EC-RR6

Radial Cylinder | Motor Unit Type | Coupled Motor | Body Width 63 mm | 24v Stepper Motor

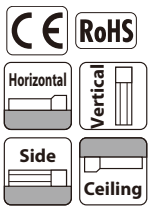
■ Model Specification Items

EC — RR6 — [Lead] — [Stroke] — [Cable Length] — ([Options])

Series	Type	Lead	Stroke	Cable Length	Options
EC	RR6	S : 20mm H : 12mm M : 6mm L : 3mm	65: 65mm ~ 315:315mm (Every 50mm)	0: With terminal block type connector 1: 1m ~ 10:10m	Refer to Options below.

* Please refer to P.16 for more information about the model specification items.

CE RoHS



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

POINT Selection Notes

(1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use.
(2) The actuator specifications display the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to "Table of Payload by Speed/Acceleration" at right for more details.
(3) The value of the horizontal payload assumes that there is an external guide.
(4) When performing push-motion operation, refer to P.65.
(5) Depending on the ambient operating temperature, duty control is necessary. Please refer to P.67 for more information.
(6) The radial cylinder is equipped with a built-in guide. For the radial load acting on the rod, refer to P.64.
(7) The power capacity can be reduced according to the setting. Please refer to P.63 for the relevant "Table of Payload by Speed/Acceleration."
(8) For the relationship between rod deflection and load on rod tip, refer to P.66.

Table of Payload by Speed/Acceleration

Lead 20

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	6	6	5	5	1.5	1.5
160	6	6	5	5	1.5	1.5
320	6	6	5	3	1.5	1.5
480	6	6	5	3	1.5	1.5
640	6	4	3	2	1.5	1.5
800	4	3			1	1

Lead 12

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	25	18	16	12	4	4
100	25	18	16	12	4	4
200	25	18	16	10	4	4
400	20	14	10	6	4	4
500	12	8	6	4	3.5	3
700	6	2			2	1

Lead 6

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	40	35	30	25	10	10
50	40	35	30	25	10	10
100	40	35	30	25	10	10
200	40	30	25	20	10	10
250	40	27.5	22.5	18	9	8
350	30	14	12	10	5	5
400	18	10	6	5	3	3
450	8	3			2	1

Lead 3

Orientation	Horizontal				Vertical	
Speed (mm/s)	Acceleration (G)					
	0.3	0.5	0.7	1	0.3	0.5
0	60	50	45	40	12.5	12.5
50	60	50	45	40	12.5	12.5
100	60	50	45	40	12.5	12.5
125	60	50	40	30	10	10
175	40	35	25	20	6	5
200	35	30	20	14	5	4.5
225	16	16	10	6	5	4

Actuator Specifications

■ Lead and Payload

Model number	Lead (mm)	Max. payload		Max. push force (N)*
		Horizontal (kg)	Vertical (kg)	
EC-RR6S-①-②(-③)	20	6	1.5	56
EC-RR6H-①-②(-③)	12	25	4	93
EC-RR6M-①-②(-③)	6	40	10	185
EC-RR6L-①-②(-③)	3	60	12.5	370

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead (mm)	65~215 (Every 50mm)	265 (mm)	315 (mm)
20	800		
12	700	660	480
6	450	325	235
3	225	160	115

*Speed limitation applies to push motion. See the manual or contact IAI.

① Stroke

① Stroke (mm)	EC-RR6	① Stroke (mm)	EC-RR6
65	○	**215**	○
115	○	**265**	○
165	○	**315**	○

② Cable Length

Cable code	Cable length
0	No cable (with connector)
1~3	1~3m
4~5	4~5m
6~10	6~10m

③ Options

Name	Option code	Reference page	Name	Option code	Reference page
Brake	**B**	See P.59	Non-motor end specification	**NM**	See P.62
Tip adapter (flange)	**FFA**	See P.59	PNP specification	**PN**	See P.62
Flange (front)	**FL**	See P.59	Clevis bracket (Note 1)	**QR**	See P.62
Foot bracket	**FT**	See P.60	Clevis bracket + oscillation receiving bracket	**QRPB**	See P.62
Tip adapter (internal thread)	**NFA**	See P.61			
Knuckle joint (Note 1)	**NJ**	See P.61	Battery-less Absolute Encoder specification	**WA**	See P.62
Knuckle joint + oscillation receiving bracket	**NJPB**	See P.61	Wireless communication specification	**WL**	See P.62

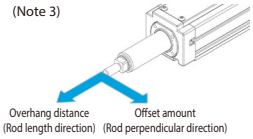
(Note 1) The clevis (QR) and knuckle joint (NJ) are sold as a set. The assembly is to be performed by the customer.

Actuator Specifications

Item	Description
Drive system	Ball screw ϕ10mm, rolled C10
Positioning repeatability	±0.05mm
Rod	ϕ25mm Material: Aluminum, hard alumite treatment
Rod non-rotation precision (Note 2)	0 degrees
Rod tip static allowable torque	5.5N·m
Rod tip allowable overhang distance (Note 3)	100mm
Rod tip allowable offset amount (Note 3)	100mm
Ambient operating temperature/humidity	0 to 40°C, 85% RH or less (Non-condensing)

(Note 2) Rod rotating direction displacement angle with no load.

(Note 3)

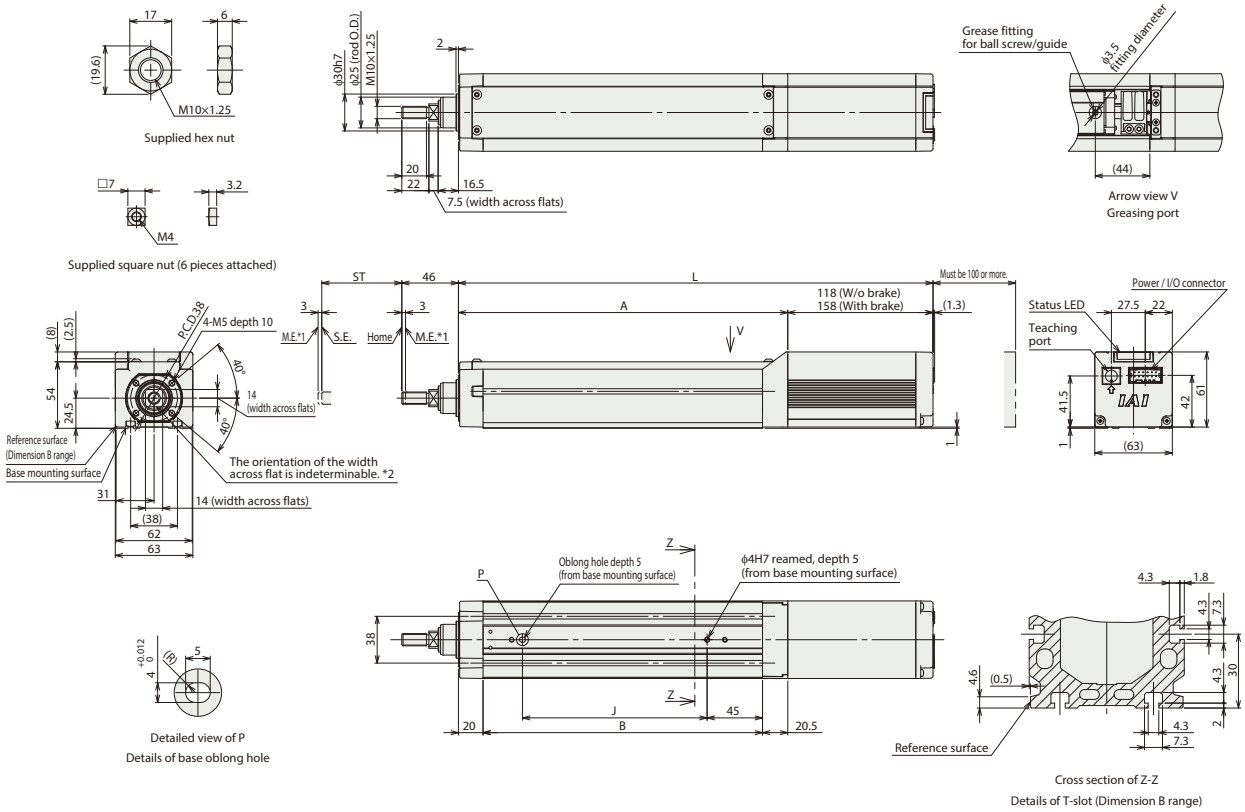


Dimensions

CAD drawings can be downloaded from our website.
www.intelligentactuator.com

2D CAD 3D CAD

*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.
M.E: Mechanical end S.E: Stroke end
*2 The direction of width across flats varies depending on the product. Those flats cannot be used for reference plane.



■ Dimensions and Mass by Stroke

Stroke		65	115	165	215	265	315
L	W/o Brake	335.5	385.5	435.5	485.5	535.5	585.5
	With Brake	375.5	425.5	475.5	525.5	575.5	625.5
A		217.5	267.5	317.5	367.5	417.5	467.5
B		177	227	277	327	377	427
J		100	150	200	250	300	350
Weight (kg)	W/o Brake	1.7	2.0	2.2	2.5	2.7	3.0
	With Brake	1.9	2.2	2.4	2.7	3.0	3.2

Controller side Options/Accessories

Name	Touch Panel Teaching Pendant	PC software	24VDC power supply
External view			
Model	☐ TB-02 (for wired connection only) ☐ TB-03 (for wired/wireless connection)	☐ RCM-101-MW (RS232 connection version) ☐ RCM-101-USB (USB connection version)	☐ PS-241 (100V input) ☐ PS-242 (200V input)
Overview	● TB-02 A teaching pendant equipped with functions such as start point, end point, and AVD input, trial operation, and monitoring. ● TB-03 A data setter that supports wireless connection. The start point, end point and AVD can be input with wireless connection.	Software for start point input, end point input and AVD input, trial operation, and monitoring using a PC. Both the RS232C version and USB version are available for PC connection.	A 24VDC power supply that can instantaneously output up to 17A. Input voltage 200VAC and 100VAC specifications are available.

* For system configurations using the above tools, refer to P.68.