EC-R6

	Rod Type	Motor Unit Type	Coupled Motor	Body Width **63** mm	**24**v Stepper Motor

■ Model Specification Items

EC	–	R6		–		–		–	
Series		Type	Lead		Stroke		Cable Length		Options

Lead
S : 20mm
H : 12mm
M : 6mm
L : 3mm

Stroke
50: 50mm
∼
300: 300mm
(Every 50mm)

Cable Length
0: With terminal block type connector
1: 1m
∼
10: 10m

Options
Refer to Options below.

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

CE RoHS

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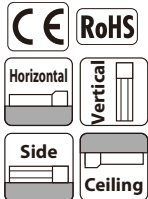
* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact IAI for more information regarding mounting positions.

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. Please be aware that the anti-rotation stopper can be damaged when an external force is applied to the rod from any direction other than the moving direction.
(4) When performing push 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 power capacity can be reduced according to the setting. Please refer to P.63 for the relevant "Table of Payload by Speed/Acceleration."

■ 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	15	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	Lead (mm)	Max. payload		Max. push force (N)*
		Horizontal (kg)	Vertical (kg)	
EC-R6S-①-②(-③)	20	6	1.5	56
EC-R6H-①-②(-③)	12	25	4	93
EC-R6M-①-②(-③)	6	40	10	185
EC-R6L-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)	50~200 (Every 50mm)	250 (mm)	300 (mm)
20	800		
12	700		547
6	450	376	268
3	225	186	133

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

① Stroke

① Stroke (mm)	EC-R6	① Stroke (mm)	EC-R6
50	○	200	○
100	○	250	○
150	○	300	○

② Cable Length

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

③ Options

Type	Option code	Reference page
Brake	B	See P.59
Flange (front)	FL	See P.59
Foot bracket	FT	See P.60
Tip adapter (Internal thread)	NFA	See P.61
Non-motor end specification	NM	See P.62
PNP specification	PN	See P.62
Battery-less Absolute Encoder specification	WA	See P.62
Wireless communication specification	WL	See P.62

■ Actuator Specifications

| Item	Description
Drive system	Ball screw ø10mm, rolled C10
Positioning repeatability	±0.05mm
Rod	ø25mm Material: Aluminum, hard alumite treatment
Static allowable torque on rod tip	0.5N·m
Rod tip maximum angular displacement (*)	±1.5 degrees
Ambient operating temperature/humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*) The rod tip angular displacement (initial value for reference) when the rod tip static allowable torque is applied with the rod fully retracted.

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.

Supplied hex nut

Supplied front fixing nut

Detailed view of Q
(Greasing port shape)
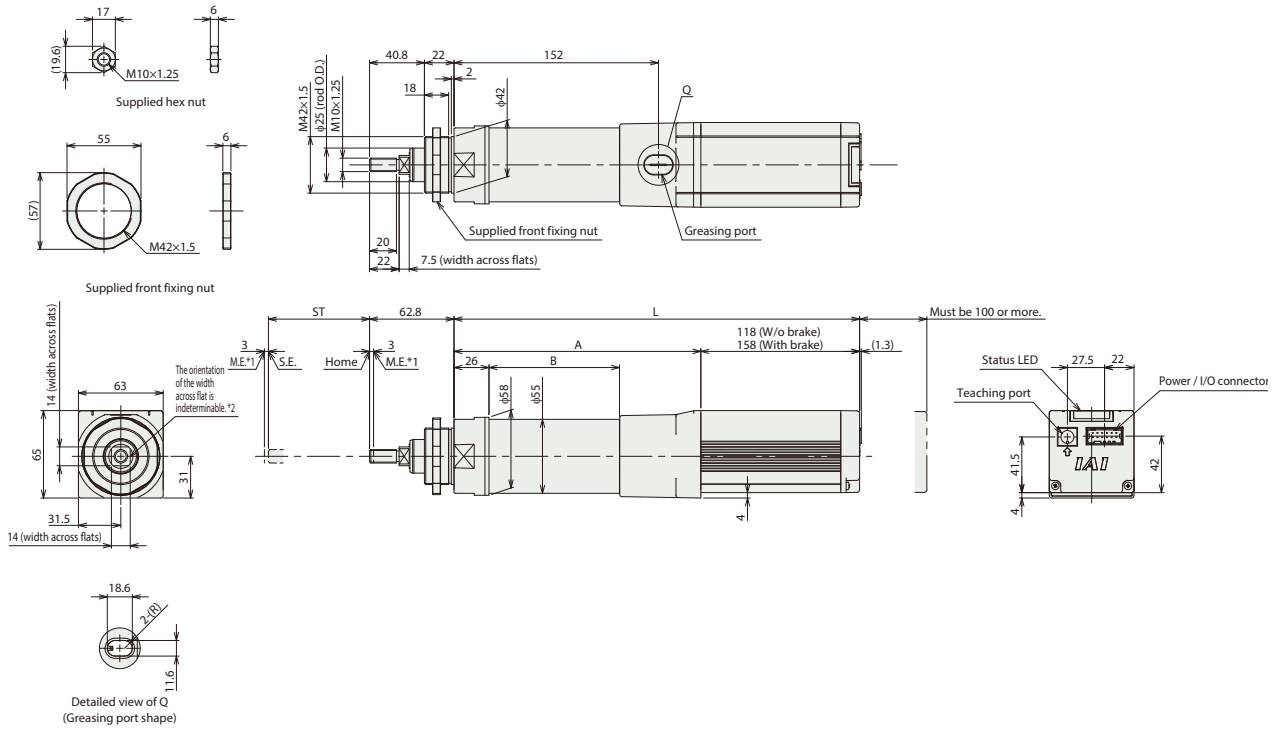
■ Dimensions and Mass by Stroke

	Stroke	50	100	150	200	250	300
L	W/o Brake	301.5	351.5	401.5	451.5	501.5	551.5
	With Brake	341.5	391.5	441.5	491.5	541.5	591.5
	A	183.5	233.5	283.5	333.5	383.5	433.5
	B	97	147	197	247	297	347
Weight (kg)	W/o Brake	1.6	1.8	2.0	2.2	2.4	2.6
	With Brake	1.8	2.0	2.2	2.4	2.6	2.8

■ 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.