB1/2/3/4	Ⓜ Pilot Operated 4, 5-Port Valve/Sub-plate Piping	RJ-012AA
M4KB1/2/3/4	Ⓝ Air Operated 4, 5-Port Valve (Master Valve)/Sub-plate Piping	RJ-012AA
M4 SA0	Ⓜ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
M4 SB0	Ⓜ Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-011AA
M4 SB0	Ⓦ Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-011AA
M512□	Ⓢ Pilot Operated 2-Port Valve/Direct Type	RJ-012AA
M513□	Ⓢ Pilot Operated 3-Port Valve/Direct Type	RJ-012AA
M5 V/H	Cylinder Switch/No Indication, Reed 2-wire	RJ-002, 003, 004, 005, 006
MAB1/MAG1	Metal-free 2-Port Solenoid Valve	CC-1055AA
MAVL	Large Mechanical Valve/Detector	RJ-007AA
MCP	Mechanical Power Cylinder	RJ-005AA
MD	Multi Monitor	RJ-008AA
MDC2	Compact Direct Cylinder/Double Acting, Single Rod Type	RJ-003AA
MDV	Compact Direct Cylinder	CC-905AA
MEB2/MEG2	Metal-free 2-Port Solenoid Valve	CC-1055AA
MEVT	Low Profile Electro-Pneumatic Regulator/Wiring-saving Manifold Type	RJ-007AA
MGD	Manual Valve for Process Gas	RJ-016AA
MGPS2	Seating Confirmation Switch/Manifold	RJ-008AA
MGPS3	Digital Gap Switch/Manifold	RJ-008AA
MHB4	Miniature Electric Ball Valve 2-Port (Motor Valve)	RJ-013AA
MHG4	Miniature Electric Ball Valve 3-Port (Motor Valve)	RJ-013AA
MHPS	Adhesion Confirmation Switch/Manifold	RJ-008AA
MJB3	Metal-free Direct Acting 2-Port Solenoid Valve	CC-1055AA
MJL□	Compression Joint/Elbow Type	RJ-007AA
MJN□	Compression Joint/Sleeve	RJ-007AA
MJS□	Compression Joint/Straight Type	RJ-007AA
MJT□	Compression Joint/Tee Type	RJ-007AA
MJU□	Compression Joint/Insert Ring	RJ-007AA
MKB3	Metal-free 2-Port Solenoid Valve	CC-1055AA
MKML	Fine Level Switch Manifold	CB-031AA
MM	Medium Mechanical Valve/Detector	RJ-007AA
MM3000 to 8000	Oil Mist Filter/Medium Pressure Series	RJ-007AA
MMD	Manual Valve for Chemicals	CB-031AA
MN3E0	Ⓦ Pilot Operated 3, 4-Port Valve	RJ-011AA
MN3E00	Ⓦ Pilot Operated 3, 4-Port Valve	RJ-011AA
MN3GA1/2	Ⓜ, Ⓑ Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MN3GA1/2	Ⓦ, Ⓑ Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MN3GAX12	Ⓦ, Ⓧ Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MN3GB1/2	Ⓜ, Ⓑ Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA
MN3GB1/2	Ⓦ, Ⓑ Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA
MN3GD1/2	Ⓜ, Ⓑ Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MN3GD1/2	Ⓦ, Ⓑ Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MN3GDX12	Ⓦ, Ⓧ Pilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MN3GE1/2	Ⓜ, Ⓑ Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA
MN3GE1/2	Ⓦ, Ⓑ Pilot Operated 3-Port Valve Dual Unit/Base Piping	RJ-011AA
MN3Q	Ⓦ Direct Acting 3-Port Valve	RJ-012AA
MN4E0	Ⓦ Pilot Operated 3, 4-Port Valve	RJ-011AA
MN4E00	Ⓦ Pilot Operated 3, 4-Port Valve	RJ-011AA
MN4EX0	Ⓦ/Ⓧ Pilot Operated 4-Port Valve	RJ-011AA
MN4GA1/2	Ⓜ/Ⓑ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MN4GA1/2	Ⓦ/Ⓑ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MN4GAX12	Ⓦ/Ⓧ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MN4GB1/2	Ⓜ/Ⓑ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
MN4GB1/2	Ⓦ/Ⓑ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
MN4GBX12	Ⓦ/Ⓧ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
MN4GD1/2	Ⓜ/Ⓑ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MN4GD1/2	Ⓦ/Ⓑ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MN4GDX12	Ⓦ/Ⓧ Pilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MN4GE1/2	Ⓜ/Ⓑ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
MN4GE1/2	Ⓦ/Ⓑ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
MN4GEX12	Ⓦ/Ⓧ Pilot Operated 5-Port Valve/Base Piping	RJ-011AA
MN4KB1/2	Ⓑ Pilot Operated 5-Port Valve/Sub-plate Piping	RJ-012AA
MNRB500	Block Manifold Regulator	RJ-007AA
MNRB500-P11	Block Manifold Regulator/Ozone Resistant	RJ-007AA
MNRJB500	Block Manifold Compact Direct Acting Precision Regulator	RJ-007AA
MNV	Flow Control Valve	CB-031AA
MR10R	Metal-free Compact 2, 3-Port Solenoid Valve	CC-1055AA
MR16	Metal-free Compact 2, 3-Port Solenoid Valve	CC-1055AA
MRG2	Magnet Type Rodless Cylinder/Double Acting Type	RJ-005AA
MRL2	Magnet Type Rodless Cylinder/Basic Type	RJ-005AA
MS	Compact Mechanical Valve/Detector	RJ-007AA
MSB1□	Electric Ball Valve 2-Port for Steam (Motor Valve)	RJ-013AA
MSD	Compact Cylinder/Double Acting, Single Rod Type	RJ-003AA
MSDG-L	Compact Cylinder/Double Acting, Guided Type, with Switch	RJ-004AA
MTLPS	Tool Breakage Detection Switch/Manifold	RJ-008AA
MV3 QRA	3QR Negative Pressure Switching Unit Direct Piping	RJ-012AA
MV3 QRB	3QR Negative Pressure Switching Unit Sub-plate Piping	RJ-012AA
MXKML	Fine Level Switch Manifold	CB-031AA
MVB	Manual Valve for High Vacuum	RJ-016AA
MVC	Compact Cylinder with Vacuum Pad/Double Acting, Single Rod Type	RJ-005AA

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Model No.	Model Name	Catalog No./Page
M		
MW3GA2	ⓂPilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MW3GA2	ⓌⓇPilot Operated 3-Port Valve/Direct Piping	RJ-011AA
MW4GA2	ⓂPilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MW4GA2	ⓌⓇPilot Operated 5-Port Valve/Direct Piping	RJ-011AA
MW4GB2	ⓂPilot Operated 5-Port Valve/Base Side Piping	RJ-011AA
MW4GB2	ⓌⓇPilot Operated 5-Port Valve/Base Side Piping	RJ-011AA
MW4 GB4	ⓂPilot Operated 5-Port Valve/Base Side Piping	RJ-011AA
MW4 GB4	ⓌⓇPilot Operated 5-Port Valve/Base Side Piping	RJ-011AA
MW4 GZ2	ⓂPilot Operated 5-Port Valve/Base Bottom Piping	RJ-011AA
MW4 GZ2	ⓌⓇPilot Operated 5-Port Valve/Base Bottom Piping	RJ-011AA
MW4 GZ4	ⓂPilot Operated 5-Port Valve/Base Bottom Piping	RJ-011AA
MW4GZ4	ⓌⓇPilot Operated 5-Port Valve/Base Bottom Piping	RJ-011AA
MW4000, 8000	Oil Mist Filter/Outdoor Series Outdoor Series	CC-1276AA
MWD	Wear Type Diaphragm Valve	CC-1637AA
MX1000 to 8000-W	High Performance Oil Mist Filter/Standard White Series	RJ-007AA
MXB1□	Electric Ball Valve 2-Port (Motor Valve)	RJ-013AA
MXB1D-N	Electric Oil-free Ball Valve 2-Port (Motor Valve)	RJ-013AA
MXB1F	Electric Ball Valve 2-Port (Motor Valve)/Full Bore	RJ-013AA
MXB1-N	Electric Oil-free Ball Valve 2-Port (Motor Valve)	RJ-013AA
MXBC2	Proportional Control Electric Ball Valve 2-Port (Motor Valve)	RJ-013AA
MXG1□	Electric Ball Valve 3-Port (Motor Valve)	RJ-013AA
MXG1 D-N	Electric Oil-free Ball Valve 3-Port (Motor Valve)	RJ-013AA
MXG1-N	Electric Oil-free Ball Valve 3-Port (Motor Valve)	RJ-013AA
MXGC2	Proportional Control Electric Ball Valve 3-Port (Motor Valve)	RJ-013AA
MYB□	Metal-free 2-Port Solenoid Valve	CC-1055AA
MYG□	Metal-free 3-Port Solenoid Valve	CC-1055AA
N		
N□P51□	ⓂⓂPilot Operated 2, 3, 5-Port Valve/Block Manifold	RJ-012AA
NAB□	Air Operated 2-Port Valve Single Unit (Compact Cylinder Valve)	RJ-013AA
NAD□	Diaphragm Cylinder Valve	RJ-013AA
NAP11	Air Operated 3-Port Valve	RJ-012AA
NCK	Shock Absorber, Fixed Type	RJ-005AA
NHS-H	New Handling System/Z-axis Module HRL	RJ-005AA
NHS-S	New Handling System/Z-axis Module STL-B	RJ-005AA
NP13R/14 R	Internal Pilot Operated 3-Port Valve Solenoid Valve Mounted Type	RJ-012AA
NPV2	Direct Air Pressure Automatic Pinch Valve	RJ-013AA
NS	Nitrogen Extraction Unit/Unit Type	RJ-009AA
NSU	Nitrogen Extraction Unit/ System Type	RJ-009AA
NSR	New Handling System/X-axis Module	RJ-005AA
NU	New Urethane Tubing	RJ-007AA
NVP11 R	Air Operated 3-Port Valve/ Solenoid Valve Mounted Type	RJ-012AA
NX4	ABSODEX	CC-1456AA
NXD	Driver	CC-1456AA
O		
OGD	Manual Valve for Process Gas	RJ-016AA
OMC2	Sequential Controller for Pulse Jet Valve (Pulse Jet Controller)	RJ-013AA
P		
P1100-W	Reed Switch, Contact Type Compact Mechanical Pressure Switch	RJ-007AA
P4000-W	Mechanical Pressure Switch/ Standard White Series	RJ-007AA
P4100-W	Reed Switch, Contact Type Compact Mechanical Pressure Switch	RJ-007AA
P512□	ⓈⓋPilot Operated 2-Port Valve/Pilot Type	RJ-012AA
P513□	ⓈⓋPilot Operated 3-Port Valve/Pilot Type	RJ-012AA
P5142	ⓈⓋPilot Operated 5-Port Valve/Pilot Type	RJ-012AA
P8100-W	Reed Switch, Contact Type Compact Mechanical Pressure Switch	RJ-007AA
PAW	Powerful Arm	CC-1418AA
PCC	Pin Clamp Cylinder Double Acting, Single Rod Type	RJ-005AA
PCIS/PCOS	Parallel cam unit	CB-019 SAA
PD2	Pilot Operated 2-Port Air Operated Valve for Dust Collector	RJ-013AA
PD3	Pilot Operated 2-Port Air Operated Valve for Dust Collector	RJ-013AA
PDV2	Pilot Operated 2-Port Valve with Solenoid for Dust Collector	RJ-013AA
PDV3	Pilot Operated 2-Port Valve with Solenoid for Dust Collector	RJ-013AA
PDVE4	Explosion-proof 2-Port Solenoid Valve for Dust Collector (Explosion-proof Pulse Jet Valve)	RJ-013AA
PE	Pressure Switch/Logic Valve	RJ-007AA
PFD	Flow Sensor for Compressed Air/ Separate Display Type Flurex	RJ-008AA
PG	Air Fiber One-touch Fitting (Standard Type)	RJ-007AA
PGM	Regulator for Process Gas	RJ-016AA
PG-P2-B	Blank Plug	RJ-007AA
PJVB	Box Type Manifold Solenoid Valve for Operation (2-Port Solenoid Valve for Pulse Jet Control)	RJ-013AA
PKA	Pilot Kick Operated 2-Port Solenoid Valve for Air	RJ-013AA
PKS	Pilot Kick Operated 2-Port Solenoid Valve for Steam	RJ-013AA
PKW	Pilot Kick Operated 2-Port Solenoid Valve for Water	RJ-013AA
PLE-B12	Side Block/Integrated Type	RJ-007AA
PLJ-C12	YES Element/Relay Type	RJ-007AA
PLK-A11	OR Element/Line Type	RJ-007AA
PLK-B12	OR Element/Integrated Type	RJ-007AA
PLK-C12	OR Element/Relay Type	RJ-007AA
PLL-A11	AND Element/Line Type	RJ-007AA
PLL-B12	AND Element/Integrated Type	RJ-007AA
PLL-C12	AND Element/Relay Type	RJ-007AA
PLM	Memory Element/Relay Type	RJ-007AA
PLN-B12	NOT Element/Integrated Type	RJ-007AA
PLN-C12	NOT Element/Relay Type	RJ-007AA
PLN-D12	Threshold Element/Relay Type	RJ-007AA
PMM	Fine Regulator	CB-031AA
PMP	Fine Regulator	CB-031AA
PNA	Oxygen Concentration Meter	RJ-009AA
PPD3	Electronic Pressure Switch/ Sensor/Amplifier Integrated Type with Display	RJ-008AA
PPD3-S	Electronic Pressure Switch, Stainless Steel Diaphragm Sensor Type/Sensor/Amplifier Integrated Type with Display	RJ-008AA
PPE	Electronic Compact Pressure Switch/Sensor/Amplifier Integrated Type without Display	RJ-008AA
PPE-□A	Electronic Compact Pressure Switch/Sensor/Amplifier Integrated Type without Display, Analog Output Type	RJ-008AA
PPEV-□A	Electronic Compact Pressure Switch/Sensor/Amplifier Integrated Type without Display, Analog Output Type	RJ-008AA
PPG-D	Electronic Pressure Sensor with Digital Display	RJ-008AA
PPLX	Linear Pick & Place Unit	CB-019 SAA
PPR	Electronic Pressure Sensor with Digital Display	RJ-008AA
PPX	Digital Pressure Sensor	RJ-008AA
PRD	Amplifier/Elements and Sensors	RJ-007AA
PRE-A12	Pressure Switch/Relay Type	RJ-007AA
PRF-A2	Booster/Elements and Sensors	RJ-007AA
PRS-A12	Solenoid Valve/Relay Type	RJ-007AA
PRT	Timer/Relay Type	RJ-007AA
PSD	Sequencer Branch Block	RJ-007AA
PSE	Sequencer Input/Output Block	RJ-007AA
PSL	Sequencer AND Element	RJ-007AA
PSM	Sequencer Element	RJ-007AA
PSV	Sequencer Sub-base V-Type	RJ-007AA
PTN2	Dedicated Fitting for Air Fiber	RJ-007AA
PV5	ⓈⓋPilot Operated 5-Port ISO Compliant Valve/I/O Connector Type/ISO Size ①	RJ-012AA
PV5 G	ⓈⓋPilot Operated 5-Port ISO Compliant Valve/DIN Terminal Box Type/ISO Size ①	RJ-012AA
PV5 S-0	ISO Compliant Master Valve	RJ-012AA
PVP	Precision Suction Plate	RJ-010AA
PVS	Pilot Operated 2-Port Solenoid Valve	RJ-013AA
PWS	Threshold Sensor	RJ-007AA
PXB-B3	Push Button Switch/Switch Body/Separate Type	RJ-007AA
PXC-K	Limit Switch	RJ-007AA
PXC-M	Miniature Limit Switch	RJ-007AA
PXC-M	Compact Limit Switch	RJ-007AA
PXD	Proximity Sensor/Elements and Sensors	RJ-007AA
PXF	Limit Sensor/Elements and Sensors	RJ-007AA
PXV	Air Lamp	RJ-007AA
PYM	Fine Regulator	CB-031AA
PZM	Mounting Bracket/Line Type	RJ-007AA
PZU	Sub-base/Input Block/Relay Type Sub-base	RJ-007AA
Q		
QEL	Quick Exhaust Valve	RJ-007AA
QEV2	Quick Exhaust Valve	RJ-007AA
R		
R0, 3, 4, 6	Cylinder Switch/1-Color Indicator, Reed 2-wire	RJ-002, 003, 004, 005, 006
R1, 2	Cylinder Switch/1-Color Indicator, Solid State 2-wire	RJ-002, 003, 004, 005, 006
R1000 to 8000-P11	Regulator/Ozone Resistant	RJ-007AA

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Model No.	Model Name	Catalog No./Page
R		
R1000 to 8000-P6	Regulator/Copper Ion Restricted (No copper/PTFE Specification)	RJ-007AA
R1000 to 8000-W	Regulator/Standard White Series	RJ-007AA
R1100 to 8100-P11	Reverse Regulator/Ozone Resistant	RJ-007AA
R1100 to 8100-P6	Reverse Regulator/Copper Ion Restricted (No copper/ PTFE Specification)	RJ-007AA
R1100 to R8100-W	Reverse Regulator/Standard White Series	RJ-007AA
R2, 3Y	Cylinder Switch/2-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
R3000 to 8000-G4	Regulator/Flame Resistant Series	RJ-007AA
R3100 to 8100-G4	Reverse Regulator/Flame Resistant Series	RJ-007AA
R5	Cylinder Switch/No Indication, Reed 2-wire	RJ-002, 003, 004, 005, 006
RA800	Compact Regulator/Compact Piston Type	RJ-007AA
RB500	Compact Regulator	RJ-007AA
RB500-P11	Compact Regulator/Ozone Resistant	RJ-007AA
RC2000	Clean Regulator	RJ-007AA
RCC2	Rotary Clamp Cylinder Double Acting, Single Rod Type	RJ-005AA
RCKL	Gripper for Collaborative Robot 3-Jaw Type	RJ-006AA
RCS2	Rotary Clamp Cylinder (Single Guide Type) Double Acting, Single Rod Type	RJ-005AA
RG	One-touch Fitting for Air Fiber (Flame Resistant Type)	RJ-007AA
RHLF	Gripper for Collaborative Robot Long Stroke Type	RJ-006AA
RJB500	Compact Direct Acting Precision Regulator	RJ-007AA
RJF	Rotary Joint	RJ-007AA
RLSH	Gripper for Collaborative Robot Compact Type	RJ-006AA
RM3000, 4000	Regulator/Medium Pressure Series	RJ-007AA
RN3000 to 8000	Oil-free Regulator	RJ-007AA
RP1000	Precision Regulator	RJ-007AA
RPE1000	Precision Regulator	RJ-007AA
RP2000	Precision Regulator	RJ-007AA
RRC	Selex Rotary/Rack & Pinion Type	RJ-005AA
RS-6	Rain Sensor for Automatic Watering Control	CC-297AA
RSC	Automatic Watering Controller	CC-297AA
RSV	Solenoid Valve for Automatic Watering Control	CC-297AA
RT	Remote I/O	RJ-011AA
RTD-3 A	Air Timer/Logic Valve	RJ-007AA
RW4000, 8000	Regulator/Outdoor Series Outdoor Series	CC-1276AA
RV3□	Selex Rotary/Vane Type	RJ-005AA
RVC	Shock Absorber	RJ-005AA
S		
SAB□□	Air Operated 2-Port Valve (Cylinder Valve)	RJ-013AA
SAL	Compact Air Lamp/Logic Valve	RJ-007AA
SC1	Speed Controller/Medium Bore Type	RJ-007AA
SC-20A to 50 A	Speed Controller/Large Bore Type	RJ-007AA
SC3P	Speed Controller/Stainless Steel Corrosion Resistant Type	RJ-007AA
SC3R	Speed Controller/Direct Port Connection, Elbow Type	RJ-007AA
SC3U	Speed Controller/Universal Type with One-touch Fitting	RJ-007AA
SC3W	Speed Controller/Elbow Type with One-touch Fitting	RJ-007AA
SCA2	Medium Bore Size Cylinder (Medium Bore ø40 to 100)/Double Acting, Single Rod Type	RJ-002AA
SCD	Speed Controller/Ultra Compact In-Out Type	RJ-007AA
SCD2	Speed Controller/In-Out Line Type with One-touch Fitting	RJ-007AA
SCG	Tie Rod Cylinder/Double Acting, Single Rod Type	RJ-002AA
SCK	Shock Absorber, Adjustable Type	RJ-005AA
SCL2	Speed Controller/Line Type with One-touch Fitting	RJ-007AA
SCL2-N	Needle Valve/Line Type with One-touch Fitting	RJ-007AA
SCM	Round shaped cylinder/Double Acting, Single Rod Type	RJ-002AA
SC-M3/M5(-F)	Speed Controller/Ultra Compact	RJ-007AA
SCPD3	Pencil Shaped Cylinder/Double Acting, Single Rod Type	RJ-002AA
SCPH3	Pencil Shaped Cylinder/Single Acting, Retracting Type	RJ-002AA
SCPS	Pencil Shaped Cylinder/ Single Acting, Push Type	RJ-002AA
SCPS3	Pencil Shaped Cylinder/ Single Acting, Push Type	RJ-002AA
SCS2	Medium Bore Size Cylinder (Large Bore ø125 to 250)/ Double Acting, Single Rod Type, Lubricated Type	RJ-002AA
SD301, 302 D	Membrane Air Dryer/Single Unit	RJ-009AA
SD301, 302 E	Membrane Air Dryer/Single Unit	RJ-009AA
SD3015 to 3075	Membrane Air Dryer/Single Unit	RJ-009AA
SD401, 402 D	Membrane Air Dryer/Single Unit	RJ-009AA
SD401, 402 E	Membrane Air Dryer/Single Unit	RJ-009AA
SD4050 to 4100	Membrane Air Dryer/Single Unit	RJ-009AA
SDM4050 to 4100	Membrane Air Dryer/Super Dryer Modular Series (Large Size)	RJ-009AA
SFC□	Antibacterial/Germ-removing Filter	RJ-007AA
SFS10	Germ-removing Filter/Inline Type	RJ-007AA
SFR/SFRT	Super Fan Rotary	CC-984AA
SFX	Siloxane/Ozone Remover	RJ-007AA
SHD	Desiccant Air Dryer/Medium/ Large Heatless Dryer	RJ-009AA
SHV2	Shuttle Valve	RJ-007AA
SKAC	Contact Protection Circuit Box (For AC Circuit)	RJ-002, 003, 004, 005, 006
SKDC	Contact Protection Circuit Box (For DC Circuit)	RJ-002, 003, 004, 005, 006
SKH	Shockless Valve	RJ-012AA
SKL	Shock Absorber	RJ-005AA
SL	Silencer/Metal Body Type	RJ-007AA
SLM	Silencer/Ultra Compact Type	RJ-007AA
SLW	Silencer/Small Bore, Resin Body Type	RJ-007AA
SM-25	Shuttle Mover Standard Type/ High Load Type	RJ-005AA
SMG	Compact Cylinder/Double Acting, Single Rod Type	RJ-003AA
SMW	Metering Valve with Silencer	RJ-007AA
SMW2	Metering Valve with Silencer	RJ-007AA
SNP	3-Port Solenoid Valve with Spool Position Detection Function	RJ-007AA
SNS	Residual Pressure Exhaust Valve with Spool Position Detection Function	RJ-007AA
SP	Thin Pilot Operated 2-Port Solenoid Valve for Compressed Air	RJ-013AA
SPD	Poppet Type Diaphragm Valve	CC-1637AA
SPK	Pilot Kick Operated 2-Port Solenoid Valve for Steam	RJ-013AA
SR	Flame Resistant Tubing	RJ-007AA
SRG3	High Precision Guided Rodless Cylinder (Single Guide)/Double Acting Type	RJ-005AA
SRL3	Rodless Cylinder/Double Acting Type	RJ-005AA
SRM3	High Precision Guided Rodless Cylinder (Double Guide)/Double Acting Type	RJ-005AA
SRT3	Rodless Cylinder with Brake/ Double Acting Type	RJ-005AA
SSD	Compact Cylinder/Double Acting, Single Rod Type	RJ-003AA
SSD2	Compact Cylinder/Double Acting, Single Rod Type	RJ-003AA
SSD-LN	With Linear Norm Sensor	RJ-005AA
SSG	Guided Compact Cylinder/ Double Acting, Single Rod Type	RJ-003AA
STG	Guided Cylinder/Double Acting, Single Rod Type	RJ-004AA
STK	Stopper Cylinder/Double Acting, Round Rod End Type	RJ-005AA
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STR2	Twin Rod Cylinder/Double Acting, Single Rod Type	RJ-004AA
STS-□	Guided Cylinder (Short Stroke Type)/Double Acting, Single Rod Type	RJ-004AA
SU301, 302D	Membrane Air Dryer/Unit	RJ-009AA
SU301, 302E	Membrane Air Dryer/Unit	RJ-009AA
SU3015 to 3075	Membrane Air Dryer/Unit	RJ-009AA
SU401, 402D	Membrane Air Dryer/Unit	RJ-009AA
SU401, 402E	Membrane Air Dryer/Unit	RJ-009AA
SU4050, 4100	Membrane Air Dryer/Unit	RJ-009AA
SVB□□	Air Operated 2-Port Valve Solenoid Valve Mounted Type (Cylinder Valve)	RJ-013AA
SWD	Wear Type Diaphragm Valve	CC-1637AA
T		
T0 V/H/C	Cylinder Switch/1-Color Indicator, Reed 2-wire	RJ-002, 003, 004, 005, 006
T0Y	Cylinder Switch/Reed 2-wire for Magnetic Environments	RJ-002, 003, 004, 005, 006
T1V/H	Cylinder Switch/1-Color Indicator, Solid State 2-wire	RJ-002, 003, 004, 005, 006
T2V/H R	Cylinder Switch/Flexible Shielded Cable Type, Solid State 2-wire	RJ-002, 003, 004, 005, 006
T2, 3V/H/C	Cylinder Switch/1-Color Indicator, Solid State 2/3-wire	RJ-002, 003, 004, 005, 006
T2, 3YL V/H	Cylinder Switch/Solid State 2/3-wire for Cutting Oil	RJ-002, 003, 004, 005, 006
T2J V/H	Cylinder Switch/Off-delay Type, Solid State 2-wire	RJ-002, 003, 004, 005, 006
T2YD(T)	Cylinder Switch/Solid State 2-wire for Strong Magnetic Fields	RJ-002, 003, 004, 005, 006
T2WL V/H	Cylinder Switch/Improved Water Resistance, Solid State 2-wire	RJ-002, 003, 004, 005, 006
T3P V/H	Cylinder Switch/PNP Output Type, Solid State 3-wire	RJ-002, 003, 004, 005, 006
T5V/H/C	Cylinder Switch/No Indication, Reed 2-wire	RJ-002, 003, 004, 005, 006
T8V/H	Cylinder Switch/1-Color Indicator, Reed 2-wire	RJ-002, 003, 004, 005, 006
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TGX	Torque Guard	CC-1601AA
TLPS	Tool Breakage Detection Switch/Single Unit	RJ-008AA
TSF	Torque Saver	CC-1601AA
TVG	Plug-in Block Manifold	RJ-011AA
U	Urethane Tubing	RJ-007AA
UB	Lock Unit	RJ-005AA

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Model No.	Model Name	Catalog No./Page
U		
UCA2	Unit Cylinder/Double Acting, Single Rod, Plain Bearing Type	RJ-004AA
UCAC2	Clamp Cylinder with Fall Prevention/Double Acting, Single Rod Type	RJ-005AA
UCAC-N32/40	Lightweight Clamp Cylinder/ With Fall Prevention, Double Acting, Single Rod Type	RJ-005AA
UFCD	Flat Cylinder with Free Position Fall Prevention/Double Acting, Single Rod Type	RJ-005AA
UGPS2	Seating Confirmation Switch/Unit	RJ-008AA
UGPS3	Digital Gap Switch/Unit	RJ-008AA
UHPS	Adhesion Confirmation Switch/Unit	RJ-008AA
ULK	Brake Cylinder/Double Acting, Single Rod Type	RJ-005AA
UMB1	High Corrosion Resistance Ultra Compact Direct Acting 2-Port Solenoid Valve for Medical Equipment	CC-1055AA
UMG1	High Corrosion Resistance Ultra Compact Direct Acting 3-Port Solenoid Valve for Medical Equipment	CC-1055AA
UP	Air Fiber Antistatic Type (For One-touch Fittings)	RJ-007AA
UP-□□-F1/F2	Antistatic Tubing	RJ-007AA
UP-9102-20-□-F1	Air Fiber Antistatic Type	RJ-007AA
UP-9102-SR	Flame Resistant Air Fiber (For One-touch Fittings)	RJ-007AA
US	Compact Direct Acting 2, 3-Port Solenoid Valve (Resin Body Type)	RJ-013AA
USB□	Compact Direct Acting 2-Port Solenoid Valve	RJ-013AA
USC	Medium Bore Size Cylinder with Free Position Fall Prevention/Double Acting, Single Rod Type	RJ-005AA
USG□	Compact Direct Acting 3-Port Solenoid Valve	RJ-013AA
USSD	Compact Cylinder with Drop Prevention/Double Acting, Single Rod Type	RJ-005AA
UTLPS	Tool Breakage Detection Switch/Unit	RJ-008AA
V		
V0	Cylinder Switch/Compact Reed 2-wire for Strong Magnetic Fields	RJ-002, 003, 004, 005, 006
V1000, 3000-W	Residual Pressure Exhaust Valve/Standard White Series	RJ-007AA
V3010, 6010-W	Residual Pressure Exhaust Valve with Keyhole, Keyhole, OSA Compliant	RJ-007AA
V3301, 3321-W	Slow Start Valve	RJ-007AA
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VNA-R/RH	Solenoid Valve for Gas Combustion System	CC-1590AA
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VNM-25-K	Safety Shutoff Valve (Fire Safety Enhanced Specification)	CC-1590AA
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VSC	Ejector System/Pad Direct Mount Type	RJ-010AA
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VSFJ	Vacuum Related Equipment/ Compact Socket Type Vacuum Filter	RJ-010AA
VSFU	Vacuum Related Equipment/ Compact Union Type Vacuum Filter	RJ-010AA
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VSH	Ejector System/Solenoid Valve Direct Mount Type	RJ-010AA
VSJ/VSJM	Ejector System/20 mm Width General Type	RJ-010AA
VSJP/VSJPM	Vacuum Pump System/20 mm Width General Type	RJ-010AA
VSK/VSKM	Ejector System/16 mm Width General Type	RJ-010AA
VSLF	Vacuum Related Equipment/ Vacuum Break Unit	RJ-010AA
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W1000 to 8000-W	Filter Regulator/Standard White Series	RJ-007AA
W1100 to 8100-P11	Reverse Filter Regulator/ Ozone Resistant	RJ-007AA
W1100 to 8100-P6	Reverse Filter Regulator/ Copper Ion Restricted (No copper/PTFE Specification)	RJ-007AA
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WFC	Capacitance Electromagnetic Flow Sensor	RJ-008AA
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WFK3000	Karman Vortex Flow Sensor for Water Flurex	RJ-008AA
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-HP□	High Durability Equipment	CC-1421 AA
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-P12	Oil-free Compatible	RJ-001 AA
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Electric Actuator ROBODEX std.——Catalog No.RJ-015AA

Electric actuators ROBODEX Pulse

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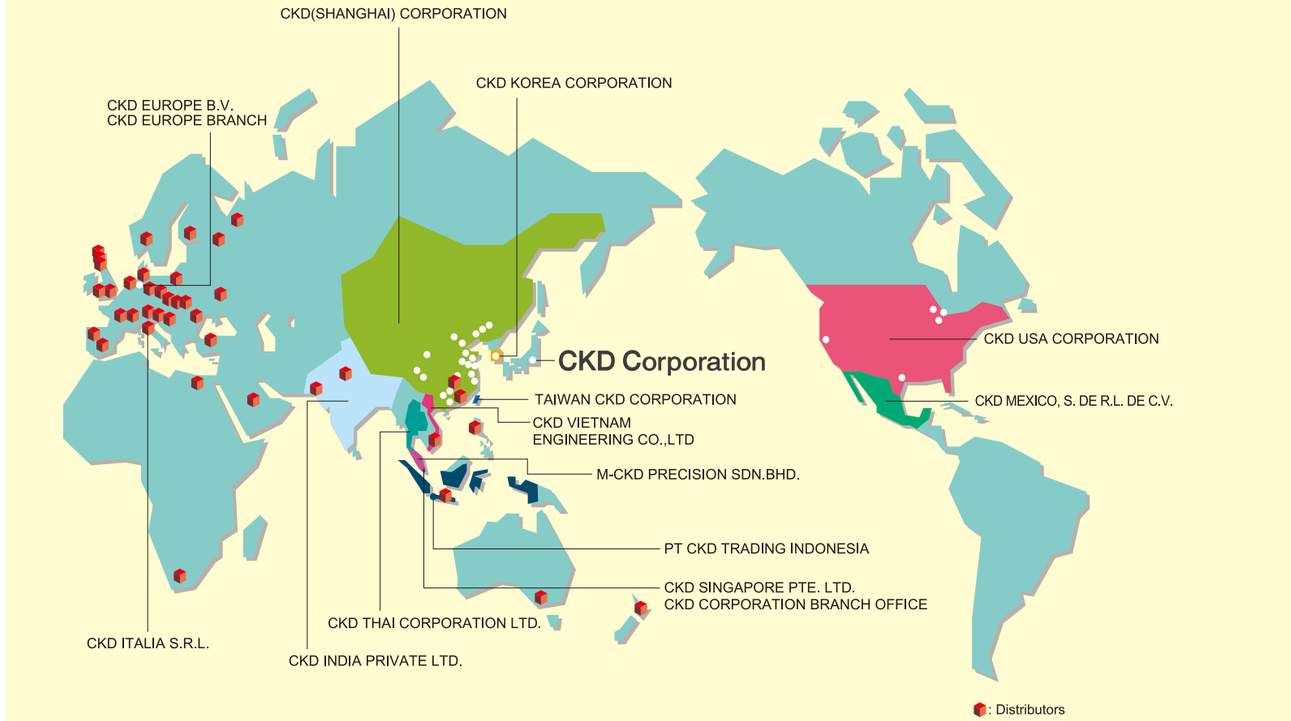

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