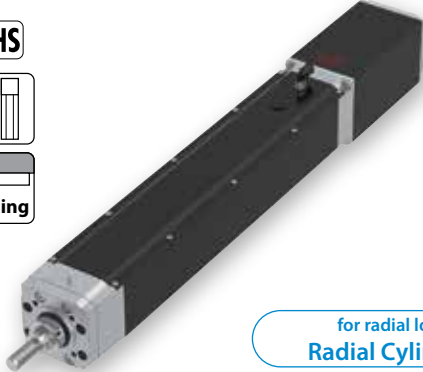
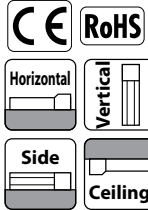


EC-RR7□W

Dust/Splash-proof
Coupled Motor
Body width 73 mm
24v Stepper motor

Model Specification Items

EC	—	RR7	<input type="text"/>	W	—	<input type="text"/>	—	<input type="text"/>	—	<input type="text"/>
Series		Type	Lead	Specification		Stroke		Cable length		Option
			S 24mm H 16mm M 8mm L 4mm	W Dust/Splash-proof		65 115 165	65mm 115mm 165mm (every 50mm)	0 1 4 8	With terminal block type connector 1m 1 8m	See the option price list below



for radial load
Radial Cylinder®



- (1) The actuator specifications display the payload's maximum value, but when energy-saving is activated, the specifications will change. Please refer to "Table of Payload by Speed/Acceleration" for more details.
- (2) The radial cylinder is equipped with a guide. Refer to P111 for details of the radial load applied to the rod.
- (3) The horizontal payload assumes the use of an external guide.
- (4) When performing a push-motion operation, please refer to the "Correlation diagram between pushing force and current limit value." push force is only a guide.
- (5) Depending on the ambient operating temperature, duty control is necessary. Please refer to P115 for cautions.
- (6) The interface box is not treated for dust- and splash-proof. Please use it where there is no splash of water.
- (7) Special attention needs to be paid to the mounting orientation. Please refer to P33 for details.

Stroke			
Stroke (mm)	EC-RR7□W	Stroke (mm)	EC-RR7□W
65	○	215	○
115	○	265	○
165	○	315	○

Cable Length	
Cable code	Cable length
0	No cable (with connector)
1 ~ 3	1 ~ 3m
4 ~ 5	4 ~ 5m
6 ~ 8	6 ~ 8m

(Note) Please select the actuator cable and power-I/O cable so that their total length is 10m or less.
(Note) Robot cable.

Option		
Name	Option code	Reference page
Actuator cable length 5m	AC5	See P.101
Actuator cable length 2m (Fluororubber cover specification) (Note 1)	ACF2	See P.101
Actuator cable length 5m (Fluororubber cover specification) (Note 1)	ACF5	See P.101
Brake	B	See P.101
Tip adaptor (flange)	FFA	See P.101
Flange (front)	FL	See P.102
Foot bracket	FT	See P.103
Specified grease applied specification	G5	See P.105
Tip adaptor (female screw)	NFA	See P.106
Non-motor end specification	NM	See P.108
PNP specification	PN	See P.108
Fluororubber seal specification (Note 1)	SLF	See P.109
Split motor and controller power supply specification	TMD2	See P.109
Battery-less absolute encoder specification	WA	See P.109
Wireless communication specification	WL	See P.109
Wireless axis-operation specification	WL2	See P.109

(Note 1) When selecting the change of the actuator cable length (fluororubber cover specification) (ACF2/ACF5), a fluororubber seal specification (SLF) is also supplied. Therefore, either one is selectable. Therefore, either one is selectable.

Main specifications

Item		Description				
Lead	Ball screw lead (mm)	24	16	8	4	
	Payload	Max. payload (kg) (energy-saving disabled)	20	50	60	80
		Max. payload (kg) (energy-saving enabled)	18	40	50	55
		Max. speed (mm/s)	860	700	350	175
Horizontal	Min. speed (mm/s)	30	20	10	5	
	Speed/Acceleration/Deceleration	Rated acceleration/deceleration (G)	0.3	0.3	0.3	0.3
		Max. acceleration/deceleration (G)	1	1	1	1
		Max. payload (kg) (energy-saving disabled)	3	8	18	19
Vertical	Max. payload (kg) (energy-saving enabled)	3	5	17.5	19	
	Speed/Acceleration/Deceleration	Max. speed (mm/s)	640	560	350	175
		Min. speed (mm/s)	30	20	10	5
		Rated acceleration/deceleration (G)	0.3	0.3	0.3	0.3
Push force	Max. acceleration/deceleration (G)	0.5	0.5	0.5	0.5	
	Max. thrust force when pushing (N)*	182	273	547	1094	
	Max. speed when pushing (mm/s)	20	20	20	20	
Brake	Brake specification	Non-excitation actuating solenoid brake				
	Brake holding force (kgf)	3	8	18	19	
Stroke	Min. stroke (mm)	65	65	65	65	
	Max. stroke (mm)	315	315	315	315	
	Stroke pitch (mm)	50	50	50	50	

Item		Description
Driving system		Ball screw φ12mm, Rolling C10
Positioning repeatability		±0.05mm
Lost motion		-
Linear guide		Linear motion infinite circulating type
	Rod	Φ30mm, material: aluminum hard-alumite treated
Main material	Frame	Material: Aluminum, Black alumite treated
	Dust seal	Rubber (NBR)
	Actuator cable	Polyvinyl chloride (PVC)
Rod rotational accuracy (Note 2)		0 degree
Ambient operation temperature/humidity		0 to 40°C, RH 85% or less (Non-condensing)
Degree of protection		IP67
Vibration & shock resistance		4.9m/s ² 100Hz or less
Overseas standards		CE marking, RoHS
Motor type		Stepper motor
Encoder type		Incremental / battery-less absolute
Number of encoder pulses		800 pulse/rev.

(Note 2) Displacement angle in the rod rotational direction when no load is applied.

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

Table of Payload by Speed/Acceleration

■ Energy-saving disabled Unit for payload is kg. Operations are not possible in the blank cells.

Lead 24	Orientation	Horizontal						Vertical					
		Acceleration (G)						Acceleration (G)					
Speed (mm/s)		0.3	0.5	0.7	1	0.3	0.5	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										

Lead 16	Orientation	Horizontal						Vertical					
		Acceleration (G)						Acceleration (G)					
Speed (mm/s)		0.3	0.5	0.7	1	0.3	0.5	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											

Lead 8	Orientation	Horizontal						Vertical					
		Acceleration (G)						Acceleration (G)					
Speed (mm/s)		0.3	0.5	0.7	1	0.3	0.5	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						

Lead 4	Orientation	Horizontal						Vertical					
		Acceleration (G)						Acceleration (G)					
Speed (mm/s)		0.3	0.5	0.7	1	0.3	0.5	0.3	0.5	0.7	1	0.3	0.5
0		80	70	65	60	19	19						
35		80	70	65	60	19	19						
70		80	70	65	60	19	19						
105		80	60	50	40	18	18						
140		50	30	20	15	12	10						
175		15				2							

■ Energy-saving Enabled Unit for payload is kg.

Lead 24

Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	18	9.5	3	
200	18	9.5	3	
420	10	5	1.5	
600	1			

Lead 16

Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	40	25	5	
140	40	25	5	
280	18	12	2	
420	1.5	1		

Lead 8

Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	50	30	17.5	
70	50	30	17.5	
140	50	30	7	
210	14	7	2	

Lead 4

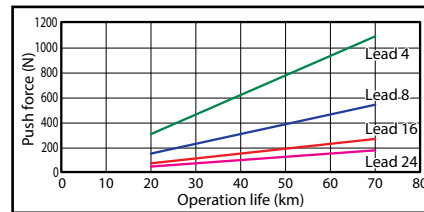
Orientation	Horizontal			Vertical
	Acceleration (G)			
Speed (mm/s)	0.3	0.7	0.3	
0	55	50	19	
35	55	50	19	
70	55	50	13	
105	30	15	2	

Stroke and maximum speed

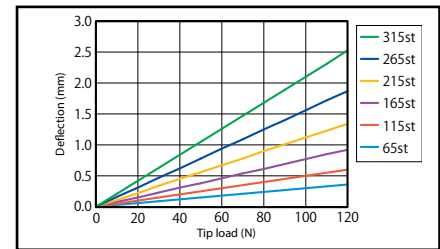
Lead (mm)	Energy-saving mode	65-315 (every 50mm)
24	Disabled	860<640>
	Enabled	630<420>
16	Disabled	700<560>
	Enabled	420<280>
8	Disabled	350
	Enabled	210
4	Disabled	175
	Enabled	105

(Unit is mm/s)

Correlation between push force and current limit value



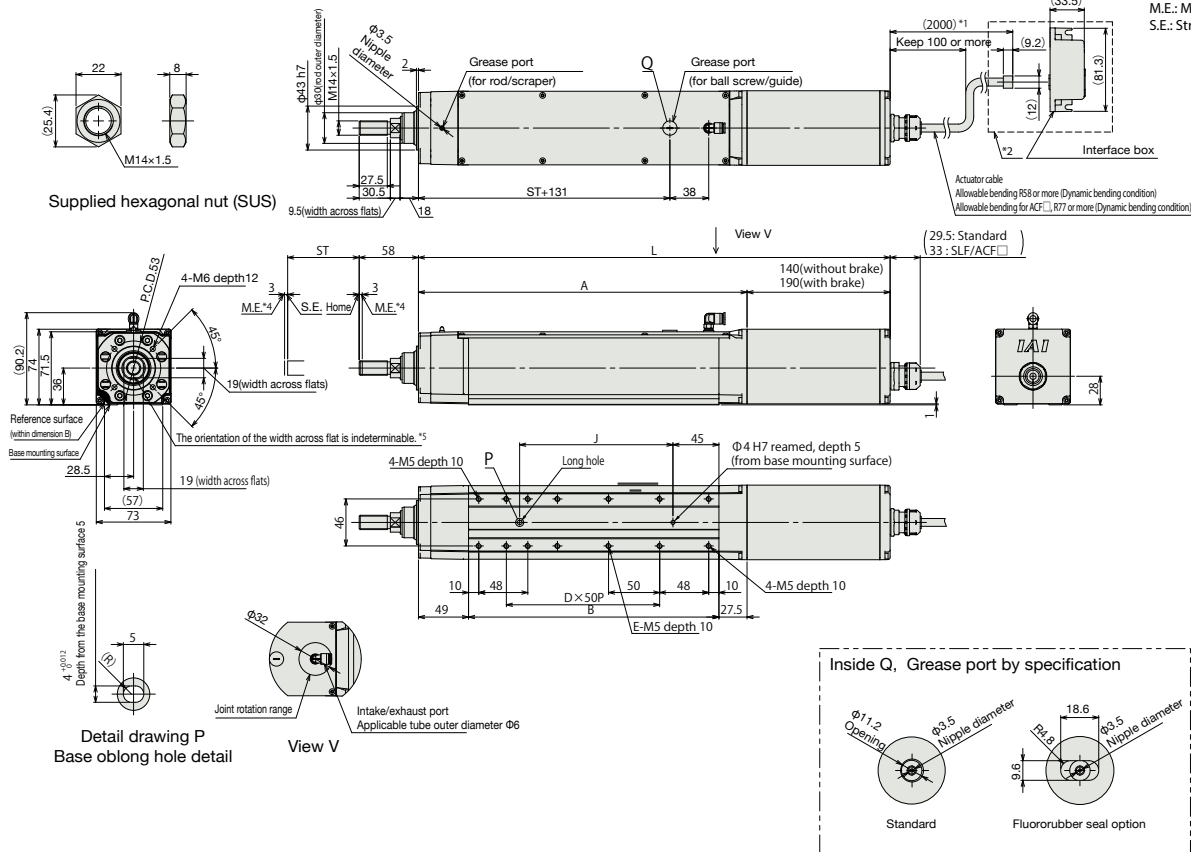
Rod deflection



Dimensions

- *1 A pigtail length of 5m is selectable as an option.
- *2 The connecting part of the interface box shown inside the broken line is not dust- and splash-proof treated.
- *3 Please select the actuator cable and power-I/O cable so that their total length is 10m or less.
- *4 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.
- *5 The direction of width across flats varies depending on the product. This flat cannot be used for reference plane.

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



ST: Stroke
M.E.: Mechanical end
S.E.: Stroke end

■ Dimensions by stroke

Stroke	65	115	165	215	265	315
L	Without brake	411.5	461.5	511.5	561.5	611.5
	With brake	461.5	511.5	561.5	611.5	661.5
A	271.5	321.5	371.5	421.5	471.5	521.5
B	195	245	295	345	395	445
D	2	3	4	5	6	7
E	4	6	8	10	12	14
J	100	150	200	250	300	350

■ Weight by Stroke

Stroke	65	115	165	215	265	315
Weight (kg)	Without brake	4.7	5.1	6.6	6.1	7
	With brake	5.3	5.7	6.2	6.6	7.1

Applicable controller

(Note) The EC series is equipped with a built-in controller. Please refer to P117 for details.