

# Mini ROBO Cylinder

RCP3 RCA2 RCS2 RCL



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Category	Туре		Title / Ex	ternal view	Mo Series Name	odel Type name	Actuator width	Maximum payload (horizontal)	Reference Page
						TCA3NA	32mm	3kg	→P.71
		Compa	t type		RCA2	TCA4NA	36mm	6kg	→P.73
					RCS2	TCA5N	48mm	20kg	→P.75
					RCA2	TWA3NA	50mm	3kg	→P.77
	Short Length type	Wide ty	pe			TWA4NA	58mm	6kg	→P.79
					RCS2	TWA5N	80mm	20kg	→P.81
					RCA2	TFA3NA	61mm	3kg	→P.83
[able		Flat typ	e			TFA4NA	71mm	6kg	→P.85
Table type		. iac typ			RCS2	TFA5N	95mm	20kg	→P.87
Ф					RCP3	TA3C	36mm	2kg	→P.89
					NCF3	TA4C	40mm	3kg	→P.91
	Motor Unit type	Couplin	g type		RCA2	TA4C	40mm	3kg	→P.93
					RCP3	TA3R	72mm	2kg	→P.95
						TA4R	81mm	3kg	→P.97
		Side-Mo Motor t			RCA2	TA4R	81mm	3kg	→P.99
						SA1L	20mm	0.5kg	→P.101
		Slim typ	oe .			SA2L	24mm	1kg	→P.103
						SA3L	28mm	2kg	→P.105
						SA4L	40mm	0.8kg	→P.107
Line	Micro Slider	<u></u>	Single slider	9	RCL	SA5L	48mm	1.6kg	→P.111
ar se		ng Str				SA6L	58mm	3.2kg	→P.115
Linear servo type		Long Stroke type		N. N		SM4L	40mm	0.8kg	→P.109
type		pe	Multi-slider			SM5L	48mm	1.6kg	→P.113
						SM6L	58mm	3.2kg	→P.117
						RA1L	ø16mm	0.5kg	→P.119
	Micro Cylinder	Slim ty	pe		RCL	RA2L	ø20mm	1kg	→P.121
				50		RA3L	ø25mm	2kg	→P.123
		PMEC//	AMEC						<b>√</b> D 121
		Contro							→P.131
Con	troller	PSEP/A Contro							→P.141
		SCON-0 Contro							→P.157

# The compact, next-generation electric actuator

# Mini ROBO Cylinder





# **Mini ROBO Cylinder (space-saving)**

The Mini ROBO Cylinder is an achievement in small electromechanical cylinders. It incorporates a newly developed motor, and its significantly reduced length, width and height make it comparable in size to air cylinders. The Mini ROBO Cylinder is the perfect replacement for air cylinders in systems that previously could only use air cylinders due to size constraints.

The Mini Table Compact type RCA2-TCA3NA has dimensions smaller than a business card.



# Shaped like an air cylinder and easy to use

The Mini ROBO Cylinder is available in shapes similar to air cylinders.

Users accustomed to the operation of pneumatic systems are able to use the new ROBO Cylinder effortlessly.

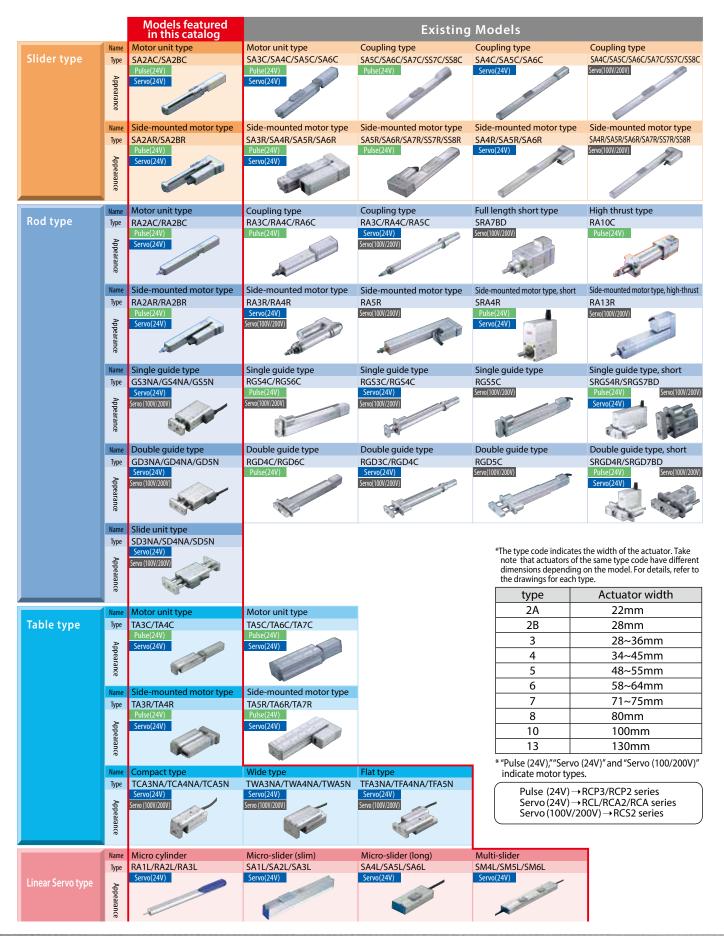


# **Expanded Variations**

New models have been added, including slim types with contracted actuator width and high-payload, long-stroke types of 46 mm in actuator width, to support greater applications.



## <List of existing ROBO Cylinder models and new ROBO Cylinder models>



# Mini Slider type

#### The slider on the main body moves back and forth until it is positioned.

Features

- The motor can easily perform switching operations for the unit model.
- Select from Side-Mounted Motor type with a reduced total length and Slim Straight type (Coupling type).

Usage

Used for jig and workpiece positioning, table travel, etc



Motor Unit Coupling type

Side-Mounted Motor type

# Mini Rod type

The rod extends and retracts from the main body, gets into position and presses.

Features

- Select from Slim Motor Unit types and Short Length types having greatly reduced overall length.
- Select from Guide types with highly rigid/linear built-in guides and those without guides having drastically miniaturized main body sizes.

Usage

Used for raising/lowering products and jigs, pushing, clamping, etc.

Short Length, Double-Guide Free Mount type









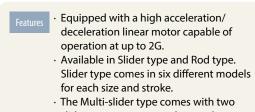




Micro Slider



# Mini Linear Servo type



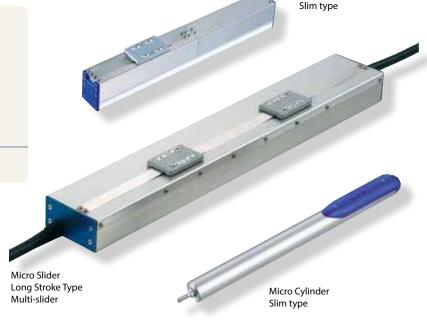
High speed, lightweight parts transfer.

 The Multi-slider type comes with two sliders on one actuator that can be independently operated.

Usage

Used for transfers requiring short cycle times, etc.





Product Features LINE UP

# **Specification Table**



Slide	r type														
Type	Title / External view	Мо	del	Encoder	Moto	r type	Feed	Lead	Rated thrust	Max. pay	load (kg)	Max.speed	Stroke	Positioning repeatability (mm)	Reference
туре	Title / External view	Series Name	Type name	Liicodei	Туре	Size	screw	(mm)	(N)	Horizontal	Vertical	(mm/s)	(mm)	repeatability (mm)	Pages
o u								4	_	0.25	_	200			
ਰ ਰ ਹ			SA2AC					2	_	0.5	_	100	25~100 (every 25)		P.17
6 6 0		RCP3			Pulse	20□	Lead	1	_	1		50		±0.05	
u G 6	Counting	IICI 3			motor		screw	6	_	0.25	_	300			
9	Coupling type		SA2BC					4	_	0.5	_	200	25~150 (every 25)		P.19
6 6								2	_	1	_	100	(0.0.) 20,		
,	Coupling type							4	21.4	0.5	0.25	200			
oto		RCA2	SA2AC	=	Servo motor	5W	Ball screw	2	42.3	1	0.5	100	25~100 (every 25)		P.25
Motor Unit model				Incremental				1	85.5	2	1	50	, ,		
i ii				rent				4	_	0.25	_	200			
log			SA2AR	<u>a</u>				2	_	0.5	_	100	25~100 (every 25)		P.21
<u>"</u>	11				Pulse	20□	Lead	1	_	1	_	50	(every 23)		
G	Side-Mounted	RCP3			motor	20□	screw	6	_	0.25	_	300		±0.05	
G 0	Side-Mounted		SA2BR					4	_	0.5	_	200	25~150		P.23
	Motor type							2	_	1	_	100	(every 25)		
				1				4	21.4	0.5	0.25	200			
u u		RCA2	SA2AR		Servo motor	5W	Ball screw	2	42.3	1	0.5	100	25~100 (every 25)	±0.02	P.27
9					1110101		SCICVV	1	85.5	2	1	50	(2.0.) 20)		

Min	Rod type														
Туре	Title / External view	Мо	del	Encoder	Moto	r type	Feed		Rated thrust	Max. pay		Max.speed	Stroke	Positioning repeatability (mm)	Reference
Туре	Title / External view	Series Name	Type name	Liicodci	Туре	Size	screw	(mm)	(N)	Horizontal		(mm/s)	(mm)	(mm)	Pages
0 0							Lead	4	_	0.25	0.125	200			
							screw	2	_	0.5	0.25	100		±0.05	
						20□		1	_	1	0.5	50			
9								2	_	0.5	0.2	200	25~100		
8			RA2AC					1	_	1 2	0.375	100 50	(every 25)		P.29
							Ball screw	4		1	0.75	200		±0.02	
						20□ High		2		2	0.525	100			
-						thrust		1	_	4	1.25	50			
Motor Unit model	Coupling type			_				6	_	0.25	0.125	300			
ا ع	Coupling	RCP3		Incremental			Lead	4	_	0.5	0.25	200		±0.05	
n <u>i</u> t	type			me e			screw	2	_	1	0.5	100		20.03	
B	1,960			ntal	Pulse	20□		6	_	0.5	0.2	300			
de					motor			4	_	1	0.375	200			
_			RA2BC					2	_	2	0.75	100	25~150 (every 25)		P.31
	<b>A</b>						Ball	1	_	4	1.5	50			
						200	screw	6	_	1	0.325	300		±0.02	
						20□ High		4	_	2	0.625	200			
						thrust		2	_	4	1.25	100			
								1	_	8	2.5	50			
					Servo		Ball	4	21.4	0.5	0.25	200	25~100		
		RCA2	RA2AC		motor	5W	screw	2	42.3	1	0.5	100	(every 25)	±0.02	P.37
								1	85.5	2	1	50			

#### ■ Skillful use of the "Lead Screw" type

- (1) Lead screws are suitable for uses with infrequent operations. (As a guide, this would be approximately 5 years, for 1 operation every 10 seconds, 24-hour use, 240 days a year.)
- (2) Lead screws are suitable for uses with small payloads, light loads. (1kg or less)
- (3) Use when repeated positioning accuracy of less than  $\pm 0.05$ mm is needed.
- (4) Please set up in a location where maintenance will be easy.

Rod		Mo	odel		Motor typ	oe .	Eood	Lead	Rated thrust	Max. pay	load (ka)	Max.speed	Stroke	Positioning	Reference
Type	Title / External view	Series Name	Type name	Encoder	Type	Size	Feed screw	(mm)	(N)	Horizontal	Vertical	(mm/s)	(mm)	Positioning repeatability (mm)	Pages
							1	4	_	0.25	0.125	200			
							Lead screw	2	_	0.5	0.25	100		±0.05	
						20□		1	_	1	0.5	50			
			DADAD					4	_	0.5	0.2	200	25~100		
			RA2AR					1	_	1	0.375	100	(every 25)		P.33
							Ball screw	4	_	2	0.75	50 200		±0.02	
	11					20□		2		2	0.525	100			
	200				Pulse	High thrust		1	_	4	1.25	50			
_≥	32.2	RCP3			motor			6	_	0.25	0.125	300			
Motor Unit model		NCP3		=			Lead screw	4	_	0.5	0.25	200		±0.05	
Ì	Side-Mounted			Incremental				2	_	1	0.5	100			
lit n	Motor type			nent		20□		6	_	0.5	0.2	300			
рог	Motor type		DAODD	<u>a</u>				4	_	1	0.375	200	25~150		
<u>e</u>	30		RA2BR					2	_	2	0.75	100	(every 25)		P.33
							Ball screw	1 6	_	1	1.5 0.325	50 300		±0.02	
						20□		4		2	0.525	200			
						High thrust		2	_	4	1.25	100			
								1	_	8	2.5	50			
								4	21.4	0.5	0.25	200			
		RCA2	RA2AR		Servo motor	5W	Ball screw	2	42.3	1	0.5	100	25~100 (every 25)	±0.02	P.39
					motor			1	85.5	2	1	50	(CVCI y 23)		
								4	25.1	0.25	0.125	200			
							Lead screw	2	50.3	0.5	0.25	100		±0.05	
			RN3NA			10W		1	100.5	1	0.5	50	30 50		P. 4
							Ball	2	42.7	0.75	0.25	200	50	+0.03	
					Servo		screw	1	85.5 170.9	1.5	0.5	100 50		±0.02	
	Fixed Nut type	RCA2			motor (24V)			6	19.9	0.25	0.125	220			
	Fixed Nut				(247)		Lead screw	4	29.8	0.5	0.25	200		±0.05	
	type		B			2014/	SCIEW	2	59.7	1	0.5	100	30		P.43
			RN4NA			20W	Ball	6	33.8	2	0.5	270(220)	50		P. 4
							screw	4	50.7	3	0.75	200		±0.02	
S								2	101.5	6	1.5	100			
hor				_	Servo	60144	Ball	10	89	5	1.5	380 (330)	50	+0.03	D 4
tLe		RCS2	RN5N	ncre	motor (200V)	60W	screw	5	178	10	3	250	75	±0.02	P.4
Short Length t				Incrementa	<u> </u>			2.5 4	356 25.1	20 0.25	6 0.125	125 200			
hty				ntal			Lead	2	50.3	0.23	0.123	100		±0.05	
уре							screw	1	100.5	1	0.5	50	30		
			RP3NA			10W	D. II	4	42.7	0.75	0.25	200	50		P.4
							Ball screw	2	85.5	1.5	0.5	100		±0.02	
		RCA2			Servo motor			1	170.9	3	1	50			
		I III I			(24V)		Lead	6	19.9	0.25	0.125	220			
	Tapped Hole						screw	4	29.8	0.5	0.25	200	20	±0.05	
	type		RP4NA			20W		2	59.7	1	0.5	100	30 50		P.4
	Tapped Hole type			ĺ	1	1	Rall	6	33.8	2	0.5	270(220)	50	1	
	type						Dali	1	50.7	2	0.75	200		+0.02	
	type						Ball screw	4	50.7	3	0.75	200		±0.02	
	type				Carro			2	101.5	6	1.5	100		±0.02	
	type	RCS2	RP5N		Servo motor (200V)	60W	screw Ball screw						50 75	±0.02	P.5

\*The value inside < > indicates vertical usage.

Product Features LINE UP

# **Specification Table**



_		Mo	del	Farad	Moto	r type	Feed	Lead	Rated thrust	Max. pay	/load (kg)	Max.speed	Stroke	Positioning	Refere
Type	Title / External view	Series Name	Type name	Encoder	Type	Size	screw	(mm)	(N)	Horizontal	Vertical	(mm/s)	(mm)	Positioning repeatability (mm)	Pag
								4	25.1	0.25	0.125	200			
							Lead	2	50.3	0.5	0.25	100		±0.05	
							screw	1	100.5	1	0.5	50	30		
			GS3NA			10W		4	42.7	0.75	0.25	200	50		P.
							Ball	2	85.5	1.5	0.5	100		±0.02	
		RCA2			Servo		screw	1	170.9	3	1	50			
	Single-Guide	NCA2			motor (24V)			6	19.9	0.25	0.125	220			
	type type				(=,		Lead screw	4	29.8	0.5	0.25	200		±0.05	
	type		GS4NA			20W	Sciew	2	59.7	1	0.5	100	30		P
	<b>~</b> \$1		GS4NA			2000	D. II	6	33.8	2	0.5	270(220)	50		ļ '
							Ball screw	4	50.7	3	0.75	200		±0.02	
								2	101.5	6	1.5	100			
					Servo		Ball	10	89	5	1.5	380(330)	50		
		RCS2	GS5N		motor	60W	screw	5	178	10	3	250	75	±0.02	I
				1	(200V)			2.5	356	20	6	125			
								4	25.1	0.25	0.125	200			
							Lead screw	2	50.3	0.5	0.25	100		±0.05	
			GD3NA			10W		1	100.5	1	0.5	50	30		۱
			0001111					4	42.7	0.75	0.25	200	50		
۲S							Ball screw	2	85.5	1.5	0.5	100		±0.02	
Short Length type		RCA2		<del> </del>	Servo motor			1	170.9	3	1	50			
Ler	Deuble Colds			Incremental	(24V)		Lead	6	19.9	0.25	0.125	220			
ğ	Double-Guide type			ner			screw	4	29.8	0.5	0.25	200		±0.05	
Į.	type		GD4NA	<u>a</u>		20W		2	59.7	1	0.5	100	30		1
pe							Ball	6	33.8	2	0.5	270(220)	50		
							screw	4	50.7	3	0.75	200		±0.02	
				-				10	101.5	6	1.5	100			
		RCS2	GD5N		Servo	60W	Ball	5	89	5 10	1.5	380(330)	50	±0.02	F
		IIC32	אוכטט		motor (200V)	0011	screw	2.5	178 356	20	6	250 125	75	10.02	ļ '
				1	<del>                                     </del>			4	25.1	0.25	0.125	200			
							Lead	2	50.3	0.25	0.125	100		±0.05	
							screw	1	100.5	1	0.23	50	25		
			SD3NA			10W		4	42.7	0.75	0.25	200	50		1
							Ball	2	85.5	1.5	0.5	100		±0.02	
					Servo		screw	1	170.9	3	1	50			
	Double-Guide	RCA2		1	motor			6	19.9	0.25	0.125	300			
	Slide Unit type				(24V)		Lead	4	29.8	0.5	0.25	200		±0.05	
							screw	2	59.7	1	0.5	100	25		
			SD4NA			20W		6	33.8	2	0.5	300	50 75		
							Ball	4	50.7	3	0.75	200	/3	±0.02	
							screw	2	101.5	6	1.5	100			
				1	C 0			10	89	5	1.5	380(330)			
		RCS2	SD5N		Servo	60W	Ball screw	5	178	10	3	250	50	±0.02	F
			1	1	(200V)	1	r screw				<u> </u>		75	I	1

\*The value inside <> indicates vertical usage.

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**Product Features** 

#### ■ Skillful use of the "Lead Screw" type

- (1) Lead screws are suitable for uses with infrequent operations. (As a guide, this would be approximately 5 years, for 1 operation every 10 seconds, 24-hour use, 240 days a year.)
- (2) Lead screws are suitable for uses with small payloads, light loads. (1kg or less)
- (3) Use when repeated positioning accuracy of less than ±0.05mm is needed.
   (4) Please set up in a location where maintenance will be easy.

			140	del		Moto	r type				Max. pay	load (ka)			Doritionin	
Туре	Title / E	xternal view	Series Name	Type name	Encoder	Type	Size	Feed screw	Lead (mm)	Rated thrust (N)	Horizontal	Vertical	Max.speed (mm/s)	Stroke (mm)	Positioning repeatability (mm)	Refere Pag
				.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		.7F=			4	25.1	0.25	0.125	200		()	
								Lead	2	50.3	0.23	0.123	100		±0.05	
							1014/	screw	1	100.5	1	0.5	50	30		
				TCA3NA			10W		4	42.7	0.75	0.25	200	50		P.7
								Ball	2	85.5	1.5	0.5	100		±0.02	
		100	DCAO			Servo		screw	1	170.9	3	1	50			
			RCA2			motor (24V)			6	19.9	0.25	0.125	220			
	Compact type					(240)		Lead screw	4	29.8	0.5	0.25	200		±0.05	
		4					20W	SCIEW	2	59.7	1	0.5	100	30		P. 7
				TCA4NA			2000		6	33.8	2	0.5	270(220)	50		F
								Ball screw	4	50.7	3	0.75	200		±0.02	
									2	101.5	6	1.5	100			
					1	Servo			10	89	5	1.5	380(330)			
			RCS2	TCA5N		motor	60W	Ball screw	5	178	10	3	250	50 75	±0.02	P.
						(200V)		Jeie	2.5	356	20	6	125	73		
									4	25.1	0.25	0.125	200			
								Lead screw	2	50.3	0.5	0.25	100		±0.05	
				TWA3NA			10W		1	100.5	1	0.5	50	30		P.
				IWASINA					4	42.7	0.75	0.25	200	50		'
와								Ball screw	2	85.5	1.5	0.5	100		±0.02	
g			RCA2		=	Servo			1	170.9	3	1	50			
Short Length type			IIC/IZ		Incremental	motor (24V)		Lead	6	19.9	0.25	0.125	220			
g	Wide type				mer	` ´		screw	4	29.8	0.5	0.25	200		±0.05	
<u>,</u>				TWA4NA	ıtal		20W		2	59.7	1	0.5	100	30		P.
/pe				1407(114)(				Ball	6	33.8	2	0.5	270(220)	50		ľ
								screw	4	50.7	3	0.75	200		±0.02	
									2	101.5	6	1.5	100			
						Servo		Ball	10	89	5	1.5	380(330)	50		
			RCS2	TWA5N		motor	60W	screw	5	178	10	3	250	75	±0.02	P
						(200V)			2.5	356	20	6	125			
					-							0.125	200			
								Lead	4	25.1	0.25					
								Lead screw	2	50.3	0.5	0.25	100	20	±0.05	
				TFA3NA			10W		2	50.3 100.5	0.5 1	0.25 0.5	50	30	±0.05	P
				TFA3NA			10W	screw	2 1 4	50.3 100.5 42.7	0.5 1 0.75	0.25 0.5 0.25	50 200	30 50		P.
				TFA3NA			10W		2 1 4 2	50.3 100.5 42.7 85.5	0.5 1 0.75 1.5	0.25 0.5 0.25 0.5	50 200 100		±0.05	P.
			RCA2	TFA3NA		Servo motor	10W	screw Ball	2 1 4 2	50.3 100.5 42.7 85.5 170.9	0.5 1 0.75 1.5 3	0.25 0.5 0.25 0.5	50 200 100 50			P.
	Elathora		RCA2	TFA3NA			10W	screw Ball	2 1 4 2 1 6	50.3 100.5 42.7 85.5 170.9	0.5 1 0.75 1.5 3 0.25	0.25 0.5 0.25 0.5 1 0.125	50 200 100 50 220		±0.02	- P.
	Flat type		RCA2	TFA3NA		motor	10W	Ball screw	2 1 4 2 1 6 4	50.3 100.5 42.7 85.5 170.9 19.9 29.8	0.5 1 0.75 1.5 3 0.25 0.5	0.25 0.5 0.25 0.5 1 0.125 0.25	50 200 100 50 220 200	50		P.
	Flat type		RCA2	TFA3NA		motor	10W	Ball screw Lead	2 1 4 2 1 6 4 2	50.3 100.5 42.7 85.5 170.9 19.9 29.8 59.7	0.5 1 0.75 1.5 3 0.25 0.5 1	0.25 0.5 0.25 0.5 1 0.125 0.25 0.5	50 200 100 50 220 200 100	30	±0.02	
	Flat type		RCA2			motor		Ball screw Lead screw	2 1 4 2 1 6 4 2 6	50.3 100.5 42.7 85.5 170.9 19.9 29.8 59.7 33.8	0.5 1 0.75 1.5 3 0.25 0.5 1	0.25 0.5 0.25 0.5 1 0.125 0.25 0.5 0.5	50 200 100 50 220 200 100 270(220)	50	±0.02	
	Flat type		RCA2			motor		Ball screw Lead screw	2 1 4 2 1 6 4 2 6 4	50.3 100.5 42.7 85.5 170.9 19.9 29.8 59.7 33.8 50.7	0.5 1 0.75 1.5 3 0.25 0.5 1 2	0.25 0.5 0.25 0.5 1 0.125 0.25 0.5 0.5 0.5 0.75	50 200 100 50 220 200 100 270(220) 200	30	±0.02	
	Flat type		RCA2			motor		Ball screw Lead screw	2 1 4 2 1 6 4 2 6 4 2 6	50.3 100.5 42.7 85.5 170.9 19.9 29.8 59.7 33.8 50.7 101.5	0.5 1 0.75 1.5 3 0.25 0.5 1 2 3 6	0.25 0.5 0.25 0.5 1 0.125 0.25 0.5 0.5 0.5 1.5	50 200 100 50 220 200 100 270(220) 200 100	30	±0.02	
	Flat type		RCA2			motor		Ball screw Lead screw	2 1 4 2 1 6 4 2 6 4	50.3 100.5 42.7 85.5 170.9 19.9 29.8 59.7 33.8 50.7	0.5 1 0.75 1.5 3 0.25 0.5 1 2	0.25 0.5 0.25 0.5 1 0.125 0.25 0.5 0.5 0.5 0.75	50 200 100 50 220 200 100 270(220) 200	30	±0.02	- P.

\*The value inside < > indicates vertical usage.

Product Features LINE UP

# **Specification Table**



Table	e type			W 20 30 31 31		00 00 00 00	X 30 30 31 X	X- 20 33 34	2 2 3 3 3	W 00 00 00 00	× 10 00 00 00				
T	Title / External view	Mo	del	Encoder	Moto	type	Feed	Lead	Rated thrust	Max. pay	load (kg)	Max.speed	Stroke	Positioning	Reference
Type	Title / External view	Series Name	Type name	Elicodei	Type	Size	screw	(mm)	(N)	Horizontal	Vertical	(mm/s)	(mm)	Positioning repeatability (mm)	Pages
4								6	-	~0.7	~0.3	300 (200)			
			TA3C			20□		4	-	~1.4	~0.6	200 (133)			P.89
G G E		DCD2			Pulse			2	-	~2	~1	100(67)			
	Coupling type	RCP3			motor			6	-	~1	~0.5	300			
	Coupling type		TA4C			28□	Ball screw	4	-	~2	~1	200			P.91
Q C	W.						SCICW	2	-	~3	~1.5	100			
3								6	-	1	0.5	300			
Motor Unit model		RCA2	TA4C	=	Servo motor	10W		4	-	2	1	200			P.93
Ç				Incremental	motor			2	-	3	1.5	100	20~100	±0.02	
lit n				men				6	-	~0.7	~0.3	300 (200)	(every 10)	±0.02	
ро			TA3R	tal		20□		4	-	~1.4	~0.6	200 (133)			P.95
<u>o</u>	~				Pulse			2	-	~2	~1	100(67)			
o G		RCP3			motor			6	-	~1	~0.5	300			
6 6	Side-Mounted Motor type		TA4R			28□	Ball	4	-	~2	~1	200			P.97
0 12 13	Motor type						screw	2	-	~3	~1.5	100			
				1				6	-	1	0.5	300			
e G		RCA2	TA4R		Servo	10W		4	-	2	1	200			P.99
		RCA2	2   fA4R		motor			2	-	3	1.5	100	-		

\*The value inside < > indicates vertical usage.

Linea	ır servo type														
Туре	Title / External view	Mo Series Name	del Type name	Encoder	Moto Type	r type Size	Feed screw	Lead (mm)	Rated thrust (N)	Max. pay Horizontal		Max.speed (mm/s)	Stroke (mm)	Positioning repeatability (mm)	Reference Pages
		Series Name	SA1L		Туре	2W		-	2	0.5	-	420	40	(mm)	P.101
	Slim type		SA2L			5W		-	4	1	-	460	48		P.103
			SA3L			10W		-	8	2	-	600	64		P.105
Mic			SA4L			2W		-	2.5	0.8	_	1200	30~180 (every 30)		P.107
Micro Slider		RCL	SM4L			2 4 4		-	2.3	0.8		1200	30~120 (every 30)		P.109
er	Long Stroke type		SA5L	Increr	Linear	5W	_	-	5	1.6	_	1400	36~216 (every 36)	±0.1	P.111
	type		SM5L	Incremental	motor	300	_	-	3	1.0		1400	36~144 (every 36)	10.1	P.113
			SA6L			10W		-	10	3.2	_	1600	48~288 (every 48)		P.115
			SM6L			1000		-	10	3.2	-	1600	48~192 (every 48)		P.117
Micr			RA1L			2W		-	2.5	0.5	0.1	300	25		P.119
Micro Cylinder	Slim type	RCL	RA2L			5W		-	5	1	0.2	340	30		P.121
nder			RA3L			10W		-	10	2	0.4	450	40		P.123

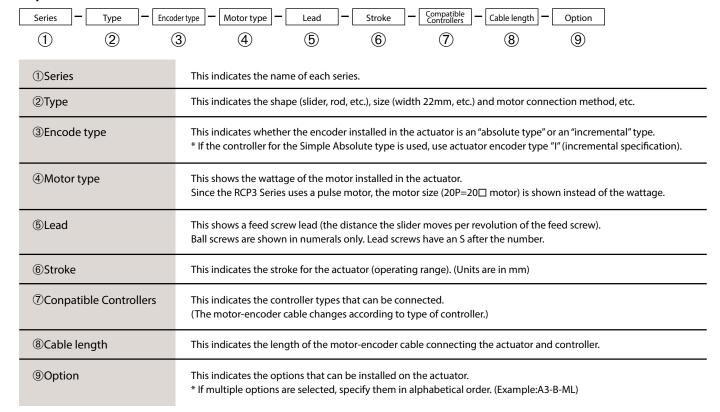
# **Model Descriptions**

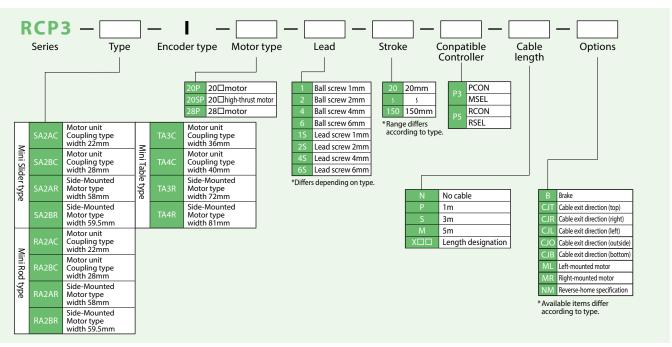


Models for each ROBO Cylinder series are designated by the items below.

See the explanations below for information on each item. The range of selections for each item (lead, stroke, etc.) varies by type, so refer to the page for each type for more information.

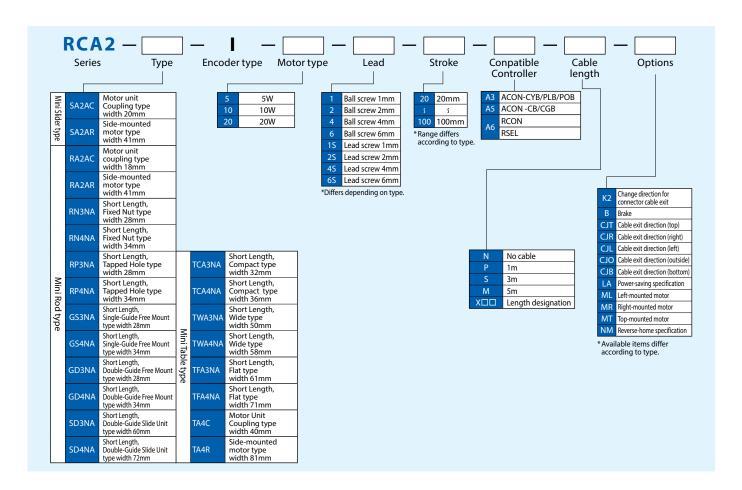
#### **Explanation of Items**

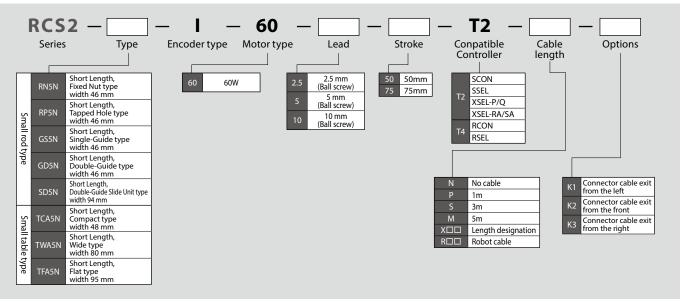


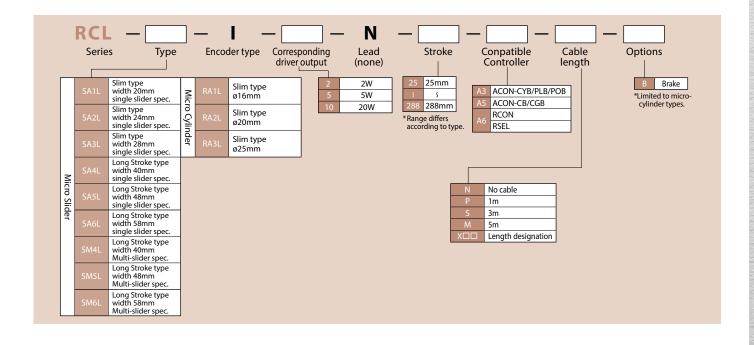


# **Model Descriptions**





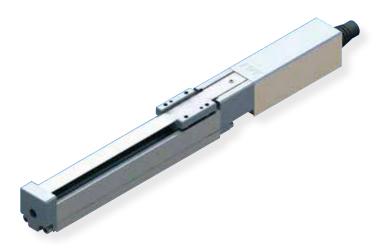




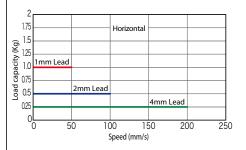
#### ■ Skillful use of the "Lead Screw" type

- (1) Lead screws are suitable for uses with infrequent operations. (As a guide, this would be approximately 5 years, for 1 operation every 10 seconds, 24-hour use, 240 days a year.)
- (2) Lead screws are suitable for uses with small payloads, light loads. (1kg or less)
- (3) Use when repeated positioning accuracy of less than  $\pm 0.05$ mm is needed.
- (4) Please set up in a location where maintenance will be easy.

**3-SA2AC** ROBO Cylinder Mini Slider Type Motor Unit Coupling Type Actuator Width 22mm Pulse Motor ■ Model Description RCP3 - SA2AC - I -20P Series Encoder type Motor type Lead Stroke Compatible controllers Option Cable length N: None P: 1 m S: 3 m NM: Reversed-home specification I: Incremental 20P: Pulse motor 25: 25mm P3: PCON specification 20□size 2S: Lead screw 2mm MSEL \* Model number is "I" when used with 1S: Lead screw 1mm 100: 100mm P5: RCON M: 5 m (every 25mm) RSEL X□□: Length Designation simple absolute unit. \* See page 14 for details on the model descriptions.



■ Correlation Diagrams of Speed and Load Capacity
With the RCP3 series, due to the characteristics of the
pulse motor, load capacity decreases as the speed
increases. Use the chart below to confirm that the
desired speed and load capacity requirements are met.





- (1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
- (2) Cannot be used in the horizontal orientation with the slider facing to the side or in the vertical orientation.
- (3) Service life decreases significantly if used in a dusty environment.

#### Actuator Specifications Table

#### ■ Leads and Payloads

	Model	Feed screw	Lead (mm)	Maximun	1	Positioning repeatability (mm)	Stroke			
		sciew	(111111)	Horizontal (kg)	Vertical (kg)	repeatability (IIIII)	(mm)			
	RCP3-SA2AC-I-20P-4S-①-②-③-④		4	0.25	_					
	RCP3-SA2AC-I-20P-2S-①-②-③-④	Lead screw	2	0.5	_	±0.05	25 to 100 (every 25mm)			
	RCP3-SA2AC-I-20P-1S-①-②-③-④		1	1	_		2311111)			
ľ	Legend ①Stroke ②Compatible Controllers ③Cable length ④Option									

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)
we	4	180	200
Lead screw	2	10	00
Le	1	5	0

(unit: mm/s)

#### ① Stroke list

① Stroke (mm)	Standard price
25	
50	
75	
100	_

#### ③Cable Length

Туре	Cable symbol	Standard price
Charada ad haraa	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(Nobol Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCP3 is the robot cable.

### **4** Options

Title	Option code	See page	Standard price
Reversed-home specification	NM	_	_

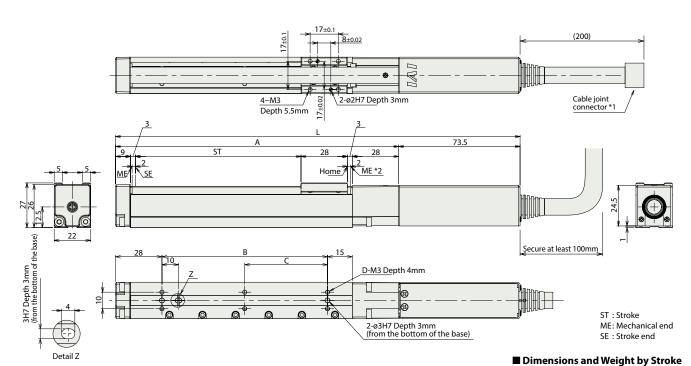
Actuator Specifications	
Item	Description
Drive System	Lead screw, ø4mm, rolled C10
Lost motion	0.3mm or less (initial value)
Base	Material: Aluminum, white alumite treated
Guide	Slide guide
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	10 million cycles

# Dimensional Drawings

## www.intelligentactuator.com



- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



Stroke	25	50	75	100
L	169.5	194.5	219.5	244.5
Α	96	121	146	171
В	25	50	75	100
С	0	0	0	50
D	4	4	4	6
Mass (kg)	0.25	0.27	0.29	0.3

#### Applicable Controllers

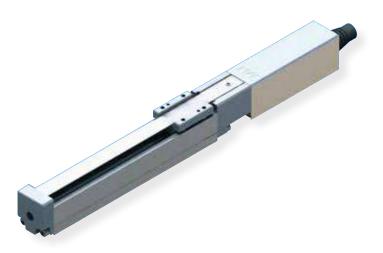
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. damed		D	Control method																
Name	External view	Max. number of connectable axes	Power supply voltage	Positioner	tioner Pulse- Program					Ne	etwor	k opti	on *1					Maximum number of positioning points	Reference page	
	VIEW	Connectable axes	voltage	rositionei	train	Fiografii	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1	20/05	● * Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information.
RCON	HOM TO.	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more imormation.
RSEL	Me i	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

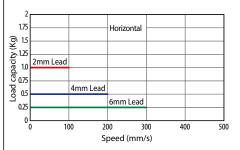
<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



ROBO Cylinder Mini Slider Type Motor Unit Coupling Type Actuator Width 28mm Pulse Motor ■ Model Description RCP3 - SA2BC - I**20P** Series **Encoder type** Motor type Lead Stroke Compatible controllers Cable length Type Option N: None P: 1 m S: 3 m M: 5 m l: Incremental specification NM: Reversed-home specification 20P: Pulse motor 6S: Lead screw 6mm 25: 25mm P3: PCON 20□size 4S: Lead screw 4mm MSEL P5: RCON \* Model number is "I" when used with 2S: Lead screw 2mm 150: 150mm (every 25mm) X□□: Length Designation simple absolute unit. \* See page 14 for details on the model descriptions.



■ Correlation Diagrams of Speed and Load Capacity With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.



Notes on

- (1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
- (2) Cannot be used in the horizontal orientation with the slider facing to the side or in the vertical orientation.
- (3) Service life decreases significantly if used in a dusty environment.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Feed	Lead	Maximum	n payload	Positioning	Stroke (mm)			
Model	screw	(mm)	Horizontal (kg)	Vertical (kg)	repeatability (mm)				
RCP3-SA2BC-I-20P-6S-1-2-3-4		6	0.25	_					
RCP3-SA2BC-I-20P-4S-①-②-③-④	Lead screw	4	0.5	-	±0.05	25 to 150 (every 25mm)			
RCP3-SA2BC-I-20P-2S-①-②-③-④		2	1	_					
legend 1 Stroke 2 Compatible Controllers	gend (1) Stroke (2) Compatible Controllers (3) Cable length (4) Option								

|--|

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)	75~150 (mm)
We	6	180	280	300
Lead screw	4	180	20	00
Leg	2		100	

(unit: mm/s)

#### ① Stroke list

① Stroke (mm)	Standard price
25	_
50	_
75	_
100	_
125	_
150	_

<b>4</b> Options			
Title	Option code	See page	Standard price
Reversed-home specification	NM	_	_

#### ③Cable Length

Туре	Cable symbol	Standard price
Charadayal huusa	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCP3 is the robot cable.

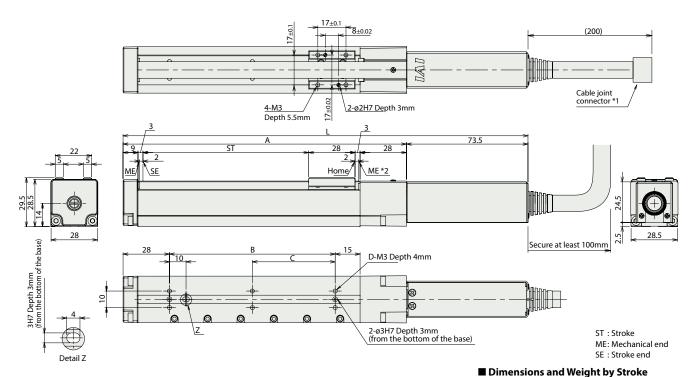
Actuator Specifications						
ltem	Description					
Drive System	Lead screw, ø6mm, rolled C10					
Lost motion	0.3mm or less (initial value)					
Base	Material: Aluminum, white alumite treated					
Guide	Slide guide					
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)					
Service life	10 million cycles					

#### Dimensional Drawings

## CAD drawings can be downloaded from the website. WWW.intelligentactuator.com



- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



#### ■ Dimensions and weight by Stroke

Stroke	25	50	75	100	125	150
L	169.5	194.5	219.5	244.5	269.5	294.5
Α	96	121	146	171	196	221
В	25	50	75	100	125	150
С	0	0	0	50	62.5	75
D	4	4	4	6	6	6
Mass (kg)	0.3	0.32	0.35	0.37	0.4	0.42

#### Applicable Controllers

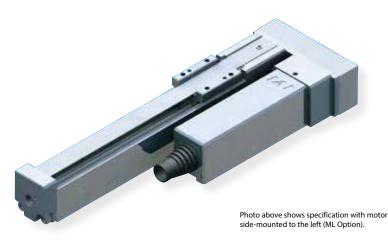
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. A	Man annahan af	D		Control method											Mandania and				
Name	External view	connectable axes	Power supply voltage		Pulse-						Ne	etwor	k opti	on *1					Maximum number of positioning points	Reference page
	VIEW	CONTRECTABLE AXES	voltage	Positioner train Pro	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points		
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1		● * Option	Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information
RCON	HOM IL	16 (ML3,SSN_ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information
RSEL	China L	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

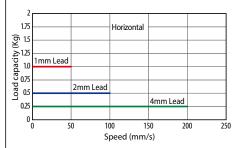
<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



**SA2AR** ROBO Cylinder Mini Slider Type Side-Mounted Motor Type Actuator Width 58mm Pulse Motor ■ Model Description RCP3 - SA2AR - I**20P** Series Encoder type Motor type Lead Stroke Option Compatible controllers Cable length l: Incremental specification See options table below. 20P: Pulse motor 25: 25mm N: None P3: PCON P: 1 m S: 3 m 20□size 2S: Lead screw 2mm MSEL \* Model number is "I" when used with 1S: Lead screw 1mm 100: 100mm \* Be sure to specify P5: RCON M: 5 m (every 25mm) which side the RSEL motor is to be mounted (ML/MR) simple absolute unit. X□□: Length Designation \* See page 14 for details on the model descriptions.



■ Correlation Diagrams of Speed and Load Capacity
With the RCP3 series, due to the characteristics of the
pulse motor, load capacity decreases as the speed
increases. Use the chart below to confirm that the
desired speed and load capacity requirements are met.





- (1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
- (2) Cannot be used in the horizontal orientation with the slider facing to the side or in the vertical orientation.
- (3) Service life decreases significantly if used in a dusty environment.

#### Actuator Specifications Table

#### ■ Leads and Payloads

	Model		Feed Lead screw (mm) H		n payload	Positioning repeatability (mm)	Stroke		
		sciew	(111111)	Horizontal (kg)	Vertical (kg)	repeatability (IIIII)	(mm)		
	RCP3-SA2AR-I-20P-4S-①-②-③-④		4	0.25	_				
	RCP3-SA2AR-I-20P-2S-①-②-③-④	Lead screw	2	0.5	_	±0.05	25 to 100 (every 25mm)		
	RCP3-SA2AR-I-20P-1S-①-②-③-④		1	1	_				
Ì	Legend ①Stroke ②Compatible Controllers ③Cable length ④Option								

### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)
We	4	180	200
Lead screw	2	10	00
Le	1	5	0

(unit: mm/s)

#### ① Stroke list

① Stroke (mm)	Standard price
25	_
50	_
75	_
100	_

#### ③Cable Length

Туре	Cable symbol	Standard price
Charadand house	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
_	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCP3 is the robot cable.

#### **4**Options

4 Options			
Title	Option code	See page	Standard price
Specification with motor side-mounted to the left	ML	_	_
Specification with motor side-mounted to the right	MR	_	_
Reversed-home specification	NM	_	_

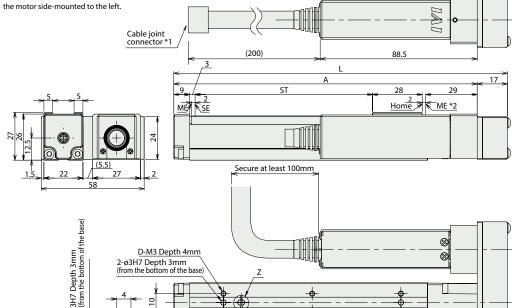
Actuator specifications	
ltem	Description
Drive System	Lead screw, ø4mm, rolled C10
Lost motion	0.3mm or less (initial value)
Base	Material: Aluminum, white alumite treated
Guide	Slide guide
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	10 million cycles

## Dimensional Drawings





- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- \*The drawing below shows the specification of



2-ø2H7 Depth 3mm



<u></u>

17±0.1

4-M3 Depth 5.5mm

ST: Stroke ME: Mechanical end SE: Stroke end

# ■ Dimensions and Weight by Stroke

Stroke	25	50	75	100
L	113	138	163	188
Α	96	121	146	171
В	25	50	75	100
C	0	0	0	50
D	4	4	4	6
Mass (kg)	0.28	0.3	0.32	0.33

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

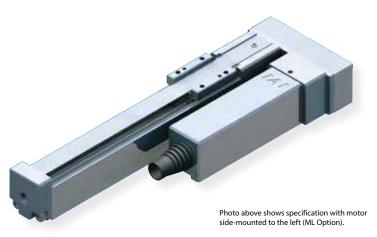
					Control method															
	External	May number of	Power supply		Control metriod					Maximum number										
Name	view	connectable axes	voltage	Positioner	Pulse-	Program					Ne	etwor	k opti	on *1					of positioning points	Reference page
	VICVV	connectable axes	voltage	1 Ositionei	train	riogiani	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	B	1		• * Option	Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1		• * Option	Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information
RCON	HOME VI.	16 (ML3,SSN_ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information
RSEL	We have	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

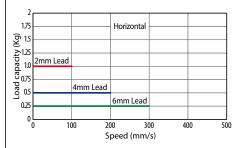


<sup>\*</sup> This is for the single-axis PSEL
\* ① indicates the power-supply voltage type (1: 100 V/2: 100 to 240 V).

ROBO Cylinder Mini Slider Type Side-Mounted Motor Type Actuator Width 59.5mm Pulse Motor ■ Model Description RCP3 - SA2BR - I**20P** Series Motor type Lead Stroke Option **Encoder type** Compatible controllers Cable length N: None P: 1 m S: 3 m I: Incremental 20P: Pulse motor 25: 25mm See options table P3: PCON specification 4S: Lead screw 4mm below. 20□size MSEL \* Model number is "I" when used with 2S: Lead screw 2mm 150: 150mm \* Be sure to specify P5: RCON M: 5 m (every 25mm) which side the RSEL motor is to be mounted (ML/MR). simple absolute unit. X□□: Length Designation \* See page 14 for details on the model descriptions.



■ Correlation Diagrams of Speed and Load Capacity
With the RCP3 series, due to the characteristics of the
pulse motor, load capacity decreases as the speed
increases. Use the chart below to confirm that the
desired speed and load capacity requirements are met.





- (1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
- (2) Cannot be used in the horizontal orientation with the slider facing to the side or in the vertical orientation.
- (3) Service life decreases significantly if used in a dusty environment.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Feed	Lead	Maximum		Positioning	Stroke		
	screw	(mm)	Horizontal (kg)	Vertical (kg)	repeatability (mm)	(mm)		
RCP3-SA2BR-I-20P-6S-①-②-③-④		6	0.25	_				
RCP3-SA2BR-I-20P-4S-①-②-③-④	Lead screw	4	0.5	_	±0.05	25 to 150 (every 25mm)		
RCP3-SA2BR-I-20P-2S-①-②-③-④		2	1	_		2311111)		
Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option								

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50 (mm)	75~150 (mm)			
we	6	180	280	300			
Lead screw	4	180	200				
Le	2		100				

(unit: mm/s)

#### ① Stroke list

① Stroke (mm)	Standard price
25	_
50	_
75	_
100	_
125	_
150	_

#### ③Cable Length

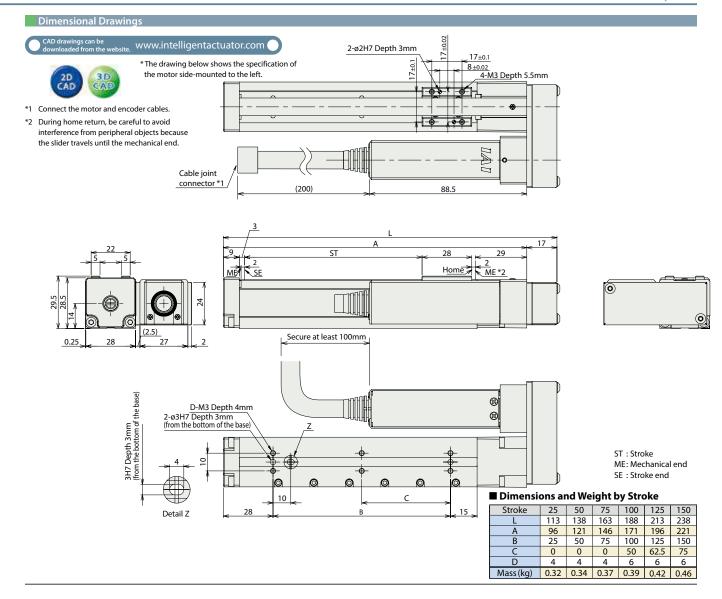
Туре	Cable symbol	Standard price
Chair dand house	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCP3 is the robot cable.

#### **3Options**

3 Options			
Title	Option code	See page	Standard price
Specification with motor side-mounted to the left	ML	_	_
Specification with motor side-mounted to the right	MR	_	_
Reversed-home specification	NM	_	_

Item	Description
Drive System	Lead screw, ø6mm, rolled C10
Lost motion	0.3mm or less (initial value)
Base	Material: Aluminum, white alumite treated
Guide	Slide guide
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	10 million cycles



### Applicable Controllers

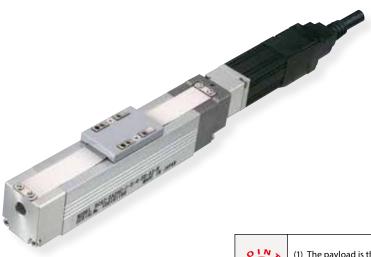
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. A	Man annahan af	D					Cor	itrol r	neth	od								Mandania and	
Name	External view	connectable axes	Power supply voltage	Positioner	Pulse-	Program					Ne	twor	k opti	on *1					Maximum number of positioning points	Reference page
	VIEW	COIIIIectable axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		• * Option	Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1		• * Option	Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more informatio
RCON	ien i	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more informatio
RSEL	We ha	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



CA2-SA2AC ROBO Cylinder Mini Slider Type Motor Unit Coupling Type Actuator Width 20mm 24V Servo Motor **Ball Screw Specification** ■ Model Description RCA2 - SA2AC - I5 **A3** Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length l: Incremental specification 25: 25mm A3: ACON-CYB/PLB/POB N: None P: 1 m S: 3 m See options table below. 4: 4mm 2: 2mm A5: ACON-CB/CGB \* Model number is "I" when used with 1:1mm 100: 100mm M: 5 m (every 25mm) X□□: Length Designation simple absolute unit. \* See page 14 for details on the model descriptions.



- (1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
- (2) Take note that, since there is no brake, the slider may come down when the power is turned off if the actuator is used vertically.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-SA2AC-I-5-4-①-A3-②-③			4	0.5	0.25	21.4	(IIIII)	(11111)
RCA2-SA2AC-I-5-2-①-A3-②-③	5	Ball screw	2	1	0.5	42.3	±0.02	25 to 100 (every 25mm)
RCA2-SA2AC-I-5-1-①-A3-②-③			1	2	1	85.5		
Legend ①Stroke ②Cable length ③C	ption							

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)
W	4	180	200
Ball screw	2	10	00
Ba	1	5	0

(unit: mm/s)

#### ① Stroke list

① Stroke (mm)	Standard price
25	_
50	_
75	_
100	_

#### ②Cable Length

Туре	Cable symbol	Standard price
Charada ad hara	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

#### **③Options**

Title	Option code	See page	Standard price
Reversed-home specification	NM	_	_

/ictuator specifications	
Item	Description
Drive System	Ball screw, ø4mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Guide	Linear guide
Dynamic allowable moment	Ma:0.22N•m, Mb:0.31N•m, Mc:0.28N•m
Allowable overhang	40mm or less in Ma, Mb and Mc directions
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000km

Mass (kg)

0.2

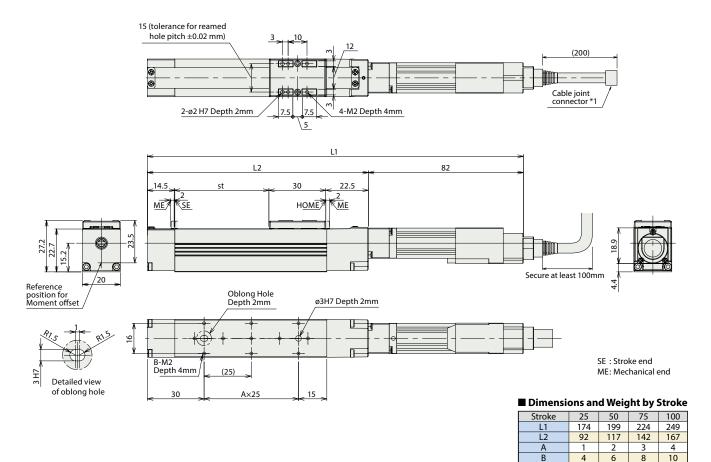
0.22 0.23 0.25

## Dimensional Drawings

## CAD drawings can be downloaded from the website. WWW.intelligentactuator.com



- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.



#### Applicable Controllers

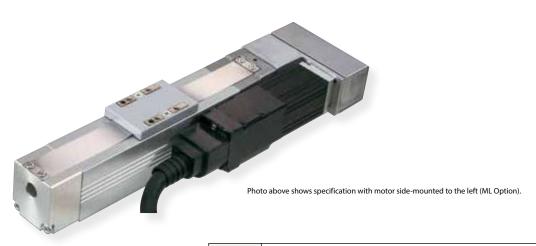
 $The actuators \ on \ this \ page \ can \ be \ operated \ by \ the \ controllers \ indicated \ below. \ Please \ select \ the \ type \ depending \ on \ your \ intended \ use.$ 

	Fortennal		Power	Control method Maximum number o					Mandania and	D-f										
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse- Program		Pulse- Network option *1									positioning points	Reference			
	view	Connectable axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	Name of	1	24VDC	● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	Please contact
ACON-CYB/PLB/POB	-	1	24VDC	● * Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	information.

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



CA2-SA2AR ROBO Cylinder Mini Slider Type Side-Mounted Motor Type Actuator Width 41mm 24V Servo Motor **Ball Screw Specification** ■ Model Description RCA2 - SA2AR - I5 **A3** Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length I: Incremental specification 4: 4mm 2: 2mm See options table below. 25: 25mm A3: ACON-CYB/PLB/POB N: None P: 1 m S: 3 m A5: ACON-CB/CGB \* Model number is "I" when used with 1:1mm 100: 100mm \* Be sure to specify M: 5 m (every 25mm) which side the X□□: Length Designation motor is to be mounted (ML/MR). simple absolute unit. \* See page 14 for details on the model descriptions.





- (1) The payload is the value when operated at 0.2G acceleration. The acceleration upper limit is the value indicated above.
- (2) Take note that, since there is no brake, the slider may come down when the power is turned off if the actuator is used vertically.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)	1 7	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-SA2AR-I-5-4-①-A3-②-③			4	0.5	0.25	21.4		
RCA2-SA2AR-I-5-2-①-A3-②-③	5	Ball screw	2	1	0.5	42.3	±0.02	25 to 100 (every 25mm)
RCA2-SA2AR-I-5-1-①-A3-②-③			1	2	1	85.5		
Legend ① Stroke ② Cable length ③ C	ption						,	

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)
<b>*</b>	4	180	200
Ball screw	2	10	00
Ba	1	5	0

(unit: mm/s)

#### ① Stroke list

① Stroke (mm)	Standard price
25	_
50	_
75	_
100	_

#### ②Cable Length

Туре	Cable symbol	Standard price
Charadanal homa	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
_	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

#### **3Options**

Title	Option code	See page	Standard price
Reversed-home specification	NM	_	_
Motor side mounted to the right	MR	_	_
Motor side mounted to the left	ML	_	_

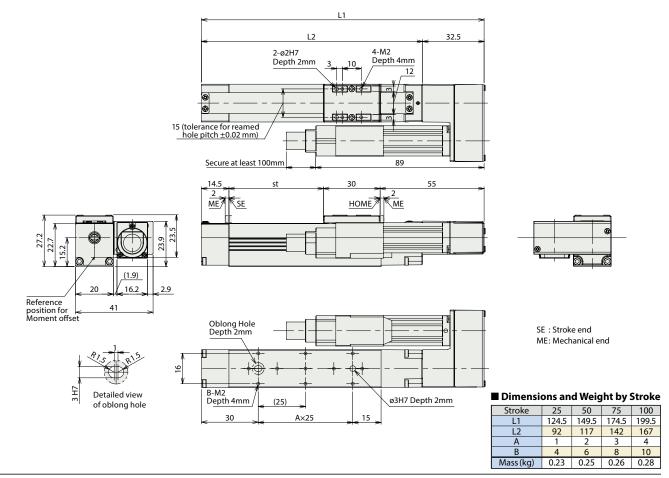
/ictuator specifications	
Item	Description
Drive System	Ball screw, ø4mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Guide	Linear guide
Dynamic allowable moment	Ma:0.22N•m, Mb:0.31N•m, Mc:0.28N•m
Allowable overhang	40mm or less in Ma, Mb and Mc directions
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000km

### Dimensional Drawings

# www.intelligentactuator.com



- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- \*The drawing below shows the specification of the motor side-mounted to the left.



#### Applicable Controllers

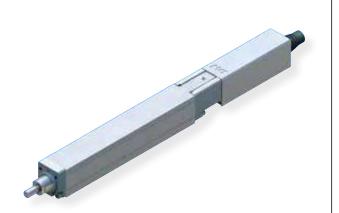
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. A	Max. number of	Power		Control method  Pulse- Network option *1			Maiaaa	Reference											
Name	External view	connectable axes	supply	Positioner				Pulse- Network option *1							Maximum number of positioning points					
	VIEW	Connectable axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	Name of the last	1	24VDC	* Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	Please contact
ACON-CYB/PLB/POB		1	24VDC	* Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	information.

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



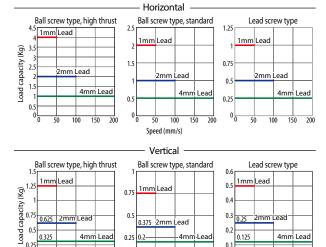
RA2AC ROBO Cylinder Mini Rod type Motor Unit Coupling type Actuator Width 22mm Pulse Motor ■ Model Description RCP3 - RA2AC - ISeries **Encoder type** Lead Stroke Cable length Option Type Motor type Compatible controllers 4: Ball screw 4mm 2: Ball screw 2mm N: None P: 1m I: Incremental Pulse Motor 25: 25mm B: Brake NM: Reversed-home P3· PCON specification \* Model number is 20□ size MSEL Model number is Standard type
"I" when used with 20SP: Pulse Motor 100: 100mm 1: Ball screw 1mm S: 3m specification P5: RCON M: 5m X□□: Length (every 25mm) 4S: Lead screw 4mm RSEL 20□ size 2S: Lead screw 2mm High-thrust type 1S: Lead screw 1mm simple absolute unit. \* See page 14 for details on the model descriptions. Designation



- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2  $\stackrel{.}{\text{G}}$  for the lead screw specification, if used vertically). The acceleration limit is the value indicated above.
- (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- (3) The maximum pushing force is the value when the actuator is operated at a speed
- (4) Service life decreases significantly if used in a dusty environment.

#### ■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.



Speed (mm/s)

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor	Feed	Lead	Maximum		Maximum pushing	Positioning repeatability	Stroke
	type	screw	(mm)	Horizontal (kg)	Vertical (kg)	force (N)	(mm)	(mm)
RCP3-RA2AC-I-20SP-4-①-②-③-④			4	1	0.325			
RCP3-RA2AC-I-20SP-2-①-②-③-④	High thrust		2	2	0.625			
RCP3-RA2AC-I-20SP-1-①-②-③-④		Ball	1	4	1.25		±0.02	
RCP3-RA2AC-I-20P-4-①-②-③-④		screw	4	0.5	0.2	See	±0.02	25 to 100
RCP3-RA2AC-I-20P-2-①-②-③-④	Standard		2	1	0.375	page		(every
RCP3-RA2AC-I-20P-1-①-②-③-④			1	2	0.75	126.		25mm)
RCP3-RA2AC-I-20P-4S-①-②-③-④			4	0.25	0.125			
RCP3-RA2AC-I-20P-2S-①-②-③-④	Standard	Lead	2	0.5	0.25		±0.05	
RCP3-RA2AC-I-20P-1S-①-②-③-④			1	1	0.5			
Legend ① Stroke ② Compatible controllers ③ Cable length ④ Option								

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)		
W	4	180	200		
Ball screw	2	100			
Bã	1	50			
We	4	180	200		
Lead screw	2	10	00		
Le	1	5	0		

(unit: mm/s)

#### ① Stroke list

	Standard price					
06. 1	Feed screw					
① Stroke (mm)	Ball s	crew				
(11111)	High thrust type	Standard type	Lead screw			
25	_	_	_			
50	_	_	_			
75	75 —		_			
100	_	_	_			

#### **4**Options

Title	Option code	See page	Standard price
Brake	В	_	_
Reversed-home specification	NM	_	_

Туре	Cable symbol	Standard price
Charadayal huusa	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

\*The standard cable for the RCP3 is the robot cable.

Actuator Specifications					
It	em	Description			
Drive Syste	m	Ball screw/Lead screw, ø4mm, rolled C10			
Lost motio	n	Ball screw: 0.1mm or less/Lead screw: 0.3mm or less (default value)			
Base		Material: Aluminum, white alumite treated			
Guide		Slide guide			
Ambient operating temperature, humidity		0 to 40°C, 85% RH or less (Non-condensing)			
Service life	Lead screw specification	Horizontal: 10 million cycles Vertical: 5 million cycles			

0.31 | 0.33 | 0.36 | 0.37

Mass (kg)

#### Dimensional Drawings www.intelligentactuator.com (Brake-equipped) \*1 Connect the motor and encoder cables. Standard type: 117.5 High thrust type: 134.5 \*2 During home return, be careful to avoid interference from peripheral objects because 28 Brake housing the slider travels until the mechanical end. 3 (width across flats) \*3 \*3 The orientation of the nut varies depending on the product. \* Please note: When installing the brake unit, the bottom of the brake housing protrudes by 1mm beyond the actuator main body. (200) (No brake) Cable joint connector \*1 Standard type: 73.5 High thrust type: 90.5 2-M3 Depth 4mm 28 Secure at least 100mm 3H7 Depth 3mm (from the bottom of the base) D-M3 Depth 4mm ST: Stroke ME: Mechanical end SE: Stroke end 2-ø3H7 Depth 3mm (from the bottom of the base) \* Brake equipped models are 0.1kg heavier. Dimensions of nut at tip of rod $\underline{\text{M6}\times1.0}$ ■ Dimensions and Weight by Stroke 25 50 75 100 168 193 218 243 212 237 262 287 Standard No brake type Brake-equipped 185 210 235 260 High No brake thrust type Brake-equipped No brake 229 254 279 304 94.5 119.5 144.5 169.5 25 50 75 100 0 0 50 4 4 4 ח 6

#### Applicable Controllers

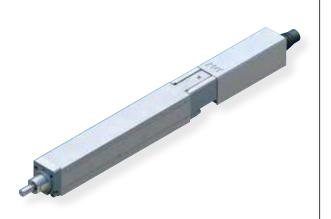
 $The actuators \ on \ this \ page \ can \ be \ operated \ by \ the \ controllers \ indicated \ below. \ Please \ select \ the \ type \ depending \ on \ your \ intended \ use.$ 

	External	May number of	D	Control method												Maximum number				
Name	view	connectable axes	Power supply voltage	Positioner	Pulse-	Program							k opti						of positioning points	Reference page
	VIEW	CONNECTABLE BYES	voitage	rositionei	train	Fiografii	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1		● * Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information.
RCON	HOM VI.	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information.
RSEL	We'r.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

 $<sup>^{*}\</sup>mbox{1}$  For network abbreviations such as DV and CC, please contact IAI.



#### RA2B ROBO Cylinder Mini Rod type Motor Unit Coupling type Actuator Width 28mm Pulse Motor ■ Model Description RCP3 -RA2BC -Series **Encoder type** Lead Stroke Cable length Option Type Motor type Compatible controllers N: None P: 1m S: 3m 6: Ball screw 6mm 4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm 25: 25mm B: Brake NM: Reversed-home P3: PCON specification 20□ size MSEL \* Model number is Model number is Standard type "I" when used with 20SP: Pulse Motor 150: 150mm specification P5: RCON M: 5m X□□: Length Designation (every 25mm) 6S: Lead screw 6mm RSEL simple absolute unit. 20∏ size 20∐ size 4S: Lead screw 4mm High-thrust type 2S: Lead screw 2mm \* See page 14 for details on the model descriptions.



(1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2  $\stackrel{.}{\text{G}}$  for the lead screw specification, if used vertically). The acceleration limit is the value indicated above.

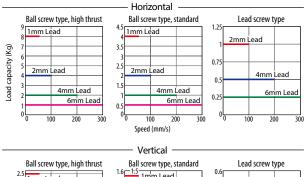
(2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.

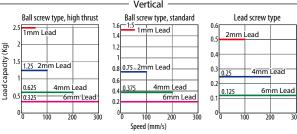
(3) The maximum pushing force is the value when the actuator is operated at a speed

(4) Service life decreases significantly if used in a dusty environment.

#### ■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.





#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor type	Feed screw		Maximum Horizontal (kg)		Maximum pushing force (N)	Positioning repeatability (mm)	Stroke (mm)			
RCP3-RA2BC-I-20SP-6-①-②-③-④			6	1	0.325						
RCP3-RA2BC-I-20SP-4-①-②-③-④	High		4	2	0.625						
RCP3-RA2BC-I-20SP-2-①-②-③-④	thrust	Ball screw	2	4	1.25						
RCP3-RA2BC-I-20SP-1-①-②-③-④			1	8	2.5			25 to 150 (every 25mm)			
RCP3-RA2BC-I-20P-6-①-②-③-④			6	0.5	0.2	See					
RCP3-RA2BC-I-20P-4-①-②-③-④	Standard		4	1	0.375	page					
RCP3-RA2BC-I-20P-2-①-②-③-④	Standard		2	2	0.75	126.					
RCP3-RA2BC-I-20P-1-①-②-③-④			1	4	1.5						
RCP3-RA2BC-I-20P-6S-①-②-③-④			6	0.25	0.125						
RCP3-RA2BC-I-20P-4S-①-②-③-④	Standard	Lead	4	0.5	0.25		±0.05				
RCP3-RA2BC-I-20P-2S-①-②-③-④			2	1	0.5						
Legend ①Stroke ②Compatible controllers	Legend ① Stroke ② Compatible controllers ③ Cable length ④ Option										

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)	75~150 (mm)						
	6	180	280	300						
crew	4	180	00							
Ball screw	2	100								
	1	50								
»e	6	180	280	300						
Lead screw	4 180 200									
Le	2		100							

(unit: mm/s)

#### ① Stroke list

	Standard price									
@ Charles		Feed s	screw							
① Stroke (mm)	Ball s	crew								
(11111)	High thrust type	Standard type	Lead screw							
25	_	_	_							
50	_	_	_							
75	_	_	_							
100	_	_	_							
125	_	_	_							
150	_	_	_							

#### **4Options**

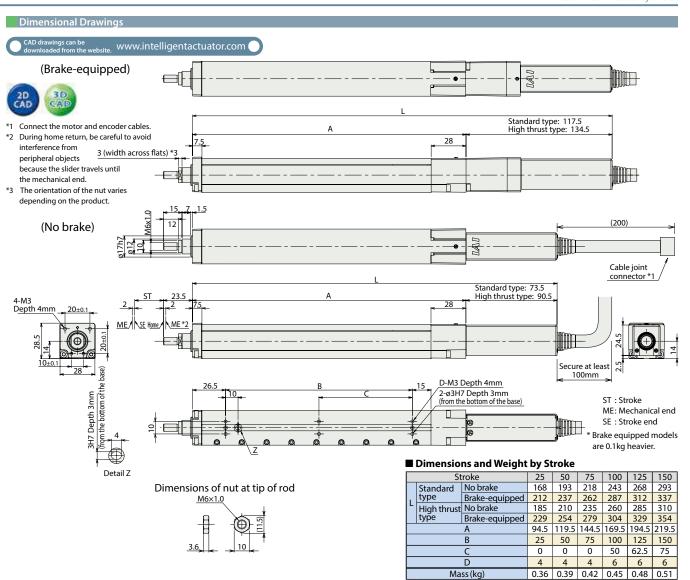
Title	Option code	See page	Standard price
Brake	В	_	_
Reversed-home specification	NM	_	_

#### ③ Cable Length

Type	Type Cable symbol				
Character of the con-	<b>P</b> (1m)	_			
Standard type (Robot cable)	<b>S</b> (3m)	_			
(RODOL CADIE)	<b>M</b> (5m)	_			
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_			
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_			
-	X16 (16m) ~ X20 (20m)	_			

<sup>\*</sup>The standard cable for the RCP3 is the robot cable.

Actua <sup>-</sup>	tor Specific	tations					
ltem		Description					
Drive System		Ball screw/Lead screw, ø6mm, rolled C10					
Lost motio	n	Ball screw: 0.1mm or less/Lead screw: 0.3mm or less (default value)					
Base		Material: Aluminum, white alumite treated					
Guide		Slide guide					
Ambient operating temperature, humidity		0 to 40°C, 85% RH or less (Non-condensing)					
Service life	Lead screw specification	Horizontal: 5 million cycles Vertical: 10 million cycles					



#### Applicable Controllers

 $The actuators \ on \ this \ page \ can \ be \ operated \ by \ the \ controllers \ indicated \ below. \ Please \ select \ the \ type \ depending \ on \ your \ intended \ use.$ 

	F. damed	Man annulus of	D		Control method													Maximum number		
Name	External view	connectable axes	Power supply voltage	Positioner	Pulse- Network option *1					of positioning points	Reference page									
	VIEW	Connectable axes	voltage	rositionei	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		• * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1	2005	● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information.
RCON	HOM IL	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information.
RSEL	We'll	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

 $<sup>^{*}1</sup>$  For network abbreviations such as DV and CC, please contact IAI.

More controller info is available in the General Controller Catalog PDF.



Mini Slider type

Rod type

> Mini Table type

Mini Linea Servo type

Side-

#### **RA2AR** ROBO Cylinder Mini Rod type Side-Mounted Motor type Actuator Width 58mm Pulse Motor ■ Model Description RCP3 - RA2AR - ISeries Lead Stroke Cable length Option Type **Encoder type** Motor type Compatible controllers 4: Ball screw 4mm 2: Ball screw 2mm N: None P: 1m See options table below. \*Be sure to specify which I: Incremental Pulse Motor 25: 25mm P3: PCON specification 20□ size MSEL Model number is Standard type "I" when used with 20SP: Pulse Motor side the motor is to be mounted (ML/MR). \* Model number is 1: Ball screw 1mm 100: 100mm S: 3m P5: RCON M: 5m X□□: Length 4S: Lead screw 4mm (every 25mm) simple absolute unit. 20∏ size 2S: Lead screw 2mm \* See page 14 for details on the model descriptions. High-thrust type 1S: Lead screw 1mm Designation

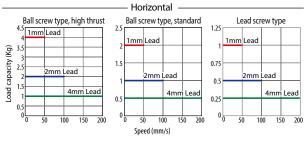


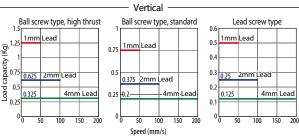
Notes on selection

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2 G for the lead screw specification, if used vertically). The acceleration limit is the value indicated above.
- (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- (3) The maximum pushing force is the value when the actuator is operated at a speed of 5 mm/s.
- (4) Service life decreases significantly if used in a dusty environment.

#### ■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.





#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor type	Feed screw		Maximum Horizontal (kg)		Maximum pushing force (N)	Positioning repeatability (mm)	Stroke (mm)
RCP3-RA2AR-I-20SP-4-①-②-③-④			4	1	0.325			
RCP3-RA2AR-I-20SP-2-①-②-③-④	High thrust		2	2	0.625			
RCP3-RA2AR-I-20SP-1-①-②-③-④		Ball	1	4	1.25		±0.02	
RCP3-RA2AR-I-20P-4-①-②-③-④		screw	4	0.5	0.2	See		25 to 100
RCP3-RA2AR-I-20P-2-①-②-③-④	Standard		2	1	0.375	page		(every 25mm)
RCP3-RA2AR-I-20P-1-①-②-③-④			1	2	0.75	126.		
RCP3-RA2AR-I-20P-4S-①-②-③-④			4	0.25	0.125			
RCP3-RA2AR-I-20P-2S-①-②-③-④	Standard	Lead	2	0.5	0.25		±0.05	
RCP3-RA2AR-I-20P-1S-①-②-③-④			1	1	0.5			
Legend 1 Stroke 2 Compatible controllers	(3) Cable	lanath		Ontion				

### Legend ①Stroke ②Compatible controllers ③Cable length ④Option

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)						
>	4	180	200						
Ball screw	2	100							
Bã	1	50							
Wei	4	180	200						
ead screw	2	100							
Le	1	5	0						

(unit: mm/s)

#### ① Stroke list

	Standard price									
@ Charles	Feed screw									
① Stroke (mm)	Ball s	crew								
(11111)	High thrust type	Standard type	Lead screw							
25	_	_	_							
50	_	_	_							
75			_							
100	_	_	_							

#### **4**Options

Title	Option code	See page	Standard price
Brake	В	_	_
Side-mounted motor to the left (standard)	ML	_	_
Side-mounted motor to the right	MR	_	_
Reversed-home specification	NM	_	_

#### ③Cable Length

Туре	Cable symbol	Standard price
Chair dand house	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

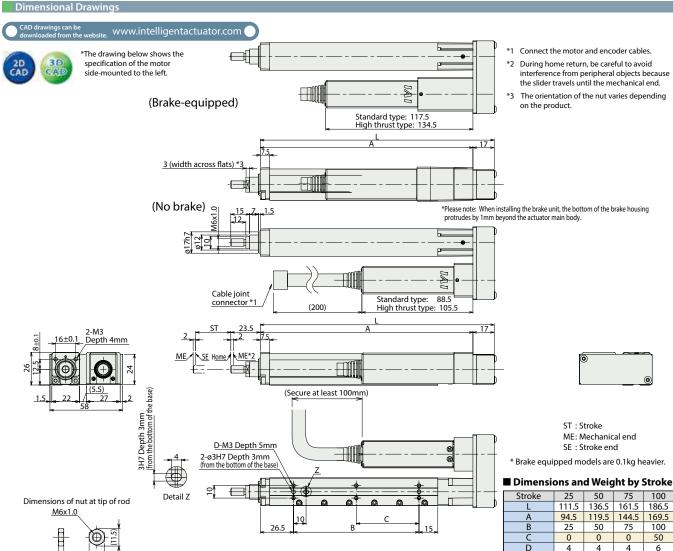
<sup>\*</sup>The standard cable for the RCP3 is the robot cable.

Actua	tor specific	cations							
İt	em	Description							
Drive Syste	m	Ball screw/Lead screw, ø4mm, rolled C10							
Lost motio	n	Ball screw: 0.1mm or less/Lead screw: 0.3mm or less (default value)							
Base		Material: Aluminum, white alumite treated							
Guide		Slide guide							
Ambient o temperatu	perating re, humidity	0 to 40°C, 85% RH or less (Non-condensing)							
Service life	Lead screw specification	Horizontal: 10 million cycles Vertical: 5 million cycles							

Mass (kg)

0.34 | 0.36 | 0.39 |

0.4



#### Applicable Controllers

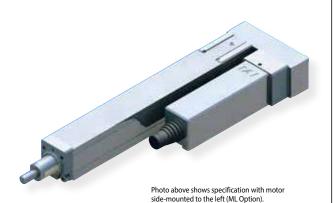
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use

	F. A	Man annula a of	D					Cor	ntrol r	neth	od								Mandania	
Name	External view	Max. number of connectable axes	Power supply voltage	Positioner	Pulse-	Program					Ne	etwor	k opti	on *1					Maximum number of positioning points	Reference page
	VIEW	CUIIIIectable axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	ě	1		• * Option	Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB	1	1		● * Option	Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information
RCON	HOME IL	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information
RSEL	The L	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### **RA2BR** ROBO Cylinder Mini Rod type Side-Mounted Motor type Actuator Width 59.5mm Pulse Motor ■ Model Description RCP3 -RA2BR -Series Lead Stroke Cable length Option Type **Encoder type** Motor type Compatible controllers 6: Ball screw 6mm 4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm N: None P: 1m See options table below. \*Be sure to specify which Pulse Motor 25: 25mm P3: PCON specification 20□ size MSEL Model number is Standard type "I" when used with 20SP: Pulse Motor \* Model number is 150: 150mm S: 3m side the motor is to be P5: RCON RSEL M: 5m X□□: Length mounted (ML/MR). (every 25mm) 6S: Lead screw 6mm 4S: Lead screw 4mm simple absolute unit. 20∏ size \* See page 14 for details on the model descriptions. High-thrust type 2S: Lead screw 2mm Designation

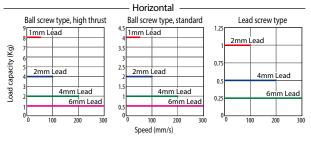


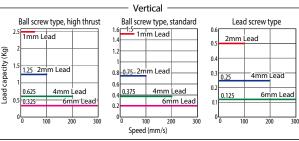
Notes on selection

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2 G for the lead screw specification, if used vertically). The acceleration limit is the value indicated above.
- (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- (3) The maximum pushing force is the value when the actuator is operated at a speed of 5 mm/s.
- (4) Service life decreases significantly if used in a dusty environment.

#### ■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.





#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor type	Feed screw		Maximum Horizontal (kg)		Maximum pushing force (N)	Positioning repeatability (mm)	Stroke (mm)			
RCP3-RA2BR-I-20SP-6-①-②-③-④			6	1	0.325						
RCP3-RA2BR-I-20SP-4-①-②-③-④	High		4	2	0.625						
RCP3-RA2BR-I-20SP-2-①-②-③-④	thrust		2	4	1.25						
RCP3-RA2BR-I-20SP-1-①-②-③-④		Ball	1	8	2.5		±0.02				
RCP3-RA2BR-I-20P-6-①-②-③-④	Standard	Standard	screw	6	0.5	0.2	See	±0.02	25 to 150		
RCP3-RA2BR-I-20P-4-①-②-③-④			Standard	Standard		4	1	0.375	page		(every
RCP3-RA2BR-I-20P-2-①-②-③-④					2	2	0.75	126.		25mm)	
RCP3-RA2BR-I-20P-1-①-②-③-④			1	4	1.5						
RCP3-RA2BR-I-20P-6S-①-②-③-④			6	0.25	0.125						
RCP3-RA2BR-I-20P-4S-①-②-③-④	Standard	Lead	4	0.5	0.25		±0.05				
RCP3-RA2BR-I-20P-2S-①-②-③-④			2	1	0.5						
Legend ①Stroke ②Compatible controllers ③Cable length ④Option											

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)	75~150 (mm)					
	6	180	280	300					
crew	4	180	200						
Ball screw	2		100						
	1		50						
we	6	180	280	300					
Lead screw	4	180	30 200						
Lei	2		100						

(unit: mm/s)

#### ① Stroke list

	Standard price									
@ Charles		Feed	screw							
① Stroke (mm)	Ball s	crew								
(11111)	High thrust type	Standard type	Lead screw							
25	_	_	_							
50	_	_	_							
75	_	_	_							
100	_	_	_							
125	_	_	_							
150	_	_	_							

#### **4**Options

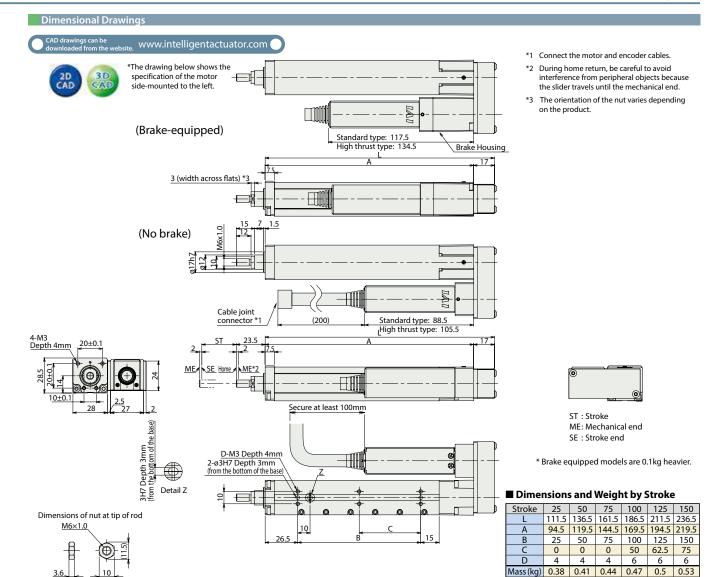
Title	Option code	See page	Standard price
Brake	В	_	_
Side-mounted motor to the left (standard)	ML	_	_
Side-mounted motor to the right	MR	_	_
Reversed-home specification	NM	_	_

#### ③Cable Length

Type	Cable symbol	Standard price
Standard type (Robot cable)	<b>P</b> (1m)	_
	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCP3 is the robot cable.

	tor opecini							
lt	em	Description						
Drive Syste	em	Ball screw/Lead screw, ø6mm, rolled C10						
Lost motio	n	Ball screw: 0.1mm or less/Lead screw: 0.3mm or less (default value)						
Base		Material: Aluminum, white alumite treated						
Guide		Slide guide						
Ambient o temperatu	perating re, humidity	0 to 40°C, 85% RH or less (Non-condensing)						
Service life	Lead screw specification	Horizontal: 10 million cycles Vertical: 5 million cycles						



#### Applicable Controllers

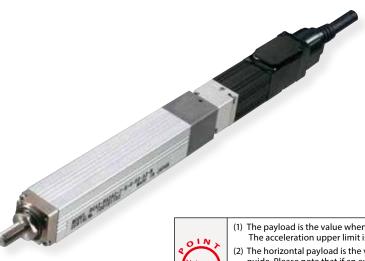
 $The actuators \ on \ this \ page \ can \ be \ operated \ by \ the \ controllers \ indicated \ below. \ Please \ select \ the \ type \ depending \ on \ your \ intended \ use.$ 

					Control method															
Name	External view	Max. number of connectable axes	Power supply voltage	Positioner	Pulse-	Program	Network option *1											Maximum number of positioning points	Reference page	
	VIEW	Connectable axes	voltage	rositionei	train	Flogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB	1	1		● * Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information.
RCON	HOME VI.	16 (ML3,SSN_ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more imornidation.
RSEL	We'r.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



CA2-RA2AC ROBO Cylinder Mini Rod type Motor Unit Coupling type Actuator Width 18mm 24V Servo Motor **Ball Screw Specification** ■ Model Description RCA2 - RA2AC - I5 **A3** Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length l: Incremental specification 25: 25mm A3: ACON-CYB/PLB/POB N: None P: 1m S: 3m 4: 4mm See options table below. 2: 2mm A5: ACON-CB/CGB \* Model number is "I" when used with 1:1mm 100: 100mm M: 5m (every 25mm) X□□: Length Designation simple absolute unit. \* See page 14 for details on the model descriptions.



Notes on election

- (1) The payload is the value when operated at 0.3G acceleration. The acceleration upper limit is the value indicated above.
- (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- (3) Take note that, since there is no brake, the slider may come down when the power is turned off if the actuator is used vertically.

### **Actuator Specifications Table**

#### ■ Leads and Payloads

= Ecdas ana i ayiodas								
Model	Motor	Feed	Lead	Maximum		Rated	Positioning repeatability	Stroke
Model	output (W)	screw	(mm)	Horizontal (kg)	Vertical (kg)	thrust (N)	(mm)	(mm)
RCA2-RA2AC-I-5-4-①-A3-②-③			4	0.5	0.25	21.4		25. 400
RCA2-RA2AC-I-5-2-①-A3-②-③	5 Ball screw	2	1	0.5	42.3	±0.02	25 to 100 (every 25mm)	
RCA2-RA2AC-I-5-1-①-A3-②-③			1	2	1	85.5		2311111)
Legend ① Stroke ② Cable length ③ C	ption							

#### ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)		
*	4	180	200		
Ball screw	2	10	00		
Ba	1	5	0		

(unit: mm/s)

#### ① Stroke list

① Stroke (mm)	Standard price
25	_
50	_
75	_
100	_

#### ② Cable Length

Туре	Cable symbol	Standard price
Standard type (Robot cable)	<b>P</b> (1m)	_
	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

#### **③Options**

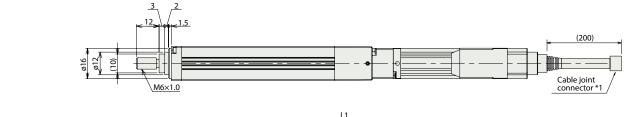
Title	Option code	See page	Standard price
Reversed-home specification	NM	<u> </u>	

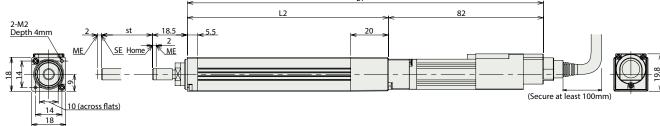
ltem	Description	
Drive System	Ball screw, ø4 mm, rolled C10	
Lost motion	0.1 mm or less	
Base	Material: Aluminum, white alumite treated	
Rod non-rotation preciseness	±3.0°	
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)	
Service life	5,000km	

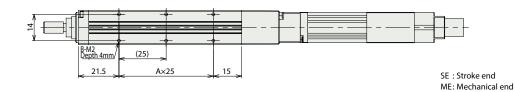
# CAD drawings can be downloaded from the website. WWW.intelligentactuator.com



- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- \*3 The orientation of the nut varies depending on the product.







Dimensions of nut at tip of rod M6×1.0

# ■ Dimensions and Weight by Stroke

Stroke	25	50	75	100
L1	163.5	188.5	213.5	238.5
L2	81.5	106.5	131.5	156.5
Α	1	2	3	4
В	4	6	8	10
Mass (kg)	0.17	0.19	0.2	0.22

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	Fortament.	M	Power		Control method					Mi	Reference									
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse- Network option *1				Pulsa- Network ontion *1		Maximum number of positioning points									
	VIEW	CONTRECTABLE axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	Name of the last	1	24VDC	● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	Please contact
ACON-CYB/PLB/POB		1	Z4VDC	● * Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	information.

 $<sup>{\</sup>rm *1}$  For network abbreviations such as DV and CC, please contact IAI.



CA2-RA2AR ROBO Cylinder Mini Rod type Side-Mounted Motor type Actuator Width 41mm 24V Servo Motor **Ball Screw Specification** ■ Model Description RCA2 - RA2AR - I5 **A3** Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length See options table below. \*Be sure to specify which side the motor is to be mounted (ML/MR). 5: Servo motor 5W 25: 25mm A3: ACON-CYB/PLB/POB N: None P: 1m S: 3m l: Incremental 4: 4mm specification 2: 2mm A5: ACON-CB/CGB \* Model number is "I" when used with 1:1mm 100: 100mm M: 5m (every 25mm) X□□: Length Designation simple absolute unit. \* See page 14 for details on the model descriptions.



- Notes on selection
- (1) The payload is the value when operated at 0.3G acceleration. The acceleration upper limit is the value indicated above.
- (2) The horizontal payload is the value when used in combination with an external guide. Please note that if an external force is applied to the rod in a direction other than the proper direction the rod travels, the detent may get damaged.
- (3) Take note that, since there is no brake, the slider may come down when the power is turned off if the actuator is used vertically.

# **Actuator Specifications Table**

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)	1 . /	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)				
RCA2-RA2AR-I-5-4-①-A3-②-③			4	0.5	0.25	21.4						
RCA2-RA2AR-I-5-2-①-A3-②-③	5	5	Ball screw		2	1	0.5	42.3	±0.02	25 to 100 (every 25mm)		
RCA2-RA2AR-I-5-1-①-A3-②-③			1	2	1	85.5		2311111)				
Legend ① Stroke ② Cable length ③ C	ption											

# ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~100 (mm)				
*	4	180	200				
Ball screw	2	100					
Ba	1	50					

(unit: mm/s)

# ① Stroke list

① Stroke (mm)	Standard price
25	_
50	_
75	_
100	_

# ②Cable Length

Туре	Cable symbol	Standard price
Charadard horas	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
_	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

# **3Options**

Title	Option code	See page	Standard price
Side-mounted motor to the left	ML	_	_
Side-mounted motor to the right	MR	_	_
Side-mounted motor to the top	MT	_	_
Reversed-home specification	NM	_	_

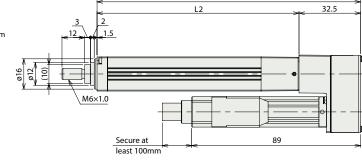
ltem	Description
Drive System	Ball screw, ø4mm, rolled C10
Lost motion	0.1 mm or less
Base	Material: Aluminum, white alumite treated
Rod non-rotation preciseness	±3.0°
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000km

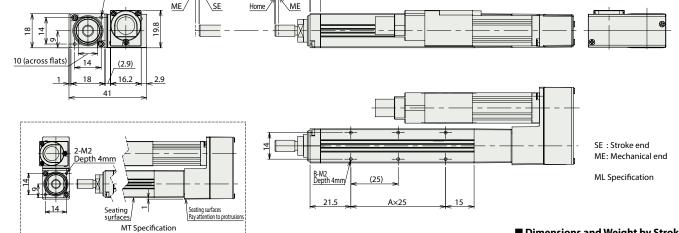
# CAD drawings can be downloaded from the website. WWW.intelligentactuator.com

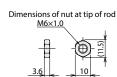


- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- \*3 The orientation of the nut varies depending on the product.
  - \*The drawing below shows the specification with motor side-mounted to the left (ML).

2-M2 Depth 4mm







■ Dimensions and Weight by Stroke									
Stroke	25	50	75	100					
L1	114	139	164	189					
L2	81.5	106.5	131.5	156.5					
Α	1	2	3	4					
В	4	6	8	10					
Mass (kg)	0.21	0.22	0.24	0.25					

# Applicable Controllers

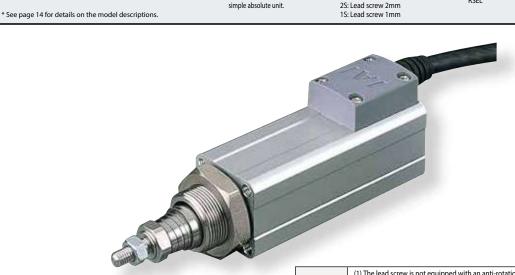
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. A	Man annahan af	Power		Control method						Manian and a second	Reference								
Name	Name External view connectable axes supply connectable axes Positioner Pulse-Program Network option *1					Maximum number of positioning points	page													
	VIEW	connectable axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1	24VDC	● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	Please contact
ACON-CYB/PLB/POB		1	ZHVUC	• * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	information.

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



### CA2-RN3NA ROBO Cylinder Mini Rod Type Short-Length Nut Mounting Type Actuator Width 28 mm 24V Servo Motor **Ball Screw Specification/Lead Screw Specification** ■ Model Description RCA2 - RN3NA10 Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length 10: Servo motor 10W K2: Connector cable exits from the I: Incremental 4: Ball screw 4mm 30: 30mm A3: ACON-CYB/PLB/POB N: None P: 1 m S: 3 m specification 2: Ball screw 2mm 50: 50mm A5: ACON-CB/CGB \* Model number is "I" when used with 1: Ball screw 1mm A6: RCON M: 5 m 4S: Lead screw 4mm LA: Power-saving RSEL

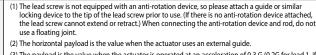


simple absolute unit.

Power-saving specification

specification

X□□: Length Designation



- (3) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (4) Do not apply an external force on the rod in any direction other than the direction the rod is
- (5) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)					Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-RN3NA-I-10-4-①-②-③-④			4	0.75	0.25	42.7	, ,	
RCA2-RN3NA-I-10-2-①-②-③-④	10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
RCA2-RN3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-RN3NA-I-10-4S-①-②-③-④			4	0.25	0.125	25.1		
RCA2-RN3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
RCA2-RN3NA-I-10-15-①-②-③-④			1	1	0.5	100.5		

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)								
Ņ	4	200									
Ball screw	2	10	00								
Ba	1	50									
Wei	4	20	00								
ead screw	2	10	00								
Le	1	5	50								

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standard price		
	Feed screw		
(11111)	Ball screw	Lead screw	
30	_	_	
50	_	_	

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	К2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Туре	Cable symbol	Standard price
C. I. I.	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

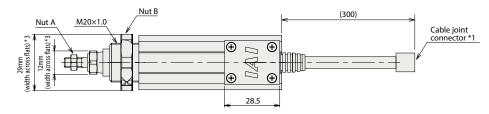
Actuato	r Specifications			
	Item	Description		
Drive System		Ball screw/Lead screw, ø4mm, rolled C10		
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less		
Frame		Material: Aluminum, white alumite treated		
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles		

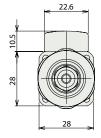
# www.intelligentactuator.com

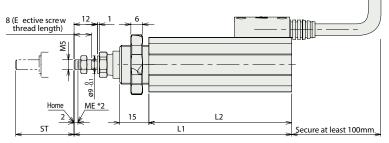


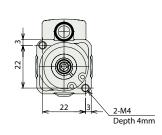
Dimensional Drawings

- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.
- \*3 The orientation of the nut varies depending on the product.

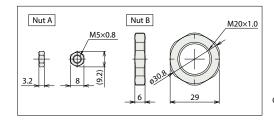


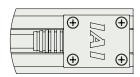






ST : Stroke ME : Mechanical end





Changing the cable connector outlet direction Model: K2

(Exits from the front)  $^{\ast}$  Rotate 180° relative to the standard specification.

# ■ Dimensions and Weight by Stroke

_	•	
Stroke	30	50
L1	112	132
L2	73.5	93.5
Mass (kg)	0.25	0.27

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

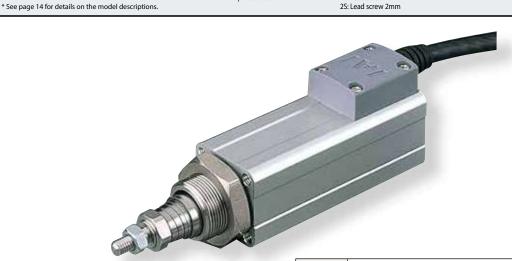
	F	и	Power		Control method						D. 6									
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Program							k opti						Maximum number of positioning points	Reference page
	****	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	lene iq.	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



### CA2-RN4NA ROBO Cylinder Mini Rod Type Short-Length Nut Mounting Type Actuator Width 34 mm 24V Servo Motor **Ball Screw Specification/Lead Screw Specification** ■ Model Description RCA2 - RN4NA 20 Series **Encoder type** Lead Stroke Motor type Compatible controllers Option Cable length 6: Ball screw 6mm 4: Ball screw 4mm K2: Connector cable exits from the I: Incremental 30: 30mm A3: ACON-CYB/PLB/POB N: None P: 1 m S: 3 m specification 20W 50: 50mm A5: ACON-CB/CGB \* Model number is "I" when used with 2: Ball screw 2mm A6: RCON M: 5 m 6S: Lead screw 6mm LA: Power-saving

4S: Lead screw 4mm



simple absolute unit.

Power-saving specification

specification

X□□: Length Designation



- (1) The lead screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the lead screw prior to use. (If there is no anti-rotation device attached, the lead screw cannot extend or retract.) When connecting the anti-rotation device and rod, do not use a floating joint.
- (2) The horizontal payload is the value when the actuator uses an external guide.

RSEL

- (3) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (4) Do not apply an external force on the rod in any direction other than the direction the rod is
- (5) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor	Feed	Lead	Maximum		Rated	Positioning repeatability	Stroke
Model	output (W)	screw	(mm)	Horizontal (kg)	Vertical (kg)	thrust (N)	(mm)	(mm)
RCA2-RN4NA-I-20-6-①-②-③-④			6	2	0.5	33.8		
RCA2-RN4NA-I-20-4-①-②-③-④	20	Ball screw	4	3	0.75	50.7	±0.02	30 50
RCA2-RN4NA-I-20-2-①-②-③-④			2	6	1.5	101.5		
RCA2-RN4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9		
RCA2-RN4NA-I-20-4S-①-②-③-④	20	20 Lead screw	4	0.5	0.25	29.8	±0.05	30 50
RCA2-RN4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7		

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)		
W	6	270 <220>	300		
Ball screw	4	200			
Ba	5	100			
We	6	220	300		
ead screw	4	200			
<u>2</u>		100			

\*< > Indicates Vertical Use

(unit: mm/s)

# ① Stroke list

Charles	Standard price			
Stroke (mm)	Feed screw			
(11111)	Ball screw	Lead screw		
30	_	_		
50	_	_		

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

# **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	К2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Туре	Cable symbol	Standard price
C. I. I.	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

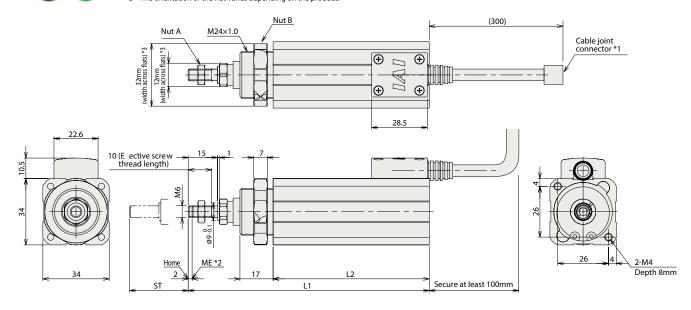
<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

Actuato	Specifications			
	Item	Description		
Drive System		Ball screw/Lead screw, ø6mm, rolled C10		
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less		
Frame		Material: Aluminum, white alumite treated		
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles		

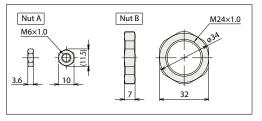
# www.intelligentactuator.com

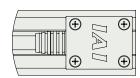
Dimensional Drawings

- - \*1 Connect the motor and encoder cables. \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.
  - \*3 The orientation of the nut varies depending on the product.



ST : Stroke ME : Mechanical end





Changing the cable connector outlet direction Model: K2

(Exits from the front) \* Rotate 180° relative to the standard specification.

<b>Dimensions and</b>
<b>Weight by Stroke</b>

	,				
Stroke	30	50			
L1	123.5	143.5			
L2	80	100			
Mass (kg)	0.4	0.44			

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

			Power		Control method											5.6				
Name	External view	Max. number of connectable axes	supply	Positioner	ositioner Pulse-								k opti						Maximum number of positioning points	Reference page
	VICVV	connectable axes	voltage	rositionei	train Flogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page	
ACON-CB/CGB		1		* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HEM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

IAI



<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

Mini Slider type

Rod

Mini Table type

Mini Linear Servo type

Fixed

e G

Double Guide

### RCS2-RN5N ROBO Cylinder Mini Rod Type Short-Length Tapped-Hole Mounting Type Actuator Width 46 mm 200V Servo Motor Ball Screw Specification ■ Model Description RCS2 -RN5N 60 **T2** Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left N: None T2: SCON P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q K2: Connector cable exits from the front 2.5: 2.5mm XSEL-RA/SA T4: RCON RSEL X□□: Length Designation K3: Connector cable R□□: Robot cable exits from the right \* See page 14 for details on the model descriptions.



- (1) The lead screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the lead screw prior to use. (If there is no anti-rotation device attached, the lead screw cannot extend or retract.) When connecting the anti-rotation device and rod, do not use a floating joint.
- (2) The horizontal payload is the value when the actuator uses an external guide.
- (3) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (4) Do not apply an external force on the rod in any direction other than the direction the rod is moving in.
- (5) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)	payload Vertical (kg)			Stroke (mm)			
RCS2-RN5N-I-60-10-10-172-22-33			10	5	1.5	89					
RCS2-RN5N-I-60-5-①-T2-②-③	60	Ball screw	5	10	3	178	±0.02	50 75			
RCS2-RN5N-I-60-2.5-①-T2-②-③			2.5	20	6	356					
Legend ①Stroke ②Cable length ③O	Legend ①Stroke ②Cable length ③Option										

# ■ Stroke and Maximum Speed

Stroke Lead	50 (mm)	75 (mm)					
10	280 <230>	380 <330>					
5	250 <230>	250					
2.5	125						

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standa	rd price
50	_	_
75	_	_

# ②Cable Length

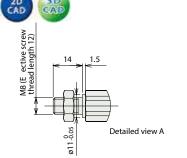
Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_
	R01 (1m) ~ R03 (3m)	_
	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
Robot cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 153m)	_
	R16 (16m) ~ R20 (20m)	_

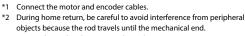
# ③ Options

Title	Option code	See page	Standard price
Connector cable exits from the left	K1	Refer to the next page	_
Connector cable exits from the front	К2	Refer to the next page	_
Connector cable exits from the	КЗ	Refer to the	_

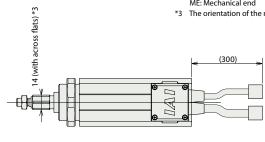
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

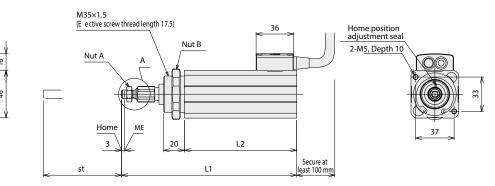
# www.intelligentactuator.com

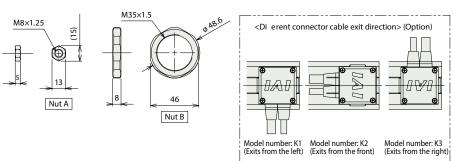




ME: Mechanical end SE: Stroke end \*3 The orientation of the nut varies depending on the product.







# ■ Dimensions and

weight	weight by stroke											
Stroke	50	75										
L1	168.5	193.5										
L2	108	133										
Mass (kg)	1.0	1.1										

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

						,,																											
	External	Max. number of	Dower supply		Control method												Maximum number	Reference															
Name	view	connectable axes					voltage			Power supply							Positioner	Pulse-	Program					Ne	twor	k optio	on *1					of positioning points	
	VIEW	Connectable axes	voltage	rositionei	train	Flogialli	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	page													
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),														
RSEL	We h	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000														
SCON-CB/CGB	9	1	Single phase	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for													
SSEL-CS	21	2	100VAC/200VAC	•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.													
XSEL-P/Q	III	6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000														
XSEL-RA/SA	Time F	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)														

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



\* See page 14 for details on the model descriptions.

### CA2-RP3NA ROBO Cylinder Mini Rod Type Short-Length Tapped-Hole Mounting Type Actuator Width 28 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification ■ Model Description RCA2 - RP3NA10 Series **Encoder type** Motor type Lead Stroke Compatible controllers Option Cable length 10: Servo motor 10W 30: 30mm 50: 50mm K2: Connector cable exits from the I: Incremental 4: Ball screw 4mm A3: ACON-CYB/PLB/POB N: None specification 2: Ball screw 2mm P: 1 m S: 3 m A5: ACON-CB/CGB \* Model number is "I" when used with 1: Ball screw 1mm A6: RCON M: 5 m 4S: Lead screw 4mm LA: Power-saving

2S: Lead screw 2mm

1S: Lead screw 1mm



simple absolute unit.

Power-saving specification

specification

X□□: Length Designation

- (1) The lead screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the lead screw prior to use. (If there is no anti-rotation device attached, the lead screw cannot extend or retract.) When connecting the anti-rotation device and rod, do not use a floating joint.
- (2) The horizontal payload is the value when the actuator uses an external guide.

RSEL

- (3) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (4) Do not apply an external force on the rod in any direction other than the direction the rod is
- (5) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-RP3NA-I-10-4-①-②-③-④			4	0.75	0.25	42.7		
RCA2-RP3NA-I-10-2-①-②-③-④	10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
RCA2-RP3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-RP3NA-I-10-4S-①-②-③-④			4	0.25	0.125	25.1		
RCA2-RP3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
RCA2-RP3NA-I-10-15-①-②-③-④			1	1	0.5	100.5		

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)				
Ņ	4	200					
Ball screw	2	10	00				
Ba	1	50					
Wei	4	200					
Lead screw	2	10	00				
Le	1	50					

(unit: mm/s)

# ① Stroke list

Charles	Standard price				
Stroke (mm)	Feed screw				
(11111)	Ball screw	Lead screw			
30	_	_			
50	_	_			

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	К2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Туре	Cable symbol	Standard price
Ct d d. t	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

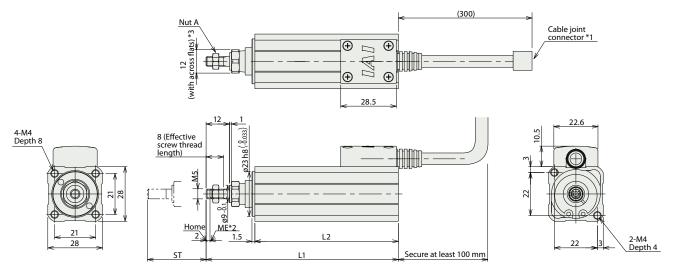
<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

Actuato	r Specifications	
	Item	Description
Drive System		Ball screw/Lead screw, ø4mm, rolled C10
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less
Frame		Material: Aluminum, white alumite treated
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles

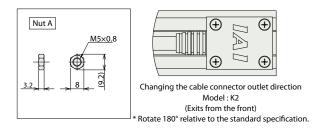




- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.
- \*3 The orientation of the nut varies depending on the product.







# ■ Dimensions and Weight by Stroke

rreight by bulone						
Stroke	30	50				
L1	98.5	118.5				
L2	73.5	93.5				
Mass (kg)	0.2	0.22				

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

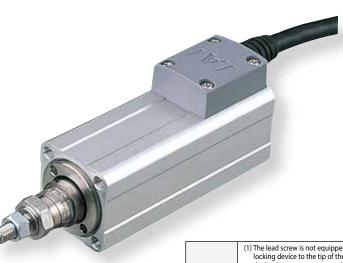
	F. A	Manuscraph and	Power		Control method						Mandanian annah an af	D (								
Name	External view	Max. number of connectable axes	supply voltage	Positioner	Pulse- train	Program	DV	CC	CIF	DD			c opti			DDT	CCNI	ECM	Maximum number of positioning points	Reference page
			voitage		trairi		υv	CC	CIE	PK	CN	IVIL	ML ML3 EC EP PRT SSN E			ECIVI				
ACON-CB/CGB	Ð	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB	8	1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	DET.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



\* See page 14 for details on the model descriptions.

### CA2-RP4NA ROBO Cylinder Mini Rod Type Short-Length Tapped-Hole Mounting Type Actuator Width 34 mm 24V Servo Motor Ball Screw Specification/ Lead Screw Specification ■ Model Description RCA2 - RP4NA 20 Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length 20: Servo motor 20W 6: Ball screw 6mm 4: Ball screw 4mm 30: 30mm A3: ACON-CYB/PLB/POB 50: 50mm A5: ACON-CB/CGB I: Incremental N: None K2: Connector cable specification P: 1 m S: 3 m exits from the \* Model number is "I" when used with front LA: Power-saving 2: Ball screw 2mm A6: RCON M: 5 m 6S: Lead screw 6mm RSEL 4S: Lead screw 4mm 2S: Lead screw 2mm X□□: Length Designation simple absolute unit. specification



Power-saving specification

- (1) The lead screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the lead screw prior to use. (If there is no anti-rotation device attached, the lead screw cannot extend or retract.) When connecting the anti-rotation device and rod, do not use a floating joint.
- (2) The horizontal payload is the value when the actuator uses an external guide.
- (3) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2 if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (4) Do not apply an external force on the rod in any direction other than the direction the rod is
- (5) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-RP4NA-I-20-6-①-②-③-④			6	2	0.5	33.8		
RCA2-RP4NA-I-20-4-①-②-③-④	20	Ball screw	4	3	0.75	50.7	±0.02	30 50
RCA2-RP4NA-I-20-2-①-②-③-④			2	6	1.5	101.5		
RCA2-RP4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9		
RCA2-RP4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50
RCA2-RP4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7		

# ■ Stroke and Maximum Speed

Stroke Lead		30 (mm)	50 (mm)			
W	6	270 <220>	300			
Ball screw	4	200				
g 2		100				
We	6	220	300			
Lead screw	4	200				
Le	2	100				

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Charles	Standard price				
Stroke (mm)	Feed screw				
(11111)	Ball screw	Lead screw			
30	_	_			
50	_	_			

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

# **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	К2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Туре	Cable symbol	Standard price
Cton doubtons	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

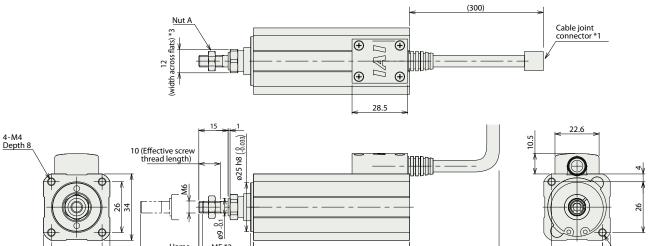
<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

Actuator specifications									
	Item	Description							
Drive System		Ball screw/Lead screw, ø6mm, rolled C10							
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less							
Frame		Material: Aluminum, white alumite treated							
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)							
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles							



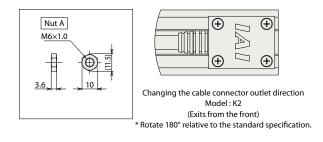


- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.
- \*3 The orientation of the nut varies depending on the product.



Secure at least 100mm

ST : Stroke ME : Mechanical end



L1

### ■ Dimensions and Weight by Stroke

	rreight by stroke										
Stroke	30	50									
L1	108	128									
L2	80	100									
Mass (kg)	0.32	0.36									

2-M4 Depth 8

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Power					Cor	ntrol r	neth	od								Mandania and a	Reference
Name	view	connectable axes	supply	D:4:	Pulse-						Ne	twor	k opti	on *1					Maximum number of positioning points	
	VIEW	Connectable axes	voltage	Positioner	train Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page	
ACON-CB/CGB	Đ.	1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB	B	1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



### CS2-RP5N ROBO Cylinder Mini Rod Type Short-Length Tapped-Hole Mounting Type Actuator Width 46 mm 200V Servo Motor Ball Screw Specification ■ Model Description RCS2 -RP5N 60 **T2** Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left T2: SCON N: None P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q K2: Connector cable exits from the front 2.5: 2.5mm XSEL-RA/SA T4: RCON RSEL X□□: Length Designation K3: Connector cable R□□: Robot cable exits from the right \* See page 14 for details on the model descriptions.





- (1) The lead screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the lead screw prior to use. (If there is no anti-rotation device attached, the lead screw cannot extend or retract.) When connecting the anti-rotation device and rod, do not use a floating joint.
- (2) The horizontal payload is the value when the actuator uses an external guide.
- (3) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (4) Do not apply an external force on the rod in any direction other than the direction the rod is moving in.
- (5) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

Legend ① Stroke ② Cable length ③ Option

# ■ Leads and Payloads

= Ecuas ana i ayioaas								
Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCS2-RP5N-I-60-10-①-T2-②-③			10	5	1.5	89		
RCS2-RP5N-I-60-5-①-T2-②-③	60	Ball screw	5	10	3	178	±0.02	50 75
RCS2-RP5N-I-60-2.5-①-T2-②-③			2.5	20	6	356		

# ■ Stroke and Maximum Speed

Stroke Lead	50 (mm)	75 (mm)					
10	280 <230>	380 <330>					
5	250 <230>	250					
2.5	125						

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standard price
50	_
75	_

# ②Cable Length

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot cable	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 153m)	_
	R16 (16m) ~ R20 (20m)	_

# ③ Options

Title	Option code	See page	Standard price
Connector cable exits from the left	K1	Refer to the next page	_
Connector cable exits from the front	К2	Refer to the next page	_
Connector cable exits from the right	КЗ	Refer to the next page	_

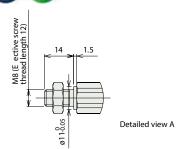
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

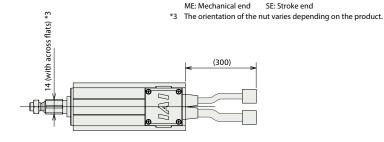
# www.intelligentactuator.com

Dimensional Drawings



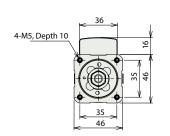


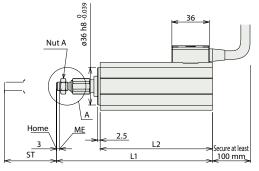


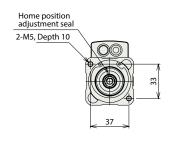


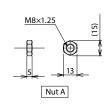
\*1 Connect the motor and encoder cables.

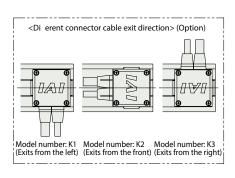
\*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.











# **■** Dimensions and

weight	y Stro	ке			
Stroke	50	75			
L1	150	175			
L2	108	133			
Mass (kg)	0.85	1.0			

### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Dower supply	Control method							Maximum number	Reference								
Name	view	connectable axes	Power supply voltage	Positioner Pulse-		Network option *1											of positioning points	page		
	VICVV	connectable axes	voltage	1 Ositionei	train	riogiani	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	page
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	
RSEL	Wen	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000	
SCON-CB/CGB	9	1	Single phase	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for
SSEL-CS	21	2	100VAC/200VAC	•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.
XSEL-P/Q	Tin	6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	
XSEL-RA/SA	lina i	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



# CA2-GS3NA

ROBO Cylinder Mini Rod Type Short-Length Single-guide Type Actuator Width 28 mm 24V Servo Motor **Ball Screw Specification/Lead Screw Specification** 

■ Model Description

\* See page 14 for details on the model descriptions.

Series

RCA2 - GS3NA

10

**Encoder type** 

Motor type

10: Servo motor 10W I: Incremental specification \* Model number is "I" when used with

simple absolute unit.

Lead 4: Ball screw 4mm 2: Ball screw 2mm

1: Ball screw 1mm 4S: Lead screw 4mm 2S: Lead screw 2mm 1S: Lead screw 1mm Stroke Compatible controllers

30: 30mm A3: ACON-CYB/PLB/ 50: 50mm A5: ACON-CB/CGB A3: ACON-CYB/PLB/POB A6: RCON

RSEL

Cable length

N: None P: 1 m S: 3 m M: 5 m X□□: Length Designation Option

K2: Connector cable exits from the LA: Power-saving specification

Power-saving specification



(1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod. See P129 for correlation diagrams of the end load and service life when a guide is not installed. Also note that single-guide types cannot be used if a force is applied in the rotating direction. Use

double-guide types in these applications. (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.

(3) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)	Maximum payload  Horizontal (kg)   Vertical (kg)		Positioning repeatability (mm)	Stroke (mm)
RCA2-GS3NA-I-10-4-①-②-③-④			4	0.75	0.25	42.7	, ,	
RCA2-GS3NA-I-10-2-①-②-③-④	10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
RCA2-GS3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-GS3NA-I-10-4S-①-②-③-④			4	0.25	0.125	25.1		
RCA2-GS3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
RCA2-GS3NA-I-10-1S-①-②-③-④			1	1	0.5	100.5		

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)			
Ņ	4	20	00			
Ball screw	2	10	00			
Ba	1	50				
We	4	20	00			
Lead screw	2	100				
Leg	1 50					

(unit: mm/s)

# ① Stroke list

a	Standard price					
Stroke (mm)	Feed screw					
(111111)	Ball screw	Lead screw				
30	_	_				
50	_	_				

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

# **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	К2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Type	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

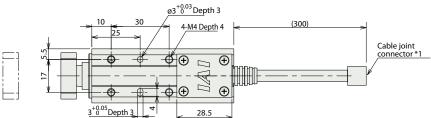
<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

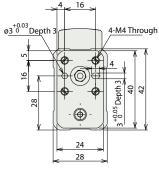
Actuato	r Specifications			
	Item	Description		
Drive System		Ball screw/Lead screw, ø4mm, rolled C10		
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less		
Frame		Material: Aluminum, white alumite treated		
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles		

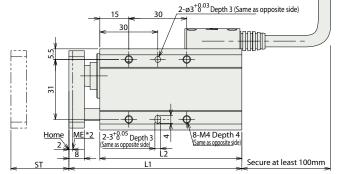
# www.intelligentactuator.com

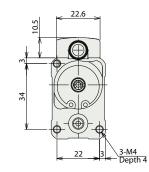


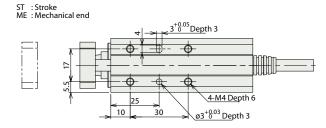
- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.

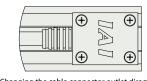












Changing the cable connector outlet direction Model: K2 (Exits from the front)

\* Rotate 180° relative to the standard specification.

# ■ Dimensions and Weight by Stroke

Stroke	30	50				
L1	89.5	109.5				
L2	73.5	93.5				
Mass (kg)	0.32	0.36				

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. stanzal	Man annula a of	Power		Control method						Mandanian and a of	Deference								
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-		oner Pulse-										Maximum number of positioning points	Reference page		
	VIEW	Connectable axes	voltage	rositionei	train	Fiogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	Will have	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	ien ig	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	West.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



# **RCA2-GS4NA**

ROBO Cylinder Mini Rod Type Short-Length Single-guide Type Actuator Width 34 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification

■ Model Description

\* See page 14 for details on the model descriptions.

RCA2 Series

RCA2 - GS4NA -

— ┃ — Encoder type

I: Incremental

specification

\* Model number is "I" when used with

simple absolute unit.

20 Motor type

Motor type

20: Servo motor
20W
4: Ball screw 2mm
2: Ball screw 2mm
6: Sall screw 2mm
6: Sall screw 2mm

nm 3 nm 5 nm

2: Ball screw 2mm 6S: Lead screw 6mm 4S: Lead screw 4mm 2S: Lead screw 2mm Stroke Compatible controllers

30: 30mm A3: ACON-CYB/PLB/POB 50: 50mm A5: ACON-CB/CGB A6: RCON RSEL

patible Cable length trollers

N: None
P: 1 m
S: 3 m
M: 5 m
X□□: Length
Designation

Option

K2: Connector cable exits from the front

front LA: Power-saving specification

Power-saving specification



選定上の注意

- (1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod.

  See P129 for correlation diagrams of the end load and service life when a guide is not installed.
- Also note that single-guide types cannot be used if a force is applied in the rotating direction. Use double-guide types in these applications.
- (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.

  (3) If the actuator is used vertically, pay attention to rod contact because the rod will come down

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-GS4NA-I-20-6-①-②-③-④			6	2	0.5	33.8		
RCA2-GS4NA-I-20-4-①-②-③-④	20	Ball screw	4	3	0.75	50.7	±0.02	30 50
RCA2-GS4NA-I-20-2-①-②-③-④			2	6	1.5	101.5		
RCA2-GS4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9		
RCA2-GS4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50
RCA2-GS4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7		

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)			
W	6	270 <220>	300			
Ball screw	4	20	00			
Ba	2	100				
We	6	220	300			
ead screw	4	200				
Le	2	100				

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Charles	Standard price				
Stroke (mm)	Feed screw				
(11111)	Ball screw	Lead screw			
30	_	_			
50	_	_			

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

# **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	К2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Type	Cable symbol	Standard price
Турс	<b>P</b> (1m)	
Standard type	<b>S</b> (3m)	_
(Robot cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

Actuato	r specifications					
	Item	Description				
Drive System		Ball screw/Lead screw, ø6mm, rolled C10				
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less				
Frame		Material: Aluminum, white alumite treated				
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)				
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles				

Cable joint connector \*1

22.6

# Dimensional Drawings

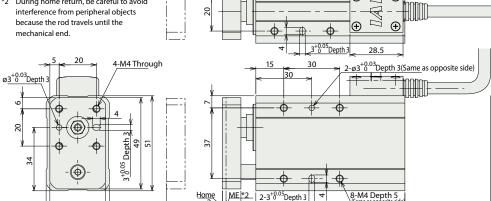
# www.intelligentactuator.com



- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the

30

34



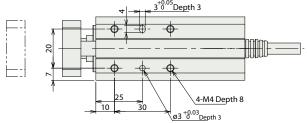
2-3<sup>+0.05</sup>Depth 3 (Same as opposite side) 8-M4 Depth 5 (Same as opposite side 10 Secure at least 100mm ST : Stroke ME : Mechanical end 3<sup>+0.05</sup>Depth 3

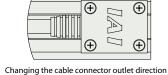
(300)

ø3<sup>+8.03</sup>Depth 3

4-M4 Depth 5

 $\oplus \ \square \ \oplus$ 





Model: K2 (Exits from the front)

\* Rotate 180° relative to the standard specification.

# ■ Dimensions and Weight by Stroke

Stroke	30	50		
L1	98	118		
L2	80	100		
Mass (kg)	0.55	0.63		

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F		Power					Cor	ntrol	meth	od									D (
Name	External view	Max. number of connectable axes	supply	Positioner	Positioner Pulse-								k opti						Maximum number of positioning points	Reference page
	VICW	connectable axes	voltage	rositionei	train Flogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page	
ACON-CB/CGB		1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		• * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE R.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



CS2-GS5N ROBO Cylinder Mini Rod Type Short-Length Single-guide Type Actuator Width 46 mm 200V Servo Motor Ball Screw Specification ■ Model Description RCS2 -GS5N 60 **T2** Series **Encoder type** Lead Stroke Compatible controllers Option Motor type Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left N: None T2: SCON P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q K2: Connector cable exits from the front 2.5: 2.5mm XSEL-RA/SA T4: RCON X□□: Length Designation K3: Connector cable R□□: Robot cable exits from the right \* See page 14 for details on the model descriptions. RSEL



- 選定上の注意
- (1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod.

  See P130 for correlation disprays of the and load and service life when a guide is not installed.
- See P129 for correlation diagrams of the end load and service life when a guide is not installed. Also note that single-guide types cannot be used if a force is applied in the rotating direction. Use double-guide types in these applications.
- (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (3) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

# Actuator Specifications Table

Legend ① Stroke ② Cable length ③ Option

# ■ Leads and Payloads

= Ecuas ana i ayioaas								
Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCS2-GS5N-I-60-10-①-T2-②-③			10	5	1.5	89		
RCS2-GS5N-I-60-5-①-T2-②-③	60	Ball screw	5	10	3	178	±0.02	50 75
RCS2-GS5N-I-60-2.5-①-T2-②-③			2.5	20	6	356		

# ■ Stroke and Maximum Speed

Stroke	50 (mm)	75 (mm)
10	280 <230>	380 <330>
5	250 <230>	250
2.5	12	25

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standard price
50	_
75	_

# ②Cable Length

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_
	R01 (1m) ~ R03 (3m)	_
	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
Robot cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 153m)	_
	R16 (16m) ~ R20 (20m)	_

# **3Options**

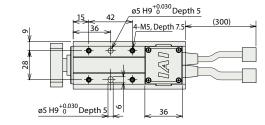
Title	Option code	See page	Standard price
Connector cable exits from the left	K1	Refer to the next page	_
Connector cable exits from the front	К2	Refer to the next page	_
Connector cable exits from the right	КЗ	Refer to the	_

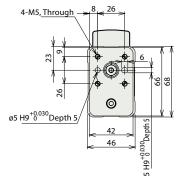
ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

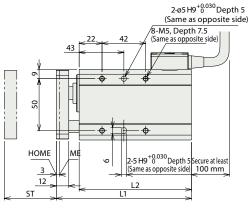
# www.intelligentactuator.com

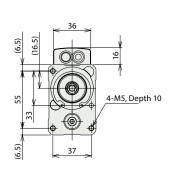


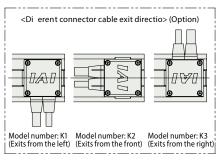
- \*1 Connect the motor and encoder cables.
- During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end. ME: Mechanical end SE: Stroke end

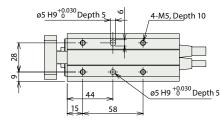












# ■ Dimensions and Weight by Stroke

weight	,y 5010	ĸĊ
Stroke	50	75
L1	130	155
L2	108	133
Mass (kg)	1.3	1.4

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F	и		Control method											D (									
Name	External view	Max. number of connectable axes				voltage	Power supply	Positioner	Pulse-	Program					Ne	etwor	k opti	on *1					Maximum number of positioning points	Reference page
	VIEW	Connectable axes	voltage	rositionei	train	Fiografii	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	page				
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),					
RSEL	We'r.	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000					
SCON-CB/CGB	9	1	Single phase	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for				
SSEL-CS	31	2	100VAC/200VAC	•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.				
XSEL-P/Q	Tie.	6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000					
XSEL-RA/SA	Tima#	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)					

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



\* See page 14 for details on the model descriptions.

### CA2-GD3NA ROBO Cylinder Mini Rod Type Short-Length Double-guide Type Actuator Width 28 mm 24V Servo Motor **Ball Screw Specification/Lead Screw Specification** ■ Model Description RCA2 - GD3NA 10 Series **Encoder type** Motor type Lead Stroke Compatible controllers Option Cable length 10: Servo motor 10W 4: Ball screw 4mm 2: Ball screw 2mm 30: 30mm A3: ACON-CYB/PLB/POB 50: 50mm A5: ACON-CB/CGB K2: Connector cable exits from the I: Incremental N: None P: 1 m S: 3 m specification \* Model number is "I" when used with 1: Ball screw 1mm A6: RCON M: 5 m 4S: Lead screw 4mm LA: Power-saving RSEL

2S: Lead screw 2mm

1S: Lead screw 1mm

simple absolute unit.

Power-saving specification

specification

X□□: Length Designation



選定上の注意

- (1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod.

  See P129 for correlation diagrams of the end load and service life when a guide is not
- (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (3) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-GD3NA-I-10-4-①-②-③-④			4	0.75	0.25	42.7		
RCA2-GD3NA-I-10-2-①-②-③-④	10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
RCA2-GD3NA-I-10-1-10-2-3-4	screw		1	3	1	170.9		
RCA2-GD3NA-I-10-4S-①-②-③-④			4	0.25	0.125	25.1		
RCA2-GD3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
RCA2-GD3NA-I-10-15-①-②-③-④			1	1	0.5	100.5		

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)						
Ņ	4	200							
Ball screw	2	100							
Ba	1	50							
Wei	4	20	00						
ead screw	2	100							
Le	1	50							

(unit: mm/s)

# ① Stroke list

Charles	Standard price					
Stroke (mm)	Feed screw					
(11111)	Ball screw	Lead screw				
30	_	_				
50	_	_				

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

### **4** Options

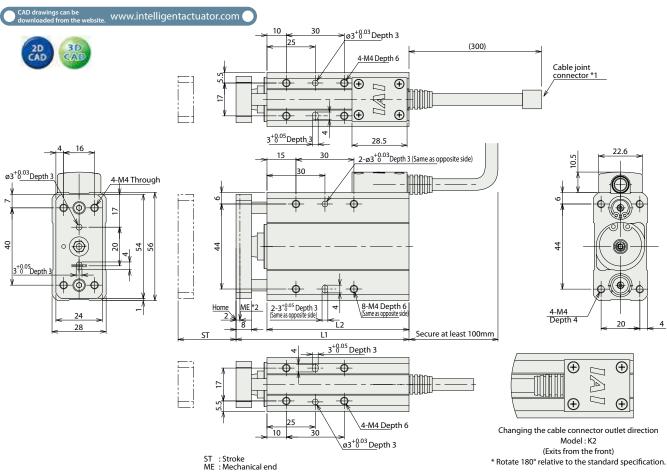
Title	Option code	See page	Standard price	
Connector cable exits from the front	К2	_		
Power-saving specification	LA	_	_	

# ③Cable Length

Туре	Cable symbol	Standard price
Ct d d. t	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

Actuato	r Specifications				
	Item	Description			
Drive System		Ball screw/Lead screw, ø4mm, rolled C10			
Lost motion		Ball screw: 0.1 mm or less Lead screw: 0.3 mm or less			
Frame		Material: Aluminum, white alumite treated			
Ambient operating temperature, humidity		0 to 40°C, 85% RH or less (Non-condensing)			
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles			



- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.

	■ Dimensions and Weight by Stroke							
ĺ	Stroke	30	50					

Stroke	30	50
L1	89.5	109.5
L2	73.5	93.5
Mass (kg)	0.41	0.48

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

			Power	Control method						D (										
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Program							k opti						Maximum number of positioning points	Reference page
			voltage	· ositionei	train	. rogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	P	P-3-
ACON-CB/CGB		1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE R.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



\* See page 14 for details on the model descriptions.

CA2-GD4NA ROBO Cylinder Mini Rod Type Short-Length Double-guide Type Actuator Width 34mm 24V Servo Motor **Ball Screw Specification/Lead Screw Specification** ■ Model Description RCA2 - GD4NA 20 Series **Encoder type** Lead Stroke Motor type Compatible controllers Option Cable length 20: Servo motor 20W 6: Ball screw 6mm 4: Ball screw 4mm 30: 30mm A3: ACON-CYB/PLB/POB 50: 50mm A5: ACON-CB/CGB K2: Connector cable exits from the I: Incremental N: None P: 1 m S: 3 m specification \* Model number is "I" when used with 2: Ball screw 2mm A6: RCON M: 5 m LA: Power-saving 6S: Lead screw 6mm RSEL X□□: Length Designation simple absolute unit. 4S: Lead screw 4mm specification

2S: Lead screw 2mm

Power-saving specification



- (1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod. See P129 for correlation diagrams of the end load and service life when a guide is not
- (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (3) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximun Horizontal (kg)	payload Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-GD4NA-I-20-6-①-②-③-④			6	2	0.5	33.8		
RCA2-GD4NA-I-20-4-①-②-③-④	20	Ball screw	4	3	0.75	50.7	±0.02	30 50
RCA2-GD4NA-I-20-2-①-②-③-④			2	6	1.5	101.5		
RCA2-GD4NA-I-20-65-①-②-③-④			6	0.25	0.125	19.9		
RCA2-GD4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50
RCA2-GD4NA-I-20-25-①-②-③-④			2	1	0.5	59.7		

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)				
W	6	270 <220>	300				
Ball screw	4	200					
Ba	2	100					
We	6	220	300				
Lead screw	4	200					
Le	2	100					

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Charles	Standard price					
Stroke (mm)	Feed screw					
(11111)	Ball screw	Lead screw				
30	_	_				
50	_	_				

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

### **4** Options

Title	Option code	See page	Standard price	
Connector cable exits from the front	К2	_		
Power-saving specification	LA	_	_	

# ③Cable Length

Туре	Cable symbol	Standard price
Character de la constant	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.

Actuator Specifications					
	Item	Description			
Drive System		Ball screw/Lead screw, ø6mm, rolled C10			
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less			
Frame		Material: Aluminum, white alumite treated			
Ambient operating temperature, humidity		0 to 40°C, 85% RH or less (Non-condensing)			
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles			

# Dimensional Drawings ø3<sup>+0.03</sup>Depth 3 www.intelligentactuator.com (300) 4-M4 Depth 8 Cable joint connector \*1 3<sup>+0.05</sup>Depth\_3 ø3<sup>+0.03</sup>Depth 3 2-ø3<sup>+0.03</sup>Depth 3 (Same as opposite side) 4-M4 Through 26 98 48 8-M4 Depth 8 (Same as opposite side) 2-3<sup>+0.05</sup> Depth 3 (Same as opposite side)\_ Secure at least 100mm 3<sup>+0.05</sup> Depth 3 $\oplus$ 4-M4 Depth 8 ø3<sup>+0.03</sup>Depth 3 Changing the cable connector outlet direction 10 ST : Stroke ME : Mechanical end

\*1 Connect the motor and encoder cables.

\*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.

Dimensions and Weight by Stroke						
Stroke	30	50				
L1	98	118				

Model : K2 (Exits from the front) \* Rotate 180° relative to the standard specification.

Stroke	30	50
L1	98	118
L2	80	100
Mass (kg)	0.64	0.76

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Fortament Management Power					Control method										Manianous accordence of	D (				
Name	External view	Max. number of connectable axes	supply voltage	Positioner					Maximum number of positioning points	Reference page										
			voitage		trairi		υv	CC	CIE	PN	CIN	IVIL	IVILS	EC	EP	PNI	SSIN	ECIVI		
ACON-CB/CGB	Đ.	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	less u	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE L	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



Mini Slider type

Rod

Mini Table type

Mini Linear Servo type

> Fixed Nut

Sir Gu

Double-Guide

Unit

S2-GD5N ROBO Cylinder Mini Rod Type Shor-Length Double-guide type Actuator Width 46 mm 200V Servo Motor Ball Screw Specification ■ Model Description RCS2 -GD5N 60 **T2** Compatible controllers Series Encoder type Lead Stroke Option Motor type Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left T2: SCON N: None P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q XSEL-RA/SA K2: Connector cable exits from the front 2.5: 2.5mm T4: RCON RSEL X□□: Length Designation K3: Connector cable R□□: Robot cable exits from the right \* See page 14 for details on the model descriptions.





- (1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod. See P129 for correlation diagrams of the end load and service life when a guide is not installed.
- (2) The payload is the value when the actuator is operated at an acceleration of  $0.3\,\mathrm{G}$  (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (3) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximun Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCS2-GD5N-I-60-10-①-T2-②-③			10	5	1.5	89		
RCS2-GD5N-I-60-5-①-T2-②-③	60	Ball screw	5	10	3	178	±0.02	50 75
RCS2-GD5N-I-60-2.5-①-T2-②-③			2.5	20	6	356		
Legend ① Stroke ② Cable length ③ Option								

# ■ Stroke and Maximum Speed

Stroke Lead	50 (mm)	75 (mm)
10	280 <230>	380 <330>
5	250 <230>	250
2.5	12	25

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standard price
50	_
75	_

# ②Cable Length

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 153m)	_
	R16 (16m) ~ R20 (20m)	_

# ③ Options

Title	Option code	See page	Standard price
Connector cable exits from the left	K1	Refer to the next page	_
Connector cable exits from the front	К2	Refer to the next page	_
Connector cable exits from the right	КЗ	Refer to the next page	_

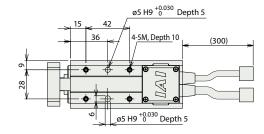
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

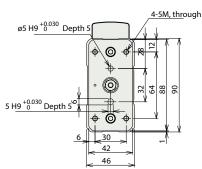
# www.intelligentactuator.com

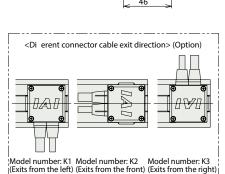


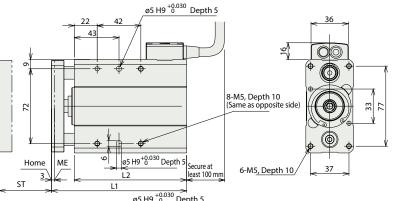
- \*1 Connect the motor and encoder cables
- During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.

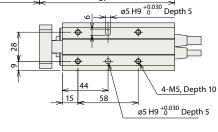
ME: Mechanical end SE: Stroke end











# ■ Dimensions and

weight by Stroke						
Stroke	50	75				
L1	130	155				
L2	108	133				
Mass (kg)	1.6	1.9				

# Applicable Controllers

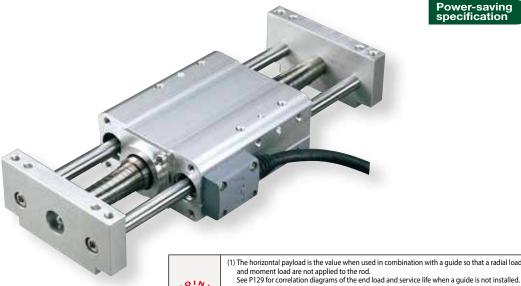
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. 1 4 1 6		Control method														Maximum number	Reference		
Name	External view	Max. number of connectable axes	Power supply voltage	Positioner	Pulse- Program		Network option *1										of positioning points	page		
	VIEW	Connectable axes	voltage	rositionei	train	Fiografii	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	page
RCON	MM IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	
RSEL	We'r.	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000	
SCON-CB/CGB	9	1	Single phase	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for
SSEL-CS	3	2	100VAC/200VAC	•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.
XSEL-P/Q		6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	
XSEL-RA/SA	Tilla 🖡	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



### CA2-SD3NA ROBO Cylinder Mini Rod Type Short-Length Double-Guide Slide Unit Type Actuator Width 60 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification ■ Model Description RCA2 – SD3NA 10 Series **Encoder type** Motor type Lead Stroke Compatible controllers Option Cable length 10: Servo motor 10W 4: Ball screw 4mm 2: Ball screw 2mm 25: 25mm A3: ACON-CYB/PLB/POB 50: 50mm A5: ACON-CB/CGB LA: Power-saving specification I: Incremental P: 1 m S: 3 m specification \* Model number is "I" when used with 1: Ball screw 1mm A6: RCON M: 5 m 4S: Lead screw 4mm RSEL X□□: Length Designation simple absolute unit. 2S: Lead screw 2mm \* See page 14 for details on the model descriptions. 1S: Lead screw 1mm



Power-saving specification

- (1) The horizontal payload is the value when used in combination with a guide so that a radial load
- (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (3) The vertical payload is the value when the actuator is mounted and side bracket is operated. Take note that in vertical operation, the side bracket cannot be mounted to operate the actuator.
- (4) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)	' '	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)	
RCA2-SD3NA-I-10-4-①-②-③-④			4	0.75	0.25(*)	42.7			
RCA2-SD3NA-I-10-2-①-②-③-④	10	10 Ball screw	2	1.5	0.5(*)	85.5	±0.02	25 50	
RCA2-SD3NA-I-10-1-①-②-③-④			4	3	1(*)	170.9			
RCA2-SD3NA-I-10-4S-①-②-③-④			4	0.25	0.125(*)	25.1			
RCA2-SD3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25(*)	50.3	±0.05	25 50	
RCA2-SD3NA-I-10-1S-①-②-③-④			1	1	0.5(*)	100.5			

# ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50 (mm)						
Ņ	4	200							
Ball screw	2	10	100						
Ba	1	50							
Wei	4	200							
Lead screw	2	00							
Leg	1	1 50							

(\*) When the main unit side is fixed

(unit: mm/s)

# ① Stroke list

Churche	Standard price						
Stroke (mm)	Feed screw						
(11111)	Ball screw	Lead screw					
25	_	_					
50	_	_					

### **4** Options

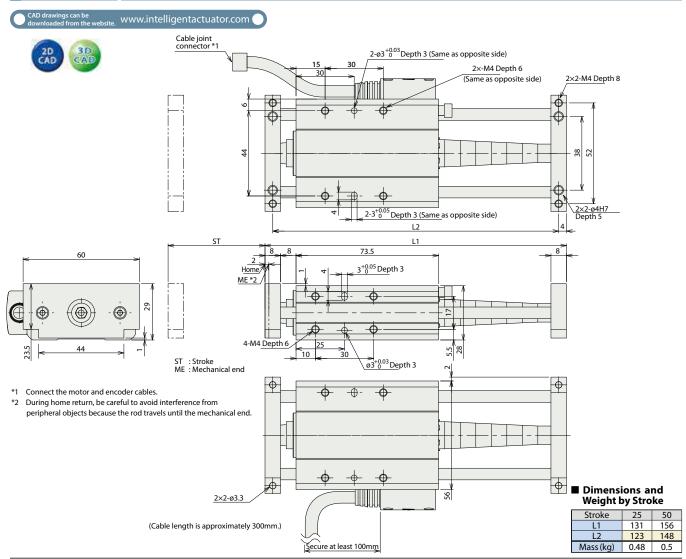
Title	Option code	See page	Standard price
Power-saving specification	LA	_	_

### **3 Cable Length**

Type	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

Actuato	r Specifications				
	Item	Description			
Drive System		Ball screw/Lead screw, ø4mm, rolled C10			
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less			
Frame		Material: Aluminum, white alumite treated			
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)			
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles			



# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F	Power	Power					Cor	ntrol r	neth	od								Maximum number of	Deference
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse- Program									Maximum number of positioning points	Reference page					
			voltage	1 ositioner	train	rrogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	P-9-
ACON-CB/CGB		1	24VDC	● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		• * Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)		-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE R.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



# CA2-SD4NA

ROBO Cylinder Mini Rod Type Short-Length, Double-Guide Slide Unit Type Actuator Width 72 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification

■ Model Description

\* See page 14 for details on the model descriptions.

Series

RCA2 - SD4NA

**Encoder type** 

simple absolute unit.

20 Motor type

I: Incremental specification 20W \* Model number is "I" when used with

6: Ball screw 6mm 4: Ball screw 4mm 2: Ball screw 2mm 6S: Lead screw 6mm 4S: Lead screw 4mm 2S: Lead screw 2mm

Lead

Stroke Compatible controllers

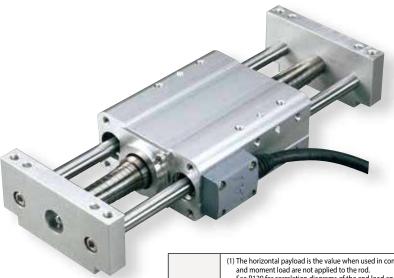
25: 25mm A3: ACON-CYB/PLB/POB 50: 50mm A5: ACON-CB/CGB 75: 75mm A6: RCON RSEL

Cable length

N: None P: 1 m S: 3 m M: 5 m X□□: Length Designation

Option LA: Power-saving specification

Power-saving specification



- (1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod. See P129 for correlation diagrams of the end load and service life when a guide is not installed.
- (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (3) The vertical payload is the value when the actuator is mounted and side bracket is operated. Take note that in vertical operation, the side bracket cannot be mounted to operate the actuator.
- (4) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor	Feed	Lead	Maximum		Rated	Positioning repeatability	Stroke
Model	output (W)	screw	(mm)	Horizontal (kg)	Vertical (kg)	thrust (N)	(mm)	(mm)
RCA2-SD4NA-I-20-6-①-②-③-④			6	2	0.5 (* 1)	33.8		
RCA2-SD4NA-I-20-4-①-②-③-④	20	20 Ball screw	4	3	0.75 (* 1)	50.7	±0.02	25 50 75
RCA2-SD4NA-I-20-2-①-②-③-④			2	6	1.5 (* 1)	101.5		
RCA2-SD4NA-I-20-6S-①-②-③-④		Lead screw	6	0.25	0.125 (* 1)	19.9		
RCA2-SD4NA-I-20-4S-①-②-③-④	20		4	0.5	0.25 (* 1)	29.8	±0.05	25 50 75
RCA2-SD4NA-I-20-2S-①-②-③-④			2	1	0.5 (* 1)	59.7		. 3

# ■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~75 (mm)						
Ņ	6	240 <200>	300						
Ball screw	4	20	200						
Ba	2	100							
Wei	6	200	300						
ead screw	4	200							
Le	2	100							

(unit: mm/s)

# ① Stroke list

Stroke	Standard price						
(mm)	Feed screw						
(11111)	Ball screw	Lead screw					
25	_	_					
50	_	_					
75	_	_					

# **4** Options

Title	Option code	See page	Standard price
Power-saving specification	LA	_	_

# ③Cable Length

Type	Cable symbol	Standard price
Character and the con-	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

Actuato	r Specifications						
	Item	Description					
Drive System		Ball screw/Lead screw, ø6mm, rolled C10					
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less					
Frame		Material: Aluminum, white alumite treated					
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)					
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles					

Φ

■ Dimensions and Weight by Stroke

141

131

Stroke

L1

12 Mass (kg)



75 191

181

166

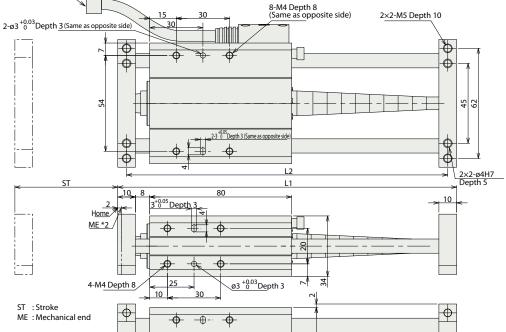
156

0.73 | 0.75 | 0.77

# Dimensional Drawings www.intelligentactuator.com Cable joint connector \*1

\*1 Connect the motor and encoder cables.

During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



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# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

2×2-ø4.2

(Cable length is approximately 300mm.)

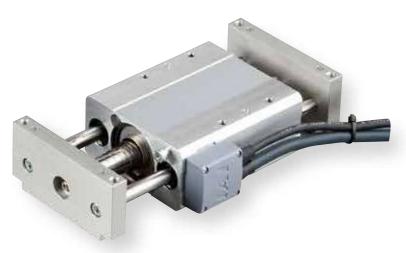
	External	Max. number of	Power		Control method													Maximum number of	Reference	
Name	view	connectable axes	supply	Positioner	Pulse-	Program					Ne	etwork option *1							positioning points	page
	VIEW	COIIIIECCADIC AXES	voltage	rositionei	train	Flogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	No.	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	ien iq.	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

Secure at least 100mm



<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

ROBO Cylinder Mini Rod Type Short-Length Double-Guide Slide Unit Type Actuator Width 94 mm 200V Servo Motor Ball Screw Specification SD5N ■ Model Description RCS2 -60 **T2** Compatible controllers Series Type Encoder type Motor type Lead Stroke Option Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left N: None T2: SCON P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q K3: Connector cable exits from the right 2.5: 2.5mm XSEL-RA/SA T4: RCON X□□: Length Designation R□□: Robot cable \* See page 14 for details on the model descriptions. RSEL





- (1) The horizontal payload is the value when used in combination with a guide so that a radial load and moment load are not applied to the rod.
  See P129 for correlation diagrams of the end load and service life when a guide is not installed.
- (2) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (3) The vertical payload is the value when the actuator is mounted and side bracket is operated. Take note that in vertical operation, the side bracket cannot be mounted to operate the actuator.
- (4) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)			
RCS2-SD5N-I-60-10-11-T2-2-3			10	5	1.5	89					
RCS2-SD5N-I-60-5-①-T2-②-③	60	Ball screw	5	10	3	178	±0.02	50 75			
RCS2-SD5N-I-60-2.5-①-T2-②-③			2.5	20	6	356					
Legend ① Stroke ② Cable length ③ C	Legend ① Stroke ② Cable length ③ Option										

# ■ Stroke and Maximum Speed

Stroke Lead	Stroke 50 (mm)							
10	280 <230>	380 <330>						
5	250 <230>	250						
2.5	12	25						

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standard price
50	_
75	_

# ②Cable Length

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot cable	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 153m)	_
	R16 (16m) ~ R20 (20m)	_

# ③ Options

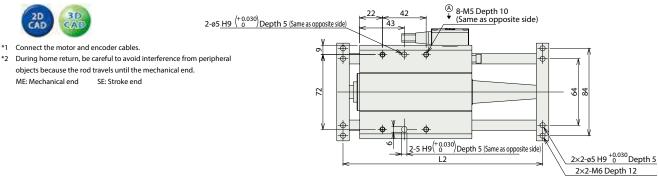
Title	Option code	See page	Standard price
Connector cable exits from the left	K1	Refer to the next page	_
Connector cable exits from the right	Кз	Refer to the next page	_

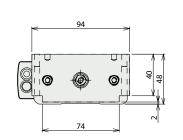
7 tetuato: 5 peen teatrons	
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

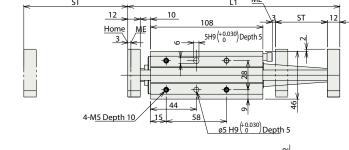
# www.intelligentactuator.com

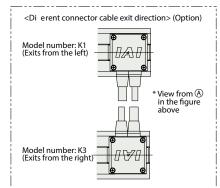


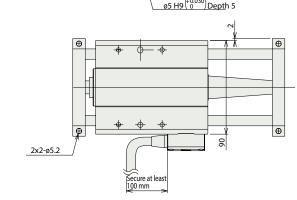
\*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.











■ Dimensions and Weight by Stroke										
Stroke	50	75								
L1	204	229								
L2	192	217								
Mass (kg)	1.9	1.94								

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. damed		Control method												Maximum number	Reference				
Name		al Max. number of connectable axes		Positioner	Pulse-	Program	Network option *1											of positioning points	page	
	VIEW	Connectable axes	voltage	rositionei	train	Flogialli	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	puge
RCON	HEM IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	
RSEL	Wet	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000	
SCON-CB/CGB	9	1	Single phase	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for
SSEL-CS	31	2	100VAC/200VAC	•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.
XSEL-P/Q	Ting.	6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	
XSEL-RA/SA	Tima F	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



\* See page 14 for details on the model descriptions.

CA2-TCA3NA ROBO Cylinder Mini Rod Type Short-Length Compact Type Actuator Width 32 mm 24V Servo Motor **Ball Screw Specification/Lead Screw Specification** ■ Model Description RCA2 - TCA3NA -10 Series **Encoder type** Motor type Lead Stroke Compatible controllers Cable length Option l: Incremental specification 10: Servo motor 10W 4: Ball screw 4mm 2: Ball screw 2mm 30: 30mm 50: 50mm K2: Connector cable exits from the A3: ACON-CYB/PLB/POB N: None A5: ACON-CB/CGB A6: RCON P: 1 m S: 3 m \* Model number is "I" when used with 1: Ball screw 1mm front M: 5 m 4S: Lead screw 4mm LA: Power-saving X□□: Length Designation simple absolute unit. 2S: Lead screw 2mm specification

1S: Lead screw 1mm



Power-saving specification

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

# **Actuator Specifications Table**

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)	n payload Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-TCA3NA-I-10-4-①-②-③-④			4	0.75	0.25	42.7		
RCA2-TCA3NA-I-10-2-①-②-③-④	10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
RCA2-TCA3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-TCA3NA-I-10-4S-①-②-③-④			4	0.25	0.125	25.1		
RCA2-TCA3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
RCA2-TCA3NA-I-10-1S-①-②-③-④			1	1	0.5	100.5		
Legend ①Stroke ②Compatible Control	lers ③C	able ler	ngth (	Option				

# ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)			
W	4	200				
Scre	Ball screw	10	00			
Ba	1	50				
we	4	20	00			
Lead screw	2	100				
Lea	1	50				

(unit: mm/s)

# ① Stroke list

Ctraka	Standard price				
Stroke (mm)	Feed screw				
(111111)	Ball screw	Lead screw			
30	_	_			
50	_	_			

### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	K2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Туре	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

### Actuator Specifications

	- Decinculoni			
	Item	Description		
Drive System		Ball screw/Lead screw, ø4mm, rolled C10		
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less		
Frame		Material: Aluminum, white alumite treated		
Dynamic allo	wable moment (see note)	Ma: 9.9 N•m Mb: 9.9 N•m Mc: 3.3 N•m		
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles		
	Ball screw specification	5,000 km or 50 million cycles (*)		

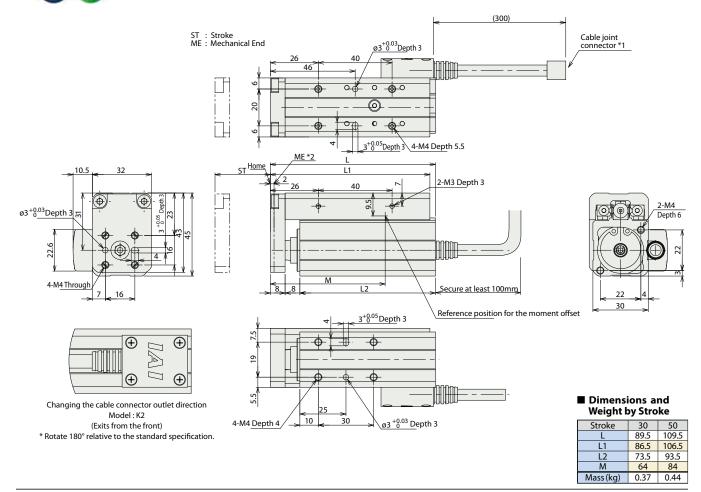
(Note) For cases when the guide service life has been set to 5,000km.

(\*) For lead 1: 3,000 km or 50 million cycles

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Dimensional Drawings

- $^{*}1$  Connect the motor and encoder cables.
- $^{*}2$  During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Power					Cor	ntrol i	neth	od								Maximum number of	Reference
Name	view	connectable axes	supply	Positioner	tioner Pulse- Program PV CC CIF RD CN MI NU SC FD RDT CCN FC FD RDT CCN							positioning points	page							
	VICW	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



### CA2-TCA4NA ROBO Cylinder Mini Table Type Short-Length Compact Type Actuator Width 36 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification ■ Model Description RCA2 - TCA4NA -20 Series **Encoder type** Motor type Lead Stroke Compatible controllers Option Cable length l: Incremental specification 20: Servo motor 20W 6: Ball screw 6mm 4: Ball screw 4mm 30: 30mm 50: 50mm K2: Connector cable exits from the A3: ACON-CYB/PLB/POB N: None A5: ACON-CB/CGB A6: RCON P: 1 m S: 3 m \* Model number is "I" when used with 2: Ball screw 2mm front M: 5 m 6S: Lead screw 6mm LA: Power-saving X□□: Length Designation simple absolute unit. 4S: Lead screw 4mm specification 2S: Lead screw 2mm \* See page 14 for details on the model descriptions.



lotes on

Power-saving specification

- (1) The payload is the value when the actuator is operated at an acceleration of  $0.3\ \dot{G}\ (0.2G\ for\ lead\ 2,\ if\ used\ vertically\ and\ for\ lead\ screw\ specification).$  The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

# **Actuator Specifications Table**

# ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)		
RCA2-TCA4NA-I-20-6-①-②-③-④			6	2	0.5	33.8				
RCA2-TCA4NA-I-20-4-①-②-③-④	20	Ball screw	4	3	0.75	50.7	±0.02	30 50		
RCA2-TCA4NA-I-20-2-①-②-③-④			2	6	1.5	101.5				
RCA2-TCA4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9				
RCA2-TCA4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50		
RCA2-TCA4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7				
Legend ①Stroke ②Compatible Control	lers ③C	able ler	ngth (	Option						

■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)		
W	6	270 <220>	300		
Ball screw	4	20	00		
Ba	2	100			
ew	6	220	300		
Lead screw		200			
Lea	2	100			

\*< > Indicates vertical use

(unit: mm/s)

# ① Stroke list

Churches	Standard price				
Stroke (mm)	Feed	screw			
(11111)	Ball screw	Lead screw			
30	_	_			
50	_	_			

### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	K2	_	_
Power-saving specification	LA	_	_

# ③Cable Length

Type	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

### Actuator Specifications

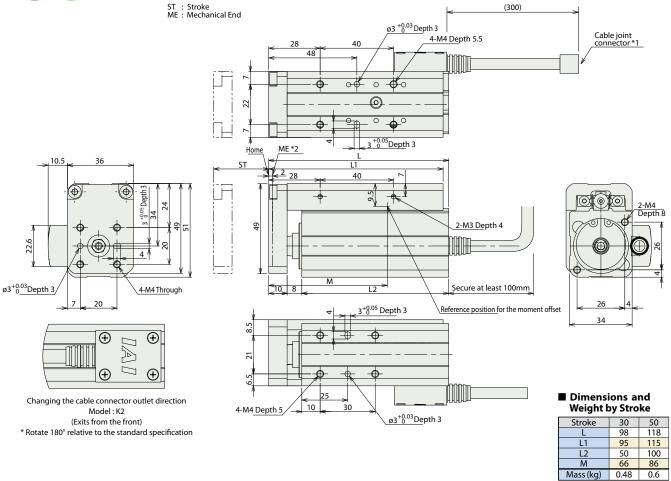
		D		
	Item	Description		
Drive System		Ball screw/Lead screw, ø6mm, rolled C10		
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less		
Frame		Material: Aluminum, white alumite treated		
Dynamic allo	wable moment (see note)	Ma: 9.9 N•m Mb: 9.9 N•m Mc: 3.3 N•m		
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles		
	Ball screw specification	5,000 km or 50 million cycles (*)		

(Note) For cases when the guide service life has been set to 5,000km.

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- \*1 Connect the motor and encoder cables.
- $^{*}2$  During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Power		Control method												Maximum number of	Reference		
Name	view	connectable axes	supply	Positioner	Pulse-	Program							k opti						positioning points	page
	VICW	connectable axes	voltage	1 Ositionei	train	Trogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



Rod in

Mini Table type

Viini iinear iervo ype

Compact

Flat

Coupling

mounted

S2-TCA5N ROBO Cylinder Mini Table Type Short-Length Compact Type Actuator Width 48 mm 200V Servo Motor **Ball Screw Specification** 60 ■ Model Description RCS2 - TCA5N -**T2** Compatible controllers Series Type Encoder type Motor type Lead Stroke Option Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left T2: SCON N: None P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q K2: Connector cable exits from the front 2.5: 2.5mm XSEL-RA/SA T4: RCON RSEL X□□: Length Designation K3: Connector cable R□□: Robot cable exits from the right \* See page 14 for details on the model descriptions.





- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximun Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)			
RCS2-TCA5N-I-60-10-①-T2-②-③			10	5	1.5	89					
RCS2-TCA5N-I-60-5-①-T2-②-③	60	60 B		5	10	3	178	±0.02	50 75		
RCS2-TCA5N-I-60-2.5-①-T2-②-③			2.5	20	6	356					
Legend ① Stroke ② Cable length ③ O											

#### ■ Stroke and Maximum Speed

Stroke Lead	50 (mm)	75 (mm)							
10	280 <230>	380 <330>							
5	250 <230>	250							
2.5	125								

\*< > Indicates vertical use

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
50	_
75	_

#### ②Cable Length

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 153m)	_
	R16 (16m) ~ R20 (20m)	_

#### **3Options**

© Options				
Title	Option code	Standard price		
Connector cable exits from the left	K1	Refer to the next page	_	
Connector cable exits from the front	К2	Refer to the next page	_	
Connector cable exits from the right	КЗ	Refer to the next page	_	

#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Dynamic allowable moment (see note)	Ma: 15 N·m Mb: 15 N·m Mc: 7.1 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

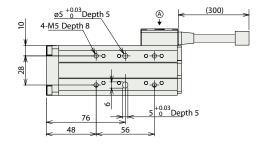
(Note) For cases when the guide service life has been set to 5,000km.

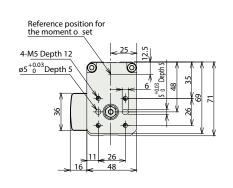
### CAD drawings can be downloaded from the website. WWW.intelligentactuator.com

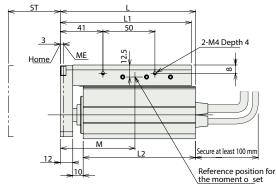


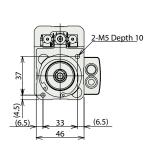
- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.

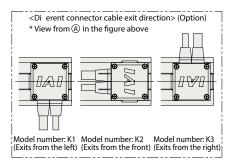
  ME: Mechanical end SE: Stroke end

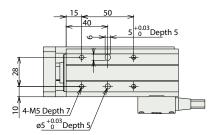












Weight by Stroke									
Stroke	50	75							
L	130	155							
L1	126	151							
L2	108	133							
M	89	105 5							

Mass (kg) 1.3 1.5

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	Fortennal	Man annulas of	D		Control method									Maximum number	Reference page					
Name	External view	Max. number of connectable axes	Power supply voltage	Positioner	ositioner Pulse- Program Pulse- Network option *1											of positioning points				
	VIEW	Connectable axes	voltage	rositionei	train	Fiografii	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	page
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	
RSEL	Wei	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000	
SCON-CB/CGB	9	1	Single phase	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for
SSEL-CS	31	2	100VAC/200VAC	•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.
XSEL-P/Q	TIN	6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	
XSEL-RA/SA	Tenna I	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### CA2-TWA3NA ROBO Cylinder Mini Table Type Short-Length Wide Type Actuator Width 50 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification ■ Model Description RCA2 -TWA3NA-10 Series **Encoder type** Motor type Lead Stroke Compatible controllers Option Cable length l: Incremental specification 10: Servo motor 10W 4: Ball screw 4mm 2: Ball screw 2mm 30: 30mm 50: 50mm K2: Connector cable exits from the A3: ACON-CYB/PLB/POB N: None P: 1 m S: 3 m A5: ACON-CB/CGB \* Model number is "I" when used with 1: Ball screw 1mm front A6: RCON M: 5 m 4S: Lead screw 4mm LA: Power-saving RSEL X□□: Length Designation simple absolute unit. 2S: Lead screw 2mm specification \* See page 14 for details on the model descriptions. 1S: Lead screw 1mm



Power-saving specification

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

#### **Actuator Specifications Table**

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-TWA3NA-I-10-4-①-②-③-④			4	0.75	0.25	42.7		
RCA2-TWA3NA-I-10-2-①-②-③-④	10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
RCA2-TWA3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-TWA3NA-I-10-4S-①-②-③-④			4	0.25	0.125	25.1		
RCA2-TWA3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
RCA2-TWA3NA-I-10-15-①-②-③-④			1	1	0.5	100.5		
Legend ①Stroke ②Compatible Control	lers ③C	able ler	ngth (	Option			·	

#### ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)							
Wei	4	20	200							
Ball screw	2	2 100								
Ba	1	5	50							
we	4	20	200							
Lead screw	2	10	100							
Lea	1 50									

(unit: mm/s)

#### ① Stroke list

Churchen	Standard price									
Stroke (mm)	Feed screw									
(11111)	Ball screw	Lead screw								
30	_	_								
50	_	_								

#### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	K2	_	_
Power-saving specification	LA	_	_

#### ③Cable Length

Туре	Cable symbol	Standard price
Cton doubt	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

#### Actuator Specifications

	- Decinculations					
	Item	Description				
Drive System		Ball screw/Lead screw, ø4mm, rolled C10				
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less				
Frame		Material: Aluminum, white alumite treated				
Dynamic allo	wable moment (see note)	Ma: 9.9 N·m Mb: 9.9 N·m Mc: 9.4 N·m				
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)				
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles				
	Ball screw specification	5,000 km or 50 million cycles (*)				

(Note) For cases when the guide service life has been set to 5,000km.

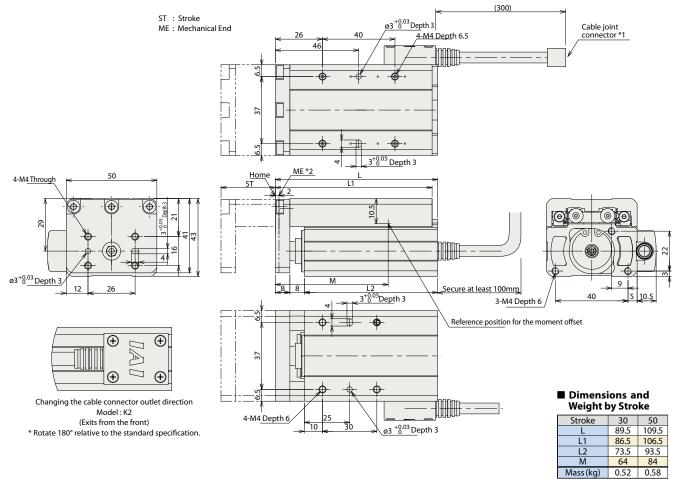
(\*) For lead 1: 3,000 km or 50 million cycles

# CAD drawings can be downloaded from the website. WWW.intelligentactuator.com



Dimensional Drawings

- \*1 Connect the motor and encoder cables.
  - \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



#### Applicable Controllers

 $The actuators \, on \, this \, page \, can \, be \, operated \, by \, the \, controllers \, indicated \, below. \, Please \, select \, the \, type \, depending \, on \, your \, intended \, use.$ 

	External	Max. number of	Power	Control method									Maximum number of	Reference						
Name	view	connectable axes	supply	Positioner	Pulse-	Program							k opti						positioning points	page
	VICW	connectable axes	voltage	1 Ositionei	train	train Program D		CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### CA2-TWA4NA ROBO Cylinder Mini Table Type Short-Length Wide Type Actuator Width 58 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification 20 ■ Model Description RCA2 -TWA4NA-Series **Encoder type** Motor type Lead Stroke Compatible controllers Option Cable length 20: Servo motor 20W 6: Ball screw 6mm 4: Ball screw 4mm 30: 30mm 50: 50mm K2: Connector cable exits from the I: Incremental A3: ACON-CYB/PLB/POB N: None specification \* Model number is "I" when used with P: 1 m S: 3 m A5: ACON-CB/CGB 2: Ball screw 2mm A6: RCON M: 5 m LA: Power-saving 6S: Lead screw 6mm RSEL X□□: Length Designation simple absolute unit. 4S: Lead screw 4mm specification \* See page 14 for details on the model descriptions. 2S: Lead screw 2mm



Notes or

electio

Power-saving specification

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)			
RCA2-TWA4NA-I-20-6-①-②-③-④			6	2	0.5	33.8					
RCA2-TWA4NA-I-20-4-①-②-③-④	20	Ball screw	)		()		3	0.75	50.7	±0.02	30 50
RCA2-TWA4NA-I-20-2-①-②-③-④			2	6	1.5	101.5					
RCA2-TWA4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9					
RCA2-TWA4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50			
RCA2-TWA4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7					
Legend ① Stroke ② Compatible Control	lers ③C	able ler	ngth (	Option			-				

#### ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)
No.	6	270 <220>	300
Ball screw	4	20	00
Ba	2	10	00
ew	6	220	300
Lead screw	4	20	00
Lea	2	10	00

\*< > Indicates vertical use

(unit: mm/s)

#### ① Stroke list

Stroke	Standa	Standard price								
(mm)	Feed screw									
(11111)	Ball screw	Lead screw								
30	_	_								
50	_	_								

#### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	K2	_	_
Power-saving specification	LA	_	_

#### ③Cable Length

Type	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable.

#### Actuator Specifications

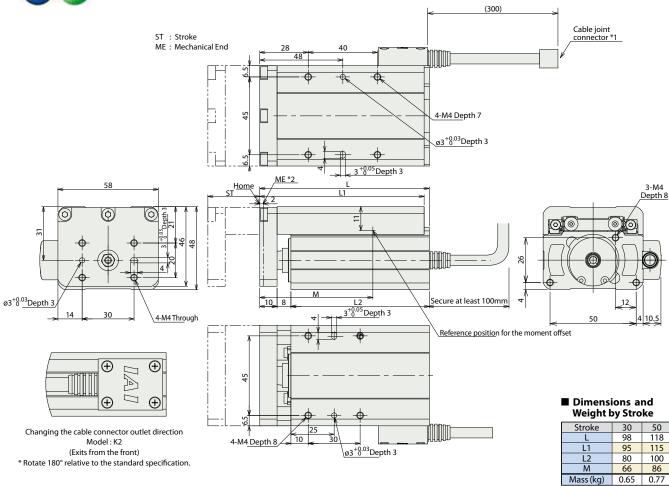
	- Decinculono					
	Item	Description				
Drive System		Ball screw/Lead screw, ø6mm, rolled C10				
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less				
Frame		Material: Aluminum, white alumite treated				
Dynamic allo	wable moment (see note)	Ma: 9.9 N•m Mb: 9.9 N•m Mc: 12.2 N•m				
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)				
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles				
	Ball screw specification	5,000 km or 50 million cycles				

(Note) For cases when the guide service life has been set to 5,000km.

### CAD drawings can be downloaded from the website. WWW.intelligentactuator.com



- 36 CAB
- \*1 Connect the motor and encoder cables.
- $^*2$  During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Power	Control method								Maximum number of	Reference							
Name	view	connectable axes	supply	Positioner	Pulse-	Program					Ne	twor	k opti	on *1					positioning points	page
	VIEW	Connectable axes	voltage	rositionei	train		DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



S2-TWA5N ROBO Cylinder Mini Table Type Short-Length Wide Type Actuator Width 80 mm 200V Servo Motor **Ball Screw Specification** ■ Model Description RCS2 - TWA5N - I -60 **T2** Compatible controllers Series Encoder type Motor type Lead Stroke Option Type Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left T2: SCON N: None P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q XSEL-RA/SA K2: Connector cable exits from the front 2.5: 2.5mm T4: RCON RSEL X□□: Length Designation K3: Connector cable R□□: Robot cable exits from the right \* See page 14 for details on the model descriptions.





- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)		
RCS2-TWA5N-I-60-10-①-T2-②-③			10	5	1.5	89				
RCS2-TWA5N-I-60-5-①-T2-②-③	60		60 Ball screw 5		5	10	3	178	±0.02	50 75
RCS2-TWA5N-I-60-2.5-①-T2-②-③			2.5	20	6	356				
Legend ① Stroke ② Cable length ③ O	ption									

#### ■ Stroke and Maximum Speed

Stroke Lead	50 (mm)	75 (mm)						
10	280 <230>	3 80 <330>						
5	250 <230>	250						
2.5	125							

\*< > Indicates vertical use

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
50	_
75	_

#### ②Cable Length

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
Robot cable	R04 (4m) ~ R05 (5m)	_
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 153m)	_
	R16 (16m) ~ R20 (20m)	_

#### ③ Options

Title	Option code	See page	Standard price
Connector cable exits from the left	K1	Refer to the next page	_
Connector cable exits from the front	К2	Refer to the next page	_
Connector cable exits from the right	КЗ	Refer to the next page	_

#### Actuator Specifications

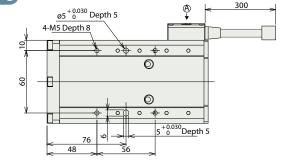
ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Dynamic allowable moment (see note)	Ma: 15 N·m Mb: 15 N·m Mc: 25.5 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

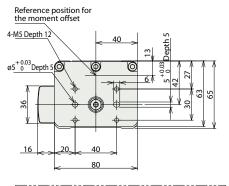
(Note) For cases when the guide service life has been set to 5,000km.

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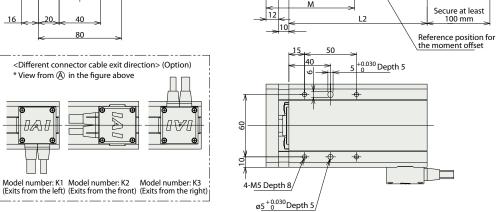
- \*1 Connect the motor and encoder cables.
- $^{*}2$  During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end. ME: Mechanical end SE: Stroke end





<Different connector cable exit direction> (Option)

 $^*$  View from  $ext{ (A) }$  in the figure above



0

■ Dimensions and Weight by Stroke							
Stroke	50	75					
L	130	155					
L1	126	151					
L2	108	133					
M	89	105.5					

Mass (kg) 1.7 2.0

4-M5 Depth 10

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Home/

	Eutornal	May number of	Dawar supply		Control method						Mavimum numbar	Reference								
Name	External view	Max. number of connectable axes	Power supply voltage	Positioner	Pulse-	Program					Ne	twor	k optid	on *1					Maximum number of positioning points	page
	VIEW	Connectable axes	voltage	rositionei	train	Flogialli	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	page
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	
RSEL	We'll	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000	
SCON-CB/CGB	9	1	Single phase	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for
SSEL-CS	31	2	100VAC/200VAC	•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.
XSEL-P/Q	Ting.	6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	
XSEL-RA/SA	Tilla 🖡	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### CA2-TFA3NA ROBO Cylinder Mini Table Type Short-Length Flat Type Actuator Width 61 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification ■ Model Description RCA2 - TFA3NA -10 Series **Encoder type** Motor type Lead Stroke Compatible controllers Cable length Option l: Incremental specification 10: Servo motor 10W 4: Ball screw 4mm 2: Ball screw 2mm 30: 30mm 50: 50mm K2: Connector cable exits from the A3: ACON-CYB/PLB/POB N: None P: 1 m S: 3 m A5: ACON-CB/CGB \* Model number is "I" when used with 1: Ball screw 1mm front A6: RCON M: 5 m 4S: Lead screw 4mm LA: Power-saving RSEL X□□: Length Designation simple absolute unit. 2S: Lead screw 2mm specification \* See page 14 for details on the model descriptions. 1S: Lead screw 1mm



Notes or

Power-saving specification

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)	n payload Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-TFA3NA-I-10-4-①-②-③-④			4	0.75	0.25	42.7		
RCA2-TFA3NA-I-10-2-①-②-③-④	10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
RCA2-TFA3NA-I-10-1-①-②-③-④			1	3	1	170.9		
RCA2-TFA3NA-I-10-4S-①-②-③-④			4	0.25	0.125	25.1		
RCA2-TFA3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
RCA2-TFA3NA-I-10-1S-①-②-③-④			1	1	0.5	100.5		
Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option								

#### ■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)						
W	4	20	200						
Ball screw	2	100							
Ba	1	50							
ew	4	200							
ead screw	2	100							
Les	1	5	0						

(unit: mm/s)

#### ① Stroke list

Chualia	Standa	rd price			
Stroke (mm)	Feed screw				
(111111)	Ball screw	Lead screw			
30	_	_			
50	_	_			

#### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	K2	_	_
Power-saving specification	LA	_	_

#### ③Cable Length

Туре	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOT Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_

 $<sup>\</sup>ensuremath{^{*}}$  The standard cable for the RCA2 is the robot cable.

#### Actuator Specifications

7100000									
	Item	Description							
Drive System		Ball screw/Lead screw, ø4mm, rolled C10							
Lost motion		Ball screw: 0.1 mm or less Lead screw: 0.3 mm or less							
Frame		Material: Aluminum, white alumite treated							
Dynamic allo	wable moment (see note)	Ma: 9.9 N•m Mb: 9.9 N•m Mc: 3.3 N•m							
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)							
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles							
	Ball screw specification	5,000 km or 50 million cycles (*)							

(Note) For cases when the guide service life has been set to 5,000km.

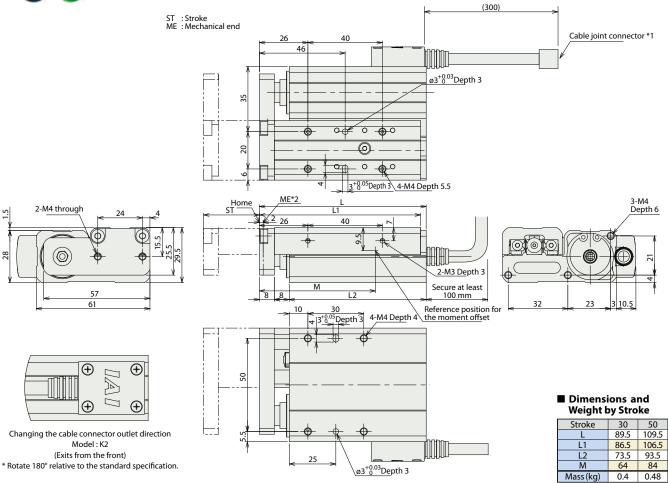
(\*) For lead 1: 3,000 km or 50 million cycles

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Dimensional Drawings

- $^{*}1$  Connect the motor and encoder cables.
  - $^{*}2$  During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Power		Control method								Maximum number of	Reference						
Name	view	connectable axes	supply	Positioner	Pulse- Proc								k opti						positioning points	page
	VICVV	connectable axes	voltage	1 Ositionei	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	E .	1		* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE REAL	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### CA2-TFA4NA ROBO Cylinder Mini Table Type Short-Length Flat Type Actuator Width 71 mm 24V Servo Motor Ball Screw Specification/Lead Screw Specification ■ Model Description RCA2 - TFA4NA -20 Series Encoder type Motor type Lead Stroke Option Compatible controllers Cable length l: Incremental specification 20: Servo motor 20W 6: Ball screw 6mm 4: Ball screw 4mm 30: 30mm 50: 50mm K2: Connector cable exits from the A3: ACON-CYB/PLB/POB N: None P: 1 m S: 3 m A5: ACON-CB/CGB \* Model number is "I" when used with 2: Ball screw 2mm front A6: RCON M: 5 m LA: Power-saving 6S: Lead screw 6mm RSEL X□□: Length Designation simple absolute unit. 4S: Lead screw 4mm specification 2S: Lead screw 2mm \* See page 14 for details on the model descriptions.



Notes or

Power-saving specification

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-TFA4NA-I-20-6-①-②-③-④			6	2	0.5	33.8		
RCA2-TFA4NA-I-20-4-①-②-③-④	20 Ball screw	4	3	0.75	50.7	±0.02	30 50	
RCA2-TFA4NA-I-20-2-①-②-③-④			2	6	1.5	101.5		
RCA2-TFA4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9		
RCA2-TFA4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50
RCA2-TFA4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7		
Legend ①Stroke ②Compatible Control	lers ③C	able ler	ngth (	Option			·	

### ■ Stroke and Maximum Speed

l	Lead	Stroke	30 (mm)	50 (mm)
	W	6	270 <220>	300
	Ball screw	4	20	00
	Ba	2	10	00
ĺ	ew	6	220	300
	Lead screw	4	20	00
	Гея	2	10	00

\*< > Indicates vertical use

(unit: mm/s)

#### ① Stroke list

Stroke	Standa	Standard price								
(mm)	Feed screw									
(11111)	Ball screw	Lead screw								
30	_	_								
50	_	_								

#### **4** Options

Title	Option code	See page	Standard price
Connector cable exits from the front	K2	_	_
Power-saving specification	LA	_	_

### ③Cable Length

Type	Cable symbol	Standard price			
6. 1.1.	<b>P</b> (1m)	_			
Standard type (Robot cable)	<b>S</b> (3m)	_			
(RODOL CADIE)	<b>M</b> (5m)	_			
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_			
Special length	X11 (11m) ~ X15 (15m)	_			
	X16 (16m) ~ X20 (20m)	_			

 $<sup>\</sup>ensuremath{^{*}}$  The standard cable for the RCA2 is the robot cable.

#### Actuator Specifications

7100000									
	Item	Description							
Drive System		Ball screw/Lead screw, ø6mm, rolled C10							
Lost motion		Ball screw: 0.1mm or less Lead screw: 0.3 mm or less							
Frame		Material: Aluminum, white alumite treated							
Dynamic allo	wable moment (see note)	Ma: 9.9 N•m Mb: 9.9 N•m Mc: 3.3 N•m							
Ambient ope	rating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)							
Service life	Lead screw specification	Horizontal specification: 10 million cycles, Vertical specification: 5 million cycles							
	Ball screw specification	5,000 km or 50 million cycles							

(Note) For cases when the guide service life has been set to 5,000km.

Mass (kg)

0.6

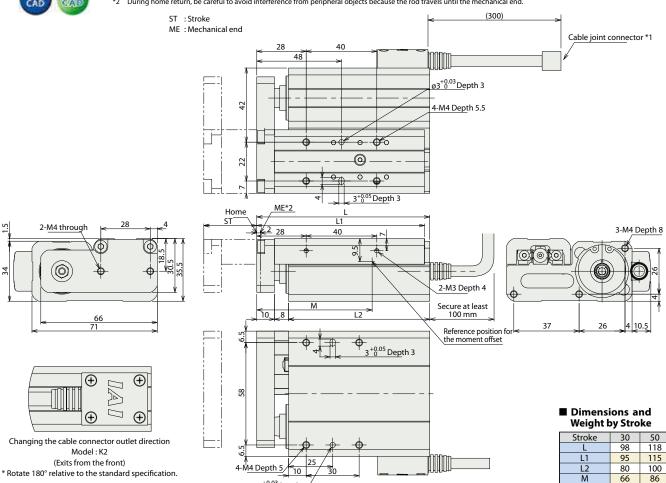
0.72

# www.intelligentactuator.com



Dimensional Drawings

- $^{*}1$  Connect the motor and encoder cables.
- $^{*}2$  During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end.



### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

ø3<sup>+0.03</sup>Depth 3

			Power					Cor	itrol r	neth	od								Maximum number of	D-f
Name	External view	Max. number of connectable axes	supply voltage	Positioner	Pulse- train Program		Network option *1							ECM	positioning points	Reference page				
			voitage		trairi		DV	CC	CIL	FN	CIV	IVIL	IVILO	LC	LF	FNI	JJIN	LCIVI		
ACON-CB/CGB	Đ	1		* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE R.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



Rod in type

Table type

Mini Linear Servo type

Wide

Couplin

mounted

S2-TFA5N ROBO Cylinder Mini Rod Type Short-Length Flat Type Actuator Width 95 mm 200 V Servo Motor **Ball Screw Specification** 60 ■ Model Description RCS2 - TFA5N **T2** Compatible controllers Series Type Encoder type Motor type Lead Stroke Option Cable length l: Incremental specification 60: Servo motor 60W 10: 10mm 5: 5mm 50: 50mm 75: 75mm K1: Connector cable exits from the left T2: SCON N: None P: 1 m S: 3 m M: 5 m SSEL XSEL-P/Q XSEL-RA/SA K2: Connector cable exits from the front 2.5: 2.5mm T4: RCON RSEL X□□: Length Designation K3: Connector cable R□□: Robot cable exits from the right \* See page 14 for details on the model descriptions.





- (1) The payload is the value when the actuator is operated at an acceleration of 0.3 G (0.2G for lead 2.5) horizontally and 0.2G vertically. The acceleration limit is the value indicated above.
- (2) If the actuator is used vertically, pay attention to rod contact because the rod will come down when the power is turned off.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)				Stroke (mm)
RCS2-TFA5N-I-60-10-11-T2-2-3			10	5	1.5	89		
RCS2-TFA5N-I-60-5-①-T2-②-③	60 Ball screw	5	10	3	178	±0.02	50 75	
RCS2-TFA5N-I-60-2.5-①-T2-②-③			2.5	20	6	356		
Legend ① Stroke ② Cable length ③ Option								

#### ■ Stroke and Maximum Speed

Stroke Lead	50 (mm)	75 (mm)
10	280 <230>	380 <330>
5	250 <230>	250
2.5	12	25

\*< > Indicates vertical use

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
50	_
75	_

#### ②Cable Lengtl

Type	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
Robot cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	<b>R11</b> (11m) ~ <b>R15</b> 153m)	_
	R16 (16m) ~ R20 (20m)	_

#### **3Options**

Title	Option code	See page	Standard price
Connector cable exits from the left	K1	Refer to the next page	_
Connector cable exits from the front	К2	Refer to the next page	_
Connector cable exits from the right	КЗ	Refer to the next page	_

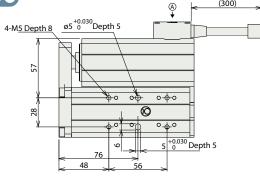
#### Actuator Specifications

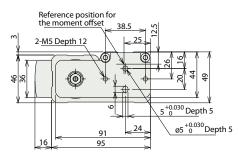
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Lost motion	0.1mm or less
Frame	Material: Aluminum, white alumite treated
Dynamic allowable moment (see note)	Ma: 15 N·m Mb: 15 N·m Mc: 7.1 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	5,000 km or 50 million cycles

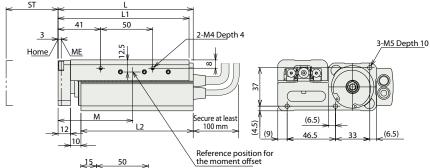
(Note) For cases when the guide service life has been set to 5,000km.



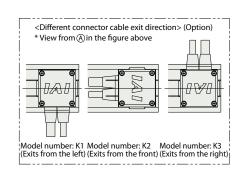
- \*1 Connect the motor and encoder cables.
- \*2 During home return, be careful to avoid interference from peripheral objects because the rod travels until the mechanical end. ME: Mechanical end SE: Stroke end

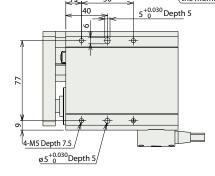






(300)





Weight by Stroke								
Stroke	50	75						
L	130	155						
L1	126	151						
L2	108	133						
M	89	105.5						
Mass (kg)	1.4	1.6						

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F	Control method											D (							
Name External Max. number of view connectable axes	Power supply voltage	Positioner	Pulse-	Program					Ne	etwor	k opti	on *1					Maximum number of positioning points	Reference page		
	VIEW	Connectable axes	voltage	rositionei	train	Fiografii	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	page
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC Single phase 200VAC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	
RSEL	Wen	8	3 phase 200VAC	-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	360000	
SCON-CB/CGB	9	1	Single phase 100VAC/200VAC	•	•	-	•	•	•	•	•	•	•	•	•	•	-	•	512 (768 for network spec.)	Please contact IAI for
SSEL-CS	31	2		•	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	more information.
XSEL-P/Q	Tie.	6	Single phase 200VAC	-	-	•	•	•	-	•	-	-	-	-	•	-	-	-	20000	
XSEL-RA/SA	Tima#	8	3 phase 200VAC	-	-	•	•	•	-	•	-	-	-	•	•	-	-	-	55000 (It depends on model)	

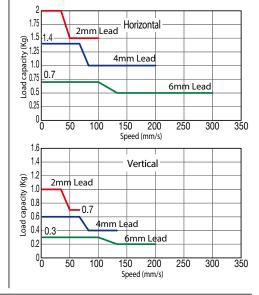
<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



3-TA3C ROBO Cylinder Mini Table Type Motor Unit Coupling Type Actuator Width 36 mm Pulse Motor ■ Model Description RCP3 -TA<sub>3</sub>C **20P** Series **Encoder type** Lead Stroke Motor type Compatible controllers Option Cable length l: Incremental specification 20P: Pulse motor 20□Size 6: 6mm 4: 4mm 2: 2mm N: None P: 1 m 20: 20mm See option table P3: PCON MSEL S: 3 m M: 5 m XIII: Length \* Model number is "I" when used with 100: 100mm P5: RCON (set in steps RSEL simple absolute unit. every 10mm) \* See page 14 for details on the model descriptions. Designation



■ Correlation Diagrams of Speed and Load Capacity With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.



(1) The payload is the value when operated with acceleration of 0.3G (or 0.2G in the case of Lead 2 and vertical usage). The upper limit for acceleration is 0.3G (or 0.2G in the case of Lead 2 and vertical usage).

#### Actuator Specifications Table

#### ■ Leads and Payloads (Note 1) Please note that the maximum payload decreases as the speed increases.

Model	Feed screw	Lead (mm)	Maximun Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCP3-TA3C-I-20P-6-①-②-③-④		6	~0.7	~0.3	9		
RCP3-TA3C-I-20P-4-①-②-③-④	Ball screw	4	~1.4	~0.6	14	±0.02	20 to 100 (every 10mm)
RCP3-TA3C-I-20P-2-①-②-③-④		2	~2	~1	28		

Leac		(mm)
>	6	300 <200>
Ball screw	4	200 <133>
Ba	2	100 <67>

20 to 100

Legend The Stroke Compatible Controllers Cable length Option (Note 2) For a graph of the pushing force, see P127. \*<> Indicates vertical use

■ Stroke and Maximum Speed

Stroke

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
20	_
30	_
40	_
50	_
60	_
70	_
80	_
90	_
100	_

### **4** Options

Title	Option code	See page	Standard price
Brake	В	_	_
Reversed-home specification	NM	_	_

#### ③Cable Length

© cable Length		
Type	Cable symbol	Standard price
туре	Cable syllibol	Standard price
Charadand hora	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> Robot type cable comes as standard with RCP3 actuator.

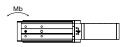
#### Actuator Specifications

Item	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note 3)	Ma: 3.2 N•m Mb: 4.6 N•m Mc: 5.1 N•m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(Note 3) For case of 5,000km service life.

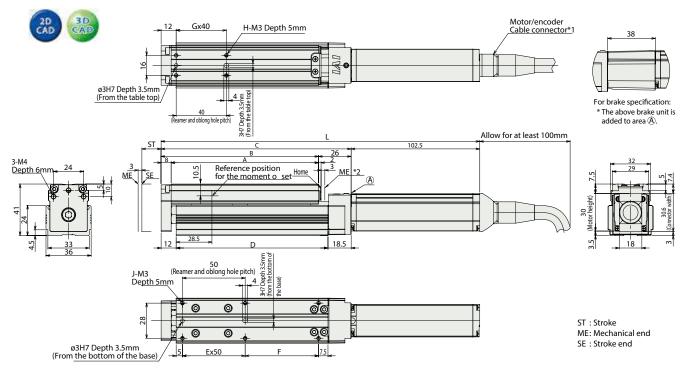
Directions of allowable load moments







### CAD drawings can be downloaded from the website. WWW.intelligentactuator.com



- \* 1 The motor-encoder cable is connected directly to the actuator motor cover.
- \*2 The slider moves to the mechanical end during home return. Pay attention to prevent contact between the slider and surrounding parts.

# ■ Dimensions and Weight by Stroke \*The attached brake adds 0.1kg of mass.

Stroke	20	30	40	50	60	70	80	90	100
No brake	224	234	244	254	264	274	284	294	304
Brake-equipped	262	272	282	292	302	312	322	332	342
Α	87.5	97.5	107.5	117.5	127.5	137.5	147.5	157.7	167.5
В	95.5	105.5	115.1	125.5	135.5	145.5	155.5	165.5	175.5
С	121.5	131.5	141.5	151.5	161.5	171.5	181.5	191.5	201.5
D	91	101	111	121	131	141	151	161	171
E	1	1	1	1	2	2	2	2	2
F	28.5	38.5	48.5	58.5	18.5	28.5	38.5	48.5	58.5
G	1	1	1	1	2	2	2	2	2
Н	4	4	4	4	6	6	6	6	6
J	6	6	6	6	8	8	8	8	8
Mass (kg)	0.5	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	May number of	Power supply					Cor	trol r	neth	od								Maximum number	
Name	view	connectable axes		Positioner	Pulse-	Pulse- Drogram		Pulse-									of positioning points	Reference page		
	VICVV	CONNECTABLE BYES	voitage	rositionei	train	train Program [	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information
RCON	ien i	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information
RSEL	Office to	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

 $<sup>{\</sup>rm *1}$  For network abbreviations such as DV and CC, please contact IAI.

 $\label{lem:controller} \textbf{More controller info is available in the General Controller Catalog~PDF.}$ 



Rod in

Table type

Mini Linear Servo type

foller

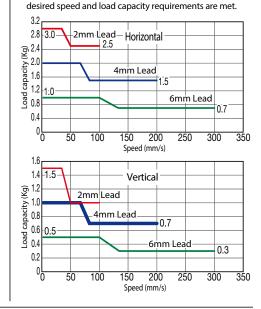
pact Wide

Coupling

**3-TA4C** ROBO Cylinder Mini Table Type Motor Unit Coupling Type Actuator Width 40 mm Pulse Motor ■ Model Description RCP3 -TA4C **28P** Series **Encoder type** Lead Stroke Option Type Motor type Compatible controllers Cable length l: Incremental specification 28P: Pulse motor 28□Size 6: 6mm 4: 4mm 2: 2mm N: None P: 1 m 20: 20mm See option table P3: PCON MSEL S: 3 m M: 5 m XIII: Length \* Model number is "I" when used with 100: 100mm P5: RCON (set in steps simple absolute unit. every 10mm) \* See page 14 for details on the model descriptions. Designation



■ Correlation Diagrams of Speed and Load Capacity
With the RCP3 series, due to the characteristics of the
pulse motor, load capacity decreases as the speed
increases. Use the chart below to confirm that the



(1) The payload is the value when operated with acceleration of 0.3G (or 0.2G in the case of Lead 2 and vertical usage). The upper limit for acceleration is 0.3G (or 0.2G in the case of Lead 2 and vertical usage).

#### Actuator Specifications Table

#### ■ Leads and Payloads

(Note 1) Please note that the maximum payload decreases as the speed increases.

Model	Feed screw	Lead (mm)	Maximun Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCP3-TA4C-I-28P-6-①-②-③-④		6	~1	~0.5	15		
RCP3-TA4C-I-28P-4-①-②-③-④	Ball screw	4	~2	~1	22	±0.02	20 to 100 (every 10mm)
RCP3-TA4C-I-28P-2-①-②-③-④		2	~3	~1.5	44		

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option (Note 2) For a graph of the pushing force, see P127.

#### ■ Stroke and Maximum Speed

Lead	Stroke	20 to 100 (mm)
W	6	300
Ball screw	4	200
Ba	2	100

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
20	_
30	_
40	_
50	_
60	_
70	_
80	_
90	_
100	_

### **4** Options

Title	Option code	See page	Standard price
Brake	В	_	_
Cable exit direction (top)	CJT		
Cable exit direction (right)	CJR		
Cable exit direction (left)	CJL	1 -	_
Cable exit direction (bottom)	CJB	1	
Reversed-home specification	NM	_	_

#### 3 Cable Length

© Cable Leligtii		
Type	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL Cable)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

 $\ensuremath{^{*}}$  Robot type cable comes as standard with RCP3 actuator.

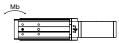
#### Actuator Specifications

Item	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (note 3)	Ma: 4.2 N•m Mb: 6 N•m Mc: 8.2 N•m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(Note 3) For case of 5,000km service life.

Directions of allowable load moments



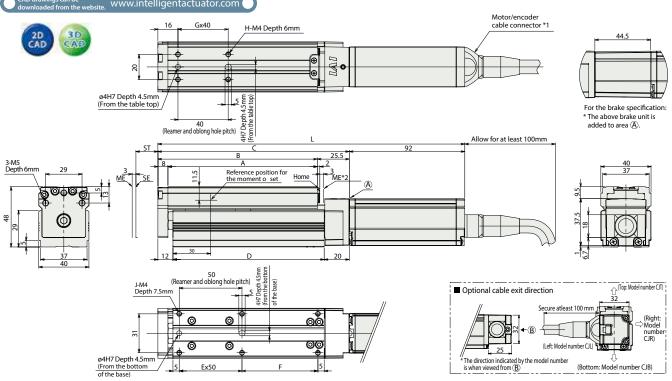




(Bottom: Model number CJB)

# Dimensional Drawings

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- $^{*}$  1 The motor-encoder cable is connected directly to the actuator motor cover.
- \* 2 The slider moves to the mechanical end during home return. Pay attention to prevent contact between the slider and surrounding parts.

ST: Stroke ME: Mechanical end SE: Stroke end

	Stroke	20	30	40	50	00	/0	00	
Γ.	No brake	214.5	224.5	234.5	244.5	254.5	264.5	274.5	28

The direction indicated by the model number is when viewed from B

■ Dimensions and Weight by Stroke \*The attached brake adds 0.2kg of mass.

Stroke	20	30	40	50	60	/0	80	90	100
, No brake	214.5	224.5	234.5	244.5	254.5	264.5	274.5	284.5	294.5
Brake-equipped	259	269	279	289	299	309	319	329	339
Α	89	99	109	119	129	139	149	159	169
В	97	107	117	127	137	147	157	167	177
С	122.5	132.5	142.5	152.5	162.5	172.5	182.5	192.5	202.5
D	90.5	100.5	110.5	120.5	130.5	140.5	150.5	160.5	170.5
E	1	1	1	1	2	2	2	2	2
F	30.5	40.5	50.5	60.5	20.5	30.5	40.5	50.5	60.5
G	1	1	1	1	2	2	2	2	2
Н	4	4	4	4	6	6	6	6	6
J	6	6	6	6	8	8	8	8	8
Mass (kg)	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.9

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. A	Man annulus of	D					Cor	trol r	netho	od								Maximum number	
Name	External view	connectable axes	Power supply voltage	Positioner	Pulse-		Network option *1											Maximum number of positioning points	Reference page	
	VIEW	Connectable axes	voltage	rositionei	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	-	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1		● * Option	Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information.
RCON	HEM IL	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information.
RSEL	Wen.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### **RCA2-TA4C** ROBO Cylinder Mini Table Type Motor Unit Coupling Type Actuator Width 40 mm 24V Servo Motor **Ball Screw Specification** ■ Model Description RCA2 -TA4C 10 Series Encoder type Motor type Lead Stroke Option Type Compatible controllers Cable length l: Incremental specification 10: Servo motor 10W 6: 6mm 4: 4mm 2: 2mm N: None P: 1 m S: 3 m K2: Connector cable exits from the 20: 20mm A3: ACON-CYB/PLB/POB A5: ACON-CB/CGB \* Model number is "I" when used with 100: 100mm front A6: RCON M: 5 m LA: Power-saving (set in steps RSEL X□□: Length Designation simple absolute unit. every 10mm) specification \* See page 14 for details on the model descriptions.

Power-saving specification





(1) The payload is the value when operated with acceleration of 0.3G (or 0.2G in the case of Lead 2 and vertical usage). The upper limit for acceleration is 0.3G (or 0.2G in the case of Lead 2 and vertical usage).

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead (mm)	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCA2-TA4C-I-10-6-①-②-③-④			6	1	0.5	28		
RCA2-TA4C-I-10-4-①-②-③-④	10	Ball screw	4	2	1	43	±0.02	20 to 100 (every 10mm)
RCA2-TA4C-I-10-2-①-②-③-④			2	3	1.5	85		
Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option								

#### ■ Stroke and Maximum Speed

Lead	Stroke	20 to 100 (mm)
W	6	300
Ball screw	4	200
Ba	2	100

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
20	_
30	_
40	_
50	_
60	_
70	_
80	_
90	_
100	_

#### **4** Options

Title	Option code	See page	Standard price
Brake	В	_	_
Cable exit direction (top)	CJT		
Cable exit direction (right)	CJR		
Cable exit direction (left)	CJL	_	_
Cable exit direction (bottom)	CJB		
Power-saving specification	LA	_	_
Reversed-home specification	NM	_	_

#### **3**Cable Length

Type	Cable symbol	Standard price
C. 1 1.	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

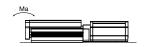
 $\ensuremath{^{*}}$  Robot type cable comes as standard with RCA2 actuator.

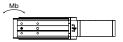
#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 4.2 N•m Mb: 6 N•m Mc: 8.2 N•m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

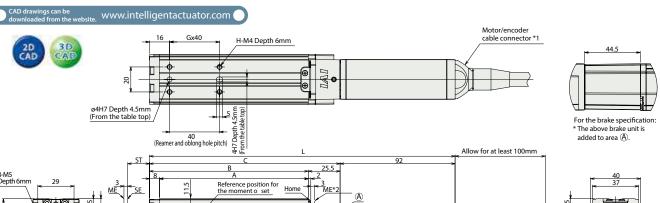
(Note) For case of 5,000km service life.

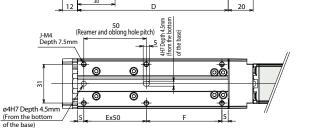
Directions of allowable load moments

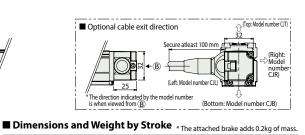












#### Stroke 20 30 40 50 60 70

	Stroke	20	30	40	50	60	70	80	90	100
ſ,	No brake	214.5	224.5	234.5	244.5	254.5	264.5	274.5	284.5	294.5
Ľ	Brake-equipped	259	269	279	289	299	309	319	329	339
	Α	89	99	109	119	129	139	149	159	169
	В	97	107	117	127	137	147	157	167	177
	С	122.5	132.5	142.5	152.5	162.5	172.5	182.5	192.5	202.5
Г	D	90.5	100.5	110.5	120.5	130.5	140.5	150.5	160.5	170.5
Г	E	1	1	1	1	2	2	2	2	2
Г	F	30.5	40.5	50.5	60.5	20.5	30.5	40.5	50.5	60.5
	G	1	1	1	1	2	2	2	2	2
	Н	4	4	4	4	6	6	6	6	6
	J	6	6	6	6	8	8	8	8	8
	Mass (kg)	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.0	1.0

- $^{*}$  1 The motor-encoder cable is connected directly to the actuator motor cover.
- \*2 The slider moves to the mechanical end during home return. Pay attention to prevent contact between the slider and surrounding parts.

ST : Stroke ME: Mechanical end SE : Stroke end

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. A	Man annahan af	Power					Cor	ntrol r	Control method									Mi	D-f
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Program							k opti						Maximum number of positioning points	Reference page
	VICVV	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	E.	1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IS,	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE R.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



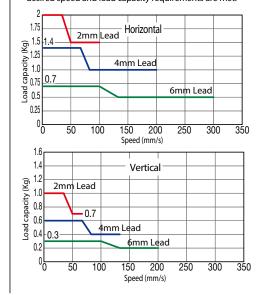
#### 3-TA3R ROBO Cylinder Mini Table Type Side-Mounted Motor Type Actuator Width 72 mm Pulse Motor ■ Model Description RCP3 -TA3R **20P** Series **Encoder type** Lead Stroke Option Motor type Compatible controllers Cable length l: Incremental specification 20P: Pulse motor 20□Size 6: 6mm 4: 4mm 2: 2mm N: None P: 1 m 20: 20mm See option table P3: PCON below. MSEL S: 3 m M: 5 m XIII: Length \* Model number is "I" when used with \* Be sure to specify which side the motor 100: 100mm P5: RCON (set in steps simple absolute unit. every 10mm) is to be mounted (ML/MR) \* See page 14 for details on the model descriptions. Designation



Photo above shows specification with motor side-mounted to the left (ML Option).

(1) The payload is the value when operated with acceleration of 0.3G (or 0.2G in the case of Lead 2 and vertical usage). The upper limit for acceleration is 0.3G (or 0.2G in the case of Lead 2 and vertical usage).

■ Correlation Diagrams of Speed and Load Capacity
With the RCP3 series, due to the characteristics of the
pulse motor, load capacity decreases as the speed
increases. Use the chart below to confirm that the
desired speed and load capacity requirements are met.



#### Actuator Specifications Table

#### ■ Leads and Payloads

(Note 1) Please note that the maximum payload decreases as the speed increases.

Ecaus and Fayibaus	(Note 1) I leas	e note that	. the maxim	uiii payioac	a decreases	as the speed	i iiici eases.
Model	Feed screw	Lead (mm)	Maximun Horizontal (kg)		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
RCP3-TA3R-I-2P0-6-①-②-③-④		6	~0.7	~0.3	9		
RCP3-TA3R-I-20P-4-①-②-③-④	Ball screw	4	~1.4	~0.6	14	±0.02	20 to 100 (every 10mm)
RCP3-TA3R-I-20P-2-①-②-③-④		2	~2	~1	28		

(Note 2) For a graph of the pushing force, see P127. \*< > Indicates vertical use

#### ■ Stroke and Maximum Speed

Lead	Stroke	20 to 100 (mm)
>	6	300 <200>
Ball screw	4	200 <133>
Ba	2	100 <67>

cates vertical use (unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
20	_
30	_
40	_
50	_
60	_
70	_
80	_
90	_
100	_

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

### **4** Options

Title	Option code	See page	Standard price
Brake	В	_	_
Side-mounted motor to the left (standard)	ML	_	_
Side-mounted motor to the right	MR	_	_
Reversed-home specification	NM	_	_

#### ③Cable Length

9		
Туре	Cable symbol	Standard price
Ct d d.t	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

 $\ensuremath{^{*}}$  Robot type cable comes as standard with RCP3 actuator.

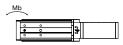
#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note 3)	Ma: 3.2 N·m Mb: 4.6 N·m Mc: 5.1 N·m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

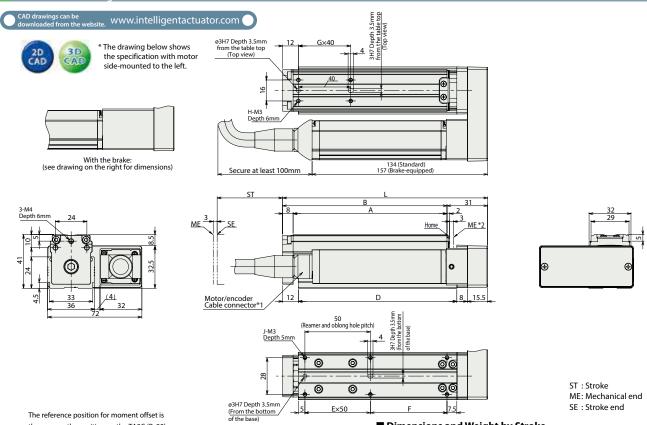
(Note 3) For case of 5,000km service life.

Directions of allowable load moments









The reference position for moment offset is the same as the position on the TA3C (P. 90).

- $^{*}$  1 The motor-encoder cable is connected directly to the actuator motor cover.
- \* 2 The slider moves to the mechanical end during home return. Pay attention to prevent contact between the slider and surrounding parts.

$lacksquare$ Dimensions and Weight by Stroke ${}_{*{ m T}!}$	he attached brake adds 0.1kg of mass.
--	---------------------------------------

Stroke	20	30	40	50	60	70	80	90	100
L	126.5	136.5	146.5	156.5	166.5	176.5	186.5	196.5	206.5
Α	87.5	97.5	107.5	117.5	127.5	137.5	147.5	157.5	167.5
В	95.5	105.5	115.5	125.5	135.5	145.5	155.5	165.5	175.5
D	91	101	111	121	131	141	151	161	171
E	1	1	1	1	2	2	2	2	2
F	28.5	38.5	48.5	58.5	18.5	28.5	38.5	48.5	58.5
G	1	1	1	1	2	2	2	2	2
Н	4	4	4	4	6	6	6	6	6
J	6	6	6	6	8	8	8	8	8
Mass (kg)	0.5	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	-																			
	F	Man annulus of	D					Cor	trol r	neth	od								Manian and a same	
Name	External view	connectable axes	Power supply voltage	Positioner	Pulse- Program			Network option *1											Maximum number of positioning points	Reference page
	VICVV	CONNECTABLE BYES	voitage	rositionei	ositioner train Program		DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB	8	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1	2005	• * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information.
RCON	HOM VI.	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information.
RSEL	We'r.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### 3-TA4R ROBO Cylinder Mini Table Type Side-Mounted Motor Type Actuator Width 81 mm Pulse Motor ■ Model Description RCP3 -TA4R **28P** Series Туре **Encoder type** Motor type Stroke Compatible controllers Cable length Option l: Incremental specification 6: 6mm 4: 4mm 2: 2mm N: None P: 1 m 28P: Pulse motor 20: 20mm See option table P3: PCON 28□Size below. MSEL \* Be sure to specify which side the motor is to be mounted Model number is "I" when used with 100: 100mm S: 3 m M: 5 m P5: RCON (set in steps RSEL simple absolute unit. every 10mm) X□□: Length (ML/MR) \* See page 14 for details on the model descriptions. Designation



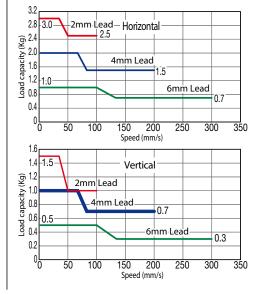
Photo above shows specification with TA3R motor side-mounted to the left (ML).

Notes or

(1) The payload is the value when operated with acceleration of 0.3G (or 0.2G in the case of Lead 2 and vertical usage). The upper limit for acceleration is 0.3G (or 0.2G in the case of Lead 2 and vertical usage).

### ■ Correlation Diagrams of Speed and Load Capacity

With the RCP3 series, due to the characteristics of the pulse motor, load capacity decreases as the speed increases. Use the chart below to confirm that the desired speed and load capacity requirements are met.



#### Actuator Specifications Table

#### ■ Leads and Payloads

(Note 1) Please note that the maximum payload decreases as the speed increases.

Model	Feed screw	Lead (mm)	Maximun Horizontal (kg)	' '	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)	
RCP3-TA4R-I-28P-6-①-②-③-④		6	~1	~0.5	15			
RCP3-TA4R-I-28P-4-①-②-③-④	Ball screw	4	~2	~1	22	±0.02	20 to 100 (every 10mm)	
RCP3-TA4R-I-28P-2-①-②-③-④		2	~3	~1.5	44			
Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option (Note 2) For a graph of the pushing force, see P127.								

#### ■ Stroke and Maximum Speed

Lead	Stroke	20 to 100 (mm)
ş	6	300
Ball screw	4	200
Ba	2	100

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
20	_
30	_
40	_
50	_
60	_
70	_
80	_
90	_
100	_

#### **4** Options

Title	Option code	See page	Standard price
Brake	В	_	_
Cable exit direction (top)	CJT		
Cable exit direction (outside)	CJO	_	_
Cable exit direction (bottom)	CJB		
Side-mounted motor to the left (standard)	ML	_	_
Side-mounted motor to the right	MR	_	_
Reversed-home specification	NM	_	_

#### ③Cable Length

Type	Cable symbol	Standard price
Ctandard tuna	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> Robot type cable comes as standard with RCP3 actuator.

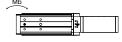
#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note 3)	Ma: 4.2 N•m Mb: 6 N•m Mc: 8.2 N•m
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

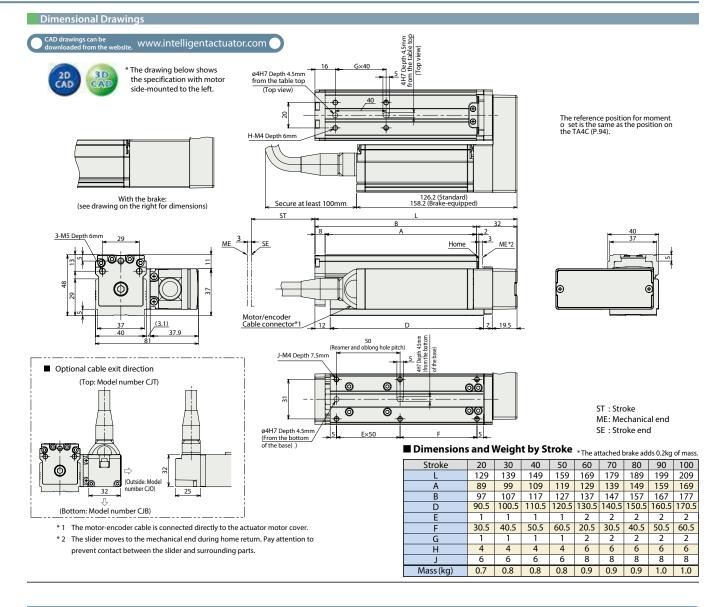
(Note 3) For case of 5,000km service life.

Directions of allowable load moments









#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Dawar supply	Control method															Maximum number	
Name	view	connectable axes	Power supply voltage	Docitionar	Positioner Pulse- train Program		Network option *1												of positioning points	Reference page
	VIEW	CUITIECIADIE AXES	voltage	Positioner			DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	or positioning points	
MSEL-PC/PG		4	Single phase 100VAC/230VAC	-	-	•	•	•	-	•	-	-	-	•	•	•	-	-	30000	
PCON-CB/CGB		1		• * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
PCON-CYB/PLB/POB		1	4.0/05	• * Option	Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact IAI for more information.
RCON	HOM IL	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	more information.
RSEL	We't.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

 $<sup>{\</sup>rm *1}$  For network abbreviations such as DV and CC, please contact IAI.



CA2-TA4R ROBO Cylinder Mini Table Type Side-Mounted Motor Type Actuator Width 81 mm 24V Servo Motor **Ball Screw Specification** ■ Model Description RCA2 -TA4R 10 Series **Encoder type** Motor type Lead Stroke Compatible controllers Cable length Option Type l: Incremental specification 10: Servo motor 10W 6: 6mm 4: 4mm 2: 2mm 20: 20mm A3: ACON-CYB/PLB/POB N: None See option table P: 1 m S: 3 m below.
\* Be sure to specify
which side the motor A5: ACON-CB/CGB \* Model number is "I" when used with 100: 100mm (set in steps A6: RCON M: 5 m X□□: Length Designation is to be mounted (ML/MR) simple absolute unit. every 10mm) \* See page 14 for details on the model descriptions.

Power-saving specification



Photo above shows the specification with TA3R motor side-mounted to the left (ML).



(1) The payload is the value when operated with acceleration of 0.3G (or 0.2G in the case of Lead 2 and vertical usage). The upper limit for acceleration is 0.3G (or 0.2G in the case of Lead 2 and vertical usage).

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Feed screw	Lead	Maximum Horizontal (kg)		Rated thrust (N)	Positioning repeatability	Stroke
	output (w)	sciew	(111111)	Horizontai (kg)	Vertical (kg)	tillust (IV)	(mm)	(mm)
RCA2-TA4R-I-10-6-①-②-③-④			6	1	0.5	28		
RCA2-TA4R-I-10-4-①-②-③-④	10	Ball screw	4	2	1	43	±0.02	20 to 100 (every 10mm)
RCA2-TA4R-I-10-2-①-②-③-④			2	3	1.5	85		

#### ■ Stroke and Maximum Speed

Lead	Stroke	20 to 100 (mm)
Ņ	6	300
Ball screw	4	200
Ba	2	100

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
20	_
30	_
40	_
50	_
60	_
70	_
80	_
90	_
100	_

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

#### **4** Options

Title	Option code	See page	Standard price
Brake	В	_	_
Cable exit direction (top)	CJT		
Cable exit direction (outside)	CJO	_	_
Cable exit direction (bottom)	CJB		
Power-saving specification	LA	_	_
Side-mounted motor to the left (standard)	ML	_	_
Side-mounted motor to the right	MR	_	_
Reversed-home specification	NM	_	_

#### **3** Cable Length

Type	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> Robot type cable comes as standard with RCA2 actuator.

#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø6mm, rolled C10
Lost motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 4.2 N•m Mb: 6 N•m Mc: 8.2 N•m
Ambient operating temperature, humidity	0 to 40°C, 85% BH or less (Non-condensing)

(Note) For case of 5,000km service life.

50.5 60.5

6

1.1

#### Dimensional Drawings www.intelligentactuator.com The drawing below shows the specification with motor ø4H7 Depth 4.5mm from the table top side-mounted to the left. The reference position for moment o set is the same as the position on the TA4C (P.94). H-M4 Depth 6mm 126.2 (Standard) 158.2 (Brake-equipped) With the brake: (see drawing on the right for dimensions) Secure at least 100mm 3-M5 Depth 6mn Motor/encoder Cable connector\*1 J-M4 Depth 7.5mm ■ Optional cable exit direction (Top: Model number CJT) 0 0 ST: Stroke ME: Mechanical end ø4H7 Depth 4.5mm SE: Stroke end ■ Dimensions and Weight by Stroke \*The attached brake adds 0.2kg of mass. 60 70 80 90 100 Stroke 30 40 50 129 139 149 159 169 179 189 199 209 25 89 99 109 117 119 129 139 149 159 137 147 157 167 169 107 97 127 В 90.5 110.5 120.5 130.5 140.5 150.5 160.5 170.5 (Bottom: Model number CJB) 100.5 D

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

\* 1 The motor-encoder cable is connected directly to the actuator motor cover.

prevent contact between the slider and surrounding parts.

 $^{*}$  2 The slider moves to the mechanical end during home return. Pay attention to

	External	Han anadas of	Power		Control method					Maximum number of	D-f											
Name	view	Max. number of connectable axes	supply	Positioner	Pulse- Program			Program							k opti						positioning points	Reference page
	VICW	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page		
ACON-CB/CGB	E.	1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)			
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact		
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.		
RSEL	DET.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000			

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

More controller info is available in the General Controller Catalog PDF.



30.5

6

G

Н

Mass (kg)

40.5

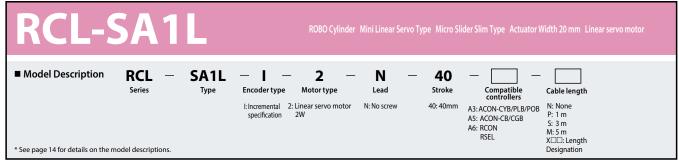
6

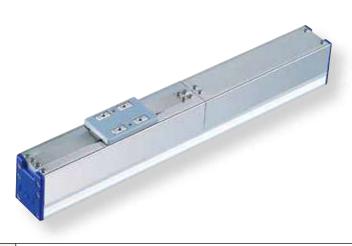
50.5 60.5 20.5 30.5

6

6 8 8 8 8 8

0.8 | 0.9 | 0.9 | 0.9 | 1.0 | 1.0 | 1.1 |





### ■ Relation between payload (horizontal) and acceleration

Maximum	Load Cap	acity (kg)
Acceleration (G)	Continuous operation (Duty is 100%)	Duty is 70% or less
0.1	0.5	
0.3	0.5	0.5
0.5	0.42	
1	0.25	0.32
1.5	0.18	0.24
2	0.15	0.2

Notes on selection

The payload is determined by the acceleration and duty.
 Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}} \times 100 \text{ per cycle.}$ 

- (2) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.
- (3) Simple absolute unit cannot be used with the RCL series.

Actuator S	pecification	is lable

Legend ①Compatible Controllers ②Cable length

#### ■ Leads and Payloads

Model	Motor	Maximum payload		Rated	Instantaneous maximum	Maximum	Positioning repeatability	Stroke
mode.	output (W)	Horizontal (kg)	Vertical (kg)	thrust (N)	thrust (N)	acceleration (G)	(mm)	(mm)
RCL-SA1L-I-2-N-40-①-②	2	See chart above	-	2	10	2	±0.1	40 (Fixed)

#### ■ Stroke and Maximum Speed

Stroke	40 (mm)
(no screw)	420

(unit: mm/s)

#### Stroke list

Stroke (mm)	Standard price
40	

#### ③Cable Length

Туре	Cable symbol	Standard price
Ct d d. t	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(NODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCL is the robot cable.

#### Actuator Specifications

Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 0.13 N·m Mb: 0.12 N·m Mc: 0.21 N·m
Overhung load length	50mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(Note) For case of 5,000km service life.

\* 1 The motor and encoder cable are attached.

\* 2 During home return, the slider travels until the mechanical end,

stroke



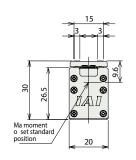


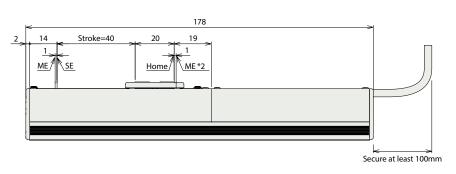
Dimensional Drawings

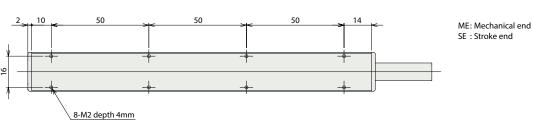


so be careful to avoid interference from peripheral objects.

Cable joint connector \*1







# ■ Dimensions and Weight by Stroke

Stroke	40
Mass (kg)	0.28

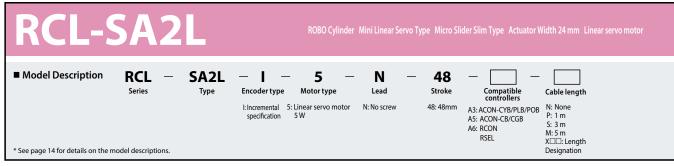
#### Applicable Controllers

 $The actuators \ on \ this \ page \ can \ be \ operated \ by \ the \ controllers \ indicated \ below. \ Please \ select \ the \ type \ depending \ on \ your \ intended \ use.$ 

	Fortament.	Man annahan af	Power		Control method									Mi	Reference					
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Program							k opti						Maximum number of positioning points	page
	VICVV	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		• * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.







# ■ Relation between payload (horizontal) and acceleration

Maximum	Load Cap	acity (kg)
Acceleration (G)	Continuous operation (Duty is 100%)	Duty is 70% or less
0.1	1	
0.3	1	1
0.5	0.85	
1	0.5	0.6
1.5	0.36	0.45
2	0.3	0.36

Notes on selection

The payload is determined by the acceleration and duty.
 Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}} \times 100 \text{ per cycle.}$ 

- (2) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.
- (3) Simple absolute unit cannot be used with the RCL series.

Actuator S	ресіпса	tions	lable

Legend ①Compatible Controllers ②Cable length

#### ■ Leads and Payloads

Model	Motor	Maximun		Rated	Instantaneous maximum	Maximum (C)	Positioning repeatability	Stroke (mm)
	output (W)	Horizontal (kg)	Vertical (kg)	thrust (N)	thrust (N)	acceleration (G)	(mm) ´	
RCL-SA2L-I-5-N-48-① - ②	5	See chart above	-	4	18	2	±0.1	48 (Fixed)

#### ■ Stroke and Maximum Speed

Stroke	48
Lead	(mm)
(no screw)	460

(unit: mm/s)

#### Stroke list

Stroke (mm)	Standard price
48	<u>_</u>

#### ③Cable Length

Туре	Cable symbol	Standard price
Ct d d	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCL is the robot cable.

#### Actuator Specifications

Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 0.2 N•m Mb: 0.17 N•m Mc: 0.25 N•m
Overhung load length	60mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

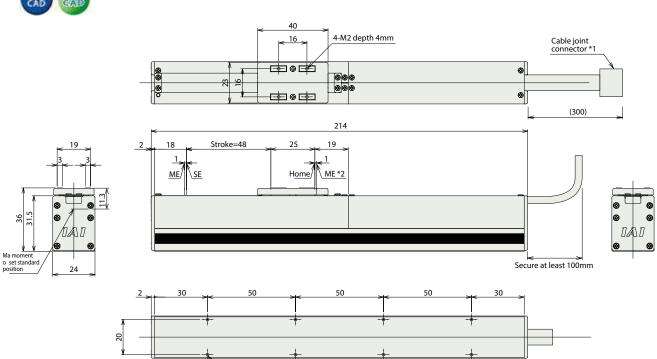
(Note) For case of 5,000km service life.

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Dimensional Drawings

\* 1 The motor and encoder cable are attached. \* 2 During home return, the slider travels until the mechanical end, so be careful to avoid interference from peripheral objects.



ME: Mechanical end SE: Stroke end

#### **■** Dimensions and **Weight by Stroke**

Stroke	48
Mass (kg)	0.45

#### Applicable Controllers

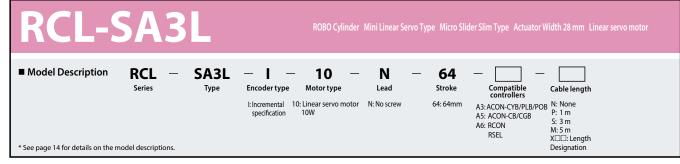
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

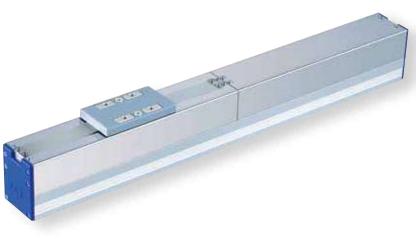
8-M2 depth 4mm

	External	Max. number of	Power		Control method								Maximum number of			Reference				
Name	view	connectable axes	supply	D = =!#! = = = =	Pulse-	D					Ne	twor	k opti	on *1					positioning points	
	view	Connectable axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	Đ	1		* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.







### ■ Relation between payload (horizontal) and acceleration

Maximum	Load Cap	pacity (kg)						
Acceleration (G)	Continuous operation (Duty is 100%)	Duty is 70% or less						
0.1	2							
0.3	2	2						
0.5	1.8							
1	1	1.2						
1.5	0.65	0.8						
2	0.5	0.6						

Notes on selection

The payload is determined by the acceleration and duty.
 Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}} \times 100 \text{ per cycle.}$ 

- (2) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.
- (3) Simple absolute unit cannot be used with the RCL series.

Actuator S	pecifications Table

#### ■ Leads and Payloads

Model	Motor Maximum payload output (W) Horizontal (kg) Vertical (kg)		1	Rated thrust (N)	Instantaneous maximum thrust (N)	Maximum acceleration (G)	Positioning repeatability (mm)	Stroke (mm)	
	•	. 3.					()		
RCL-SA3L-I-10-N-64-①-②	10	See chart above	_	8	30	2	±0.1	64(Fixed)	
Legend ①Compatible Controllers ②Cable length									

#### ■ Stroke and Maximum Speed

Stroke Lead	64 (mm)
(no screw)	600

(unit: mm/s)

#### Stroke list

Stroke (mm)	Standard price
64	_

#### ③Cable Length

Туре	Cable symbol	Standard price	
Standard type (Robot cable)	<b>P</b> (1m)	_	
	<b>S</b> (3m)	_	
(RODOL CADIE)	<b>M</b> (5m)	_	
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_	
Special length	X11 (11m) ~ X15 (15m)	_	
	X16 (16m) ~ X20 (20m)	_	

<sup>\*</sup>The standard cable for the RCL is the robot cable.

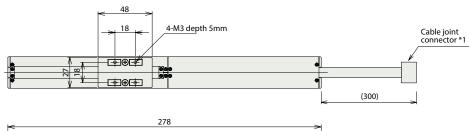
#### Actuator Specifications

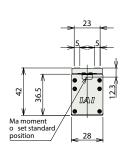
ltem	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 1.22 N·m Mb: 1.08 N·m Mc: 0.34 N·m
Overhung load length	Ma direction: 120mm or less, Mb and Mc directions: 80mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

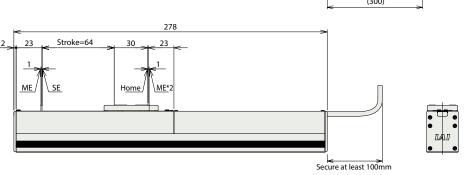
(Note) For case of 5,000km service life.

- www.intelligentactuator.com

- \* 1 The motor and encoder cable are attached.
- \* 2 During home return, the slider travels until the mechanical end, so be careful to avoid interference from peripheral objects.







10-M3 depth 4mm

ME: Mechanical end SE: Stroke end

#### ■ Dimensions and **Weight by Stroke**

Stroke	64
Mass (kg)	0.82

#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

			Power		Control method													D-f		
Name	External view		supply	Positioner	ositioner Pulse- Program								k opti						Maximum number of positioning points	Reference page
			voltage		train		DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM		
ACON-CB/CGB	Đ.	1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	● * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	KM U	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	THE R.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



■ Model Description **RCL** SA4L 2 N Series **Encoder type** Lead Stroke Compatible controllers Cable length Type Motor type Option N: None P: 1 m NM: Reversed-home specification l: Incremental 2: Linear servo motor N: No screw 30: 30mm A3: ACON-CYB/PLB/POB specification 2W A5: ACON-CB/CGB 180: 180mm S: 3 m A6: RCON M: 5 m X□□: Length (set in steps RSEL every 30mm) \* See page 15 for details on the model descriptions. Designation



### ■ Relation between payload (horizontal) and acceleration

Maximum Acceleration	Load Capacity (kg)
(G)	Continuous operation (Duty is 100%)
0.1	0.8
0.3	0.8
0.5	0.5
1	0.25
1.5	0.18
2	0.14

# Notes on selection

- (1) Please take care because this type has magnetic flux leakage. (If magnetism is a problem, use SA1L/SA2L/SA3L)
- (2) The payload is determined by the acceleration and duty.
- Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}}$  ×100 per cycle.

Operating time + stop time

- (3) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.
- (4) Simple absolute unit cannot be used with the RCL series.

#### Actuator Specifications Table

#### ■ Leads and Payloads

Model	Motor output (W)	Maximum Horizontal (kg)		Rated thrust (N)	Instantaneous maximum thrust (N)		Positioning repeatability (mm)	Stroke (mm)
RCL-SA4L-I-2-N-①-②-③-④	2	See chart above	_	2.5	10	2	±0.1	30 to 180 (set in 30mm increments)

#### ■ Stroke and Maximum Speed

Stroke	30 to 180
Lead	(set in 30mm increments)
(no screw)	1200

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
30	_
60	_
90	_
120	_
150	_
180	_

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

#### ③Cable Length

Туре	Cable symbol	Standard price
Charles de la la conse	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup>The standard cable for the RCL is the robot cable.

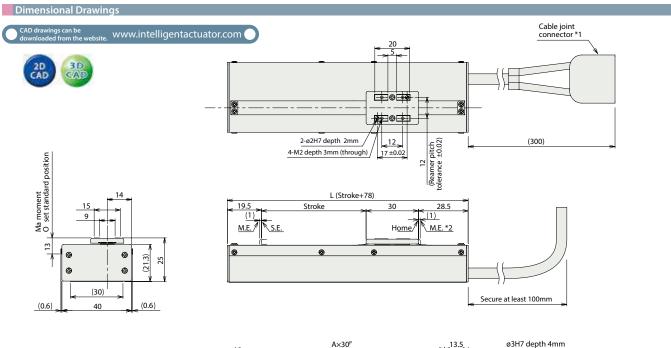
### 4 Options

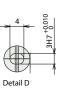
Title	Option code	See page	Standard price
Reversed-home specification	NM	_	_

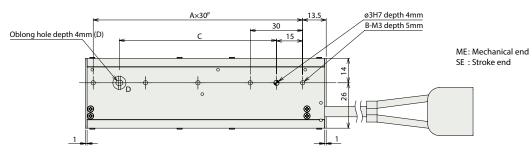
Actuator Specifications					
Item	Description				
Drive System	Linear servo motor				
Encoder resolution	0.042mm				
Base	Material: Aluminum, white alumite treated				
Dynamic allowable moment (Note)	Ma: 0.2 N•m Mb: 0.17 N•m Mc: 0.25 N•m				
Overhung load length	Ma direction: 60mm or less, Mb and Mc directions: 80mm or less				
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)				

(Note) For case of 5,000km service life.

RCL ROBO Cylinder







- \* 1 The motor and encoder cable are attached.
- \* 2 During home return, the slider travels until the mechanical end, so be careful to avoid interference from peripheral objects.

#### ■ Dimensions and Weight by Stroke

Stroke	30	60	90	120	150	180
L	108	138	168	198	228	258
Α	3	4	5	6	7	8
В	4	5	6	7	8	9
С	60	90	120	150	180	210
Mass (kg)	0.21	0.25	0.29	0.32	0.36	0.4

#### Applicable Controllers

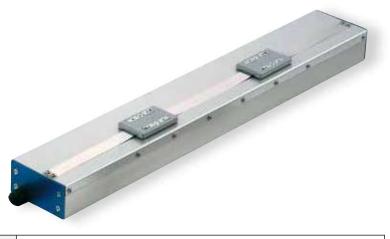
The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. damed	Man annahar af	Power					Cor	ntrol i	meth	od								Mi	Deference
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Program					Ne	twor	k opti	on *1					Maximum number of positioning points	Reference page
	VICW	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



#### ■ Model Description **RCL** SM4L 2 N Series Encoder type Motor type Lead Stroke Compatible controllers Cable length Type N: None P: 1 m N: No screw 30: 30mm A3: ACON-CYB/PLB/POB specification 2W A5: ACON-CB/CGB S: 3 m M: 5 m XIII: Length 120: 120mm (set in steps A6: RCON RSEL every 30mm) Designation \* See page 14 for details on the model descriptions.



#### ■ Relation between payload (horizontal) and acceleration

Maximum Acceleration	Load Capacity (kg)				
(G)	Continuous operation (Duty is 100%)				
0.1	0.8				
0.3	0.8				
0.5	0.5				
1	0.25				
1.5	0.18				
2	0.14				

(1) Please take care because this type has magnetic flux leakage. (If magnetism is a problem, use SA1L/SA2L/SA3L) (2) The payload is determined by the acceleration and duty.

Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}}$  ×100 per cycle.

(3) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.

(4) Simple absolute unit cannot be used with the RCL series.

■ Leads and Payloads	■ Stroke and Maximum Speed
Actuator Specifications Table	

Model	Motor output (W)	Maximun Horizontal (kg)		Rated thrust (N)	Instantaneous maximum thrust (N)		Positioning repeatability (mm)	Stroke (mm)
RCL-SM4L-I-2-N-①-②-③	2	See chart above	_	2.5	10	2	±0.1	30 to 120 (set in 30mm increments)

Stroke	30 to 120
Lead	(set in 30mm increments)
(no screw)	1200

(unit: mm/s)

#### ① Stroke list

Stroke (mm)	Standard price
30	_
60	_
90	_
120	_

Legend ① Stroke ② Compatible Controllers ③ Cable length

### ③Cable Length

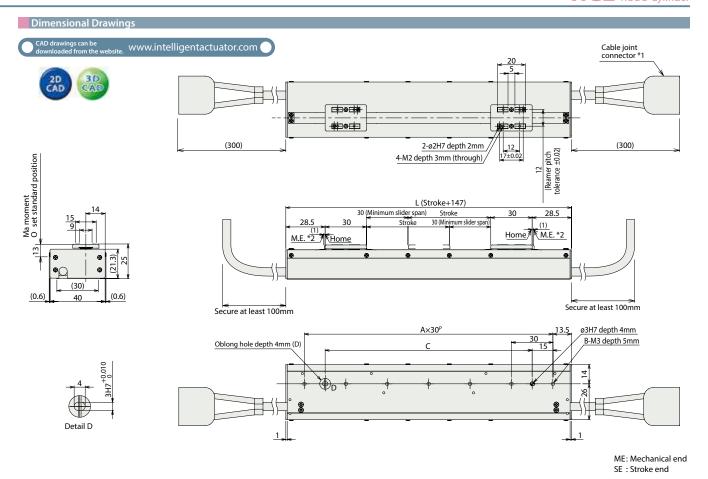
Туре	Cable symbol	Standard price
Character of the con-	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCL is the robot cable.

### Actuator Specifications

Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 0.2 N·m Mb: 0.17 N·m Mc: 0.25 N·m
Overhung load length	Ma direction: 60mm or less, Mb and Mc directions: 80mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(Note) For case of 5,000km service life.



# $\ensuremath{^*}\xspace$ 1 The motor and encoder cable are attached.

\* 2 During home return, the slider travels until the mechanical end, so be careful to avoid interference from peripheral objects. One controller is required for each slider. (Or, one 2-axis controller is required.)

■ Dimensions	and \	Neigh	t by St	troke
Stroke	30	60	90	120
L	177	207	237	267
Α	5	6	7	8
В	6	7	8	9
C	120	150	180	210
Mass (kg)	0.37	0.4	0.44	0.48

### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External	Max. number of	Power		Control method											Maximum number of	Reference			
Name	view	connectable axes	supply	Positioner	Pulse-	Program					Ne	twor	k opti	on *1					positioning points	page
	VIEW	Connectable axes	voltage	rositionei	train	Fiogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	E .	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB	B	1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IS,	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



■ Model Description **RCL** SA5L 5 N Series **Encoder type** Lead Stroke Compatible controllers Cable length Motor type Option N: None P: 1 m NM: Reversed-home specification N: No screw 36: 36mm A3: ACON-CYB/PLB/POB specification 5W A5: ACON-CB/CGB 216: 216mm S: 3 m A6: RCON M: 5 m X□□: Length (set in steps RSEL every 36mm) \* See page 14 for details on the model descriptions. Designation



#### ■ Relation between payload (horizontal) and acceleration

Maximum	Load Capacity (kg)
Acceleration (G)	Continuous operation (Duty is 100%)
0.1	1.6
0.3	1.0
0.5	1.0
1	0.5
1.5	0.35
2	0.25

- (1) Please take care because this type has magnetic flux leakage. (If magnetism is a problem, use SA1L/SA2L/SA3L)
- (2) The payload is determined by the acceleration and duty.
- Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}}$  ×100 per cycle.

- (3) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.
- (4) Simple absolute unit cannot be used with the RCL series.

#### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	otor Maximum payload out (W) Horizontal (kg) Vertical (kg)			Instantaneous maximum thrust (N)		Positioning repeatability (mm)	Stroke (mm)
RCL-SA5L-I-5-N-①-②-③-④	5	See chart above	_	5	18	2	±0.1	36 to 216 (set in 36mm increments)

# ■ Stroke and Maximum Speed

Stroke	36 to 216
Lead	(set in 36mm increments)
(no screw)	1400

(unit: mm/s)

### ① Stroke list

9 5 ti 5 it 6 ii 5 t	
Stroke (mm)	Standard price
36	<del>_</del>
72	_
108	_
144	<del>-</del>
180	_
216	_

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

# ③Cable Length

Туре	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
_	X16 (16m) ~ X20 (20m)	_

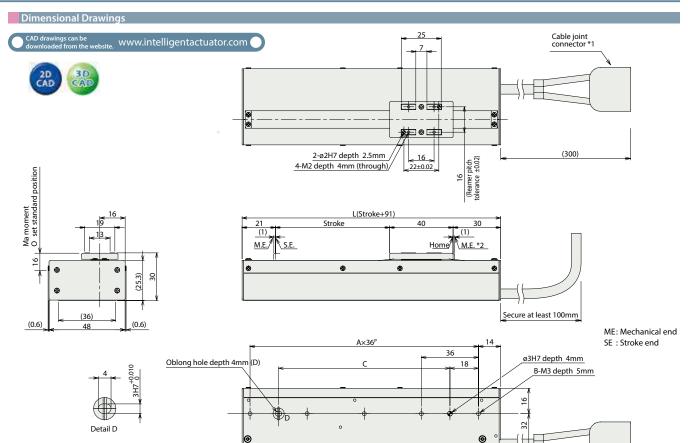
<sup>\*</sup> The standard cable for the RCL is the robot cable.

#### 4 Options

Title	Option code	See page	Standard price
Reversed-home specification	NM	_	_

# Actuator Specifications

Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma:0.49 N•m Mb: 0.41 N•m Mc: 0.72 N•m
Overhung load length	Ma direction: 80mm or less, Mb and Mc directions: 100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)



# \* 1 The motor and encoder cable are attached.

\* 2 During home return, the slider travels until the mechanical end, so be careful to avoid interference from peripheral objects.

#### 108 144 180 216 199 235 271 307 36 72 Stroke 127 163 6 7 8 3 4 72 108 144 180 216 252

0.35 | 0.42 | 0.48 | 0.55 | 0.62 | 0.68

■ Dimensions and Weight by Stroke

Mass (kg)

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

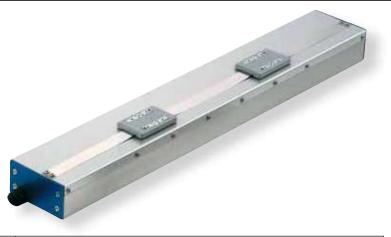
										-										
	F. A	Man annahan af	Power		Control method								Massisson assessing a 4	D-f						
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Drogram					Ne	twor	k opti	on *1					Maximum number of positioning points	Reference
	view	Connectable axes	voltage	Positioner	train	Program	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		• * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	lene iq.	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	DEED!	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

IAI



<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

■ Model Description **RCL** SM5L 5 N Series **Encoder type** Lead Stroke Compatible controllers Cable length Motor type N: None P: 1 m N: No screw 36: 36mm A3: ACON-CYB/PLB/POB specification 5W A5: ACON-CB/CGB S: 3 m M: 5 m XIII: Length 144: 144mm A6: RCON (set in steps RSEI RSEL every 36mm) \* See page 14 for details on the model descriptions. Designation



#### ■ Relation between payload (horizontal) and acceleration

Maximum Acceleration	Load Capacity (kg)					
(G)	Continuous operation (Duty is 100%)					
0.1	1.6					
0.3	1.0					
0.5	1.0					
1	0.5					
1.5	0.35					
2	0.25					

(If magnetism is a problem, use SA1L/SA2L/SA3L) (2) The payload is determined by the acceleration and duty.

Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}}$  ×100 per cycle.

(3) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.

(4) Simple absolute unit cannot be used with the RCL series.

	1
e because this type has magnetic flux leakage.	1

#### Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Maximum Horizontal (kg)		Rated thrust (N)	Instantaneous maximum thrust (N)	Maximum acceleration (G)	Positioning repeatability (mm)	Stroke (mm)
RCL-SM5L-I-5-N-①-②-③	5	See chart above	_	5	18	2	±0.1	36 to 144 (set in 36mm increments)

# ■ Stroke and Maximum Speed

Stroke	36 to 144 (set in 36mm increments)
(no screw)	1400

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standard price
36	_
72	_
108	_
144	_

Legend ① Stroke ② Compatible Controllers ③ Cable length

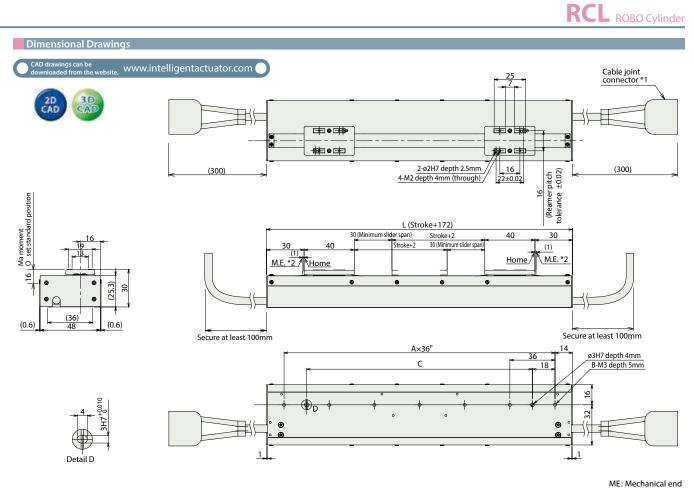
# ③Cable Length

Туре	Cable symbol	Standard price
Ct d d	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCL is the robot cable.

#### Actuator Specifications

ltem	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 0.49 N•m Mb: 0.41 N•m Mc: 0.72 N•m
Overhung load length	Ma direction: 80mm or less, Mb and Mc directions: 100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)



SE: Stroke end

#### \* 1 The motor and encoder cable are attached.

\* 2 During home return, the slider travels until the mechanical end, so be careful to avoid interference from peripheral objects. One controller is required for each slider. (Or, one 2-axis controller is required.)

■ Dimensions and Weight by Stroke									
Stroke	36	72	108	144					
L	208	244	280	316					
Α	5	6	7	8					
В	6	7	8	9					
C	144	180	216	252					
Mass (kg)	0.62	0.69	0.75	0.82					

### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

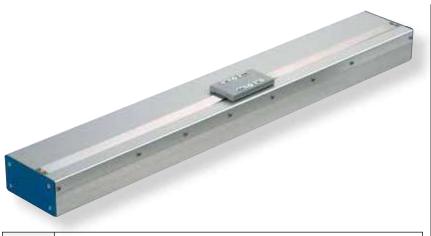
	External	Max. number of	Power		Control method										Maximum number of	Reference				
Name	view	connectable axes	supply	Positioner	Pulse-	Program							k opti						positioning points	page
	VICW	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	-	1		● * Option	• * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		• * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

IAI



<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

■ Model Description **RCL** SA6L 10 N Series Encoder type Lead Stroke Compatible controllers Cable length Option Motor type l: Incremental 10: Linear servo motor specification 10W A3: ACON-CYB/PLB/POB N: None A5: ACON-CB/CGB P: 1 m NM: Reversed-home specification N: No screw 48: 48mm specification A5: ACON-CB/CGB A6: RCON 288: 288mm S: 3 m M: 5 m X□□: Length (set in steps every 48mm) \* See page 14 for details on the model descriptions. Designation



# Relation between payload (horizontal) and acceleration

Maximum Acceleration	Load Capacity (kg)
(G)	Continuous operation (Duty is 100%)
0.1	3.2
0.3	3.2
0.5	2
1	1
1.5	0.65
2	0.5

Notes on selection

- (1) Please take care because this type has magnetic flux leakage. (If magnetism is a problem, use SA1L/SA2L/SA3L)
- (2) The payload is determined by the acceleration and duty.
- Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}}$  ×100 per cycle.

- (3) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.
- (4) Simple absolute unit cannot be used with the RCL series.

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Maximum Horizontal (kg)		Hutcu	Instantaneous maximum thrust (N)	Maximum acceleration (G)	Positioning repeatability (mm)	Stroke (mm)
RCL-SA6L-I-10-N-①-②-③-④	10	See chart above	_	10	30	2	±0.1	48 to 288 (set in 48mm increments)

# ■ Stroke and Maximum Speed

Stroke Lead	48 to 288 (set in 48mm increments)
(no screw)	1600

(unit: mm/s)

# ① Stroke list

© Stroke iii	,
Stroke (mm)	Standard price
48	_
96	_
144	_
192	_
240	_
288	_

Legend ① Stroke ② Compatible Controllers ③ Cable length ④ Option

# **3** Cable Length

Туре	Cable symbol	Standard price
Character day	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

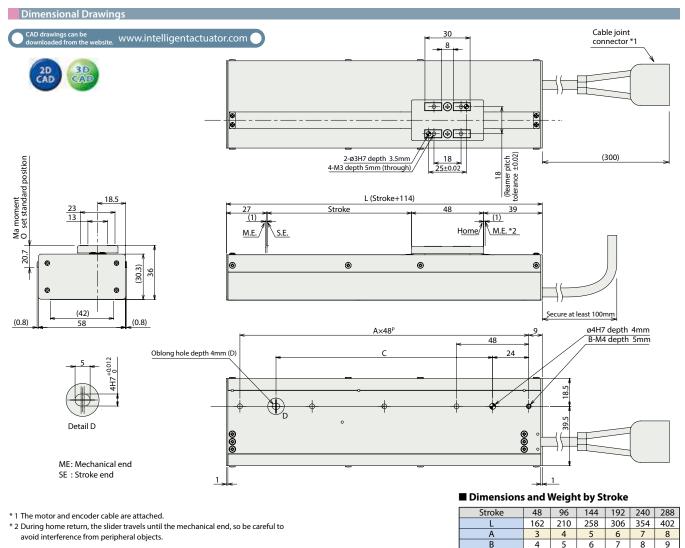
<sup>\*</sup>The standard cable for the RCL is the robot cable.

# 4 Options

Title	Option code	See page	Standard price
Reversed-home specification	NM	_	

Actuator Specifications	
Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 0.87 N•m Mb: 0.75 N•m Mc: 1.22 N•m
Overhung load length	Ma direction: 80mm or less, Mb and Mc directions: 120mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

288 336



# avoid interference from peripheral objects.

Applicable Controllers

# The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	External Max number of Power Control method									Mi	Reference									
Name	view	connectable axes	supply voltage	Positioner	Pulse-	Program							k opti						Maximum number of positioning points	page
			voitage		train		DV	CC	CIE	PR	CN	ML	ML3	FC	EP	PRI	SSN	ECM		
ACON-CB/CGB		1		● * Option	● * Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOM IL	16 (ML3,SSN,ECM=8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No data for ML3SSn, ECM),	information.
RSEL	ORT.	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

# More controller info is available in the General Controller Catalog PDF.



96

Mass (kg)

144

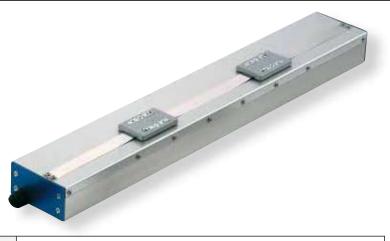
192

0.67 | 0.8 | 0.93 | 1.07 | 1.2 | 1.34

240

\* See page 14 for details on the model descriptions.

#### ■ Model Description **RCL** SM6L 10 N Series Encoder type Motor type Lead Stroke Compatible controllers Cable length l: Incremental 10: Linear servo motor specification 10W A3: ACON-CR/CGR P: 1 m N: No screw 48: 48mm A5: ACON-CB/CGB S: 3 m 192: 192mm A6: RCON M: 5 m X□□: Length (set in steps RSEL every 48mm)



#### ■ Relation between payload (horizontal) and acceleration

Maximum Acceleration	Load Capacity (kg)
(G)	Continuous operation (Duty is 100%)
0.1	3.2
0.3	3.2
0.5	2
1	1
1.5	0.65
2	0.5

Designation

(1) Please take care because this type has magnetic flux leakage. (If magnetism is a problem, use SA1L/SA2L/SA3L)

(2) The payload is determined by the acceleration and duty. Verify the payload in the payload (horizontal) and acceleration chart at right.

The duty is  $\frac{\text{Operating time}}{\text{Operating time} + \text{stop time}}$  ×100 per cycle.

(3) The mounting position is horizontal-only. Please take care because the slider will drop down with power OFF when operating vertically.

(4) Simple absolute unit cannot be used with the RCL series.

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)	Maximum Horizontal (kg)		Rated thrust (N)	Instantaneous maximum thrust (N)	Maximum acceleration (G)	Positioning repeatability (mm)	Stroke (mm)
RCL-SM6L-I-10-N-①-②-③	10	See chart above	_	10	30	2	±0.1	48 to 192 (set in 48mm increments)

# ■ Stroke and Maximum Speed

Stroke	48 to 192
Lead	(set in 48mm increments)
(no screw)	1600

(unit: mm/s)

# ① Stroke list

Stroke (mm)	Standard price
48	_
96	_
144	_
192	_

Legend ① Stroke ② Compatible Controllers ③ Cable length

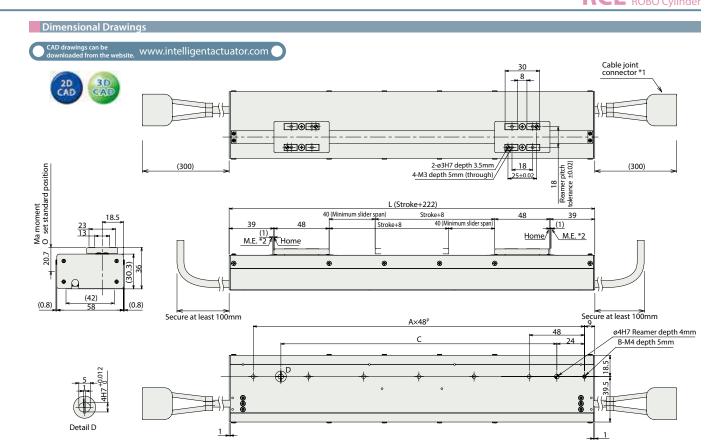
# ③Cable Length

Туре	Cable symbol	Standard price
Charles de la la conse	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

<sup>\*</sup> The standard cable for the RCL is the robot cable.

#### Actuator Specifications

Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Base	Material: Aluminum, white alumite treated
Dynamic allowable moment (Note)	Ma: 0.87 N•m Mb: 0.75 N•m Mc: 1.22 N•m
Overhung load length	Ma direction: 80mm or less, Mb and Mc directions: 120mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)



ME: Mechanical end SE: Stroke end

# ■ Dimensions and Weight by Stroke

\* 1 The motor and encoder cable are attached.
\* 2 During home return, the slider travels until
the mechanical end, so be careful to avoid
interference from peripheral objects.

One controller is required for each slider. (Or, one 2-axis controller is required.)

		-	
48	96	144	192
270	318	366	414
5	6	7	8
6	7	8	9
192	240	288	336
1.17	1.31	1.44	1.58
	270 5 6 192	270     318       5     6       6     7       192     240	270     318     366       5     6     7       6     7     8       192     240     288

# Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. 4 1	Man annahan af	Power		Control method								Mandanian	Reference						
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Program					Ne	twor	k opti	on *1					Maximum number of positioning points	page
	VIEW	connectable axes	voltage	rositionei	train	Flogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1		* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB	B	1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.



\* See page 14 for details on the model descriptions.

#### ■ Model Description RCL RA1L 2 N 25 Series Lead Stroke Compatible controllers Cable length Option **Encoder type** Motor type N: None P: 1 m B : Brake (with brake box) I: Incremental 2: Linear servo motor N: No screw 25: 25mm A3: ACON-CYB/PLB/POB specification 2W A5: ACON-CB/CGB S: 3 m BN: Brake A6: RCON M: 5 m X□□: Length (without brake box)



#### ■ Relation between payload (horizontal) and acceleration

Designation

RSEL

		Load Cap	acity (kg)				
Maximum Acceleration (G)	Continuous (Duty is		Duty is 70% or less				
, ,	Horizontal	Vertical	Horizontal	Vertical			
0.1	0.5						
0.3	0.5	0.1	0.5	0.1			
0.5	0.42	0.1		0.1			
1	0.2		0.25				
1.5	0.11	_	0.15	_			
2	0.07	-	0.1	_			

# ■ Pushing force guidelines

Pushing operation is possible within the range of numeric values listed below.

Electric current limit	30%	40%	50%	60%	70%	80%
Pushing force	0.75	1	1.25	1.5	1.75	2

(Note) The pushing forces listed above are for horizontal usage. If facing vertically upward, subtract 0.5N from the numeric values listed above, but if facing vertically downward, add 0.5N.

#### (1) The payload is determined by the acceleration and duty. Verify the payload in the payload (horizontal) and acceleration chart at right.

Operating time The duty is  $\frac{\text{Operating time}}{\text{Operating time}} \times 100 \text{ per cycle.}$ 

- $\ensuremath{\text{(2)}}\ \mbox{If the actuator is operated vertically, use the optional brake specification.}$
- (3) Please use an external guide to avoid a horizontal or rotational load applied to the rod.
- (4) The pushing force fluctuation increases when the current limit is low.
- (5) Simple absolute unit cannot be used with the RCL series.

# Actuator Specifications Table

# ■ Leads and Payloads

Model	Motor output (W)		n payload Vertical (kg)	Rated thrust (N)	Instantaneous maximum thrust (N)		Positioning repeatability (mm)	Stroke (mm)
RCL-RA1L-I-2-N-25-①-②-③	2	See chart above	See chart above	2.5	10	Horizontal 2G Vertical 1G	±0.1	25 (Fixed)

#### ■ Stroke and Maximum Speed

Stroke	25
Lead	(mm)
(no screw)	300

(unit: mm/s)

#### Stroke list

ш		
	Stroke (mm)	Standard price
ı	25	<u> </u>

Legend ①Compatible Controllers ②Cable length ③Option

# ② Cable Length

Туре	Cable symbol	Standard price
Ct d d	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_

- \* The standard cable for the RCL is the robot cable.

  \* Refer to P. 155 for the cable for non-brake specification.
- \* Refer to P. 120 for the cable for brake specification.

  (All prices represent the total of an integrated motor/encoder/brake cable and brake cable.)

## ③ Options

Title	Option code	See page	Standard price
Brake (with brake box)	В	_	_
Brake (without brake box)	BN	_	_

<sup>\*</sup> The brake box and cable with brake is needed to use the brake. If only the actuator with brake is needed for a repair, specify the BN (specification without brake box).

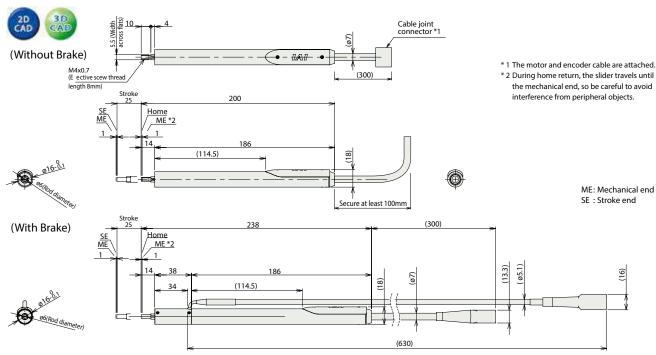
#### Actuator Specifications

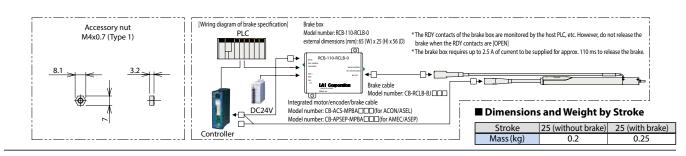
Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Pipe	Material: Nickel-plated carbon steel tube
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	10 million cycles

RCL ROBO Cylinder



Dimensional Drawings





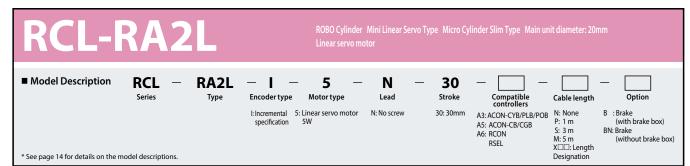
#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

	F. 4 1	Man annahan af	Power						trol i	neth	od								Maurian and an af	Reference
Name	External view	Max. number of connectable axes	supply	Positioner	Pulse-	Program					Ne	twor	k opti	on *1					Maximum number of positioning points	page
	VIEW	connectable axes	voltage	rositionei	train Program		DV	DV CC CIE PR CN ML ML3 EC EF		EP	PRT	SSN ECM		positioning points	page					
ACON-CB/CGB		1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		* Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.







#### ■ Relation between payload (horizontal) and acceleration

		Load Capacity (kg)								
Maximum Acceleration (G)	Continuous (Duty is		Duty is 70% or less							
. ,	Horizontal	Vertical	Horizontal	Vertical						
0.1	1									
0.3	_	0.2	1	0.2						
0.5	0.85	0.2		0.2						
1	0.4		0.5							
1.5	0.24	_	0.3	_						
2	0.15	-	0.2	-						

#### ■ Pushing force guidelines

Pushing operation is possible within the range of numeric values listed below. (N)

Electric current limit	30%	40%	50%	60%	70%	80%
Pushing force	1.5	2	2.5	3	3.5	4

(Note) The pushing forces listed above are for horizontal usage. If facing vertically upward, subtract 1N from the numeric values listed above, but if facing vertically downward, add 1N.

#### (1) The payload is determined by the acceleration and duty. Verify the payload in the payload (horizontal) and acceleration chart at right.

Operating time The duty is  $\frac{\text{Operating time}}{\text{Operating time}} \times 100 \text{ per cycle.}$ 

- (2) If the actuator is operated vertically, use the optional brake specification.
- (3) Please use an external guide to avoid a horizontal or rotational load applied to the rod.
- (4) The pushing force fluctuation increases when the current limit is low.
- (5) Simple absolute unit cannot be used with the RCL series.

# Actuator Specifications Table

#### ■ Leads and Payloads

	Model	Motor output (W)		n payload Vertical (kg)	Rated thrust (N)	Instantaneous maximum thrust (N)	Maximum acceleration (G)	Positioning repeatability (mm)	Stroke (mm)
RCL-RA2L-	-I-5-N-30-①-②-③	5	See chart above	See chart above	5	18	Horizontal 2G Vertical 1G	±0.1	30 (Fixed)
Legend ①	Legend ①Compatible Controllers ②Cable length ③Option								

#### ■ Stroke and Maximum Speed

Stroke	30
Lead	(mm)
(no screw)	340

(unit: mm/s)

#### Stroke list

Stroke (mm)	Standard price
30	

# ② Cable Length

Туре	Cable symbol	Standard price
Ct d d	<b>P</b> (1m)	_
Standard type (Robot cable)	<b>S</b> (3m)	_
(RODOL CADIE)	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
Special length	X11 (11m) ~ X15 (15m)	_
	X16 (16m) ~ X20 (20m)	_

- \* The standard cable for the RCL is the robot cable. \* Refer to P. 155 for the cable for non-brake specification.
- \* Refer to P. 120 for the cable for brake specification.

  (All prices represent the total of an integrated motor/encoder/brake cable and brake cable.)

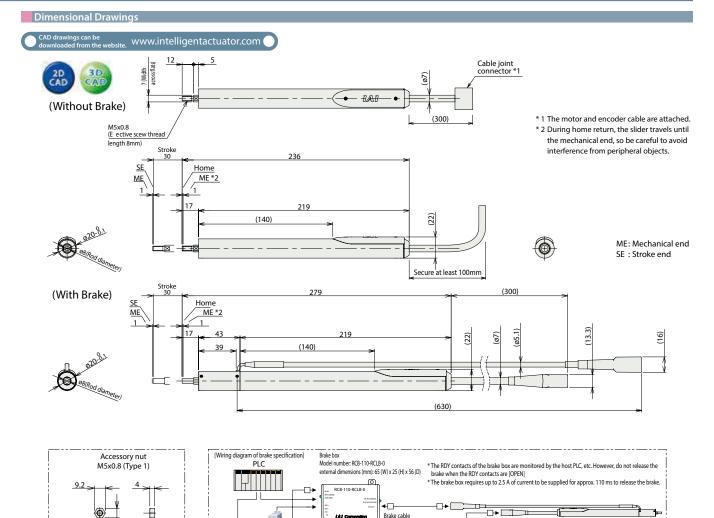
#### ③ Options

Title	Option code	See page	Standard price
Brake (with brake box)	В	_	_
Brake (without brake box)	BN	_	_

<sup>\*</sup> The brake box and cable with brake is needed to use the brake. If only the actuator with brake is needed for a repair, specify the BN (specification without brake box).

#### Actuator Specifications

Item	Description
Drive System	Linear servo motor
Encoder resolution	0.042mm
Pipe	Material: Nickel-plated carbon steel tube
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)
Service life	10 million cycles



## Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Controller

DC24V

	External	Max. number of	Power		Control method					Maximum number of	Reference									
Name	view	connectable axes	supply	Positioner	Pulse-	Program							k opti						positioning points	page
	VICVV	connectable axes	voltage	1 Ositionei	train	riogram	DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB	E .	1		● * Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	
ACON-CYB/PLB/POB		1		● * Option	• * Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	Please contact
RCON	HOME IL	16 (ML3,SSN, ECM are 8)	24VDC	-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	IAI for more information.
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

Integrated motor/encoder/brake cable Model number: CB-ACS-MPBA□□□(for ACON/ASEL)
Model number: CB-APSEP-MPBA□□□(for AMEC/ASEP)

Model number: CB-RCLB-BJ□□□

# More controller info is available in the General Controller Catalog PDF.



\* This is for the single-axis ASEL

■ Dimensions and Weight by Stroke

0.33

30 (without brake) 30 (with brake)

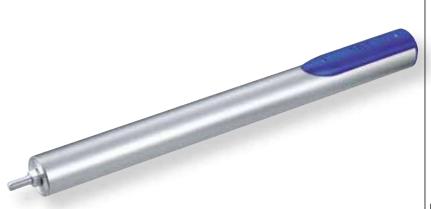
0.4

Stroke

Mass (kg)

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.

#### ■ Model Description RCL RA3L 10 40 Ν Series Lead Stroke Option Type **Encoder type** Motor type Compatible controllers Cable length N: None P: 1 m B : Brake (with brake box) N: No screw 40: 40mm A3: ACON-CYB/PLB/POB 10W specification A5: ACON-CB/CGB S: 3 m BN: Brake A6: RCON M: 5 m X□□: Length (without brake box) RSEL \* See page 14 for details on the model descriptions. Designation



(1) The payload is determined by the acceleration and duty. Verify the payload in the payload (horizontal) and acceleration chart at right.

Operating time The duty is  $\frac{\text{Operating time}}{\text{Operating time}} \times 100 \text{ per cycle.}$ 

- $\ensuremath{\text{(2)}}\ \mbox{If the actuator is operated vertically, use the optional brake specification.}$
- (3) Please use an external guide to avoid a horizontal or rotational load applied to the rod.
- (4) The pushing force fluctuation increases when the current limit is low.
- (5) Simple absolute unit cannot be used with the RCL series.

#### ■ Relation between payload (horizontal) and acceleration

	Load Capacity (kg)							
Maximum Acceleration (G)	Continuous (Duty is		Duty is 70% or less					
	Horizontal	Vertical	Horizontal	Vertical				
0.1	2	2						
0.3	2	0.4	2	0.4				
0.5	1.6	0.4						
1	0.78		1					
1.5	0.46	_	0.6	_				
2	0.3	-	0.4					

#### ■ Pushing force guidelines

Pushing operation is possible within the range of numeric values listed below. (N)

Electric current limit	30%	40%	50%	60%	70%	80%
Pushing force	3	4	5	6	7	8

(Note) The pushing forces listed above are for horizontal usage. If facing vertically upward, subtract 1.8N from the numeric values listed above, but if facing vertically downward, add 1.8N.

#### Actuator Specifications Table

# ■ Leads and Payloads

	Mater	Mavimun	n payload	Datad	Instantaneous	Maximum	Positioning	Ci. I
Model	Motor output (W)			Rated thrust (N)	mavimum		repeatability (mm)	Stroke (mm)
RCL-RA3L-I-10-N-40-①-②-③	10	See chart above	See chart above	10	30	Horizontal 2G Vertical 1G	±0.1	40 (Fixed)

#### ■ Stroke and Maximum Speed

Stroke	40 (mm)
(no screw)	450

(unit: mm/s)

#### Stroke list

Stroke (mm)	Standard price
40	

Legend ①Compatible Controllers ②Cable length ③Option

# ② Cable Length

Туре	Cable symbol	Standard price		
Character day	<b>P</b> (1m)	_		
Standard type (Robot cable)	<b>S</b> (3m)	_		
(RODOL CADIE)	<b>M</b> (5m)	_		
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_		
Special length	X11 (11m) ~ X15 (15m)	_		
	X16 (16m) ~ X20 (20m)	_		

- \* The standard cable for the RCL is the robot cable. \* Refer to P. 155 for the cable for non-brake specification.
- \* Refer to P. 120 for the cable for brake specification.

  (All prices represent the total of an integrated motor/encoder/brake cable and brake cable.)

#### ③ Options

Title	Option code	See page	Standard price
Brake (with brake box)	В	_	_
Brake (without brake box)	BN	_	_

<sup>\*</sup> The brake box and cable with brake is needed to use the brake. If only the actuator with brake is needed for a repair, specify the BN (specification without brake box).

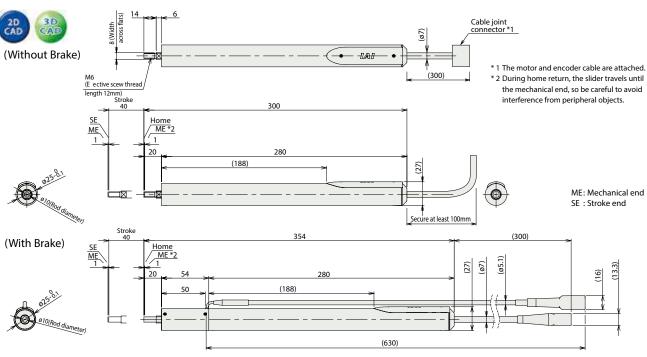
#### Actuator Specifications

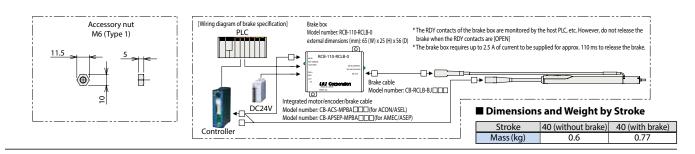
Item	Description								
Drive System	Linear servo motor								
Encoder resolution	0.042mm								
Pipe	Material: Nickel-plated carbon steel tube								
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)								
Service life	10 million cycles								

RCL ROBO Cylinder



Dimensional Drawings





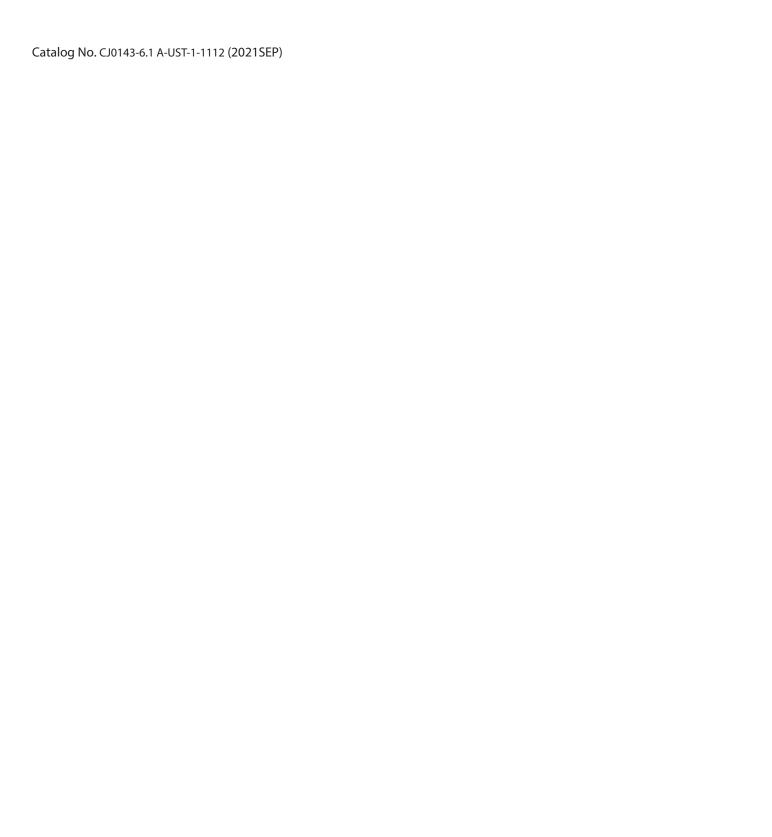
#### Applicable Controllers

The actuators on this page can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method														Maximum number of	Reference	
				Positioner	Pulse- train	Program						twor	positioning points	page						
							DV	CC	CIE	PR	CN	ML	ML3	EC	EP	PRT	SSN	ECM	positioning points	page
ACON-CB/CGB		1	24VDC	* Option	* Option	-	•	•	•	•	•	•	•	•	•	•	-	-	512 (768 for network spec.)	Please contact IAI for more information.
ACON-CYB/PLB/POB		1		* Option	* Option	-	-	-	-	-	-	-	-	-	-	-	-	-	64	
RCON	HOM IL	16 (ML3,SSN, ECM are 8)		-	-	-	•	•	•	•	-	-	•	•	•	•	•	•	128 (No position data for ML3, SSN, ECM),	
RSEL	ONE TO	8		-	-	•	•	•	•	•	-	-	-	•	•	•	-	-	36000	

<sup>\*1</sup> For network abbreviations such as DV and CC, please contact IAI.





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