

Overview of ELECYLINDER® EC



Please check New products web page for latest information.

ecc.iai-america.com

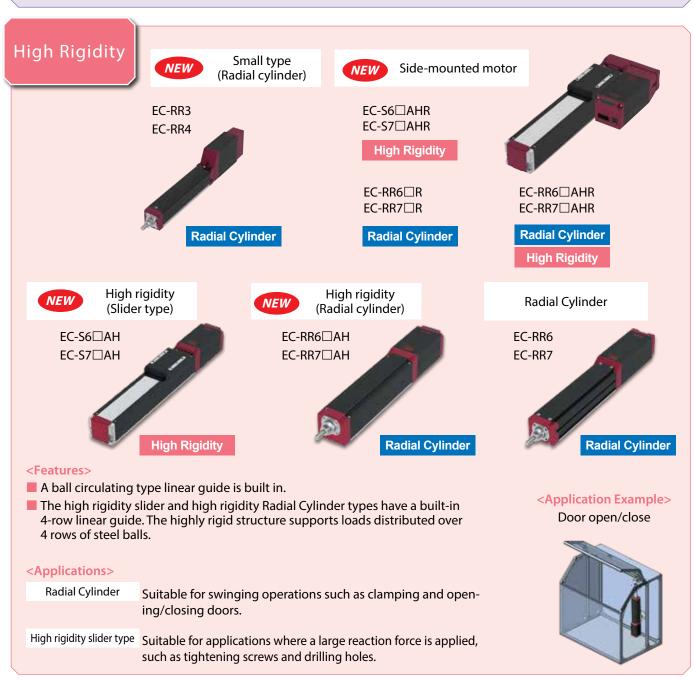


Simple & Wireless Operation



EC Product List











Small type

EC-S3

EC-S4

Slider type

EC-S6

EC-S7





Side-mounted motor

EC-S6□R





EC-R6 EC-R7



<Features>

- For the slider type, the slider on the top of the body operates in the same way as a slider type air cylinder.
- For the rod type, the rod operates in the same way as a rod type air cylinder.

<Application Examples>

Slider type Transferring between conveyors

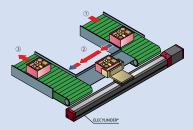




<Applications>

Slider type Suitable for transporting workpieces.

Rod type Suitable for pushing and lifting.



Compact

<Features>

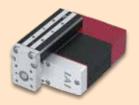
- For the slider type, the table on the top of the body operates.
- For the mini guided rod type, the rod operates.
- The use of a nut rotation mechanism reduces the size.

<Applications>

Suitable for conveying and pushing workpieces in narrow spaces.

Mini Table type

EC-TC4 EC-TW4



Mini Guided rod type



Immersed in water? No problem!

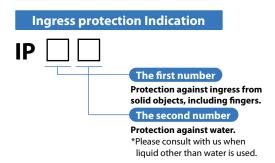
Splash-proof type Radial Cylinder



1. The ingress protection rating is IP67.

The Splash-proof structure prevents the ingress of water even when immersed, making it suitable for equipment such as food-related machines and washing machines which are exposed to violent splashes of water.

It can also be used in an environment where oil mist is present around processing machines.



Description of protection rating

IP67	Solid objects	:	Completely protected from ingress by dust or solid particles.
	Water	:	No ingression by water, even when immersed.

2. Fluororubber seal option is added as an option.

A fluororubber seal, which has excellent resistance against cutting oil and cleaning fluid, is added as an option to be used for O-rings and gaskets. (Option code: SLF)

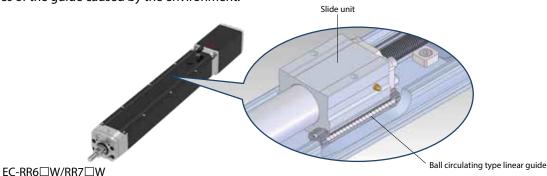
The Radial Cylinder can be used near machine tools where oil mist scatters.

<Application Example>
Processing machine door open/close



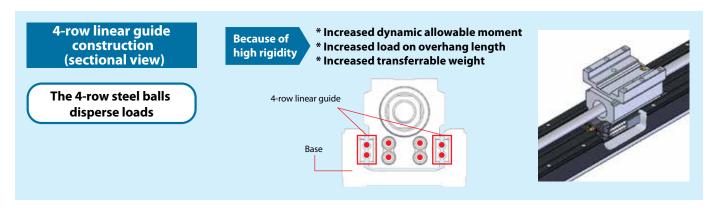
3. Equipped with a guide.

A ball circulating type built-in linear guide is equipped in the rod. The guide part is protected by the water-proof construction, elimination troubles of the guide caused by the environment.

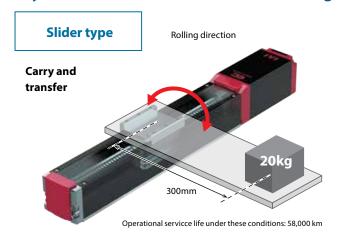


Increased rigidity thanks to the 4-row guide

High Rigidity ELECYLINDER®



 ${\bf 1.}$ Dynamic allowable moment is 3.5 times greater than that of the conventional products.





Specifications

	S6□AH	S7□AH
Maximum stroke	800mm	800mm
Maximum payload (horizontal)	40kg	51kg
Dynamic allowable moment (rolling direction)	Mc 55N∙m	Mc 134N∙m

2. Dynamic allowable radial load at the rod tip is 2.8 times greater than that of the conventional products.



EC-RR6□AH ▶P71	
EC-RR7□AH ▶P73	

Specifications

Longest stroke	400mm	500mm
Dynamic allowable radial load at the rod tip *	130N	170N

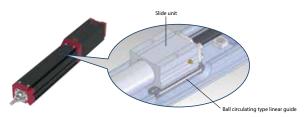
^{*} Assuming a basic rated service life of 5,000km. (Note) Please confirm the conditions specified on P107 before use.

Radial load can be applied without an external guide!

Radial Cylinder®

1. Includes a built-in guide.

The radial cylinder is equipped with a built-in ball circulating type linear guide in the rod body. No external guide is required, as both radial loads and eccentric loads can be applied.





(1) There is no tip runout.

Since it has a built-in linear guide and the rod is supported by the guide, there is no runout to the tip.

(2) It can be used in narrow spaces.

Since there is no need for an external guide, it can be used even in narrow spaces to save overall space.

The theoretical operation life of the 315mm stroke Radial Cylinder, with a load of 2.9kg applied to the rod tip, is 4,770km.

When the load on rod tip is halved, the theoretical service life increases 8-fold.



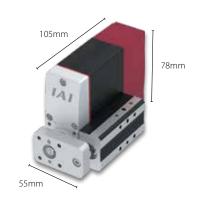
23.09 million cycles (when moving 315mm)

Palm size

Mini ELECYLINDER®

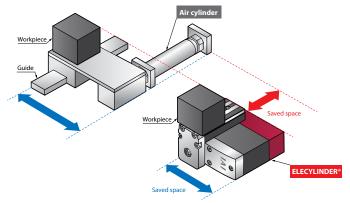
1. It can be used in narrow spaces.

- (1) The use of a nut rotation mechanism reduces the size.
- (2) Even with a built-in controller, the size is a compact $55 \text{mm} \times 105 \text{mm} \times 78 \text{mm}$.



2. As it has a guide, no external guide is required.

- (1) The guide design process can be eliminated.
- (2) It helps save space.



Body widths 35mm and 44mm are now available!

Compact slider Compact Radial Cylinder



1. Compact and lightweight

The body width is only 35mm wide thanks to the built-in controller.

The main unit weight is reduced by 58%, compared to our conventional model with the same stroke.



2. Mounting direction of the motor and controller unit is selectable.

The direction of the motor and controller unit can be selected according to the application (See P105).

Retrofit changes of the mounting direction are also possible.

Motor side-mounted type is added as standard!

Motor side-mounted specification



1. The overall length has been shortened.

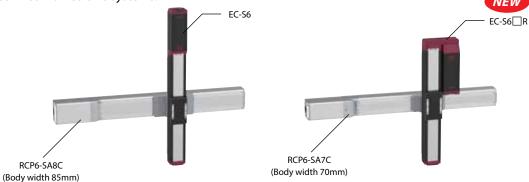
The overall length has been shortened by up to 133.5mm, allowing a smaller installation space in the longitudinal direction.



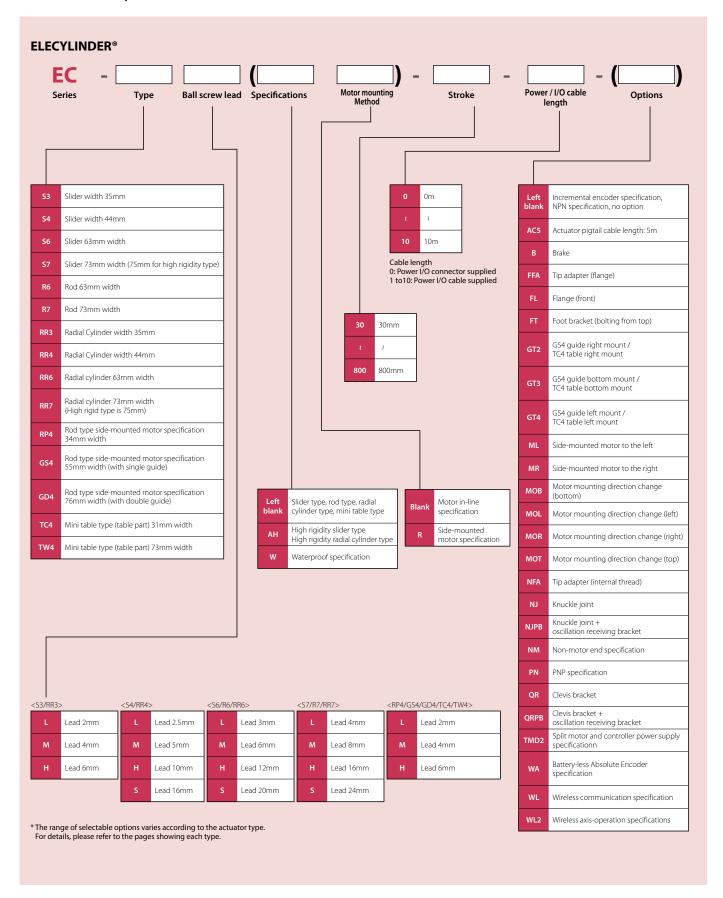
2. No extra space for maintenance is necessary. A maintenance space required for the straight type is no longer necessary, providing wider options for equipment layout within the facility. Not necessary

3. Compact combination possible

The shorter overall length results in a shorter overhang length, which allows more compact axes to be used in combined axis systems.



Model Specification Items



Product List

Slider Type

 $\mbox{\ensuremath{^{*}}}$ Speed limitation applies to push motion. See the manual or contact IAI.

		5	Body width	Lead	Positioning	Stroke	Max. speed	Max. push	Max. payload (kg)	
Spec	Туре	External view	(mm)	(mm)	repeatability (mm)	(mm)	(mm/s)	force (N)*	Horizontal	Vertical
			35	6			420	45	3.5	1.5
	S3			4	±0.05	50 to 300 (per 50st)	280	68	6	2.5
			35mm	2			140	136	9	3.5
			44	16			800	41	7	1.5
	S4			10	±0.05	50 to 300	700	66	12	2.5
Coupled Motor	34			5	±0.05	(per 50st)	350	132	15	5
			44mm	2.5			175 <150>	263	18	6.5
	S6	3	63	20			800	67	15	1
				12	±0.05	50 to 400 (per 50st)	700	112	26	2.5
				6			450	224	32	6
			63mm	3			225	449	40	12.5
	S 7	3	73	24		50 to 500 (per 50st)	860	139	37	3
				16	±0.05		700	209	46	8
	3,			8	20.03		420	418	51	16
			73mm	4			210 <175>	836	51	19
			63	20			800	67	15	1
	S6□R			12	±0.05	50 to 400	700	112	26	2.5
	30⊔K			6	±0.03	(per 50st)	450 <400>	224	32	6
Motor side-			63mm	3			225	449	40	12.5
mounted specification			73	24			860	139	37	3
,				16		50 to 500	700	209	46	8
	S7□R		73	8	±0.05	(per 50st)	420 <350>	418	51	16
			73mm	4			190 <175>	836	51	19

Figures in < > represent vertical operations.

High Rigidity Slider Type

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

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Smar	Type	External view	Body width	Lead	Positioning repeatability	Stroke	Max. speed	Max. push	Max. pay	load (kg)
Spec	туре	External view	(mm)	(mm)	(mm)	(mm)	(mm/s)	force (N)*	Horizontal	Vertical
			63	20		50 to 800 (per 50st)	1440 <1280>	67	15	1
	S6□AH	19		12	±0.05		900	112	26	2.5
	30ШАП			6			450	224	32	6
Coupled Motor			63mm	3			225	449	40	16
Coupled Motor	S7□AH		75	24			1230	139	37	3
		19	8	16	±0.05	50 to 800 (per 50st)	980 <840>	209	46	8
	37∟АП			8			420	418	51	16
			75mm	4			210 <175>	836	51	25
		1	63	20	±0.05	50 to 800 (per 50st)	1120	67	15	1
	S6 AHR			12			900 <800>	112	26	2.5
	30_AHN			6			450 <400>	224	32	6
Motor side- mounted			63mm	3			225	449	40	16
specification			75	24			1080 <860>	139	37	3
	S7 AHR			16	±0.05	50 to 800	840 < 700 >	209	46	8
S	эл <u></u> АПК		No.	8	±0.05	(per 50st)	420 <350>	418	51	16
			75mm	4			190 <175>	836	51	25

* Please refer to the IAI website for new products.

Product List

Mini Rod Type / Rod Type

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

C	Type	External view	Body width	Lead	Positioning	Stroke	Max. speed	Max. push	Max. payload (kg)	
Spec	туре	External view	(mm)	(mm)	repeatability (mm)	(mm)	(mm/s)	force (N)*	Horizontal	Vertical
			34 (A)	6		30, 50	300	30	2.5	1
	RP4		82	4	±0.05		200	45	4	1.5
		20	34mm	2			100	90	8	2.5
Motor side-	GS4		55 [[A]]	6		±0.05 30,50	300	30	2.5	1
mounted specification			2	4	±0.05		200	45	4	1.5
specification			55mm	2			100	90	8	2.5
	GD4		76 UAU	6			300	30	2.5	1
				4	±0.05	30, 50	200	45	4	1.5
			76mm	2			100	90	8	2.5
		<u> </u>	63	20			800	67	6	1.5
	R6			12	±0.05	50 to 300	700	112	25	4
	NO			6	±0.05	(per 50st)	450	224	40	10
Coupled Motor		NV .	63mm	3			225	449	60	12.5
Coupled Motor			73	24			860 (640)	182	20	3
	R7		\$ 6	16	±0.05	50 to 300	700 (560)	273	50	8
	117	37.00		8	±0.03	(per 50st)	350	547	60	18
		AN CONTRACTOR OF THE PARTY OF T	73mm	4			175	1094	80	19

Figures in < > represent vertical operations.

Radial Cylinder

 $\ensuremath{^*}$ Speed limitation applies to push motion. See the manual or contact IAI.

Spac	Turno	External view	Body width	Lead	Positioning repeatability	Stroke	Max. speed	Max. push	Max. payl	load (kg)
Spec	Type	External view	(mm)	(mm)	(mm)	(mm)	(mm/s)	force (N)*	Horizontal	Vertical
			35	6			420	45	9	1.5
	RR3			4	±0.05	±0.05 50 to 300 (per 50st)	280	68	14	2.5
			35mm	2			140	136	18	3.5
			44	16	±0.05		800	41	7	1.5
	RR4			10		50 to 300	700	66	16	2.5
	KK4			5		(per 50st)	350	132	25	5
		No.	44mm	2.5			175 <150>	263	35	6.5
Coupled Motor	RR6		_ 63 _	20			800	67	6	1.5
				12	±0.05	65 to 315 (per 50st)	700	112	25	4
				6			450	224	40	10
			63mm	3			225	449	60	12.5
	RR7		2 73	24	±0.05	65 to 315 (per 50st)	860 < 640 >	182	20	3
				16			700 <560>	273	50	8
				8			350	547	60	18
			73mm	4			175	1094	80	19
			_ 63 _	20			800	67	6	1.5
	RR6⊡R			12	±0.05	65 to 315	700	112	25	4
	nno⊡n			6	±0.05	(per 50st)	450	224	40	10
Motor side- mounted			63mm	3			225	449	60	12.5
specification			73 4	24			860 <640>	182	20	3
	RR7⊡R			16	±0.05	65 to 315	700 <560>	273	50	8
	NN/K			8	±0.03	(per 50st)	320 <280>	547	60	18
			73mm	4			160 <140>	1094	80	19

 $\label{eq:Figures} \textit{Figures in} < > \textit{represent vertical operations}.$

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High Rigidity Radial Cylinder

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Spec	Type	External view	Body width	Lead	Positioning repeatability	Stroke	Max. speed	Max. push	Max. pay	load (kg)
	.,,,,,		(mm)	(mm)	mm) (mm)	(mm)	(mm/s)	force (N)*	Horizontal	Vertical
			63	20	±0.05	50 to 400 (per 50st)	800	67	6	1.5
	RR6□AH			12			700	112	25	4
	MODAII			6			450	224	40	10
Coupled			63mm	3			225	449	60	20
motor	RR7□AH		75	24		50 to 500 (per 50st)	860 <640>	182	20	3
				16	±0.05		700 <560>	273	50	8
	кк/⊔АП			8			350	547	60	18
			75mm	4			175	1094	80	28
			 • 63 	20	±0.05	50 to 400 (per 50st)	800	67	6	1.5
	RR6□AHR			12			700	112	25	4
	кко⊔апк			6			450	224	40	10
Motor side- mounted			63mm	3			225	449	60	20
specification			75	24			860 <640>	182	20	3
	RR7□AHR			16	±0.05	50 to 500	640 <560>	273	50	8
	кк/ ⊔АПК			8	±0.05	(per 50st)	320 <280>	547	60	18
			75mm	4			150 <140>	1094	80	28

Figures in < > represent vertical operations

Mini Table type

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

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Spec	Туре	External view	Body width (mm)	Lead (mm)	Positioning repeatability (mm)	Stroke (mm)	Max. speed (mm/s)	Max. push force (N)*	Max. pay	load (kg) Vertical	
		///	78	6			300	30	2.5	1	
	TC4			4	±0.05	30, 50	200	45	4	1.5	
Motor side- mounted			78mm	2			100	90	8	2.5	
specification			78	6			300	30	2.5	1	
	TW4		5 (.	4	±0.05	30, 50	200	45	4	1.5	
			78mm	2			100	90	8	2.5	

Splash-proof type

Figures in < > represent vertical operations

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

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Spec	Type	External view	Body width	Lead	Positioning repeatability	Stroke	Max. speed	Max. push	Max. pay	load (kg)
эрсс	1,700	External view	(mm)	(mm)	(mm)	(mm)	(mm/s)	force (N)*	Horizontal	Vertical
			63	20			800	67	6	1.5
	R6□W	A Total	4	12	±0.05	50 to 300 (per 50st)	700	112	25	4
	KO□ W	all		6			450	224	40	10
Coupled motor			63mm	3			225	449	60	12.5
Coupled motor			73	24		50 to 300 (per 50st)	860 <640>	182	20	3
	R7□W			16	±0.05		700 <560>	273	50	8
	K7⊔W			8			350	547	60	18
		(A)	73mm	4			175	1094	80	19
		50	63	20	±0.05	65 to 315 (per 50st)	800	67	6	1.5
	RR6□W			12			700	112	25	4
	KKO□W			6			450	224	40	10
Carreladuantas			63mm	3			225	449	60	12.5
Coupled motor		A	73	24			860 <640>	182	20	3
	RR7□W			16	±0.05	65 to 315	700 <560>	273	50	8
	NN/□W			8	±0.05	(per 50st)	350	547	60	18
		50	73mm	4			175	1094	80	19
								Figures in <	> represent vert	cal operations

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