

# EC-RR7□H

Motor straight    Body width 70 mm    24V Stepper Motor

■ Model Specification Items

<b>EC</b> □	<b>RR7</b> □	□	<b>H</b> □	□	□	□
Series	Type	Lead	Specification	Stroke	Cable Length	Options
		S 24mm H 16mm M 8mm L 4mm	H High rigidity	50 100 300 50mm 300mm (every 50mm)	0 With terminal block type connector 1 1m 10 10m	Options Refer to Options below.



CE RoHS

Horizontal Vertical Side Ceiling

**for radial load**

Stroke

Stroke (mm)	Stroke (mm)
50	200
100	250
150	300

Options

Name	Option code	Reference page	Name	Option code	Reference page
Brake	B	(Note1)	Non-motor end specification	NM	(Note1)
Tip adapter (flange)	FFA	5	PNP specification	PN	(Note1)
Flange (front)	FL	5	Clevis bracket (Note 2)	QR	6
Tip adapter (Female thread)	NFA	5	Clevis bracket + oscillation receiving bracket	QRPB	6
Knuckle joint (Note 2)	NJ	5	Battery-less Absolute Encoder specification	WA	(Note1)
Knuckle joint + oscillation receiving bracket	NJPB	6	Wireless communication specification	WL	(Note1)

**POINT Selection Notes**

- (1) Payload values shown in "Main spec" are the highest values at low speed.
- (2) The radial cylinder is equipped with a built-in guide. For the radial load acting on the rod, refer to P.7.
- (3) Horizontal load capacity is when using an external guide.
- (4) For push motion refer to the graph "Correlation of push force and current limit value". The value in the graph is a guideline push force.
- (5) Depending on the ambient operating temperature, duty control is necessary. Please refer to (CE0250-5A) P.67 eleycylinder catalog for more information.
- (6) Attention is required depending on the mounting position. Please refer to the instruction manual for details.

Cable length

Cable code	Cable length
0	
1 ~ 3	1 ~ 3m
4 ~ 5	4 ~ 5m
6 ~ 10	6 ~ 10m

(Note 1) Please refer to the eleycylinder catalog (CJ0250-5A) for details.  
 (Note 2) The clevis (QR) and knuckle joint (NJ) are sold as a set. Please assemble by customer.

\* Refer to eleycylinder catalog (CJ0250-5A) for details of cables.

Specifications

Item	Description	
Lead	Ball screw lead (mm) 24 16 8 4	
Horizontal	Payload Maximum payload (kg) 20 50 60 80	
	Speed / acceleration / deceleration	Maximum speed (mm/s) 860 700 350 175
	Minimum speed (mm/s) 30 20 10 5	
	Rated acceleration / deceleration (G) 0.3 0.3 0.3 0.3	
	Maximum acceleration / deceleration (G) 1 1 1 1	
Vertical	Payload Maximum payload (kg) 3 8 18 28	
	Speed / acceleration / deceleration	Maximum speed (mm/s) 640 560 350 175
	Minimum speed (mm/s) 30 20 10 5	
	Rated acceleration / deceleration (G) 0.3 0.3 0.3 0.3	
	Maximum acceleration / deceleration (G) 0.5 0.5 0.5 0.5	
Push force	Maximum push force (N) 182 273 547 1094	
	Maximum push force speed (mm/s) 20 20 20 20	
Brake	Brake specification Non-excitation actuated electromagnetic brake	
	Brake holding force (kgf) 3 8 18 28	
Stroke	Minimum stroke (mm) 50 50 50 50	
	Maximum stroke (mm) 300 300 300 300	
	Stroke pitch (mm) 50 50 50 50	

Item	Description
Drive system	Ball screw φ12mm rolled C10
Positioning repeatability	±0.05mm
Lost motion	-
Linear guide	Direct acting infinite circulation type
Rod	φ30mm Material: Aluminum, hard alumite treatment
Rod non-rotation precision (Note 3)	0 degrees
Ambient operating temperature/humidity	0~40°C, 85%RH or less (Non-condensing)
Degree of protection	IP30
Vibration resistant, shock resistant	4.9m/s <sup>2</sup> 100Hz or less
Overseas standards	CE and RoHS compliant
Motor type	Stepper motor
Encoder Type	Incremental / Battery-less absolute
Number of encoder pulses	800 pulse/rev

(Note 3) The angle of rotation of the rod when no load is applied.

**Table of Payload by Speed/Acceleration**

The unit of payload quantity is kg. Blank spaces cannot be achieved.

**Lead24**

Orientation	Horizontal					Vertical
	Acceleration (G)					
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5
0	20	18	15	12	3	3
200	20	18	15	12	3	3
400	20	14	12	8	3	3
420	17	12	10	6	3	3
600	14	6	5	4	3	2
640	5	3	2	1.5	2	1
800	5	1	1			
860	2	0.5				

**Lead16**

Orientation	Horizontal					Vertical
	Acceleration (G)					
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5
0	50	40	35	30	8	8
140	50	40	35	30	8	8
280	50	35	25	20	7	7
420	25	18	14	10	4.5	4
560	10	5	3	2	2	1
700	2					

**Lead8**

Orientation	Horizontal					Vertical
	Acceleration (G)					
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5
0	60	50	45	40	18	18
70	60	50	45	40	18	18
140	60	50	45	40	16	12
210	60	40	31	26	10	9
280	34	20	15	11	5	4
350	12	4	1		2	1

**Lead4**

Orientation	Horizontal					Vertical
	Acceleration (G)					
Speed (mm/s)	0.3	0.5	0.7	1	0.3	0.5
0	80	70	65	60	28	28
35	80	70	65	60	28	28
70	80	70	65	60	28	28
105	80	60	50	40	18	18
140	50	30	20	15	12	10
175	15				2	

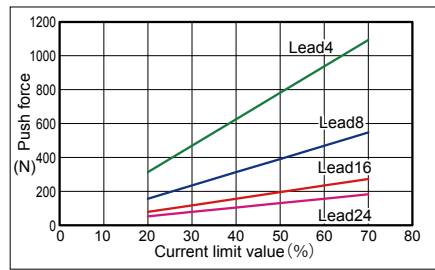
**Stroke and Max Speed**

Lead (mm)	50~200 (every 50mm)	250 (mm)	300 (mm)
24		860<640>	
16		700<560>	
8		350	
4		175	

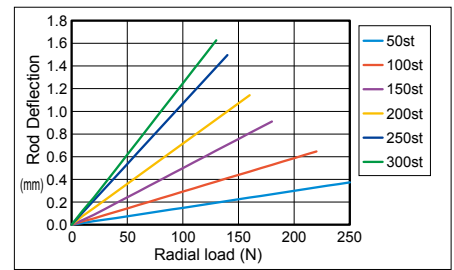
\* The inside of <> is for vertical use.

(Unit: mm/s)

**Correlation of push force and current limit value**



**Rod Deflection (Reference Values)**



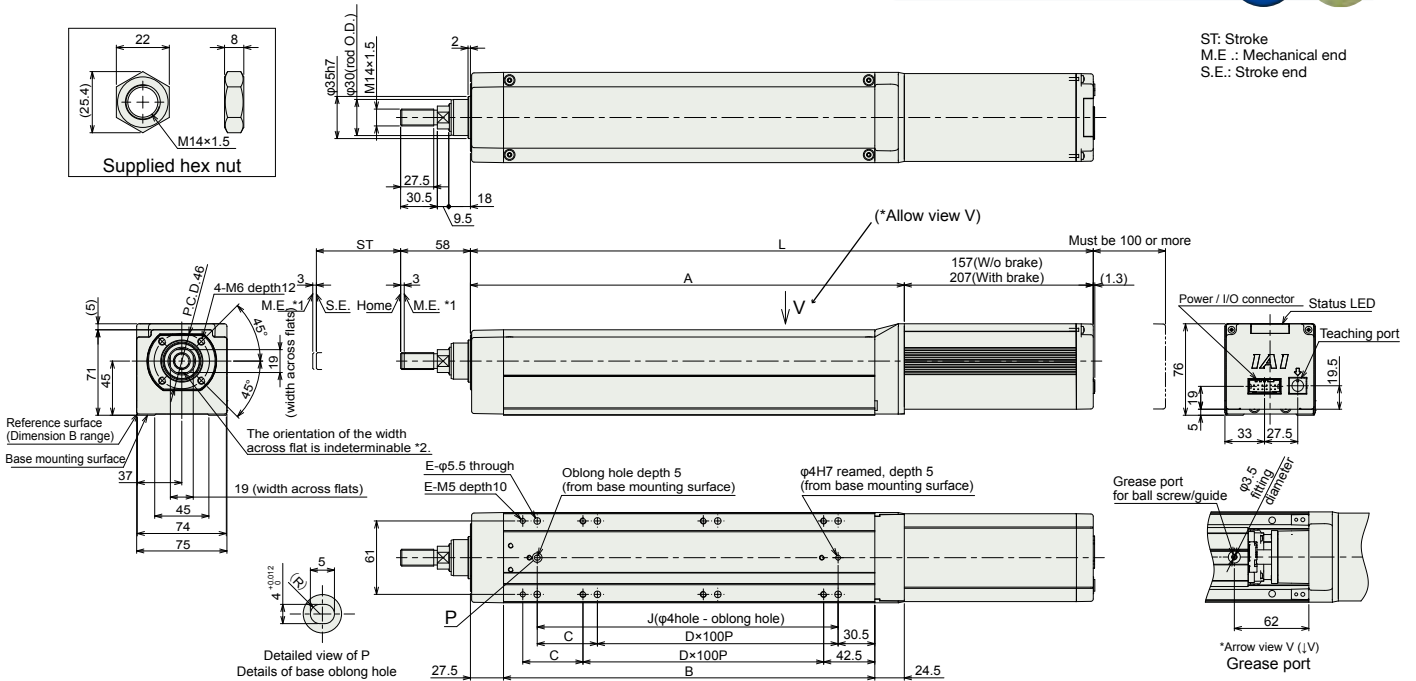
**Dimensions**

\*1 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.

\*2 The direction of width across flats varies depending on the product. Those flats cannot be used for reference plane.

CAD drawings can be downloaded from our website.

[www.intelligentactuator.com](http://www.intelligentactuator.com)



**Dimensions by Stroke**

Stroke	Stroke						
	50	100	150	200	250	300	
L	W/o Brake	417.5	467.5	517.5	567.5	617.5	667.5
	With Brake	467.5	517.5	567.5	617.5	667.5	717.5
A	260.5	310.5	360.5	410.5	460.5	510.5	
B	208.5	258.5	308.5	358.5	408.5	458.5	
C	50	0	50	0	50	0	
D	1	2	2	3	3	4	
E	6	6	8	8	10	10	
J	150	200	250	300	350	400	

**Mass by Stroke**

Weight (kg)	Stroke					
	50	100	150	200	250	300
W/o Brake	4	4.4	4.7	5	5.4	5.7
	With Brake	4.5	4.9	5.2	5.5	5.9

**Adaptive controller**

\* EC series has built in controller. For details of the built-in controller, please refer to page 68 of the elecylinder catalog (CE0250-5A).