# **Rod Type**



# **Rod Type**

RCP4	ERC3	RCA2
RCP3	ERC2	RCA
RCP2	RCD	RCS2

Pulse Motor	r Type				
DCD4	Standard Type	Coupling Type	52mm Width	RCP4-RA5C	147
RCP4			61mm Width	RCP4-RA6C	149
series		Side-Mounted Motor Type	52mm Width	RCP4-RA5R	151
			61mm Width	RCP4-RA6R	153
	Mini Type	Coupling Type	22mm Width	RCP3-RA2AC	155
RCP3			28mm Width	RCP3-RA2BC	157
series		Side-Mounted Motor Type	22mm Width	RCP3-RA2AR	159
Jerres			28mm Width	RCP3-RA2BR	161
	Standard Type	Coupling Type	25mm Width	RCP2-RA2C	163
			35mm Width	RCP2-RA3C	165
	High-Thrust Type	Coupling Type	85mm Width	RCP2-RA8C	167
RCP2	7.	Side-Mounted Motor Type	85mm Width	RCP2-RA8R	169
series		Coupling Type	100mm Width	RCP2-RA10C	171
Jerres	Short-Length Type	Standard Type	45mm Width	RCP2-SRA4R	173
	- /.	Single-Guide Type	45mm Width	RCP2-SRGS4R	175
		Double-Guide Type	45mm Width	RCP2-SRGD4R	177
Controller-In	ntegrated Type with Pulse	Motor			
ERC3	Controller-Integrated Type	Standard Type	45mm Width	ERC3-RA4C	179
			64mm Width	ERC3-RA6C	181
series					
	Controller-Integrated Type	Standard Type	58mm Width	ERC2-RA6C	183
			68mm Width	ERC2-RA7C	185
ERC2		Single-Guide Type	58mm Width	ERC2-RGS6C	187
series			68mm Width	ERC2-RGS7C	189
361163		Double-Guide Type	58mm Width	ERC2-RGD6C	191
			68mm Width	ERC2-RGD7C	193
DC Brushles	ss Motor Type				
RCD	Mini Cylinder		12mm Width	RCD-RA1D	195
series					





# **Rod Type**

	Mini Rod Type	Coupling Type	18mm Width	RCA2-RA2AC	197
		Side-Mounted Motor Type	18mm Width	RCA2-RA2AR	199
		Short-Length Type	28mm Width	RCA2-RN3NA	201
RCA2			34mm Width	RCA2-RN4NA	203
series			28mm Width	RCA2-RP3NA	205
			34mm Width	RCA2-RP4NA	207
24V		Single-Guide Type	28mm Width	RCA2-GS3NA	209
Servo Motor			34mm Width	RCA2-GS4NA	211
Type		Double-Guide Type	28mm Width	RCA2-GD3NA	213
.,,,,,			34mm Width	RCA2-GD4NA	215
		Slide Unit Type	60mm Width	RCA2-SD3NA	217
			72mm Width	RCA2-SD4NA	219
	Standard Type	Coupling Type		DCA DAGC	221
	Standard Type	Coupling Type	ø32mm	RCA-RA3C	
		Build-in Type	ø37mm	RCA-RA4C	223
		Bullu-III Type	ø32mm	RCA-RA3D	225
		Cida Mauntad Matar Tura	ø37mm	RCA-RA4D	227
		Side-Mounted Motor Type	ø32mm	RCA-RA3R	229
		Chart Langth Tuna	ø37mm	RCA-RA4R	231
RCA	Single-Guide Type	Short-Length Type	45mm Width	RCA-SRA4R	233
series	Single-Guide Type	Coupling Type	ø32mm	RCA-RGS3C	235
		Duild in Turns	ø37mm	RCA-RGS4C	237
24V		Build-in Type	ø32mm	RCA-RGS3D	239
Servo Motor		Chart Langth Tuna	ø37mm	RCA-RGS4D	241
Type	Davida Tura	Short-Length Type	45mm Width	RCA-SRGS4R	243
1,750	Double-Guide Type	Coupling Type	ø32mm	RCA-RGD3C	245
		Decilal in Terms	ø37mm	RCA-RGD4C	247
		Build-in Type	ø32mm	RCA-RGD3D	249
		Cide Mayneted Mater Type	ø37mm	RCA-RGD4D	251
		Side-Mounted Motor Type	ø32mm	RCA-RGD3R	253
		Chart Langth Tuna	ø37mm	RCA-RGD4R	255
		Short-Length Type	45mm Width	RCA-SRGD4R	257
	Mini Rod Type	Short-Length Type	46mm Width	RCS2-RN5N	259
			46mm Width	RCS2-RP5N	261
			46mm Width	RCS2-GS5N	263
			46mm Width	RCS2-GD5N	265
			94mm Width	RCS2-SD5N	267
	Standard Type	Coupling Type	ø37mm	RCS2-RA4C	269
			55mm Width	RCS2-RA5C	271
RCS2		Build-in Type	ø37mm	RCS2-RA4D	273
		Short-Length Type	75mm Width	RCS2-SRA7BD	275
series		Side-Mounted Motor Type	ø37mm	RCS2-RA4R	277
200V			55mm Width	RCS2-RA5R	279
Servo			130mm Width	RCS2-RA13R	281
Motor	Single-Guide Type	Coupling Type	ø37mm	RCS2-RGS4C	283
Туре			55mm Width	RCS2-RGS5C	285
		Build-in Type	ø37mm	RCS2-RGS4D	287
		Short-Length Type	75mm Width	RCS2-SRGS7BD	289
	Double-Guide Type	Coupling Type	ø37mm	RCS2-RGD4C	291
			55mm Width	RCS2-RGD5C	293
		Build-in Type	ø37mm	RCS2-RGD4D	295
		Short-Length Type	75mm Width	RCS2-SRGD7BD	297
		Side-Mounted Motor Type	ø37mm	RCS2-RGD4R	299

Slider Type

Mini

Controller

lod ype

Mini

Standard

Table/

Arm/ Flat Type

Standard

Gripper/ Rotary Type

\_inear Servo Type

Cleanoom ype

Splash-Proof Type

ulse Motor

Servo Motor 24V)

Servo Motor

Linear Servo Motor

OIN

lotes or

selectio

# Model Specification Items

\* See page Pre-47 for details on the model descriptions **Built-in guide mechanism** 

Series

RCP4 — RA5C —

Type

CE RoHS Technical References

Encoder type

I: Incremental

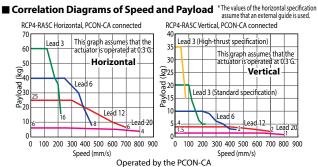
(1) The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1G (\*). Note that raising the acceleration causes the payload to drop. (\*) The specific value varies depending on the connected controller and actuator

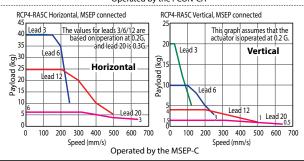
lead. For details, refer to "Selection References" on page A-101 and A-103. (2) Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4.

(Refer to the actuator specifications below.) (3) All horizontal payloads are values when an external guide is used.

(4) See page A-71 for details on push motion.

#### **P3** Applicable controller Motor type Lead Stroke Cable length **Options** P3: PCON-CA MSEP-C N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable 20: 20mm 42P: Pulse motor, 50: 50mm See Options below. size 42□ 12:12mm \* If the high-thrust pulse motor is selected, the actuator comes standard with option B (Brake). 400: 400mm (50mm pitch increments) 42SP: High-thrust 6: 6mm pulse motor 3: 3mm size 42□





#### Actuator Specifications ■ Leads and Payloads (\*) When operated at 0.2 G Lead Connected (mm) Controller Horizontal (kg) Vertical (kg) Max. push (mm) Model number controller Horizontal (kg) | Vertical (kg) force (N PCON-CA RCP4-RA5C-I-42P-20-1 -P3-2 -3 20 56 MSEP-C PCON-CA RCP4-RA5C-I-42P-12-1 -P3-2 -3 12 25 (\*) 4 (\*) MSEP-C 50 to RCP4-RA5C-I-42P-6-①-P3-②-③ 185 MSEP-C 40 (\*) 10 (\*) (every PCON-CA MSEP-C 60 40 (\*) 20 10 (\*) 50mm) RCP4-RA5C-I-42P-3-①-P3-②-③ 370 PCON-CA 35

Standard specification | High-thrust | RCP4-RA5C-I-42SP-3-1 | -P3-2 - 3 -B 

■ Stroke	■ Stroke and Maximum Speed						
Lead (mm)	Stroke Connected cotroller	50~400 (every 50mm)					
20	PCON-CA	800					
20	MSEP-C	640					
12	PCON-CA	700					
12	MSEP-C	500					
6	PCON-CA	450					
0	MSEP-C	250					
3	PCON-CA	225					
(Standard)	MSEP-C	125					
3 (High-thrust)	PCON-CA	80					

①Stroke					
Churches (mans)	Standard price				
Stroke (mm)	Standard	High-thrust			
50	_	_			
100	_	_			
150	_	_			
200	_	_			
250	_	_			
300	_	_			
350	_	_			
400	_				

<b>③Options</b>					
Name	Option code	Page	Standard Price		
Brake	В	→ A-42	_		
Optional cable exit direction (top)	CJT	→ A-42	_		
Optional cable exit direction (right)	CJR	→ A-42	_		
Optional cable exit direction (left)	CJL	→ A-42	_		
Optional cable exit direction (bottom)	CJB	→ A-42	_		
Flange bracket	FL	→ A-44	_		
Non-motor end specification	NM	→ A-52	_		
Scraper	SC	→ A-55	_		

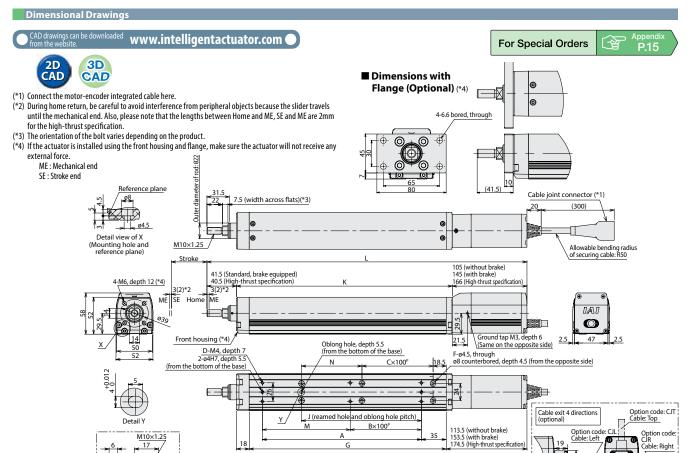
② Cable Length				
Туре	Cable symbol	Standard price		
	<b>P</b> (1m)	_		
Standard type	<b>S</b> (3m)	_		
	<b>M</b> (5m)	_		
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_		
Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_		
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_		
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_		
	<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> (15m)	_		
	<b>R16</b> (16m) ~ <b>R20</b> (20m)	_		
* Soo page A 50 for cables for maintanance				

See page A-59 for cables for maintenance.

Actuator Specifications				
ltem	Description			
Drive method	Ball screw, ø10mm, rolled C10			
Positioning repeatability (*1)	±0.02mm [±0.03mm]			
Lost motion	0.1mm or less			
Rod	ø22mm stainless steel pipe			
Rod non-rotation precision	±0 deg			
Allowable rod load mass	Refer to page 148 and page A-117			
Rod tip overhang distance	100mm or less			
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)			

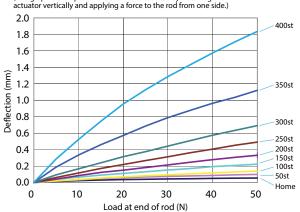
(\*1) The value at lead 20 is shown in [].





■ Rod Deflection of RCP4-RA5C (Reference Values)

(The graph below plots deflection as measured by installing the actuator vertically and applying a force to the rod from one side.)



#### ■ Dimensions and Mass by Stroke

	50	100	150	200	250	300	350	400	
	Without brake	300	350	400	450	500	550	600	650
L	With brake	340	390	440	490	540	590	640	690
	High-thrust specification	360	410	460	510	560	610	660	710
	A	73.5	123.5	173.5	223.5	273.5	323.5	373.5	423.5
	В	0	0	1	1	2	2	3	3
	C	0	0	0	1	1	2	2	3
	D	4	4	6	6	8	8	10	10
	F	4	4	4	6	6	8	8	10
	G	127	177	227	277	327	377	427	477
	J	18.5	68.5	118.5	168.5	218.5	268.5	318.5	368.5
	K	153.5	203.5	253.5	303.5	353.5	403.5	453.5	503.5
	М	73.5	123.5	73.5	123.5	73.5	123.5	73.5	123.5
	N	35	85	135	85	135	85	135	85
Allowak	ole static load at end of rod (N)	65.6	51.2	41.7	34.9	29.8	25.7	22.4	19.7
Allowable		32.4	23.6	18.1	14.4	11.6	9.5	7.7	6.2
load at end	d of rod (N) Load offset 100mm	25.6	19.7	15.7	12.7	10.4	8.6	7.1	5.7
Allowable static torque at end of rod (N·m)		6.6	5.2	4.3	3.7	3.2	2.8	2.6	2.3
Allowable	Allowable dynamic torque at end of rod (N•m)		2.0	1.6	1.3	1.0	0.9	0.7	0.6
Weight	Without brake	1.9	2.1	2.4	2.7	2.9	3.2	3.4	3.7
(kg)	With brake	2.1	2.4	2.6	2.9	3.1	3.4	3.7	3.9

Applicable Controllers								
RCP4 series actuators ca	an be opera	ted with the controllers in	dicated below. Select the type according to your inte	nded application.				
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner type High-output specification	Ü	PCON-CA-42OI-①-2-0	Equipped with a high-output driver PIO control supported	512 points			_	
Pulse-train type High-output specification		PCON-CA-42○I-PL□-2-0	Equipped with a high-output driver Pulse-train input supported	_		Refer to P618	_	→ P607
Field network type High-output specification		PCON-CA-42OI-@-0-0	Equipped with a high-output driver Field network supported	768 points	DC24V		_	
Solenoid valve multi-axis type PIO specification	A COLUMN	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points		Refer to		, DEC2
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P563

imindicates field network specification symbol. \* 🗆 indicates N (NPN specification) or P (PNP specification) symbol.

\* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates number of axes (1 to 8). \* ⊕ indic \* ⊖ indicates P (Standard specification) or SP (High-thrust specification) symbol.

IAI

RCP4-RA5C ECTROMATE

> Toll Free Phone (877) SERV098 Toll Free Fax (877) SERV099 www.electromate.com sales@electromate.com

\* See page Pre-47 for details on the model descriptions

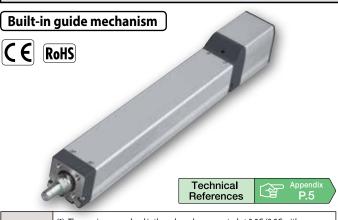
selectio

#### Model Specification Items RCP4 — SA6C — Encoder type Cable length Type Motor type — Applicable controller — Series Stroke Lead **Options** P3: PCON-CA MSEP-C N: None P: 1m S: 3m I: Incremental 56P: Pulse motor, 24: 24mm 50: 50mm See Options below. size 56□ 16: 16mm \* If the high-thrust pulse motor is selected, the actuator comes standard with option B (Brake). 500: 500mm (50mm pitch increments) P4: PCON-CFA 56SP: High-thrust

4: 4mm

pulse motor

size 56□

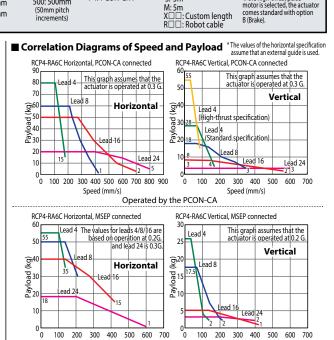


(1) The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1G (\*). Note that raising the acceleration causes the payload to drop.

(\*) The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on page A-101 and A-103.

(2) Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)

(3) All horizontal payloads are values when an external guide is used.(4) See page A-71 for details on push motion.



Operated by the MSEP-C

Speed (mm/s)

Actu	Actuator Specifications							
<b>■</b> Lead	s and Payloads				(1	*) When oper	ated at 0.2 G	
Model number		Lead	Connected	Maximun	n payload	Max. push	Stroke	
	Modernamber	(mm)	controller	Horizontal (kg)	Vertical (kg)	force (N)	(mm)	
RCP4-RA6C-I-56P-24-①-P3-②-③		24	PCON-CA	20	3	182		
	RCP4-RAOC-I-50P-24-[[[]-P3-[2]-[3]		MSEP-C	18	3 (*)	102		
	RCP4-RA6C-I-56P-16-①-P3-②-③		PCON-CA	50	8	273		
Standard		16	MSEP-C	40 (*)	5 (*)	2/3	50 to	
specification	RCP4-RA6C-I-56P-8-①-P3-②-③	8	PCON-CA	60	18	547	500	
	RCP4-RA0C-1-30P-8-101-P3-101-101	0	MSEP-C	50 (*)	17.5 (*)	347	(every	
	RCP4-RA6C-I-56P-4-①-P3-②-③	4	PCON-CA	80	28	1094	50mm)	
	NCF4-NA0C-1-30F-4-[U]-F3-[Z]-[S]		MSEP-C	55 (*)	26 (*)	1094		
High-thrust specification RCP4-RA6C-I-56SP-4-①-P4-②-③-B		4	PCON-CFA	_	55	1106		
spécification	ncr4-nauc-1-303r-4-[[]-P4-[2]-[3]-B	4	_	_	_	1106		

<b>■</b> Stroke	■ Stroke and Maximum Speed						
Lead (mm)	Stroke Connected cotroller	50~500 (every 50mm)					
24	PCON-CA	800<600>					
24	MSEP-C	600<400>					
16	PCON-CA	700<560>					
10	MSEP-C	420					
8	PCON-CA	420					
	MSEP-C	210					
4	PCON-CA	210					
(Standard)	MSEP-C	140					
4 (High-thrust)	PCON-CFA	90					

The values in < > apply when the actuator is used vertically. (Unit: mm/s)

Type	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_
	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	<b>X16</b> (16m) ~ <b>X20</b> (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)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

\* See page A-59 for cables for maintenance.

② Cable Length

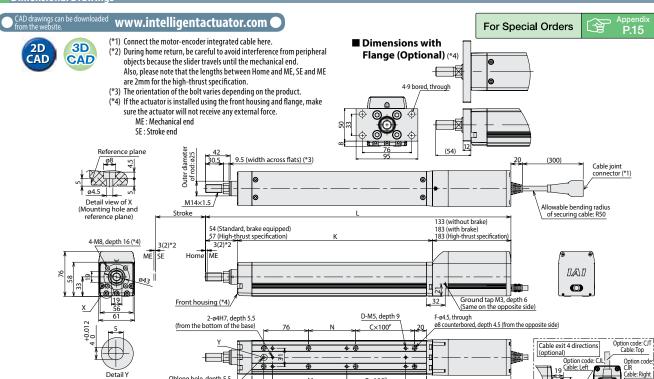
	Actuator Specifications	
•	ltem	Description
	Drive method	Ball screw, ø12mm, rolled C10
	Positioning repeatability (*1)	±0.02mm [±0.03mm]
	Lost motion	0.1mm or less
	Rod	ø25mm stainless steel pipe
	Rod non-rotation precision	±0 deg
	Allowable rod load mass	Refer to page 150 and page A-117
	Rod tip overhang distance	100mm or less
Ī	Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

(\*1) The value at lead 24 is shown in [].

#### ①Stroke Standard price Stroke (mm) Standard High-thrust 50 100 150 200 250 300 350 400 450 500

©Options			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Optional cable exit direction (top)	CJT	→ A-42	_
Optional cable exit direction (right)	CJR	→ A-42	_
Optional cable exit direction (left)	CJL	→ A-42	_
Optional cable exit direction (bottom)	CJB	→ A-42	_
Flange bracket	FL	→ A-44	_
Non-motor end specification	NM	→ A-52	_
Scraper	SC	→ A-55	_

### Dimensional Drawings



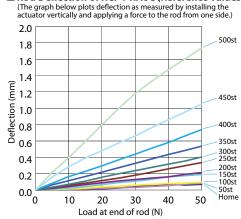
# ■ Rod Deflection of RCP4-RA6C (Reference Values)

Supplied rod end nut

M14×1.5

Oblong hole, depth 5.5

(from the bottom of the base),



#### mansions and Mass by Stroke

J (reamed hole and oblong hole pitch)

B×100<sup>P</sup>

■ Dim	Dimensions and Mass by Stroke											
	Stı	roke	50	100	150	200	250	300	350	400	450	500
	Wi	thout brake	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5
L	Wi	th brake	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5
	High-th	rust specification	421.5	471.5	521.5	571.5	621.5	671.5	721.5	771.5	821.5	871.5
		A	76	126	176	226	276	326	376	426	476	526
		В	0	0	1	1	2	2	3	3	4	4
		С	0	0	0	1	1	2	2	3	3	4
		D	4	4	6	6	8	8	10	10	12	12
		F	6	6	6	8	8	10	10	12	12	14
		G	146	196	246	296	346	396	446	496	546	596
		J	91	141	191	241	291	341	391	441	491	541
		K	181.5	231.5	281.5	331.5	381.5	431.5	481.5	531.5	581.5	631.5
		M	76	126	76	126	76	126	76	126	76	126
		N	30	80	130	80	130	80	130	80	130	80
Allowa	ble static lo	ad at end of rod (N)	112.7	91.5	76.7	65.7	57.2	50.4	44.8	40.2	36.2	32.7
Allowable		Load offset 0mm	49.0	37.4	29.9	24.5	20.4	17.1	14.5	12.3	10.3	8.6
load at en	d of rod (N)	Load offset 100mm	38.7	31.0	25.5	21.4	18.1	15.4	13.2	11.2	9.5	8.0
Allowable	static torqu	e at end of rod (N•m)	11.4	9.3	7.9	6.8	6.0	5.4	4.9	4.5	4.1	3.8
Allowable	Allowable dynamic torque at end of rod (N•m)		3.9	3.1	2.5	2.1	1.8	1.5	1.3	1.1	1.0	0.8
Weight	V	Vithout brake	3.4	3.7	4.1	4.4	4.7	5.0	5.4	5.7	6.0	6.3
(kg)		With brake	3.9	4.2	4.6	4.9	5.2	5.5	5.9	6.2	6.5	6.8

143.5 (without brake) 193.5 (with brake) 193.5 (High-thrust specification)

	iii be operai	ted with the controllers maic	ated below. Select the type according to your inte	nueu application.				
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner type High-output specification	Ñ	PCON-CA-56PI-①-2-0	Equipped with a high-output driver PIO control supported	512 points			_	
Pulse-train type High-output specification		PCON-CA-56PI-PL-□-2-0	Equipped with a high-output driver Pulse-train input supported	_		Refer to P618	_	→ P60
Field network type High-output specification		PCON-CA-56PI-III-0-0	Equipped with a high-output driver Field network supported	768 points	DC24V		_	
Solenoid valve multi-axis type PIO specification	Anna	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points		Refer to		, DEC
Solenoid valve multi-axis type Network specification	iiii -	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P56
Positioner type		PCON-CFA-56SPI-①-2-0	High-thrust specification Positioner type based on PIO control	512 points			_	
Pulse-train type	1	PCON-CFA-56SPI-PL-□-2-0	High-thrust specification Pulse-train input type	_	DC24V	Refer to P618	_	→ P60
Field network type		PCON-CFA-56SPI-@-0-0	High-thrust specification Supporting 7 major field networks	768 points			_	

Model Specification Items RCP4 — RA5R — **42P P3** Series Type Encoder type — Motor type Applicable controller Lead Stroke Cable length **Options** P3: PCON-CA 42P: Pulse motor, 20: 20mm 50: 50mm N: None I: Incremental See Options below. P: None
P: 1m
S: 3m
M: 5m
X \subseteq : Custom length
R \subseteq : Robot cable MSEP-C size 42□ 12:12mm 400: 400mm (50mm pitch increments) 6: 6mm \* Be sure to specify either "ML" or "MR" as the motor side-mounted direction. 3: 3mm \* See page Pre-47 for details on the model descriptions

Built-in guide mechanism CE RoHS

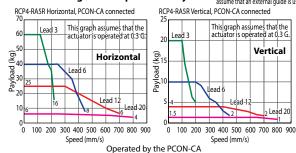
The "Motor side-mounted to the left (ML)" option is selected for the actuator shown above.

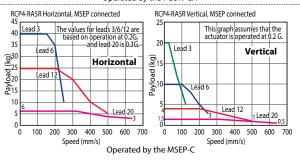
Technical References

selectio

- (1) The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (\*). Note that raising the acceleration causes the payload to drop.
  - (\*) The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on page A-105 and A-107.
- (2) Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)
- (3) All horizontal payloads are values when an external guide is used.(4) See page A-71 for details on push motion.

# ■ Correlation Diagrams of Speed and Payload \*The values of the horizontal specification assume that an external guide is used. RCP4-RASR Horizontal, PCON-CA connected RCP4-RASR Vertical, PCON-CA connected





### Actuator Specifications

■ Leads and Payloads (\*) When operated at 0.2 G Connected Controller | Maximum payload Controller | Maximum payload Controller | Maximum payload | Max. push Controller | Max. push Lead (mm) Model number PCON-CA RCP4-RA5R-I-42P-20-①-P3-②-③ 20 56 MSEP-C 25 25 (\*) PCON-CA 50 to RCP4-RA5R-I-42P-12-1-1-P3-2-3 12 93 4 (\*) MSEP-C 10 RCP4-RA5R-I-42P-6-①-P3-②-③ (every 6 185 10 (\*) MSEP-C 40 (\*) 50mm) PCON-CA 60 MSEP-C 40 (\*) 20 (\*) RCP4-RA5R-I-42P-3-1 -P3-2 -3 370

Code explanation	① Stroke	2 Cable lengt	h ③Ω	ntions *	ioo nago Δ-7	1 for details	on push motion	

■ Stroke	and	Maximum	Speed
= Juoke	and	MIGAIIIIGIII	Sheer

Lead (mm)	Stroke Connected cotroller	50~400 (every 50mm)		
20	PCON-CA	800		
20	MSEP-C	640		
12	PCON-CA	700		
12	MSEP-C	500		
6	PCON-CA	450		
0	MSEP-C	250		
3	PCON-CA	225		
	MSEP-C	125		

OD CI OILC	
Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_

200	_				
250	_				
300	_				
350	_				
400	_				
<b>③Options</b>					
Name		Option code	Page	Standard Price	

<b>③Options</b>					
Name	Option code	Page	Standard Price		
Brake (*)	В	→ A-42	_		
Optional cable exit direction (top)	CJT	→ A-42	_		
Optional cable exit direction (outside)	CIO	→ A-42	_		
Optional cable exit direction (bottom)	CJB	→ A-42	_		
Flange bracket (*)	FL	→ A-44	_		
Motor side-mounted to the left (Standard)	ML	→ A-52	_		
Motor side-mounted to the Right	MR	→ A-52	_		
Non-motor end specification	NM	→ A-52	_		
Scraper	SC	→ A-55	_		

<sup>\*</sup> With brake option at 50 stroke, flange bracket can not be used because flange and motor cover may interfere.

② Cable 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)	_			
	<b>X16</b> (16m) ~ <b>X20</b> (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)	_			
	R11 (11m) ~ R15 (15m)	_			
	<b>R16</b> (16m) ~ <b>R20</b> (20m)	_			

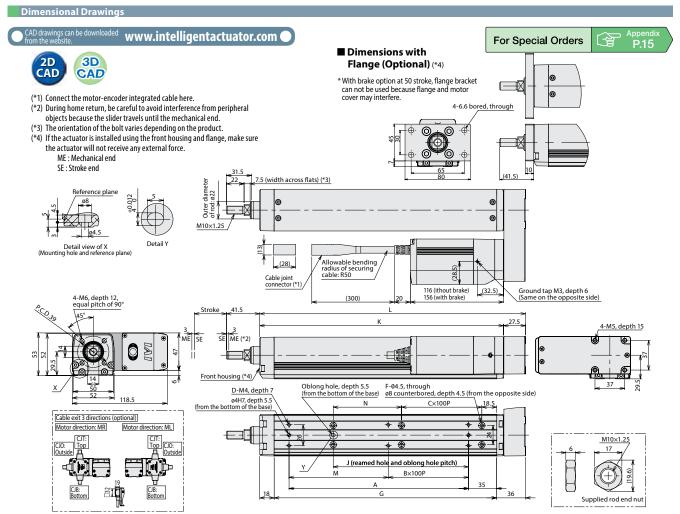
<sup>\*</sup> See page A-59 for cables for maintenance.

#### Actuator Specifications

ltem	Description
Drive method	Ball screw, ø10mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Rod	ø22mm stainless steel pipe
Rod non-rotation precision	±0 deg
Allowable rod load mass	Refer to page 152 and page A-117
Rod tip overhang distance	100mm or less
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

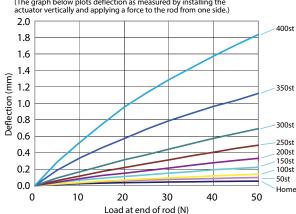
<sup>(\*1)</sup> The value at lead 20 is shown in [].





■ Rod Deflection of RCP4-RA5R (Reference Values)

(The graph below plots deflection as measured by installing the actuator vertically and applying a force to the rod from one side.)



#### ■ Dimensions and Mass by Stroke

		, .								
Stroke			50	100	150	200	250	300	350	400
L			181	231	281	331	381	431	481	531
Α			73.5	123.5	173.5	223.5	273.5	323.5	373.5	423.5
В			0	0	1	1	2	2	3	3
С			0	0	0	1	1	2	2	3
D			4	4	6	6	8	8	10	10
F			4	4	4	6	6	8	8	10
G			127	177	227	277	327	377	427	477
J			18.5	68.5	118.5	168.5	218.5	268.5	318.5	368.5
K			153.5	203.5	253.5	303.5	353.5	403.5	453.5	503.5
M			73.5	123.5	73.5	123.5	73.5	123.5	73.5	123.5
	N			85	135	85	135	85	135	85
Allowab	le static lo	oad at end of rod (N)	65.6	51.2	41.7	34.9	29.8	25.7	22.4	19.7
Allowable		Load offset 0mm	32.4	23.6	18.1	14.4	11.6	9.5	7.7	6.2
load at end of rod (N) Load offset 100mm		25.6	19.7	15.7	12.7	10.4	8.6	7.1	5.7	
Allowable	Allowable static torque at end of rod (N·m)			5.2	4.3	3.7	3.2	2.8	2.6	2.3
Allowable	dynamic to	rque at end of rod (N•m)	2.6	2.0	1.6	1.3	1.0	0.9	0.7	0.6
Weight	V	Vithout brake	2.1	2.4	2.6	2.9	3.2	3.4	3.7	4.0
(kg)		With brake	2.3	2.6	2.9	3.1	3.4	3.7	3.9	4.2

Applicable Controllers											
RCP4 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.											
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page			
Positioner type High-output specification		PCON-CA-42PI-①-2-0	Equipped with a high-output driver PIO control supported	512 points			_				
Pulse-train type High-output specification		PCON-CA-42PI-PL-□-2-0	Equipped with a high-output driver Pulse-train input supported	_		Refer to P618	_	→ P607			
Field network type High-output specification		PCON-CA-42PI0-0	Equipped with a high-output driver Field network supported	768 points DC24\			_				
Solenoid valve multi-axis type PIO specification	diam'		Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points		Refer to		, DE 62			
Solenoid valve multi-axis type Network specification	iiii		Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P563			
* ① indicates I/O type (NP/PN). *	indicates n	umber of axes (1 to 8). * III indic	tates field network specification symbol. $*\Box$ indicates N (NPN sp	ecification) or P (PNP s	pecification)	symbol.					

IAI



RCP4-RA5R

selectio

Model Specification Items RCP4 — RA6R — **56P P3** Motor type Type Encoder type — Applicable controller – Cable length Series — Stroke Lead **Options** P3: PCON-CA MSEP-C I: Incremental 56P: Pulse motor, 24: 24mm 50: 50mm N: None See Options below. 16: 16mm size 56□ S: 3m
M: 5m
X : Custom length
R : Robot cable 500: 500mm (50mm pitch increments) Be sure to specify either "ML" or "MR" as the motor side-mounted direction. 4: 4mm \* See page Pre-47 for details on the model descriptions



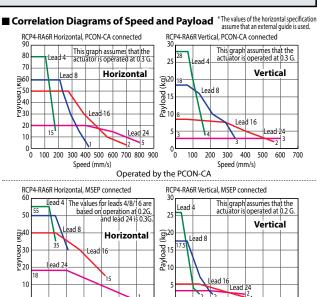
The "Motor side-mounted to the left (ML)" option is selected for the actuator shown above. References (1) The maximum payload is the value when operated at 0.3G (0.2G with some

Technical

models) acceleration. The upper limit of acceleration is 1 G (\*). Note that raising the acceleration causes the payload to drop. (\*) The specific value varies depending on the connected controller and actuator lead. For details, refer to "Selection References" on page A-105 and A-107.

(2) Take note that the maximum payload and maximum speed vary depending on the controller connected to the RCP4. (Refer to the actuator specifications below.)

(3) All horizontal payloads are values when an external guide is used.(4) See page A-71 for details on push motion.



700

Operated by the MSEP-C

Actuator Specifications						
■ Leads and Payloads				(	*) When oper	ated at 0.2 0
Model number	Lead	Connected	Maximum payload		Max. push	Stroke
Model Humber	(mm)	controller	Horizontal (kg)	Vertical (kg)	force (N)	(mm)
RCP4-RA6R-I-56P-24-①-P3-②-③	24	PCON-CA	20	3	182	
NCF4-NAON-1-30F-24-[[]-F3-[2]-[3]	24	MSEP-C	18	3 (*)	102	
RCP4-RA6R-I-56P-16-①-P3-②-③	16	PCON-CA	50	8	273	50 to
NCF4-NAON-1-30F-10-[0]-F3-[2]-[3]	10	MSEP-C	40 (*)	5 (*)	2/3	500
RCP4-RA6R-I-56P-8-①-P3-②-③	8	PCON-CA	60	18	547	(every
RCP4-RAOR-I-50P-8-[[]-P3-[2]-[3]		MSEP-C	50 (*)	17.5 (*)	347	50mm)
RCP4-RA6R-I-56P-4-①-P3-②-③	4	PCON-CA	80	28	1094	
NCF4-NAON-1-30F-4-[[]-F3-[2]-[3]	4	MSEP-C	55 (*)	26 (*)	1094	
Code explanation ① Stroke ② Cable length	gth ③	Options *	See page A-7	1 for details	on push moti	on.

100

200 300 400 500 600 700

①Stroke	
Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_
350	_
400	_
450	_
500	_

300			_							
350			_							
400	_									
450	_									
500			_							
	· · · · · · · · · · · · · · · · · · ·									
<b>③Options</b>										
N.		0 11 1	_	c. 1 15 1						
Name		Option code	Page	Standard Price						
Brake (*)		B B	→ A-42	Standard Price —						
	(top)			Standard Price — —						
Brake (*)		В	→ A-42	Standard Price — — — —						
Brake (*) Optional cable exit direction (	(outside)	B CJT	→ A-42 → A-42	Standard Price — — — — — —						
Brake (*) Optional cable exit direction ( Optional cable exit direction (	(outside)	CJO CJT	→ A-42 → A-42 → A-42	Standard Price — — — — — — — — — — —						

SC Scraper → A-55 With brake option at 50 stroke, flange bracket can not be used because flange and motor cover may interfere.

ML

MR

NM

→ A-52

→ A-52

→ A-52

■ Stroke and	d Maximum Speed	(Unit: mm/s)
Lead (mm)	Stroke Connected cotroller	50~500 (every 50mm)
24	PCON-CA	800<600>
24	MSEP-C	600<400>
16	PCON-CA	560
16	MSEP-C	420
8	PCON-CA	420<350>
•	MSEP-C	210
1	PCON-CA	175
4	MSEP-C	140
*The values of lead 0 a	nah. Ti	a a valuacia e > a analu whom

Type
P (1m)
Standard type     \$ (3m)     —       \$ (5m)     —       \$ (10m)     ~       \$ (15m)     —       \$ (16m)     ~       \$ (20m)     —
M (5m)
X06 (6m)     ~ X10 (10m)     —       Special length     X11 (11m)     ~ X15 (15m)     —       X16 (16m)     ~ X20 (20m)     —
Special length   X11 (11m) ~ X15 (15m) —   X16 (16m) ~ X20(20m) —
<b>X16</b> (16m) ~ <b>X20</b> (20m) —
1 1 1 1
R01 (1m) ~ R03 (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> (15m) —
<b>R16</b> (16m) ~ <b>R20</b> (20m) —

\* See page A-59 for cables for maintenance.

Actuator Specifications	
ltem	Description
Drive method	Ball screw, ø12mm, rolled C10
Positioning repeatability (*1)	±0.02mm [±0.03mm]
Lost motion	0.1mm or less
Rod	ø25mm stainless steel pipe
Rod non-rotation precision	±0 deg
Allowable rod load mass	Refer to page 154 and page A-117
Rod tip overhang distance	100mm or less
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)
(*1) The value at lead 24 is shown in [1]	•

(\*1) The value at lead 24 is shown in [].

100

200 300 400 500 600

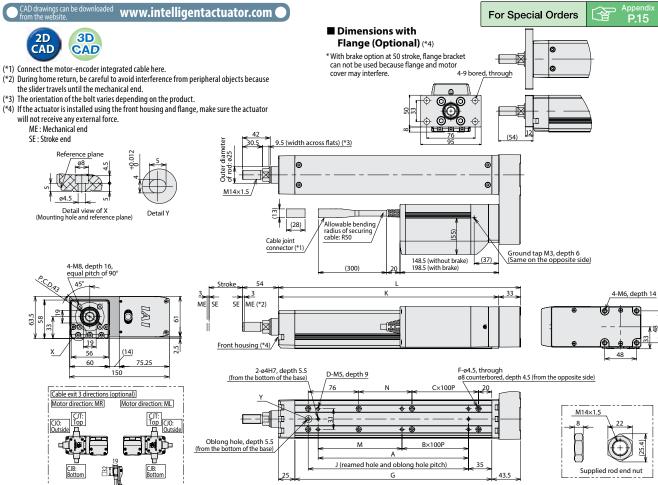
RCP4-RA6R

Motor side-mounted to the left (Standard)

Motor side-mounted to the Right

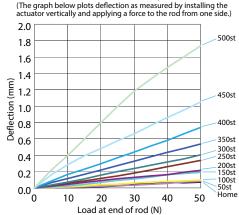
Non-motor end specification





### ■ Rod Deflection of RCP4-RA6R (Reference Values)

Dimensional Drawings



### ■ Dimensions and Mass by Stroke

		una mass by .										
	Stroke				150	200	250	300	350	400	450	500
	L			264.5	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5
	76	126	176	226	276	326	376	426	476	526		
В			0	0	1	1	2	2	3	3	4	4
С			0	0	0	1	1	2	2	3	3	4
	D			4	6	6	8	8	10	10	12	12
F			6	6	6	8	8	10	10	2	12	14
	G			196	246	296	346	396	446	496	546	596
	J			141	191	241	291	341	391	441	491	541
	K			231.5	281.5	331.5	381.5	431.5	481.5	531.5	581.5	631.5
	M			126	76	126	76	126	76	126	76	126
	N				130	80	130	80	130	80	130	80
Allowable sta	Allowable static load at end of rod (N)			91.5	76.7	65.7	57.2	50.4	44.8	40.2	36.2	32.7
Allowable dynan	Allowable dynamic Load offset 0mm		49.0	37.4	29.9	24.5	20.4	17.1	14.5	12.3	10.3	8.6
load at end of ro	load at end of rod (N) Load offset 100mm			31.0	25.5	21.4	18.1	15.4	13.2	11.2	9.5	8.0
Allowable static	Allowable static torque at end of rod (N·m)			9.3	7.9	6.8	6.0	5.4	4.9	4.5	4.1	3.8
Allowable dyna	mic to	rque at end of rod (N•m)	3.9	3.1	2.5	2.1	1.8	1.5	1.3	1.1	1.0	0.8
Weight	W	/ithout brake	3.9	4.2	4.5	4.8	5.1	5.5	5.8	6.1	6.4	6.8
(kg)		With brake	4.4	4.7	5.0	5.3	5.6	6.0	6.3	6.6	6.9	7.3

Applicable Controllers											
RCP4 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.											
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page			
Positioner type High-output specification		PCON-CA-56PI-①-2-0	Equipped with a high-output driver PIO control supported	512 points			_				
Pulse-train type High-output specification			Equipped with a high-output driver Pulse-train input supported	_		Refer to P618	_	→ P607			
Field network type High-output specification		PCON-CA-56PI-III-0-0	Equipped with a high-output driver Field network supported	768 points	DC24V		_				
Solenoid valve multi-axis type PIO specification	(mar)		Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points		Refer to		→ P563			
Solenoid valve multi-axis type Network specification	iiii		Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572		7 1303			
* ① indicates I/O type (NP/PN). *	① indicates n	umber of axes (1 to 8). * (11) indicates	cates field network specification symbol. $*\Box$ indicates N (NPN sp	ecification) or P (PNP s	pecification)	symbol.					

\* See page Pre-47 for details on the model descriptions

RCP3 — RA2AC – Specification Items Series — Type Encoder type — Motor type

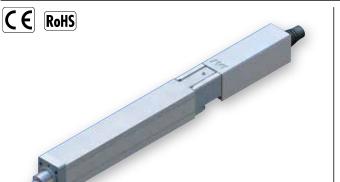
20P: Pulse motor, I: Incremental size 20□ Standard type 20SP:Pulse motor, \*The Simple absolute encoder is also considered type "I".

Lead 4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm 45: Lead screw 4mm size 20☐ 2S: Lead screw 2mm High thrust type 1S: Lead screw 1mm

Stroke 25: 25mm 100: 100mm

 Applicable controller — Cable length P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP

Options N: None B: P: 1m NM: S: 3m M:5m X□□: Custom length B: Brake NM: Non-motor end



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

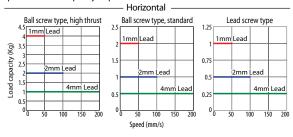
Technical

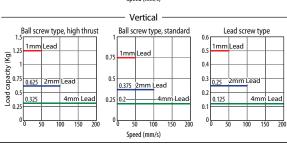
References

- (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 5mm/s. See page A-71 for details on push motion.
- (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

#### ■ Leads and Payloads

Model number	Motor type	Feed screw	Lead (mm)	Maximum Horizontal (kg)	Payload Vertical (kg)		Positioning repeatability	Stroke (mm)
RCP3-RA2AC-1-20SP-4-①-②-③-④	турс	Jeien	4	1	0.325	force (N)	(mm)	(IIII)
RCP3-RA2AC-1-20SP-2- ① - ② - ③ - ④	High thrust		2	2	0.625			
RCP3-RA2AC-1-20SP-1- ①-②-③-④		Ball	1	4	1.25			
RCP3-RA2AC-1-20P-4-①-②-③-④		screw	4	0.5	0.2	See	±0.02	25 to
RCP3-RA2AC-1-20P -2 - ① - ② - ③ - ④	Standard		2	1	0.375	page		100 (every
RCP3-RA2AC-1-20P -1 - ① - ② - ③ - ④			1	2	0.75	A-81.		25mm)
RCP3-RA2AC-1-20P-4S-①-②-③-④			4	0.25	0.125			
RCP3-RA2AC-1-20P-2S-①-②-③-④	Standard	Lead screw	2	0.5	0.25		±0.05	
RCP3-RA2AC-1-20P-1S-①-②-③-④			1	1	0.5			
				<u> </u>		,		,

#### ■ Stroke and Maximum Speed

Stroke Lead		25 (mm)	50~100 (mm)	
>	4	180	200	
Ball screw	2	10	00	
ĕ	1	50		
N.	4	180	200	
ead screw	2	100		
Le	1	5	0	

Legend ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

	Standard price			
①Stroke (mm)	Feed screw			
U Stroke (IIIII)	Ball screw		Lead screw	
	High thrust type	Standard type	Lead Sciew	
25	_	_	_	
50	_	_	_	
75	_	_	_	
100	_	_		

<b>4</b> Options			
<u> </u>			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
lan matarandenseifestian	NIA	> A E2	

#### ③Cable Length

Type	Cable symbol	Standard price
ć. l. l.	P (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	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_

<sup>\*</sup> The standard cable for the RCP3 is the robot cable. \* See page A-59 for cables for maintenance.

#### Actuator Specifications

	ltem	Description	
Drive metho	d	Ball screw/Lead screw, ø4mm, rolled C10	
Lost motion		Ball screw: 0.1mm or less/Lead screw: 0.3mm or less (default value)	
Base		Material: Aluminum, white alumite treated	
Guide		Slide guide	
Ambient ope	rating temperature/humidity	0 to 40°C, 85% RH max. (No condensing)	
Lead screw specification		Horizontal: 10 million cycles, Vertical: 5 million cycles	
Service life	Ball screw specification	5,000km or 50 million cycles	

For Special Orders

100

50 6

0.37

144.5 169.5

75

0

0.36

Weight (kg)

94.5

0

0.31

119.5

50

0

0.33

# Dimensional Drawings

# www.intelligentactuator.com

2D CAD 3D CAD

- - (\*1) Connect the motor-encoder integrated cable here.
    (\*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 bolt varies depending on the product.

(5)					Monor-	_			
(Brake-equi	pped)			0.40		_			
	-	L							
		Α		Standard type: 1 High thrust type					
	3 (width across flats) *3	28	Ŧ ,	Brake housing	. 1				
	flats) *3				Minner	_			
	2 _ 15 _ 7 _ 1.5	_	* Please brake	note: When install housing protrudes	ing the brake unit, the l by 1mm beyond the ac	bottom of t	he n body.		
(No brake)	12 1				(200)		<del>-&gt;</del>		
		L	-		Cable	e joint ector *1	1		
2-M3	ST 23.5	A		type: 73.5 st type: 90.5	Com	icctor 1	,		
Depth 4mm 16±0.1	2 -7.5	28	*						
M M	E SE Home ME *2					† <u></u>	_		
			4			24.5	<u> </u>		
22	44	<u>—</u> J			Secure at least 100mm	_	<del></del>		
ise)	26.5	B C 15		H	<del>&gt;</del>		ST : Stro		
he be		D-M3	Depth 4mm				ME: Med SE: Stro		end
јо ш4			<u> </u>	— - — <b>H</b>		* Bra	ıke equip	ped mo	dels
botto di		2-ø31	17 Depth 3mn the bottom of the		,	are	0.1kg he	eavier.	
(from the bottom of the base)	Dimensions of nut at tip of rod				ns and Weigh	t hy S	roko		
3H7 (froi	M6×1.0				oke	25	50 I	75	100
				Standard	No brake	168	193	218	243
	H MA	← Note: ───			Brake-equipped	212	237	262	287
	3.6	Do not apply any external force on the		High thrust type	No brake Brake-equipped	185 229	210 254	235 279	260 304
		rod from any direction other than the			Make-equipped	04.5	110.5	1/1/5	304 160 F

# ② Applicable Controllers

RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

become damaged.

 $\operatorname{rod}$  from any direction other than the  $\operatorname{\footnotemap}$ 

direction of the rod's motion. If a force is

exerted on the rod in a perpendicular or

rotational direction, the detent may

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calamaid Valua Tima	***************************************	PMEC-C-20SPI-①-2-⑪ PMEC-C-20PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid Valve Type		PSEP-C-20SPI-①-2-0 PSEP-C-20PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P547
Solenoid valve multi-axis type PIO specification	A. Carlo	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		. 0563
Solenoid valve multi-axis type Network specification		MSEP-C-(II)-~-(V)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P563
Positioner type High-output specification	-100	PCON-CA-20SPI-①-2-0 PCON-CA-20PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification		PCON-CA-20SPI-PL□-2-0 PCON-CA-20PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type High-output specification		PCON-CA-20SPI-Ŵ-0-0 PCON-CA-20PI-Ŵ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)	O	PCON-PL-20SPI-①-2-0 PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support	(—)			_	
Pulse Train Input Type (Open Collector)		PCON-PO-20SPI-①-2-0 PCON-PO-20PI-①-2-0	Pulse train input type with open collector support	(—)		Refer to P628	_	→ P623
Serial Communication Type	Ī	PCON-SE-20SPI-N-0-0 PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-20SPI-①-2-0 PSEL-CS-1-20PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	_	→ P665

\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1:100V / 2:100~240V).
\* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

Model Specification Items RCP3 - RA2BCSeries Type

\* See page Pre-47 for details on the model descriptions

Encoder type — Motor type I: Incremental \*The Simple absolute encoder is also considered type "I".

20P: Pulse motor, size 20□ Standard type 20SP:Pulse motor,

6: Ball screw 6mm 4: Ball screw 4mm Size 20□
Standard type
Pulse motor,
size 20□
High thrust type
Size 20□
Siz

Lead

25: 25mm 150: 150mm (every 25mm)

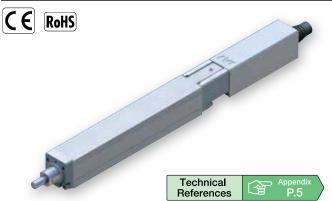
Stroke

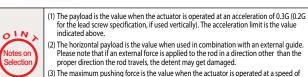
Applicable controller — Cable length P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP

N: None P: 1m S: 3m

Options B: Brake NM: Non-motor end

M:5m X□□: Custom length

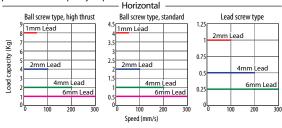


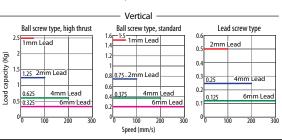


5mm/s. See page A-71 for details on push motion. (4) Service life decreases significantly if used in a dusty environment.

#### ■ 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

#### ■ Leads and Payloads

Model number	Motor	Feed	Lead	Maximun	n payload	Maximum pushing	Positioning repeatability	Stroke
Model Hullibei	type	screw	(mm)	Horizontal (kg)	Vertical (kg)	force (N)	(mm)	(mm)
RCP3-RA2BC-1-20SP-6-①-②-③-④			6	1	0.325			
RCP3-RA2BC-1-20SP-4-①-②-③-④	High		4	2	0.625			
RCP3-RA2BC-1-20SP-2- ① - ② - ③ - ④	thrust		2	4	1.25			
RCP3-RA2BC-1-20SP-1- ① - ② - ③ - ④		Ball	1	8	2.5		10.02	
RCP3-RA2BC-1-20P-6-①-②-③-④		screw	6	0.5	0.2	See	±0.02	25 to
RCP3-RA2BC-1-20P-4-①-②-③-④	Standard		4	1	0.375	page		150
RCP3-RA2BC-1-20P- 2 - ① - ② - ③ - ④	Stalluaru		2	2	0.75	A-81.		(every 25mm)
RCP3-RA2BC-1-20P- 1 - ① - ② - ③ - ④			1	4	1.5			
RCP3-RA2BC-1-20P-6S-①-②-③-④			6	0.25	0.125			
RCP3-RA2BC-1-20P-4S-①-②-③-④	Standard	Lead	4	0.5	0.25		±0.05	
RCP3-RA2BC-1-20P-2S-①-②-③-④			2	1	0.5			

# ■ Stroke and Maximum Speed

= 5troke and maximum speed							
Stroke Lead		25   50		75~150 (mm)			
	6	180	280	300			
Ball screw	4	180	200				
Balls	2		100				
	1		50				
We	6	180	280 300				
Lead screw	4	180	200				
Le	2		100				

Legend ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

	Standard price Feed screw			
①Stroke (mm)	Ball screw		Landanian	
	High thrust type	Standard type	Lead screw	
25	_	_	_	
50	_	_	_	
75	_	_	_	
100	_	_	_	
125	_	_	_	
150	_	_	_	

<b>4</b> Options			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Non-motor end specification	NM	→ A-52	_

### ③Cable Length

Type	Cable symbol	Standard price
Charada ad hara	<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	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_

<sup>\*</sup> The standard cable for the RCP3 is the robot cable. \* See page A-59 for cables for maintenance.

Actua	tor specifications					
Item		Description				
Drive method		Ball screw/Lead screw, ø6mm, rolled C10				
Lost motion		Ball screw: 0.1mm or less/Lead screw: 0.3mm or less (default value)				
Base		Material: Aluminum, white alumite treated				
Guide		Slide guide				
Ambient ope	rating temperature/humidity	0 to 40°C, 85% RH max. (No condensing)				
Service life	Lead screw specification	Horizontal: 5 million cycles, Vertical: 10 million cycles				
Service life	Ball screw specification	5,000km or 50 million cycles				

0.45

0.42

0.48

0.51

www.intelligentactuator.com

For Special Orders



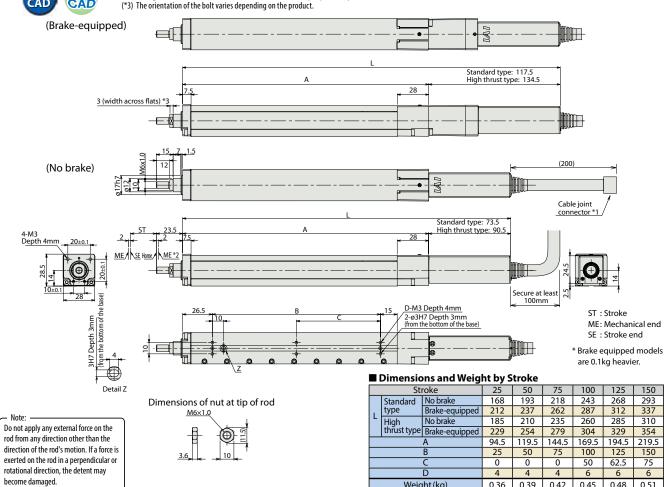


Dimensional Drawings



(\*1) Connect the motor-encoder integrated cable here.

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



Weight (kg)

0.36

0.39

(2) Ar	and It	aa la	la /	C	tu a l	Lawa	

RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calan aid Valua Tima	*	PMEC-C-20SPI-①-2-⑪ PMEC-C-20PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid Valve Type	1	PSEP-C-20SPI-①-2-0 PSEP-C-20PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P547
Solenoid valve multi-axis type PIO specification	lune"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		, DEC2
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572		→ P563
Positioner type High-output specification	mi.	PCON-CA-20SPI-①-2-0 PCON-CA-20PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification	1	PCON-CA-20SPI-PL□-2-0 PCON-CA-20PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type High-output specification	100	PCON-CA-20SPI-Ŵ-0-0 PCON-CA-20PI-Ŵ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)	Ó	PCON-PL-20SPI-①-2-0 PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support	(—)			_	
Pulse Train Input Type (Open Collector)		PCON-PO-20SPI-①-2-0 PCON-PO-20PI-①-2-0	Pulse train input type with open collector support	(—)		Refer to P628	_	→ P623
Serial Communication Type	Ĩ	PCON-SE-20SPI-N-0-0 PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-20SPI-①-2-0 PSEL-CS-1-20PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points		Refer to P671	_	→ P665

\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1:100V / 2:100~240V).
\* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

IAI

RCP3-RA2BC

Model Specification Items RCP3 - RA2AR -Series Type

I: Incremental \*The Simple absolute encoder is also considered type "I".

Encoder type — Motor type 20P: Pulse motor, size 20□ Standard type 20SP:Pulse motor,

4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm 45: Lead screw 4mm size 20☐ 2S: Lead screw 2mm High thrust type 1S: Lead screw 1mm

Lead

Stroke 25: 25mm 100: 100mm

Applicable controller — Cable length P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP

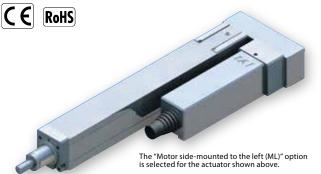
See Options below. P: 1m S: 3m M: 5m X□□: Custom length

N: None

\* Be sure to specify either "ML" or "MR" as the motor sidemounted direction.

**Options** 

\* See page Pre-47 for details on the model descriptions

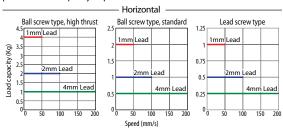


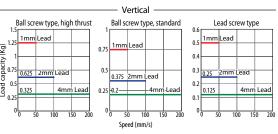
Technical References

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3G (0.2G 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 5mm/s. See page A-71 for details on push motion.
- (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

#### ■ Leads and Payloads

Model number	Motor type	Feed screw	Lead (mm)	Maximun Horizontal (kg)	. /	pushing force (N)	repeatability (mm)	Stroke (mm)	
RCP3-RA2AR-1-20SP-4-①-②-③-④			4	1	0.325				
RCP3-RA2AR-1-20SP-2-①-②-③-④	High thrust		2	2	0.625		±0.02		
RCP3-RA2AR-1-20SP-1-①-②-③-④		Ball	1	4	1.25				
RCP3-RA2AR-1-20P-4-①-②-③-④		screw	4	0.5	0.2	See	±0.02		
RCP3-RA2AR-1-20P-2-①-②-③-④	Standard		2	1	0.375	page			
RCP3-RA2AR-1-20P-1-①-②-③-④			1	2	0.75	A-81.			
RCP3-RA2AR-1-20P-4S-①-②-③-④			4	0.25	0.125				
RCP3-RA2AR-1-20P-2S-①-②-③-④	Standard	Lead screw	2	0.5	0.25		±0.05		
RCP3-RA2AR-1-20P-1S-①-②-③-④			1	1	0.5				

# ■ Stroke and Maximum Speed

Lea	Stroke d	25 (mm)	50~100 (mm)			
3	4	180	200			
Ball scre	2	10	00			
	1	50				
>	4	180	200			
ad scre	2	100				
Le l	1	5	0			
	Lead screw Ball screw	Lead 4  2  1  4  4  2  1  4  2	A			

Legend ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

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

### **③Cable Length**

Type	Cable symbol	Standard price
Standard type	<b>P</b> (1m)	_
	<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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_

<sup>\*</sup> The standard cable for the RCP3 is the robot cable. \* See page A-59 for cables for maintenance.

#### 4 Options

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Side-mounted motor to the left (standard)	ML	→ A-52	_
Side-mounted motor to the right	MR	→ A-52	_
Non-motor end specification	NM	→ A-52	_

#### Actuator Specifications

	Item	Description				
Drive method		Ball screw/Lead screw, ø4mm, rolled C10				
Lost motion		Ball screw: 0.1mm or less/Lead screw: 0.3mm or less (default value				
Base		Material: Aluminum, white alumite treated				
Guide		Slide guide				
Ambient ope	rating temperature/humidity	0 to 40°C, 85% RH max. (No condensing)				
c	Lead screw specification	Horizontal: 10 million cycles, Vertical: 5 million cycles				
Service life	Rall screw specification	5 000km or 50 million cycles				

Dimensional Drawings

www.intelligentactuator.com

Cable joint

connector \*1

D-M3 Depth 5mm 2-ø3H7 Depth 3mm (from the bottom of the bas

\* The drawing below shows the specification of the motor side-mounted to the left.

For Special Orders



2D CAD 3D CAD

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

 $(\ensuremath{^{\star}}\xspace3)$  The orientation of the bolt varies depending on the product.

(Brake-equipped) Standard type: 117.5 High thrust type: 134.5 3 (width across flats) (No brake) 🦭 \*Please note: When installing the brake unit, the bottom of the brake housing protrudes by 1mm beyond the actuator main body.

(Secure at least 100mm)

Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or  $% \left\{ 1,2,...,n\right\}$ rotational direction, the detent may become damaged.



ST: Stroke ME: Mechanical end SE: Stroke end

\* Brake equipped models are 0.1kg heavier.

Dimension	s and \	Weight	by Str	oke
Stroke	25	50	75	100
L	111.5	136.5	161.5	186.5
Α	94.5	119.5	144.5	169.5
В	25	50	75	100
C	0	0	0	50
D	4	4	4	6
Weight (kg)	0.34	0.36	0.39	0.4

Standard type: 88.5 High thrust type: 105.5



Dimension	s and \	Weight	by Str	oke
Stroke	25	50	75	100
L	111.5	136.5	161.5	186.5
Α	94.5	119.5	144.5	169.5
В	25	50	75	100
C	0	0	0	50
D	4	4	4	6
Weight (kg)	0.34	0.36	0.39	0.4

② Applicable Controllers

Dimensions of nut at tip of rod

M6x1.0

2-M3 Depth 4mm

3H7 Depth 3mm (from the bottom of the base)

Detail Z

RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application

10

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calan aid Valua Tima	*	PMEC-C-20SPI-①-2-⑪ PMEC-C-20PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid Valve Type	1	PSEP-C-20SPI-①-2-0 PSEP-C-20PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P547
Solenoid valve multi-axis type PIO specification	lune"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		, DEC2
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572		→ P563
Positioner type High-output specification	mi.	PCON-CA-20SPI-①-2-0 PCON-CA-20PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification	1	PCON-CA-20SPI-PL□-2-0 PCON-CA-20PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type High-output specification	100	PCON-CA-20SPI-Ŵ-0-0 PCON-CA-20PI-Ŵ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)	Ó	PCON-PL-20SPI-①-2-0 PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support	(—)			_	
Pulse Train Input Type (Open Collector)		PCON-PO-20SPI-①-2-0 PCON-PO-20PI-①-2-0	Pulse train input type with open collector support	(—)		Refer to P628	_	→ P623
Serial Communication Type	Ĩ	PCON-SE-20SPI-N-0-0 PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-20SPI-①-2-0 PSEL-CS-1-20PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points		Refer to P671	_	→ P665

\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1:100V / 2:100~240V). \* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

RCP3-RA2AR ELECTROMATE

\* See page Pre-47 for details on the model descriptions

Model Specification Items

RCP3 — RA2BR — Series — Type

Encoder type — Motor type I: Incremental \*The Simple absolute encoder is also considered type "I".

20P: Pulse motor, size 20□ Standard type 20SP:Pulse motor,

6: Ball screw 6mm 4: Ball screw 4mm Standard type
Pulse motor,
size 20□
High thrust type
Standard type
1: Ball screw 2mm
6: Lead screw 4mm
4: Lead screw 4mm
25: Lead screw 4mm
25: Lead screw 2mm

Lead

25: 25mm 150: 150mm (every 25mm)

Stroke

Applicable controller — Cable length — P1: PCON-PL/PO/SE PSEL P3: PCON-CA

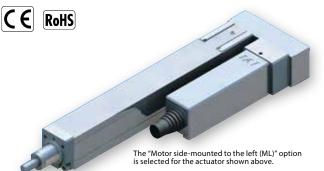
N: None P: 1m S: 3m

M: 5m X□□:Custom length

See Options below. \* Be sure to specify either "ML" or "MR" as the motor side-

**Options** 

PMEC/PSEP MSEP mounted direction.



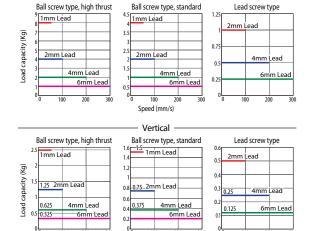
Technical References

- (1) The payload is the value when the actuator is operated at an acceleration of 0.3G (0.2G 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 5mm/s. See page A-71 for details on push motion.
- (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.

Horizontal



### Actuator Specifications

### ■ Leads and Payloads

Model number	Motor type	Feed screw	Lead (mm)	Horizontal (kg)	Vertical (kg)	pushing force (N)	repeatability (mm)	Stroke (mm)
RCP3-RA2BR-1-20SP-6-①-②-③-④			6	1	0.325			
RCP3-RA2BR-1-20SP-4-①-②-③-④	High		4	2	0.625			
RCP3-RA2BR-1-20SP-2-①-②-③-④	thrust		2	4	1.25			
RCP3-RA2BR-1-20SP-1-①-②-③-④		Ball	1	8	2.5		±0.02	
RCP3-RA2BR-1-20P-6-①-②-③-④		screw	6	0.5	0.2	See	10.02	25 to
RCP3-RA2BR-1-20P-4-10-2-3-4	Standard		4	1	0.375	page		150 (every
RCP3-RA2BR-1-20P-2-①-②-③-④	Stalluaru		2	2	0.75	A-81.		25mm)
RCP3-RA2BR-1-20P-1-①-②-③-④			1	4	1.5			
RCP3-RA2BR-1-20P-6S-①-②-③-④			6	0.25	0.125			
RCP3-RA2BR-1-20P-4S-①-②-③-④	Standard	Lead screw	4	0.5	0.25		±0.05	
RCP3-RA2BR-1-20P-2S-①-②-③-④			2	1	0.5			

#### ■ Stroke and Maximum Speed

Speed (mm/s)

Lea	Stroke d	25 (mm)	50 (mm)	75~150 (mm)		
	6	180	280	300		
crew	4	180	180 200			
Ball screw	2	100				
	1		50			
We	6	180	280	300		
ead screw	4	180	180 200			
Lei	2		100			

(Unit: mm/s)

①Stroke (mm)	Standard price					
		Feed screw				
	Ball screw		Lead screw			
	High thrust type	Standard type	Lead sciew			
25	_	_	_			
50			_			
75			_			
100			_			
125			_			
150	_	_	_			

#### 4 Ontions

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Side-mounted motor to the left (standard)	ML	→ A-52	_
Side-mounted motor to the right	MR	→ A-52	_
Non-motor end specification	NM	→ A-52	_

### ③Cable Length

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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_

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

#### Actuator Specifications

Item		Description		
Drive method		Ball screw/Lead screw, ø6mm, rolled C10		
Lost motion		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 max. (No condensing)		
Service life	Lead screw specification	Horizontal: 10 million cycles, Vertical: 5 million cycles		
Service life	Ball screw specification	5,000km or 50 million cycles		

RCP3-RA2BR



<sup>\*</sup> See page A-59 for cables for maintenance.

Dimensional Drawings

Dimensions of nut at tip of rod

② Applicable Controllers

Solenoid Valve Type

Solenoid valve multi-axis type

PIO specification

Solenoid valve multi-axis type

Network specification

Positioner type High-output specification

Pulse-train type High-output specification

Field network type High-output specification

Pulse Train Input Type

(Differential Line Driver)

Pulse Train Input Type (Open Collector)

Serial Communication Type

Program

Control Type

M6×1.0

Detail Z

www.intelligentactuator.com

The drawing below shows the specification of the

### For Special Orders



(\*1) Connect the motor-encoder integrated cable here.

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

 $(\ensuremath{^{*}}\xspace3)$  The orientation of the bolt varies depending on the product.

Note:

Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



ST: Stroke ME: Mechanical end SE: Stroke end

\* Brake equipped models are 0.1kg heavier.

ns and Weight by Stroke

Refer to P541

Refer to P555

Refer to P572

Refer to

P618

Refer to P628

Refer to

AC100V

AC200V

DC24V

3 points

256 points

512 points

768 points

(--)

64 points

1500 points

- Difficultions and Weight by Stroke									
Stroke	25	50	75	100	125	150			
L	111.5	136.5	161.5	186.5	211.5	236.5			
Α	94.5	119.5	144.5	169.5	194.5	219.5			
В	25	50	75	100	125	150			
C	0	0	0	50	62.5	75			
D	4	4	4	6	6	6			
Weight (kg)	0.38	0.41	0.44	0.47	0.5	0.53			

IAI

Easy-to-use controller, even for beginners

Simple controller operable with the same

Positioner type based on PIO control.

allowing up to 8 axes to be connected

Field network-ready positioner type,

Equipped with a high-output driver

Positioner type based on PIO control

Equipped with a high-output driver

Equipped with a high-output driver

Supporting 7 major field networks

**Dedicated Serial Communication** 

Programmed operation is possible.

Can operate up to 2 axes \*This is for the single-axis PSEL. \* ① indicates I/O type (NP/PN). \* ① indicates power supply voltage (1: 100V / 2: 100~240V).
\* ② indicates number of axes (1 to 8). \* ② indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

Pulse train input type with differential line

Pulse train input type with open collector

Pulse-train input type

driver support

support

allowing up to 8 axes to be connected

signal as a solenoid valve

RCP3-RA2BR

→ P537

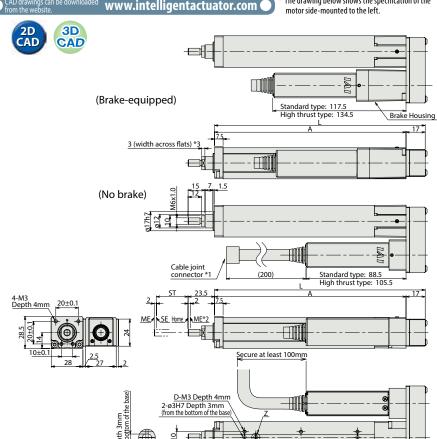
→ P547

→ P563

→ P607

→ P623

→ P665



RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

PMEC-C-20SPI-(1)-2-(1) PMEC-C-20PI-(1)-2-(1)

PSEP-C-20SPI-①-2-0 PSEP-C-20PI-①-2-0

MSEP-C-(||)-~-(1)-2-0

PCON-CA-20SPI-①-2-0 PCON-CA-20PI-①-2-0

PCON-CA-20SPI-PL□-2-0 PCON-CA-20PI-PL□-2-0

PCON-CA-20SPI-W-0-0 PCON-CA-20PI-W-0-0

PCON-PL-20SPI-①-2-0 PCON-PL-20PI-①-2-0

PCON-PO-20SPI-①-2-0 PCON-PO-20PI-①-2-0

PCON-SE-20SPI-N-0-0

PCON-SE-20PI-N-0-0 PSEL-CS-1-20SPI-①-2-0 PSEL-CS-1-20PI-①-2-0

---

\* See page Pre-47 for details on the model descriptions

RCP2 - RA2C -Туре Series —

-Encoder type - Motor type -I: Incremental

> encoder is also considered type "I".

20P: Pulse motor, \*The Simple absolute

References

**20P** 

1 Lead 1:1mm

Stroke 25: 25mm 100: 100mm (25mm pitch increments)

Applicable controller — Cable length — Options

P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP

N: None See P: 1m S: 3m M:5m X□□: Custom length X□□: Robot cable

See Options below.

CE RoHS **Technical** 

(1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

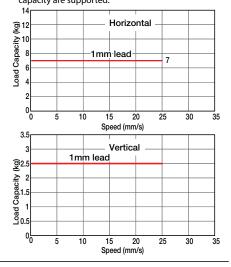
(2) The load capacity is based on operation at an acceleration of 0.05G. 0.05G is the upper limit of the acceleration.

In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

(3) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



### Actuator Specifications

#### ■ Lead and Payloads

Madalassahas		Maximun	n payload	Maximum	Stroke
Model number	(mm)	Horizontal (kg)	Vertical (kg)	pushing force (N)	
RCP2-RA2C-I-20P-1-①-②-③-④	1	7	2.5	100	25 to 100 (every 25mm)

### ■ Stroke and Maximum Speed

	•
Stroke Lead	25~100 (every 50mm)
1	25

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

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

#### **3Cable 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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (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> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

<b>4</b> Options			
Name	Option code	Page	Standard Price
Flange	FL	→ A-44	_
Foot bracket	FT	→ A-48	ı

Actuator Specifications	
ltem	Description
Drive method	Ball screw, ø6mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	ø12mm
Rod non-rotation precision	±2.1 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)



#### Dimensional Drawings

### www.intelligentactuator.com

For Special Orders





Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may

Note:

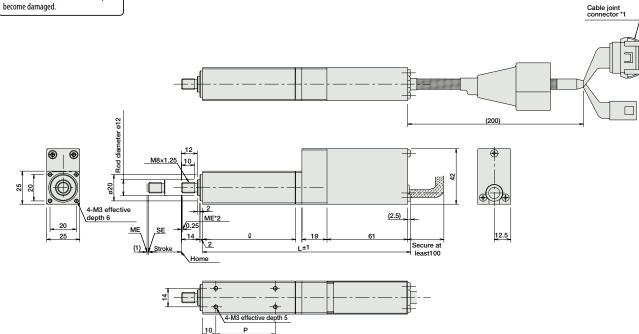


\* The RA2C is not available in non-motor end

- (\*1) Connect the motor and encoder cables here. (See page A-59 for details on cables.)
- (\*2) After homing, the rod moves to the ME, therefore, please watch for any interference with surrounding objects.

ME: Mechanical end

SE: Stroke end



### ■ Dimensions and Weight by Stroke

= Dimensions and treight by buloke						
Stroke	25	50	75	100		
l	70	95	120	145		
L	157.5	182.5	207.5	232.5		
Р	45	70	95	120		
Weight (kg)	0.4	0.5	0.6	0.7		

② Applicable Controllers
RCP2 series actuators can be operated with

h the controllers indicated below. Select the type according to your intended application

The 2 series detailed is can be operated with the controllers maleated below. Series the type according to your mended application.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		PMEC-C-20PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid valve Type	•	PSEP-C-20PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P547
Solenoid valve multi-axis type PIO specification	dinne.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to P572		→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-(11)-~-(1V)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	
Positioner type High-output specification		PCON-CA-20PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification	1	PCON-CA-20PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type High-output specification	10)	PCON-CA-20PI-W-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)	Ĉ.	PCON-PL-20PI-①-2-0	Pulse train input type with differential line driver support	(—)			_	
Pulse Train Input Type (Open Collector)		PCON-PO-20PI-①-2-0	Pulse train input type with open collector support	(—)		Refer to P628	_	→ P623
Serial Communication Type		PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-20PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	_	→ P665

\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1: 100V / 2: 100~240V).
\* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol.

IAI

RCP2-RA2C

\* See page Pre-47 for details on the model descriptions

RCP2 - RA3C -Type Series

-Encoder type - Motor type I: Incremental

\*The Simple absolute

encoder is also considered type "I".

**28P** Lead 28P: Pulse motor, 28 ☐ size

5: 5mm 2.5: 2.5mm

Stroke 50: 50mm 200: 200mm (50mm pitch increments)

Applicable controller

P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP

N: None P: 1m S: 3m M:5m

Cable length — Options

See Options below.

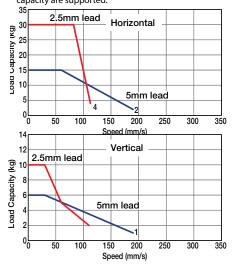
X□□:Custom length X□□:Robot cable

C E RoHS

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.02G. 0.02G is the upper limit of the acceleration.
- In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.
- (4) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

#### **■** Leads and Payloads

Technical References

Model number		Maximum payload (Note 1)		Maximum pushing	Stroke
Modernamber	(mm)	Horizontal (kg)	Vertical (kg)	force (Note 2)	(mm)
RCP2-RA3C-I-28P-5-①-②-③-④	5	~15	~6	73.5	50 to 200
RCP2-RA3C-I-28P-2.5-①-②-③-④	2.5	~30	~10	156.8	(every 50mm)

#### (Note 1) Please note that the maximum load capacity decreases as the speed increases. Stroke and Maximum Speed

Stroke Lead	50~200 (every 50mm)
5	187
2.5	114

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

# ①Stroke

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_

### **3Cable 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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (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> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

#### **4**Options Page Standard Price Name Option code → A-44 Flange Foot bracket → A-48 Non-motor end specification

Actuator Specifications					
ltem	Description				
Drive method	Ball screw, ø8mm, rolled C10				
Positioning repeatability	±0.02mm				
Lost motion	0.1mm or less				
Rod	ø22mm				
Rod non-rotation precision	±1.5 deg				
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)				

### www.intelligentactuator.com

For Special Orders





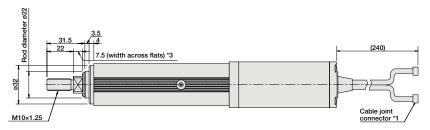
3D CAD

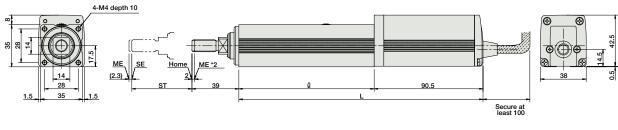
Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

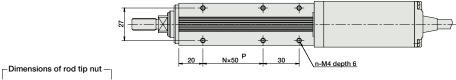
(\*1) Connect the motor and encoder cables here. (See page A-59 for details on cables.)
 (\*2) When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.
 ME: Mechanical end

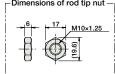
SE: Stroke end

(\*3) The orientation of the bolt will vary depending on the product.









#### ■ Dimensions and Weight by Stroke

= Difficultions and Weight by Stroke							
Stroke	50	100	150	200			
Ł	112.5	162.5	212.5	262.5			
L	203	253	303	353			
N	1	2	3	4			
n	6	8	10	12			
Weight (kg)	0.8	0.95	1.1	1.25			

(2) A.	ممللهم	blo (	ontro	llove

RCP2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calan aid Valua Tura	10.5	PMEC-C-28SPI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid Valve Type		PSEP-C-28SPI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P547
Solenoid valve multi-axis type PIO specification	According to	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to	_	. DEC2
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572		→ P563
Positioner type High-output specification		PCON-CA-28SPI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification		PCON-CA-28SPI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type High-output specification		PCON-CA-28SPI-W-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-28SPI-①-2-0	Pulse train input type with differential line driver support	(—)			_	
Pulse Train Input Type (Open Collector)		PCON-PO-28SPI-①-2-0	Pulse train input type with open collector support	(—)		Refer to P628		→ P623
Serial Communication Type		PCON-SE-28SPI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-28SPI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671		→ P665

\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1:100V / 2:100~240V). \* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

IAI



RCP2 - RA8C -**60P P4** -Encoder type - Motor type Туре Stroke Applicable controller — Cable length — Options Lead N: None See P: 1m S: 3m M:5m X□□: Custom length X□□: Robot cable 10: 10mm 5: 5mm P4: PCON-CFA I: Incremental 50: 50mm See Options below. 60□size 300: 300mm (every 50mm) \* See page Pre-47 for details on the model descriptions.



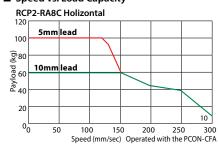
(1) The load capacity is based on operation at an acceleration of 0.1G for 5mm-lead, and 0.2G for

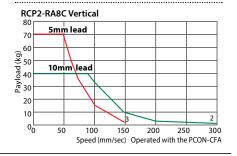
10mm-lead. These values are the upper limits for the acceleration. (2) Please note that the controller for the RA8C will be the PCON-CFA (for high-thrust motors).

(3) The horizontal load capacity is based on the use of an external guide.

(4) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity





#### Actuator Specifications

#### ■ Leads and Payloads

Model number		Connection	Maximun	n payload	Maximum	Stroke	
Model Humber	(mm)	cable	Horizontal (kg)	Vertical (kg)	pushing force (N)	(mm)	
RCP2-RA8C-I-60P-10-①-P4-②-③	10	PCON-CFA	60	40	1,000	50 to 300	
RCP2-RA8C-I-60P-5-①-P4-②-③	5	PCON-CFA	100	70	2,000	(every 50mm)	

Code explanation ① Stroke ② Cable length ③ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
10	300
5	150

(Unit: mm/s)

#### ①Stroke ①Stroke (mm) Standard price 50 100 150 200 250

Туре	Cable symbol	Standard pric
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_

	<b>X06</b> (6m)	2	<b>X10</b> (10m)	_
Special length	<b>X11</b> (11m)	~	<b>X15</b> (15m)	_
	<b>X16</b> (16m)	~	<b>X20</b> (20m)	_
	<b>R01</b> (1m)	2	<b>R03</b> (3m)	_
	R04 (4m)	٧	<b>R05</b> (5m)	_
Robot cable	<b>R06</b> (6m)	~	<b>R10</b> (10m)	_
	<b>R11</b> (11m)	~	<b>R15</b> (15m)	_
	<b>R16</b> (16m)	~	<b>R20</b> (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

**©Cable Length** 

<b>3Options</b>			
Name	Option code	Page	Standard Prices
Connector cable exit direction	A1 ~ A3	→ A-41	_
Brake	В	→ A-42	_
Flange	FL	→ A-44	_
Foot bracket	FT	→ A-48	_
Non-motor end specification	NM	→ A-52	_

Actuator Specifications	
ltem	Description
Drive method	Ball screw, ø16mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	ø40mm Stainless steel pipe
Rod non-rotation precision	±1.0 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)



#### Dimensional Drawings

### www.intelligentactuator.com



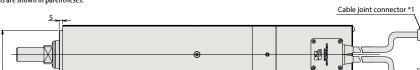


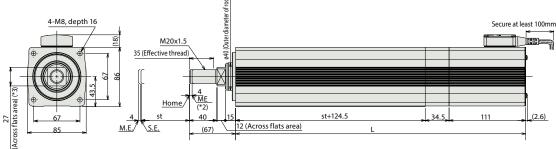


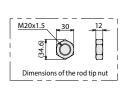


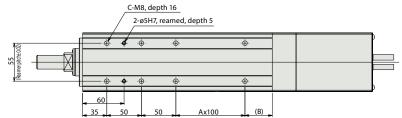
Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

- (\*1) Connect the motor and encoder cables here.
- (\*2) During home return, the rod will move all the way to the ME.
  Accordingly, pay attention to prevent possible contact between the rod and surrounding parts during home return. ME: Mechanical End SE: Stroke End Reference dimensions are shown in parentheses.
- (\*3) The orientation of the bolt will vary depending on the product.
- (\*4) When installing the actuator by using flange and front housing, be careful not to apply external force to the main body.
  - ME : Mechanical end SE: Stroke end

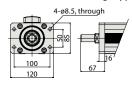


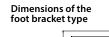


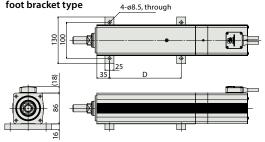




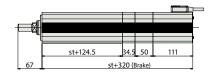
#### Dimensions of the flange type



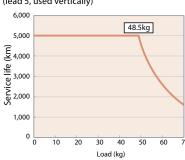




### Dimensions of the brake type



#### Relationship of payload and service life (lead 5, used vertically)



■ Dimensions and weights by Stroke (mim)										
	Stroke	50	100	150	200	250	300			
	L	320	370	420	470	520	570			
	A		0	1	1	2	2			
	В		89.5	39.5	89.5	39.5	89.5			
	С		6	8	8	10	10			
	D		100	200	200	300	300			
Weight	without brake	6.5	7.4	8.2	9.1	9.9	10.7			
(kg)	with brake	7.5	8.4	9.2	10.1	10.9	11.7			

#### Applicable Controllers

RCP2 series actuators car	n be operate	a with the controllers indicate	a below. Select the type according to you	ir intended applica	ition.			
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner type			Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type		PCON-CFA-60PI-PLN-□-0-□ PCON-CFA-60PI-PLP-□-0-□	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type			Equipped with a high-output driver Supporting 7 major field networks	768 points			_	
* ① indicates field network specification symbol (DV, CC, PR, CN, ML, EC, EP).								



Slider Type

Mini

Standard

Integrated

Rod Type

IVIII

Standard

Table/ Arm/

Mini

otanuaru

Gripper/ Rotary Type

> Servo Type

Cleanroom Type

Splash Proo Type

> Pulse Motor

Servo Moto (24V

Serve Moto (200V

Linear Servo Motor RCP2-RA8R

OBO Cylinder, High-Thrust Rod Type, Side-mounted Motor Type, Actuator Width 85mm 4-V Pulse Motor

Model Specificatio Items RCP2 — RA8R — Series — Type —

- I - 60P -Encoder type - Motor type

60□size

I: Incremental

\_ \_ \_\_\_ e \_ \_ Lead

Stroke — Applicable con
50: 50mm P4: PCON-CF.
300: 300mm (every 50mm)

Applicable controller — Cable length
P4: PCON-CFA N: None
P: 1m
S: 3m

N: None
P: 1m
S: 3m
M:5m
X□□:Custom length
X□□:Robot cable

\*Please specify side-mounted motor direction by an option

Options

\* See page Pre-47 for details on the model descriptions

C E RoHS

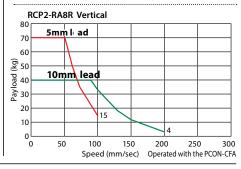
Technical References



Notes on Selection

- (1) The load capacity is based on operation at an acceleration of 0.1G for 5mm-lead, and 0.2G for 10mm-lead. These values are the upper limits for the acceleration.
- (2) Please note that the controller for the RA8R will be the PCON-CFA (for high-thrust motors).
- (3) The horizontal load capacity is based on the use of an external guide.
- (4) See page A-71 for details on push motion.

	120 i	CP2-RA	BR Horiz	onta	1						
	100	5mm	lead								
			۱ ۱								
	Payload (kg)	10mm	lead	75							
l	<u>8</u> 60					7					
l	ط <sup>2</sup> 40					-					-
	20						/	12			
	0	50		0 ed (mr	150 n/se		200 Opera		250 rith th	D ne PCO	300 N-CF <i>A</i>



#### Actuator Specifications

#### ■ Leads and Payloads

Model number		Connection	Maximum	payload	Maximum	Stroke
Model Humber	(mm)	cable	Horizontal (kg)	Vertical (kg)	pushing force (N	(mm)
RCP2-RA8R-I-60P-10-①-P4-②-③	10	PCON-CFA	60	40	1,000	50 to 300
RCP2-RA8R-I-60P-5-①-P4-②-③	5	PCON-CFA	100	70	2,000	(every 50mm)

Stroke Lead	50~300 (every 50mm)
10	200
5	100

Code explanation ① Stroke ② Cable length ③ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

①Stroke	
①Stroke (mm)	

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

#### 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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (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> (15m)	_
	<b>R16</b> (16m) ~ <b>R20</b> (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

<b>®Options</b>			
Name	Option code	Page	Standard Prices
Connector cable exit direction	A1 ~ A3	→ A-41	_
Brake	В	→ A-42	_
Flange	FL	→ A-44	_
Foot bracket	FT	→ A-48	_
Non-motor end specification	NM	→ A-52	_
Side-mounted motor at the top	MT1/MT2/MT3	→ A-57	_
Side-mounted motor to the right	MR1/MR2	→ A-57	_
Side-mounted motor to the left	ML1/ML3	→ A-57	_

Actuator Specifications	
Item	Description
Drive method	Ball screw, ø16mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod	ø40mm Stainless steel pipe
Rod non-rotation precision	±1.0 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

169 RCP2-RA8R



# www.intelligentactuator.com

For Special Orders





Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

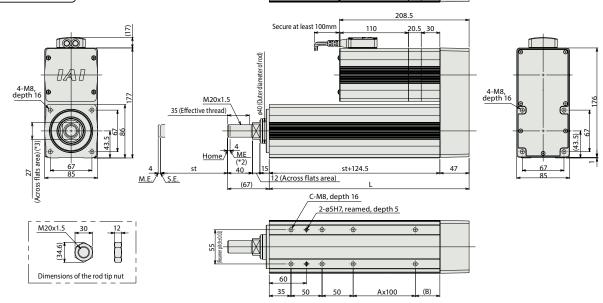
Note:



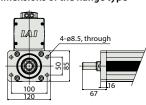
(\*1) Connect the motor and encoder cables here.
(\*2) When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.

(\*3) The orientation of the bolt will vary depending on the product.
(\*4) When installing the actuator by using flange and front housing, be careful not to apply external force to the main body.

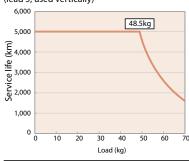
ME : Mechanical end SE : Stroke end Cable joint connector \*1

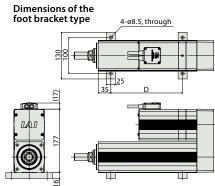


### Dimensions of the flange type

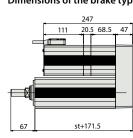


Relationship of payload and service life (lead 5, used vertically)





### Dimensions of the brake type



	Dimensions and weights by Stroke (IIIIII)						
	Stroke	50	100	150	200	250	300
	L		271.5	321.5	371.5	421.5	471.5
	Α	0	0	1	1	2	2
	В	39.5	89.5	39.5	89.5	39.5	89.5
	С	6	7	8	8	10	10
D		100	100	200	200	300	300
Weight	without brake	7.7	8.6	9.4	10.3	11.1	12
(kg)	with brake	8.6	9.5	10.3	11.2	12.0	12.9

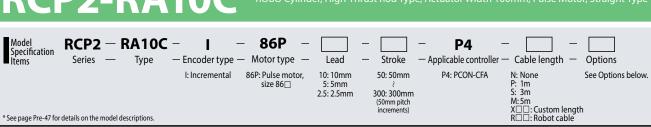
#### Applicable Controllers

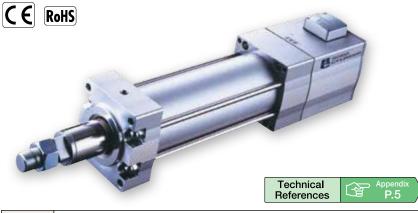
RCP2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner type			Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type		PCON-CFA-60PI-PLN-□-0-□ PCON-CFA-60PI-PLP-□-0-□	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type		PCON-CFA-60PI-⊕-0-0-□	Equipped with a high-output driver Supporting 7 major field networks	768 points			_	

\* ① indicates field network specification symbol (DV, CC, PR, CN, ML, EC, EP).

IAI



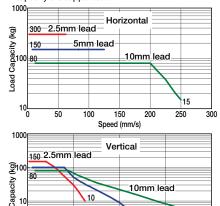




- (1) Minimum speed is set per each lead. (10mm-lead: 10mm/s, 5mm-lead: 5mm/s, 2.5-lead: 1mm/s) Please note that if the actuator is operated below the minimum speed, vibration may occur.
- (2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.04G for 10mm-lead, 0.02G for 5mm-lead, and 0.01G for 2.5-lead. This is the upper limit of the acceleration. In addition, the horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.
- (4) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



	<sub>150</sub> 2.5mm		tical		
Load Capacity (kg) 급	80	10	10mn	ı lead	
Load Ca			5r	nm lead <sup>6</sup>	
1	) 50	0 10 Speed		150	200

### Actuator Specifications

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

Model number	Lead (mm)	Maximum pay Horizontal (kg)	yload (Note 1) Vertical (kg)	Positioning repeatability (mm)	Stroke (mm)
RCP2-RA10C-1-86P-10-①-P4-②-③	10	~80	~80	1,500	50 to
RCP2-RA10C-1-86P-5-①-P4-②-③	5	150	~100	3,000	300 (every
RCP2-RA10C-1-86P-2.5-①-P4-②-③	2.5	300	~150	6,000	50mm)

Legend ① Stroke ② Cable length ③ Options \*See page A-71 for details on push motion.

■ Stroke	and	Maximum	Speed
----------	-----	---------	-------

· · · · · · · · · · · · · · · · · · ·					
Stroke Lead	50~300 (every 50mm)				
10	250 <167>				
5	125				
2.5	63				

The values in <> apply when the actuator is used vertically. (Unit: mm/s)

①Stroke				
①Stroke (mm)	Standard price			
50	_			
100	_			
150	_			
200	_			
250	_			
300	_			

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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (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> (15m)	_

**R16** (16m) ~ **R20** (20m) \* See page A-59 for cables for maintenance

②Cable Length

<b>③Options</b>			
Name	Option code	Page	Standard Price
Connector cable exit direction	A1 ~ A3	→ A-41	_
Brake	В	→ A-42	_
Flange	FL	→ A-46	_
Foot bracket	FT	→ A-48	_

Actuator Specifications	
ltem	Description
Drive method	Ball screw, ø20mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod diameter	ø40mm
Rod non-rotation precision	±1.0 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)



(200)

Cable joint

connector \*

For Special Orders

**₩** 



Dimensional Drawings



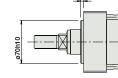


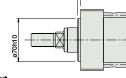


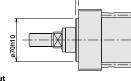
\* The RA10C is not available in non-motor end configuration due to its construction.

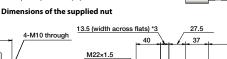


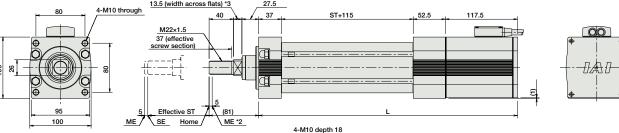












40

φ

(\*1) Connect the motor and encoder cables here.

Please note that although the motor cable is the same as RCP2 series, the encoder cable is series-specific. (See page A-59 for details on cables.)

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

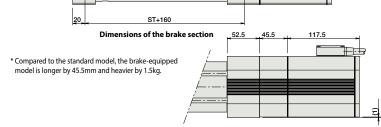
ME: Mechanical end

SE: Stroke end

The values enclosed in "()" are reference dimentions.

(\*3) The orientation of the bolt varies depending on the product.

Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



Ф

Φ

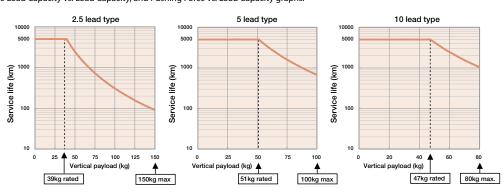
### ■ Dimensions and Weights by Stroke

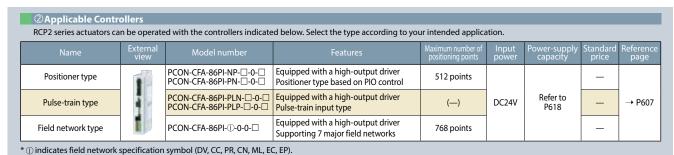
			<b>,</b>	,		
Stroke	50	100	150	200	250	300
L	372	422	472	522	572	622
Weight (kg)	9	9.5	10	10.5	11	11.5

#### Vertical Payload and Service Life

The service life of a rod-type ROBO Cylinder is 5,000km. However, since the RCP2-RA10C has a larger maximum thrust compared to other types, its service life will largely depend on the load capacity and pushing force used. Therefore, when selecting your product using the Speed vs. Load Capacity, or Pushing Force vs. Current Limit graphs, check the service life using the Load Capacity vs. Load Capacity, and Pushing Force vs. Load Capacity graphs.

Note: The rated value is the maximum value that can meet a service life of 5,000km. The maximum value is the value at which it is still operable. Please note that operation with values exceeding the rated value will result in a decrease in the service life, as shown in the graphs.





Model Specification Items RCP2 - SRA4R -Type Series

\* See page Pre-47 for details on the model descriptions

35P — Encoder type — Motor type I: Incremental

\*The Simple absolute

considered type "I".

Lead 35P: Pulse motor, 5: 5mm 2.5: 2.5mm size 35□

Stroke 20: 20mm

200: 200mm (10mm pitch increments) \* 50mm increments over 100mm

Applicable controller — P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP

Cable length N. None

**Options** \* See options below.

N: None \* Se
P: 1m
S: 3m
M:5m
X: Custom length

CE RoHS 0

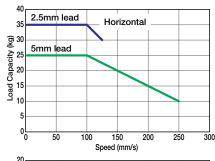
> Technical References

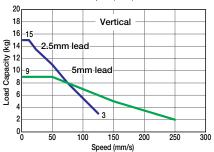


- (1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G is for the 2.5mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (3) The horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.
- (4) See page A-71 for details on push motion.

#### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





20~200 (every 10mm)

250

125

#### Actuator Specifications

■ Leads and Payloads (Note 1) Please note that the maximum load capacity decreases as the speed increases. (Note 2) 50mm increments over 100mm. ■ Stroke and Maximum Speed

Model number	Lead	Maximum pa	<del>_ `</del>	Positioning repeatability	Stroke
	(mm)	Horizontal (kg)	Vertical (kg)	(mm)	(mm)
RCP2-SRA4R-1-35P-5-①-②-③-④	5	~25	~9	112	20 to 200
RCP2-SRA4R-1-35P-2.5-①-②-③-④	2.5	~35	~15	224	(every 10mm) (Note 2)

5 2.5

Legend ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

Stroke

(Unit: mm/s)

①Stroke	
①Stroke (mm)	Standard price
25 ~ 50	_
60 ~ 100	_
150	_
200	_

Option code

В

FL FLR

FT2/FT4

NM

#### **3Cable Length**

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

- The cable is a motor-encoder integrated cable, and is provided as a robot cable.

  See page A-59 for cables for maintenance.

|--|

Page Standard Price

→ A-42

→ A-44

→ A-46

→ A-48

→ A-48

Item	Description
Drive method	Ball screw, ø8mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod diameter	ø22mm
Rod non-rotation precision	_
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

The brake is available for strokes of 70mm or more.

Name

Foot bracket 2 (right/left side mounting)

**4**Options

Flange bracket (front)

Flange bracket (rear)

Foot bracket 1 (base mounting)

Non-motor end specification

Brake

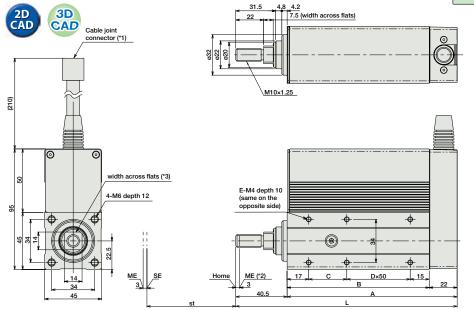


Dimensional Drawings

CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders





Secure at least 100 0 0 1-M6 depth 12 **(** (d)

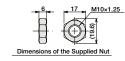
\* The exterior dimensions for the brake-equipped model is no different than the standard model. However, 70mm is the minimum stroke of the brake-equipped models. (i.e. The brake is not compatible at 60mm strokes and under.)

Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or

rotational direction, the detent may

become damaged.

E-M4 depth 10 ф



ST : Stroke SE : Stroke end ME: Mechanical end

# ■ Dimensions and Weights by Stroke (Add 0.2kg for brake equipped)

Stroke	20	30	40	50	60	70	80	90	100	150	200
L	124.5	134.5	144.5	154.5	164.5	174.5	184.5	194.5	204.5	254.5	304.5
Α	84	94	104	114	124	134	144	154	164	214	264
В	62	72	82	92	102	112	122	132	142	192	242
С	30	40	50	60	70	30	40	50	60	60	60
D	0	0	0	0	0	1	1	1	1	2	3
E	4	4	4	4	4	6	6	6	6	8	10
Weight (kg)	0.83	0.89	0.96	1.02	1.08	1.14	1.21	1.27	1.33	1.64	1.95

(\*1) Connect the motor-encoder integrated cable here. (See page A-59 for details on cables.)

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

(\*3) The orientation of the bolt varies depending on the product.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Referen page
Calanaid Mahaa Tana	*****	PMEC-C-35PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P53
Solenoid Valve Type		PSEP-C-35PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P54
Solenoid valve multi-axis type PIO specification	diam'	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		. DE
Solenoid valve multi-axis type Network specification	iiii .	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P56
Positioner type High-output specification	and a	PCON-CA-35PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification		PCON-CA-35PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P60
Field network type High-output specification		PCON-CA-35PI-W-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)	Ü	PCON-PL-35PI-①-2-0	Pulse train input type with differential line driver support	( )			_	
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-①-2-0	Pulse train input type with open collector support	64 points		Refer to P628		→ P623
Serial Communication Type	Ĩ	PCON-SE-35PI-N-0-0	Dedicated Serial Communication				_	
Program Control Type		PSEL-CS-1-35PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	_	→ P6

IAI

RCP2-SRA4R **ELECTROMATE** 

ROBO Cylinder, Short-length Rod Type with Single Guide, Actuator Width 45mm,

Model Specification Items RCP2 - SRGS4R-Type Series

35P Encoder type — Motor type I: Incremental 35P: Pulse motor,

\*The Simple absolute

considered type "I".

Lead

size 35□

5: 5mm

2.5: 2.5mm

Stroke 20: 20mm 200: 200mm (10mm pitch increments) \*50mm increments over 100mm

 Applicable controller P1: PCON-PL/PO/SE P1: PCON-PL/PC PSEL P3: PCON-CA PMEC/PSEP MSEP

N: None P: 1m S: 3m M:5m X□□: Custom length

Cable length

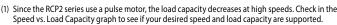
\* See options below.

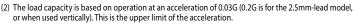
Options

\* See page Pre-47 for details on the model descriptions

CE RoHS IAI

Technical References

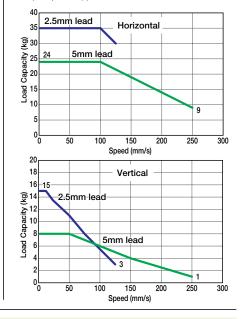




- (3) The horizontal load capacity is based on the use of an external guide. See the technical resources (page A-109) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

■ Leads and Payloads (Note 1) Please note that the maximum load capacity decreases as the speed increases. (Note 2) 50mm increments over 100mm.

		*			
Model number	Lead (mm)	Maximum pa Horizontal (kg)	yload (Note 1) Vertical (kg)	Positioning repeatability (mm)	Stroke (mm)
RCP2-SRGS4R-1-35P-5-①-②-③-④	5	~24	~8	112	20 to 200
RCP2-SRGS4R-1-35P-2.5-①-②-③-④	2.5	~35	~15	224	(every 10mm) (Note 2)

### ■ Stroke and Maximum Speed

Stroke Lead	20~200 (every 10mm)
5	250
2.5	125

Legend ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

#### ①Stroke

①Stroke (mm)	Standard price
20 ~ 50	_
60 ~ 100	_
150	_
200	_

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	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_

- \* The cable is a motor-encoder integrated cable, and is
- provided as a robot cable.

  \* See page A-59 for cables for maintenance.

#### @Options

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Flange bracket (rear)	FLR	→ A-46	_
Foot bracket 2 (right/left side mounting)	FT2/FT4	→ A-47	_
Guide mounting direction	GS2 ~ GS4	→ A-50	_
Non-motor and specification	NM	→ A-52	

- The brake is available for strokes of 70mm or more.

  Please be sure that the mounting direction of the guide is specified in the product name.
  The guide and the foot bracket cannot be mounted in the same direction.
  (Combination of FT2 and FT4, GS4 and GS2 can be mounted. The foot bracket cannot be mounted in the GS3 direction.)

175 RCP2-SRGS4R





242 60

3 10

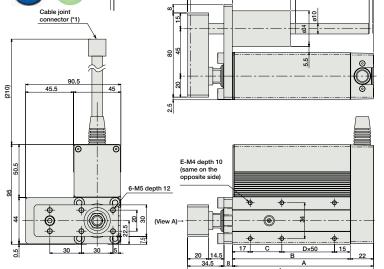
60

Dimensional Drawings



www.intelligentactuator.com

For Special Orders 2D CAD 3D 4 3 (The amount of shaft movement from the ME CAD 5 (The amount of shaft overhang at SE) st on the home-side to the home position) Cable joint connector (\*1)



4-M6 depth 12 ◉ **(** 

Guide mounting direction (as viewed from view A)

\* The exterior dimensions for the brake-equipped model is no different than the standard model. However, 70mm is the minimum stroke of the brake-equipped models. (i.e. The brake is not compatible at 60mm strokes and under.)

> 50 60

ST : Stroke SE : Stroke end ME: Mechanical end ■ Dimensions and Weights by Stroke (Add 0.2kg for brake equipped) 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 176.5 186.5 196.5 134 144 154 126.5 84 166.5 206.5 256.5 164 214 94 104 114 124 72 82 92 102 40 50 60 70 62 30 122 40 132 142

 Weight (kg)
 1.2
 1.27
 1.34
 1.41
 1.48
 1.54
 1.61
 1.68
 1.75
 2.09
 2.43

0 0 30

(\*1) Connect the motor-encoder integrated cable here. (See page A-59 for details on cables.)
 (\*2) When homing, the rod moves to the mechanical end position; therefore, please watch for any interference with the surrounding objects.

21	Annlica	blo C	ontrol	lore

RCP2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calanaid Valua Tura		PMEC-C-35PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid Valve Type		PSEP-C-35PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P547
Solenoid valve multi-axis type PIO specification	A COLUMN	MSEP-C-(1)-~-(1)-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		, DE (2)
Solenoid valve multi-axis type Network specification		MSEP-C-(11)-~-(10)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P563
Positioner type High-output specification	mi.	PCON-CA-35PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification		PCON-CA-35PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type High-output specification		PCON-CA-35PI-Ŵ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)	Ó	PCON-PL-35PI-①-2-0	Pulse train input type with differential line driver support	( )			_	
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-①-2-0	Pulse train input type with open collector support	- (—)		Refer to P628	_	→ P623
Serial Communication Type	Ĩ	PCON-SE-35PI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-35PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	_	→ P665

\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1:100V / 2:100~240V).
\* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

**ECTROMATE** 

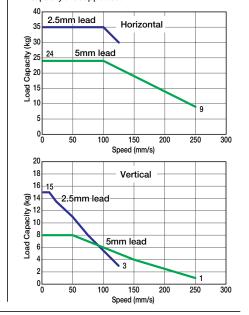
RCP2 - SRGD4R-35P Specification Items — Encoder type — Series — Type Motor type — Applicable controller — Cable length — Lead Stroke **Options** P1: PCON-PL/PO/SE N: None P: 1m S: 3m I: Incremental 35P: Pulse motor, 20: 20mm 5: 5mm \* See options below. P1: PCON-PL/PO PSEL P3: PCON-CA PMEC/PSEP MSEP size 35□ 2.5: 2.5mm \*The Simple absolute 200: 200mm (10mm pitch increments) \*50mm increment over 100mm M: 5m X□□: Custom length considered type "I". \* See page Pre-47 for details on the model descriptions



- (1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) The load capacity is based on operation at an acceleration of 0.03G (0.2G is for the 2.5mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (3) The horizontal load capacity is based on the use of an external guide. See the technical resources (page A-110) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

■ Leads and Payloads (Note 1) Please note that the maximum load capacity decreases as the speed increases. (Note 2) 50mm increments over 100mm. ■ Stroke and Maximum Speed

Model number	Lead (mm)	Maximum pa Horizontal (kg)	yload (Note 1) Vertical (kg)	Positioning repeatability (mm)	Stroke (mm)
RCP2-SRGD4R-1-35P-5-①-②-③-④	5	~24	~8	112	20 to 200
RCP2-SRGD4R-1-35P-2.5-①-②-③-④	2.5	~35	~15	224	(every 10mm) (Note 2)

Stroke Lead	20~200 (every 10mm)
5	250
2.5	125

Legend ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

①Stroke	
①Stroke (mm)	Standard price
25 ~ 50	_
60 ~ 100	_
150	_
200	_

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

- The cable is a motor-encoder integrated cable, and is provided as a robot cable.

  See page A-59 for cables for maintenance.

<b>4</b> Options			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Flange bracket (rear)	FLR	→ A-46	_
Non-motor end specification	NM	→ A-52	_

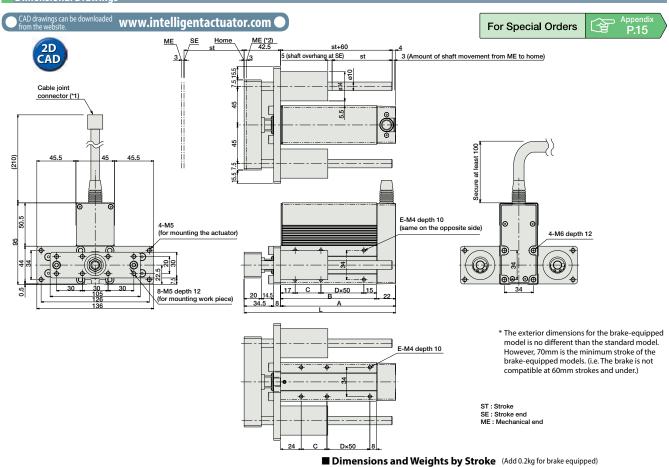
<sup>\*</sup> The brake is available for strokes of 70mm or more.

Actuator Specifications		
Item	Description	
Drive method	Ball screw, ø8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less	
Rod diameter	ø22mm	
Rod non-rotation precision	±0.05 deg	
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)	

177 RCP2-SRGD4R



Dimensional Drawings



84

20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 30 40 70 80 90 100 130 130 136.5 146.5 156.5 166.5 176.5 186.5 196.5 206.5 256.5 94 104 114 124 134 144 154 164 214 72 82 92 102 112 122 132 142 192 40 50 60 70 30 40 50 60 60 306.5 264 242 60 62 30 0 
 Weight (kg)
 1.47
 1.55
 1.62
 1.7
 1.77
 1.84
 1.92
 1.99
 2.07
 2.44
 2.81

(\*1) Connect the motor-encoder integrated cable here. (See page A-59 for details on cables.)
 (\*2) When homing, the rod moves to the mechanical end position; therefore, please watch for any interference with the surrounding objects.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colon Mala Tana	101	PMEC-C-35PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P53
Solenoid Valve Type	8	PSEP-C-35PI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		Refer to P555	_	→ P54
olenoid valve multi-axis type PIO specification	line.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		→ P56
olenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P50
Positioner type High-output specification	mil.	PCON-CA-35PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type High-output specification		PCON-CA-35PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P60
Field network type High-output specification		PCON-CA-35PI-Ŵ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		-	
Pulse Train Input Type (Differential Line Driver)	Ó	PCON-PL-35PI-①-2-0	Pulse train input type with differential line driver support	(—)			_	
Pulse Train Input Type (Open Collector)		PCON-PO-35PI-①-2-0	Pulse train input type with open collector support	(—)		Refer to P628	_	→ P62
Serial Communication Type	Ĩ	PCON-SE-35PI-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		PSEL-CS-1-35PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		Refer to P671	_	→ P66

\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1: 100V / 2: 100~240V). \* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

Type

Mini

Standard

Controllers Integrated

> Rod Type

Mini

Standard

Table/

Table/ Arm/ Flat Type

Mini

Gripper/

Linear Servo Type

Cleanroom Type

Splash-Proo Type

> Pulse Moto

Servo Motor (24V

Servo Motor (200V)

Linear Servo Motor

# ERC3-RA4C

Controller-Integrated, Rod Type, Actuator Width 45mm, Pulse Motor, Straight Type

ERC3 - RA4C -**42P** Т Specification Items I/O type Type Encoder type — Motor type Stroke Cable length — Controller Type — Options Series — Lead CN: CON type MC: MEC type : Brake 42□: Pulse motor 20: 20mm I: Incremental N: None B : Brake NM : Non-motor end ABU : Simple absolute specification FL : Flange FT : Foot bracket P: 1m MC: N S: 3m M: 5m X\subseteq : Custom length 12: 12mm 6: 6mm 3: 3mm \* See page Pre-47 for details on the model descriptions

RoHS

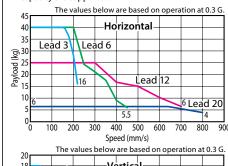


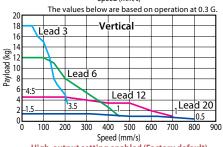
Notes on Selection

- (1) If the high-output setting is enabled (factory default), the duty must be limited. (Refer to page A-95.) If the high-output setting is disabled, the payload and maximum speed become lower, but the actuator can be used at a duty of 100%. Refer to the operation manual for information on how to change the high-output setting.
- (2) Refer to page A-99 for the payload at each speed/acceleration when the high-output setting is enabled.
- (3) The value for the horizontal load capacity is with an external guide.
- (4) See page A-71 for details on push motion.

#### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





High-output setting enabled (Factory default)

#### Actuator Specifications (High-output Setting Enabled)

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

Model number	Lead	Maximum pay	Maximum payload (Note 1)		Stroke
Model Hullibei	(mm)	Horizontal (kg)	Vertical (kg)	push force (N)	(mm)
ERC3-RA4C-I-42P-20-①-②-③-④	20	6	1.5	56	
ERC3-RA4C-I-42P-12-①-②-③-④	12	25	4.5	93	50 to 300
ERC3-RA4C-I-42P-6-①-②-③-④	6	40	12	185	(every 50mm)
ERC3-RA4C-I-42P-3-①-②-③-④	3	40	18	370	

	,				
Legend ① Stroke ② I/O type ③	Cable length 4 C	ptions *See ;	page A-71 for det	tails on push mo	otion.

#### ■ Stroke and Maximum Speed

Lead	50~200 (every 50mm)	250 (mm)	300 (mm)
20			
12	700	695	485
6	450	345	240
3	225	170	120

(Unit: mm/s)

#### ①Stroke

Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

#### **3Cable Length**

Туре	Cable symbol	Standard price
C	<b>P</b> (1m)	_
Standard (Robot Cables)	<b>S</b> (3m)	_
(Nobol Cables)	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_

<sup>\*</sup> See page 586 for cables for maintenance.

#### 4 Ontions

© 0 perons			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Simple absolute specification	ABU	→ A-42	— (*)
Flange	FL	→ A-45	_
Foot bracket	FT	→ A-48	_
Non-motor end specification	NM	→ A-52	_

<sup>(\*)</sup> If the simple absolute specification is selected, SE (SIO type) I/O type and the separately sold PIO converter with simple absolute specification (with battery) are required.

#### Actuator Specifications

Item	Description
Drive method	Ball screw, ø10mm, rolled C10
Positioning repeatability (*)	±0.02mm [±0.03mm]
Lost motion (*)	0.1mm or less [0.2mm or less]
Rod diameter	ø25mm
Rod non-rotation precision	±1.5 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

<sup>(\*)</sup> The specification in [] applies when the lead is 20mm.

179 ERC3-RA4C

# CAD drawings can be downloaded www.intelligentactuator.com

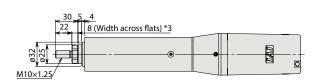
For Special Orders

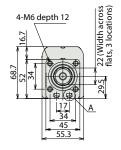


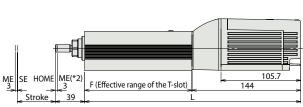


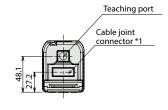


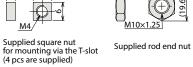






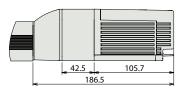






### External view of the brake specification

The overall length of the brake specification is 42.5 mm longer than the standard specification and its mass is 0.4 kg heavier.



- \*1 Connect the power & I/O cable. Refer to page 586 for details on this cable SE: Stroke End ME: Mechanical End
- \*2 The rod moves to the ME during home return, so pay attention to possible contact with surroundingstructures.
- \*3 The orientation of the bolt will vary depending on the product.

### ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
L	286	336	386	436	486	536
F	142	192	242	292	342	392
Weight (kg)	1.4	1.7	2.0	2.3	2.6	2.9

### **Controllers (Built into the Actuator)**

②I/O type

With the ERC3 series, one of the following five types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose.														
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page						
PIO type (NPN specification)		ERC3-RA4C-I-42P-□-□-NP-□-□	Simple control type accommodating up to 16 positioning points	16										
PIO type (PNP specification)		ERC3-RA4C-I-42P-□-□-PN-□-□	I/O type supporting inputs/outputs of the PNP specification often used overseas	16		High-output setting								
SIO type		ERC3-RA4C-I-42P-□-□-SE-□-□	High-function type accommodating up to 512 positioning points (PIO converter is used)	512	DC24V	enabled: 3.5A rated 4.2A max. High-output setting	_	→ P577						
Pulse-train type (NPN specification)		ERC3-RA4C-I-42P-□-□-PLN-□-□	Pulse-train input type supporting the NPN specification	-		disabled: 2.2A								
Pulse-train type (PNP specification)		ERC3-RA4C-I-42P-□-□-PLP-□-□	Pulse-train input type supporting the PNP specification	_										

IAI

ERC3-RA4C **ELECTROMATE** 

Slider Type

Mini

Standard

Тур

Integrated

Arm/ Flat Type

Mini

Gripper/ Rotary

> Linear Servo Type

Cleanroom Type

Splash-Proo Type

> Pulse Moto

Servo Motor (24V)

Servo Motor (200V)

Linear Servo Motor

# ERC3-RA6C

Controller-Integrated, Rod Type, Actuator Width 64mm, Pulse Motor, Straight Type

Model Specification Items ERC3 - RA6C -**56P** I/O type Type Encoder type — Motor type — Cable length — Controller Type — Options Series — Lead Stroke NP: PIO (NPN) type N: None CN:
PN: PIO (PNP) type P: 1m MC:
SE: SIO type S: 3m
PLN: pulse-train (PNP) type M: 5m
PLP: pulse-train (PNP) type X□□: Custom Length CN: CON type B MC: MEC type N/ 56□: Pulse motor I: Incremental 24: 24mm 50: 50mm : Brake NM: Non-motor end ABU: Simple absolute 16: 16mm 8: 8mm 300: 300mm specification : Flange : Foot bracket (50mm pitch increments) \* See page Pre-47 for details on the model descriptions.

## RoHS

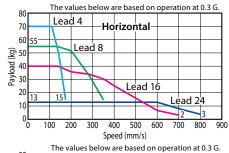


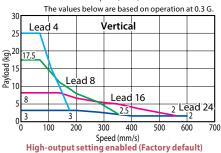
Notes on Selection

- (1) If the high-output setting is enabled (factory default), the duty must be limited. (Refer to page A-95.) If the high-output setting is disabled, the payload and maximum speed become lower, but the actuator can be used at a duty of 100%. Refer to the operation manual for information on how to change the high-output setting.
- (2) Refer to page A-99 for the payload at each speed/acceleration when the high-output setting is enabled.
- (3) The value for the horizontal load capacity is with an external guide.
- (4) See page A-71 for details on push motion.

## ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC3 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





### Actuator Specifications

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

Model number	Lead (mm)	Maximum pay Horizontal (kg)	Vertical (kg)	Maximum push force (N)	Stroke (mm)
ERC3-RA6C-I-56P-24-①-②-③-④	24	13	3	182	
ERC3-RA6C-I-56P-16-①-②-③-④	16	40	8	273	50 to 300
ERC3-RA6C-I-56P-8-①-②-③-④	8	55	17.5	547	(every 50mm)
ERC3-RA6C-I-56P-4-①-②-③-④	4	70	25	1094	

Legend ① Stroke ② I/O type ③ Cable length ④ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

Lead	50~250 (every 50mm)	300 (mm)			
24	800 <600>				
16	700 <560>				
8	420	400			
4	210 <175>	200 <175>			

\*The values enclosed in < > apply to vertical settings.
\*The values of lead 8 and lead 4 apply when acceleration is at 0.1G.

(Unit: mm/s)

#### ①Stroke

Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

#### 4 Ontions

@Options			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Simple absolute specification	ABU	→ A-42	— (*)
Flange	FL	→ A-45	_
Foot bracket	FT	→ A-48	_
Non-motor end	NM	→ A-52	_

(\*) If the simple absolute specification is selected, SE (SIO type) I/O type and the separately sold PIO converter with simple absolute specification (with battery) are required.

## **3Cable Length**

Туре	Cable symbol	Standard price
Standard	<b>P</b> (1m)	_
(Robot Cables)	<b>S</b> (3m)	_
(NODOL Cables)	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_

 $<sup>\</sup>mbox{*}$  See page 586 for cables for maintenance.

#### Actuator Specifications

Item	Description
Drive method	Ball screw, ø10mm, rolled C10
Positioning repeatability (*)	±0.02mm [±0.03mm]
Lost motion (*)	0.1mm or less [0.2mm or less]
Rod diameter	ø25mm
Rod non-rotation precision	±1.5 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

(\*) The specification in [] applies when the lead is 20mm.

181 ERC3-RA6C

Dimensional Drawings

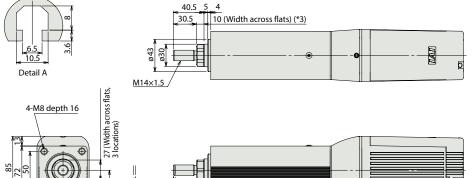
ngs can be downloaded www.intelligentactuator.com

For Special Orders

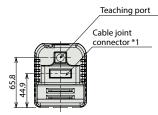








F (Effective range of the T-slot)





Supplied square nut for mounting via the T-slot (4 pcs are supplied)



ME(\*2)

49.5

SE SE

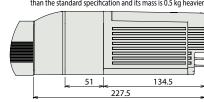
Stroke

Supplied rod end nut



134.5

176.5



- \*1 Connect the power & I/O cable. Refer to page 586 for details on this cable SE: Stroke End ME: Mechanical End
- \*2 The rod moves to the ME during home return, so pay attention to possible contact with surroundingstructures.
- \*3 The orientation of the bolt will vary depending on the product.

### ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
L	334.5	384.5	434.5	484.5	534.5	584.5
F	158	208	258	308	358	408
Weight (kg)	3.9	4.4	4.9	5.4	5.9	6.4

## **Controllers (Built into the Actuator)**

②I/O type

With the ERC3 s	With the ERC3 series, one of the following five types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
PIO type (NPN specification)		ERC3-RA6C-I-56P-□-□-NP-□-□	Simple control type accommodating up to 16 positioning points	16	DC24V				
PIO type (PNP specification)		ERC3-RA6C-I-56P-□-□-PN-□-□	I/O type supporting inputs/outputs of the PNP specification often used overseas	16		High-output setting			
SIO type		ERC3-RA6C-I-56P-□-□-SE-□-□	High-function type accommodating up to 512 positioning points (PIO converter is used)	512		enabled: 3.5A rated 4.2A max. High-output setting disabled: 2.2A	_	→ P577	
Pulse-train type (NPN specification)		ERC3-RA6C-I-56P-□-□-PLN-□-□	Pulse-train input type supporting the NPN specification	-					
Pulse-train type (PNP specification)		ERC3-RA6C-I-56P-□-□-PLP-□-□	Pulse-train input type supporting the PNP specification	_					

IAI

ERC3-RA6C

Controller-Integrated, Rod Type, Actuator Width 58mm, Pulse Motor, Straight Type

Model Specification Items

ERC2 - RA6C -Type Series

 Encoder type — Motor type I: Incremental

**PM** Lead

PM: Pulse motor

12: 12mm 6: 6mm 3: 3mm

Stroke 50: 50mm 300: 300mm

(50mm pitch increments)

I/O type NP: PIO (NPN) type PN: PIO (PNP) type SE: SIO type

Cable length N:None S:3m X□□: WDD:

**Options** P:1m M:5m Custom length Double-ended cable B : Brake FT : Foot bracket NM : Non-motor end

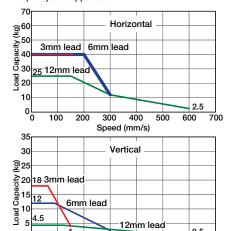
R□□: Robot cable RW□□: Double-ended Robot cable



- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) The value for the horizontal load capacity is with an external guide.
- (5) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



300

Speed (mm/s)

400

#### Actuator Specifications

**■** Leads and Payloads (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model number Lead   Maximum payload (Note 1)   Horizontal (kg)   Vertical (kg)		Maximum push force (N)	Stroke (mm)		
ERC2-RA6C-I-PM-12-①-②-③-④	12	~25	~4.5	78	50 to
ERC2-RA6C-I-PM-6-①-②-③-④	6	~40	~12	157	300 (every
ERC2-RA6C-I-PM-3-①-②-③-④	3	40	~18	304	50mm)

Code explanation ① Stroke ② I/O type ③ Cable length ④ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

100 200

Stroke Lead	50~250 (every 50mm)	300 (mm)
12	600	500
6	300	250
3	150	125

(Unit: mm/s)

600

## ①Stroke

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

#### ③Cable Length

Type	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (3m)	_
	<b>W01</b> (1m) ~ <b>W03</b> (5m)	_
Double ended	<b>W04</b> (4m) ~ <b>W05</b> (10m)	_
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	_
	R01 (1m) ~ R03 (3m)	_
Robot cable	R04 (4m) ~ R05 (5m)	_
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
Davida andad	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	_
Double ended Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
Nobol Cable	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_

The values in < > apply to the SE type. \* See page 606 for cables for maintenance.

<b>4</b> Options			
Name	Option code	Page	Standard Price
l	D	N 42	

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-47	_
Non-motor end specification	NM	→ A-52	_

Actuator specifications	
ltem	Description
Drive method	Ball screw, ø10mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod diameter	ø22mm special SUS type
Rod non-rotation precision	±1.5 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)



# CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders



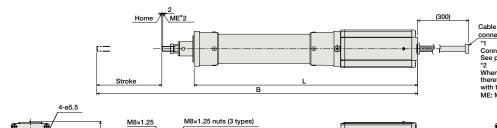




(Note) The actual orientation of the bolt may differ by product.

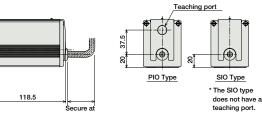
Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or  $% \left\{ \mathbf{r}^{\prime}\right\} =\mathbf{r}^{\prime}$ rotational direction, the detent may become damaged.

7 <u>2</u> 18 31.7



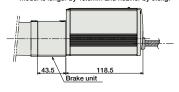
connector \*1

Connect the power and I/O cables. See page 606 for details on cables.



#### **Brake Specifications Diagram**

Compared to the standard model, the brake-equipped model is longer by 43.5mm and heavier by 0.5kg.



#### ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
L	293.5	343.5	393.5	443.5	493.5	543.5
Α	175	225	275	325	375	425
С	91	141	191	241	291	341
Weight (kg)	1.6	1.7	1.8	2.0	2.1	2.2

## I/O type (Controller built into the Actuator)

With the ERC2 series, one of the following three types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose					ts your purpose.			
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN Specification)		ERC2-RA6C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
PIO Type (PNP Specification)		ERC2-RA6C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16	DC24V	2A max.	_	→ P597
SIO Type		ERC2-RA6C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				

IAI

ERC2-RA6C **ELECTROMATE** 

Controller-Integrated, Rod Type, Actuator Width 68mm, Pulse Motor, Straight Type

Model Specification Items

ERC2 - RA7C Series Type

 Encoder type — Motor type I: Incremental

**PM** PM: Pulse motor

Lead 16: 16mm

8: 8mm 4: 4mm

Stroke 50: 50mm

I/O type 300: 300mm (50mm pitch increments)

NP: PIO (NPN) type PN: PIO (PNP) type SE: SIO type

Cable length N:None S:3m XDD: C WDD: D P:1m M:5m

Custom length Double-ended cable Robot cable

FT : Foot bracket NM : Non-motor end

Options

: Brake

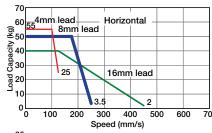
 $RW \square \square : Double-ended \ Robot \ cable$ 

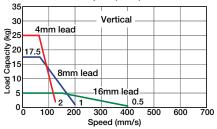


- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 4mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) The value for the horizontal load capacity is with an external guide.
- (5) See page A-71 for details on push motion.

## ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





## Actuator Specifications

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

Model number	Lead (mm)	Horizontal (kg)	Vertical (kg)	Maximum push force (N)	Stroke (mm)
ERC2-RA7C-I-PM-16-①-②-③-④	16	~40	~5	220	50 to
ERC2-RA7C-I-PM-8-①-②-③-④	8	~50	~17.5	441	300 (every
ERC2-RA7C-I-PM-4-①-②-③-④	4	~55	~25	873	50mm)

Code explanation ① Stroke ② I/O type ③ Cable length ④ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
16	450 <400>
8	250 <200>
4	125

\*The values enclosed in < > apply to vertical settings.

(Unit: mm/s)

#### ①Stroke

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

#### **3Cable Length**

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (3m)	_
	<b>W01</b> (1m) ~ <b>W03</b> (5m)	_
Double ended	<b>W04</b> (4m) ~ <b>W05</b> (10m)	_
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	_
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
Robot cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	RW01 (1m) ~ RW03 (3m)	_
Double ended Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
Nobol Cable	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_

The values in < > apply to the SE type. \* See page 606 for cables for maintenance.

The options			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-47	_
Non-motor end specification	NM	→ A-52	_

Actuator Specifications	
ltem	Description
Drive method	Ball screw, ø12mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod diameter	ø30mm special SUS type
Rod non-rotation precision	±1.5 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

For Special Orders

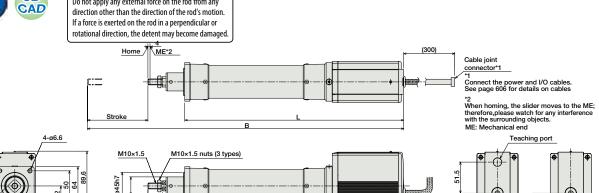
P.15

SIO Type

\* The SIO type does not have a teaching port.

Dimensional Drawings





Rod 930 (Note) The actual orientation of the bolt may differ by product.

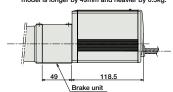
diameter

<u>9</u> 21

40

## **Brake Specifications Diagram**

\* Compared to the standard model, the brake-equipped model is longer by 49mm and heavier by 0.5kg.



118.5

## ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
L	312.5	362.5	412.5	462.5	512.5	562.5
Α	194	244	294	344	394	444
С	106	156	206	256	306	356
Weight (kg)	2.7	2.9	3.0	3.2	3.3	3.5

PIO Type

# I/O type (Controller built into the Actuator)

With the ERC2 series, one of the following three types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN Specification)		ERC2-RA7C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
PIO Type (PNP Specification)		ERC2-RA7C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16	DC24V	2A max.		→ P597
SIO Type		ERC2-RA7C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				

# 2-RGS6C

Controller-integrated, Rod Type with Single Guide, Actuator Width 58mm, Pulse Motor, Straight Type

Model Specification Items

ERC2 - RA6C Type

\* See page Pre-47 for details on the model descriptions.

 Encoder type — Motor type I: Incremental

**PM** 

PM: Pulse motor

Lead 12: 12mm

3: 3mm

Stroke 50: 50mm 300: 300mm (50mm pitch increments)

I/O type NP:PIO (NPN)

type PN:PIO (PNP) type SE: SIO type

N:None S:3m X□□: ( W□□: [

e P:1m B M:5m FT Custom length NN Double-ended cable B : Brake FT : Foot bracket NM : Non-motor end

R□□: Robot cable RW□□: Double-ended Robot cable

**Options** 

Cable length

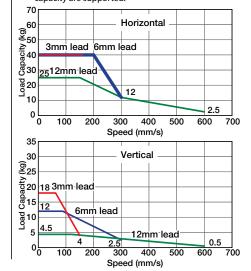
CE RoHS



- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) The value for the horizontal load capacity is with an external guide.
- (5) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

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

Model number	Lead Maximum payload (No		load (Note 1)	Maximum	Stroke	
Model Hambel	(mm)	Horizontal (kg)	Vertical (kg)	push force (N)	(mm)	
ERC2-RGS6C-I-PM-12-①-②-③-④	12	~25	~4.5	78	50 to	
ERC2-RGS6C-I-PM-6-①-②-③-④	6	~40	~12	157	300 (every	
ERC2-RGS6C-I-PM-3-①-②-③-④	3	40	~18	304	50mm)	

Code explanation ① Stroke ② I/O type ③ Cable length ④ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

Stroke Lead	50~250 (every 50mm)	300 (mm)
12	600	500
6	300	250
3	150	125

(Unit: mm/s)

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

#### **3Cable Length**

Type	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (3m)	_
	<b>W01</b> (1m) ~ <b>W03</b> (5m)	_
Double ended	<b>W04</b> (4m) ~ <b>W05</b> (10m)	_
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	_
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
Robot cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	ı
Double ended Robot cable	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	
	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_

The values in < > apply to the SE type.

	* See page 606 for cables for mainter
ntions	Actuator Specifications

© Options				rictuator specifications		
Name	Option code	Page	Standard Price	ltem	Description	
Brake	В	→ A-42	_	Drive method	Ball screw, ø10mm, rolled C10	
Foot bracket	FT	→ A-47	_	Positioning repeatability	±0.02mm	
Non-motor end specification	NM	→ A-52	_	Lost motion	0.1mm or less	
				Rod diameter	ø22mm special SUS type	
			Rod non-rotation precision	±1.5 deg		
				Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)	

187



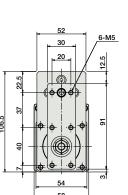
CAD drawings can be downloaded www.intelligentactuator.com

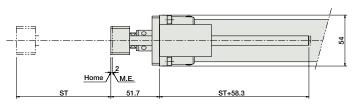
For Special Orders

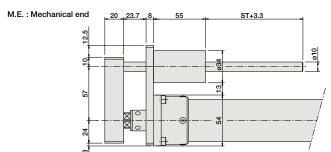












st See page 184 for the dimensions of the actuator.

## ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
Guide weight (kg)	0.2	0.2	0.3	0.3	0.3	0.4
Guide + actuator weight (kg)	1.8	1.9	2.1	2.3	2.4	2.6

# I/O type (Controller built into the Actuator)

②I/O type

With the ERC2 series, one of the following three types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose.								
Name	External view Model number		Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN Specification		ERC2-RGS6C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
PIO Type (PNP Specification		ERC2-RGS6C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16	DC24V	2A max.	_	→ P597
SIO Type		ERC2-RGS6C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				

IAI

ERC2-RGS6C

Controller-integrated, Rod Type with Single Guide, Actuator Width 68mm, Pulse Motor, Straight Type

Model Specification Items

ERC2 — RGS7C Туре Series —

 Encoder type — Motor type I: Incremental

**PM** PM: Pulse motor

Lead 16: 16mm

8: 8mm 4: 4mm

Stroke 50: 50mm 300: 300mm

(50mm pitch increments)

I/O type NP:PIO (NPN)

type PN:PIO (PNP) type SE: SIO type

e P:1m B:Brake
M:5m FT:Foot bracket
Custom length NM: Non-motor end
Double-ended cable N:None S:3m X□□: C W□□: D Robot cable

Cable length

**Options** 

RW□□: Double-ended Robot cable

CE RoHS



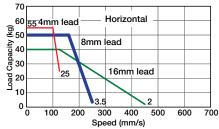
Technical References

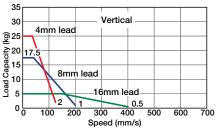


- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 4mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) The value for the horizontal load capacity is with an external guide.
- (5) See page A-71 for details on push motion.

### ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





## Actuator Specifications

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

Model number	Lead (mm)	Maximum pay Horizontal (kg)	Vertical (kg)	Maximum push force (N)	Stroke (mm)
ERC2-RGS7C-I-PM-16-①-②-③-④	16	~40	~5	220	50 to
ERC2-RGS7C-I-PM-8-①-②-③-④	8	~50	~17.5	441	300 (every
ERC2-RGS7C-I-PM-4-①-②-③-④	4	~55	~25	873	50mm)

Code explanation ① Stroke ② I/O type ③ Cable length ④ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

Stroke Lead	50~250 (every 50mm)
16	450 <400>
8	250 <200>
4	125

\*The values enclosed in < > apply to vertical settings.

## (Unit: mm/s)

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

#### **③Cable Length**

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (3m)	_
	<b>W01</b> (1m) ~ <b>W03</b> (5m)	_
Double ended	<b>W04</b> (4m) ~ <b>W05</b> (10m)	_
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	_
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
Robot cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
Double ended Robot cable	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	_
	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_

The values in < > apply to the SE type. \* See page 606 for cables for maintenance.

#### **4**Options Actuator Specifications

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-47	_
Non-motor end specification	NM	→ A-52	_
Rod diameter ø30mm special SUS type			



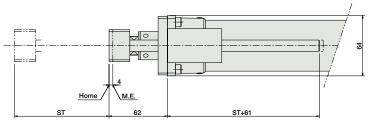
wings can be downloaded www.intelligentactuator.com

For Special Orders

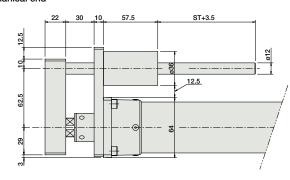




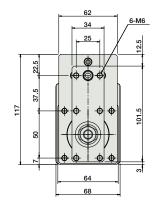




M.E.: Mechanical end



\* See page 186 for the dimensions of the actuator.



## ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
Guide weight (kg)	0.3	0.3	0.4	0.4	0.5	0.5
Guide + actuator weight (kg)	3.0	3.2	3.4	3.6	3.8	4.0

# I/O type (Controller built into the Actuator)

With the ERC2	With the ERC2 series, one of the following three types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose.							
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN Specification)		ERC2-RGS7C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
PIO Type (PNP Specification)		ERC2-RGS7C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16	DC24V	2A max.	_	→ P597
SIO Type		ERC2-RGS7C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				

ERC2-RGS7C

Controller-integrated, Rod Type with Double Guide, Actuator Width 58mm, Pulse Motor, Straight Type

Model Specification Items

ERC2 - RGD6C Series — Type

**PM** Encoder type — Motor type

PM: Pulse motor

Lead

12: 12mm 6: 6mm

3: 3mm

Stroke 50: 50mm

300: 300mm (50mm pitch increments)

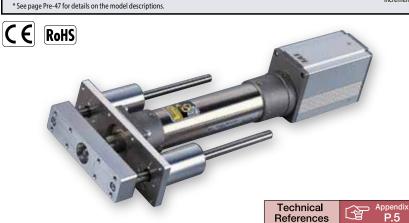
I/O type NP:PIO (NPN)

type PN:PIO (PNP) type SE: SIO type

Cable length

N:None P:Im B:Brake
S:3m M:5m FT:Foot bracket
X□: Custom length NM:Non-motor end
W□: Double-ended cable
R□: Robot cable
RW□:Double-ended Robot cable

**Options** 

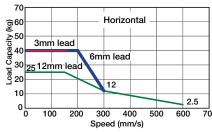


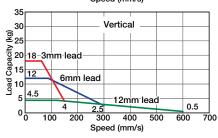
I: Incremental

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) The value for the horizontal load capacity is with an external guide.
- (5) See page A-71 for details on push motion.

## ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.





#### Actuator Specifications

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

Stroke and Maximum Speed ■ Leads and Payloads

Model number	Lead (mm)	Maximum pay Horizontal (kg)	vload (Note 1) Vertical (kg)	Maximum push force (N)	Stroke (mm)
ERC2-RGD6C-I-PM-12-①-②-③-④	12	~25	~4.5	78	50 to
ERC2-RGD6C-I-PM-6-①-②-③-④	6	~40	~12	157	300 (every
ERC2-RGD6C-I-PM-3-①-②-③-④	3	40	~18	304	50mm)

Stroke Lead	50~250 (every 50mm)	300 (mm)
12	600	500
6	300	250
3	150	125

(Unit: mm/s)

## ①Stroke

Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

## **3Cable Length**

Туре	Cable symbol	Standard price
	<b>P</b> (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (3m)	_
	<b>W01</b> (1m) ~ <b>W03</b> (5m)	_
Double ended	<b>W04</b> (4m) ~ <b>W05</b> (10m)	_
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	_
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
Robot cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
Daubla andad	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	_
Double ended Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_

The values in < > apply to the SE type.

\* See page 606 for cables for maintenance.

<b>4</b> Options			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-47	_
Non-motor end specification	NM	→ A-52	_

#### Actuator Specifications

Item	Description
Drive method	Ball screw, ø10mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod diameter	ø22mm special SUS type
Rod non-rotation precision	±0.05 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

ERC2-RGD6C



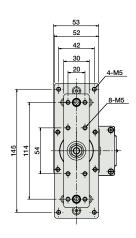
P.15

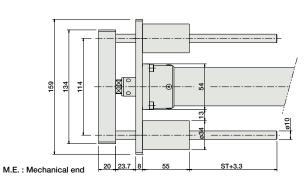
For Special Orders

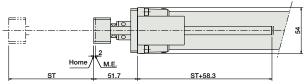
Dimensional Drawings

CAD drawings can be downloaded www.intelligentactuator.com

3D CAD 2D CAD







\* See page 184 for the dimensions of the actuator.

## ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
Guide weight (kg)	0.4	0.4	0.5	0.6	0.6	0.7
Guide + actuator weight (kg)	2.0	2.1	2.3	2.6	2.7	2.9

# I/O type (Controller built into the Actuator)

With the ERC2 series, one of the following three types of built-in controllers can be selected depending on the external input/output (I/O) type. Select the type that meets your purpose.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN Specification)		ERC2-RGD6C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
PIO Type (PNP Specification)		ERC2-RGD6C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16	DC24V	2A max.	-	→ P597
SIO Type		ERC2-RGD6C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				

# 2-**RGD**7

Controller-integrated, Rod Type with Double Guide, Actuator Width 68mm, Pulse Motor, Straight Type

Model Specification Items

ERC2 - RGD7C -Series — Type

**PM** Encoder type
 Motor type

I: Incremental

Lead

16: 16mm

8: 8mm 4: 4mm

PM: Pulse motor

Stroke 50: 50mm

I/O type 300: 300mm

NP:PIO (NPN) type PN:PIO (PNP) type SE: SIO type

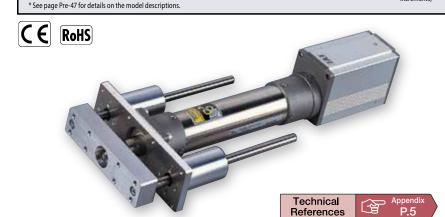
N:None S:3m XDD: 0 WDD: 0 P : 1m M: 5m

Options See Options below.

Custom Double-ended cable

Cable length

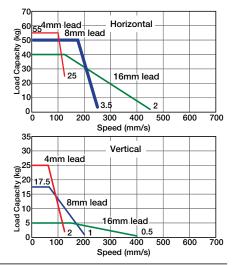
R□□: Robot cable RW□□: Double-ended Robot cable



- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 4mm-lead model, or when used vertically). This is the upper limit of the acceleration
- (4) The value for the horizontal load capacity is with an external guide
- (5) See page A-71 for details on push motion.

## ■ Speed vs. Load Capacity

Due to the characteristics of the pulse motor, the ERC2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



#### Actuator Specifications

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

Model number	Lead	Maximum pay	/load (Note 1)	Maximum	Stroke (mm)	
Modernumber	(mm)	Horizontal (kg)	Vertical (kg)	push force (N)		
ERC2-RGD7C-I-PM-16-①-②-③-④	16	~40	~5	220	50 to	
ERC2-RGD7C-I-PM-8-①-②-③-④	8	~50	~17.5	441	300 (every	
ERC2-RGS7C-I-PM-4-①-②-③-④	4	~55	~25	873	50mm)	

Code explanation ① Stroke ② I/O type ③ Cable length ④ Options \*See page A-71 for details on push motion.

Stroke	and	Maximum	Sr	eed

Stroke Lead	50~300 (every 50mm)
16	450 <400>
8	250 <200>
4	125

<b>UStroke</b>	
Stroke (mm)	Standard price
50	_
100	_
150	_
200	_
250	_
300	_

© Cubic Ecligati					
Type	Cable symbol	Standard price			
	<b>P</b> (1m)	_			
Standard type	<b>S</b> (3m)	_			
	<b>M</b> (5m)	_			
Special length	<b>X06</b> (6m) ~ <b>X10</b> (3m)	_			
	<b>W01</b> (1m) ~ <b>W03</b> (5m)	_			
Double ended	<b>W04</b> (4m) ~ <b>W05</b> (10m)	_			
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	_			
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_			
Robot cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_			
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_			
Davidala anadad	RW01 (1m) ~ RW03 (3m)	_			
Double ended Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_			
NODOL CADIE	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_			

The values in < > apply to the SE type.

\* See page 606 for cables for maintenance. Actuator Specifications

③Cable Length

<b>@Options</b>			
Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-47	_
Non-motor end specification	NM	→ A-52	_

Actuator Specifications					
ltem	Description				
Drive method	Ball screw, ø12mm, rolled C10				
Positioning repeatability	±0.02mm				
Lost motion	0.1mm or less				
Rod diameter	ø30mm special SUS type				
Rod non-rotation precision	±0.05 deg				
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)				

193 ERC2-RGD7C



(Unit: mm/s)

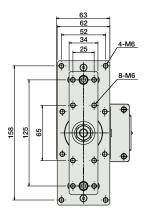
CAD drawings can be downloaded www.intelligentactuator.com

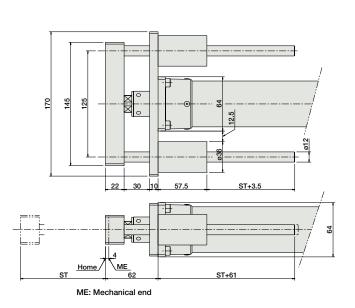
For Special Orders











\* See page 186 for the dimensions of the actuator.

## ■Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300
Guide weight (kg)	0.5	0.6	0.7	0.8	0.9	1.0
Guide + actuator weight (kg)	3.2	3.5	3.7	4.0	4.2	4.5

I/O type (Controller built into the Actuator)

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN Specification)		ERC2-RGD7C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
PIO Type (PNP Specification)		ERC2-RGD7C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16	DC24V	2A max.	_	→ P597
SIO Type		ERC2-RGD7C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				

IAI

ERC2-RGD7C SOUR SOUR ELECTROMATE

Toll Free Phone (877) SERV098 Toll Free Fax (877) SERV099 www.electromate.com sales@electromate.com

Chanden

Controller Integrated

> Rod Type

Mini

Controllers

Arm/ Flat Type

Mini

Standar

Rotary Type

Linear Servo Type

> Cleancoom Type

Splash-Proof Type

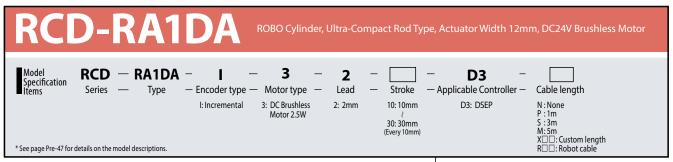
Pulse

Servo Motor

> Servo Motor

Linear Servo Motor

**ROBO** Cylinder





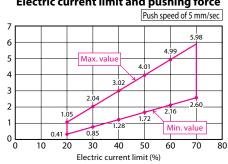
(1) The load capacity is based on operation at an acceleration of 1G. This is the upper limit of the acceleration/deceleration speed.

- 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 push motion is when operated at 5mm/s.
- (4) Since this model uses a lead screw, the actuator specifications may change according to the usage.
- (5) Take note that, since there is no brake, the rod may come down when the power is turned off if the actuator is used vertically.

  (6) See page A-71 for details on push motion.

## ■ Electric Current Limit and Pushing Force

#### **Electric current limit and pushing force**



The ranges shown in this graph take into account efficiency deterioration caused by wear on the lead screw. Always use the product within the maximum and minimum values.

#### Actuator Specifications ■ Lead and Payloads ■ Stroke and Maximum Speed Motor Feed Lead L Maximum payload Maximum push force (N) Stroke Model number output (w Screw Horizontal (kg) Vertical (kg) 10 to 30 Lead RCD-RA1DA-I-3-2-①-D3-② 2.5 0.7 0.3 300 2 4.2 (every 10 mm) (Unit: mm/s) Legend ① Stroke ② Cable length \*See page A-71 for details on push motion.

①Stroke Stroke (mm) Standard price 10 20 30

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)	_			
	<b>X16</b> (16m) ~ <b>X20</b> (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> (15m)	_			
	<b>R16</b> (16m) ~ <b>R20</b> (20m)	_			

\* See page A-59 for cables for maintenance.

Actuator Specifications						
ltem	Description					
Drive method	Ball screw, ø3mm					
Positioning repeatability	±0.05mm					
Lost motion	0.2mm or less					
Encoder resolution	400 pulses/rev					
Base	Material: Aluminum, white alumite treated					
Allowable static moment	0.02 N•m					
Rod non-rotation precision	±3 deg					
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)					
Service life	10 million cycles (for horizontal and vertical)					

Dimensional Drawings

## www.intelligentactuator.com

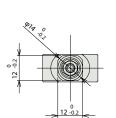
Technical References



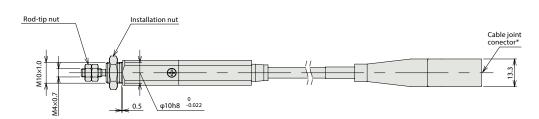


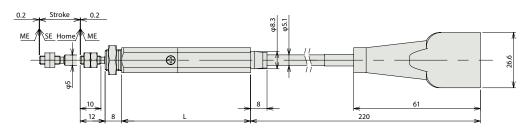


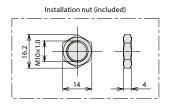
(\*) Connect the motor-encoder integrated cable here. (See page A-59 for details on cables.)

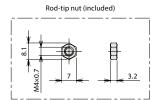


(Installation nut not shown)









ME: Mechanical end SE: Stroke end

Stroke	10	20	30
L	52	62	72
Weight (g)	47	51	55

Name	External view	Model	Description	Maximum number of positioning points	Input Voltage	Power-supply capacity	Standard price	See Pa
Solenoid valve type		DSEP-C-3I-①-2-0	Operable with the same signal as a solenoid valve.			(Standard specification) Rated: 0.7A Maximum: 2.5A	_	→ P547
Dust-proof colenoid valve type		DSEP-CW-3I-(I)-2-0	Supports both single and double solenoid types.	3 points	DC24V			

Rod Type



Robo Cylinder, Mini Rod Type, Motor Unit Coupled Type, Actuator Width 18mm, 24V Servo Motor, Ball Screw Specification

Model Specification Items

RCA2 - RA2AC-Series — Type

5 — Encoder type — Motor type

5: 5W Servo

motor

Lead 4:4mm

Notes on

2:2mm 1:1mm

Stroke 25: 25mm 100: 100mm (every 25mm)

A3:ASEP MSEP

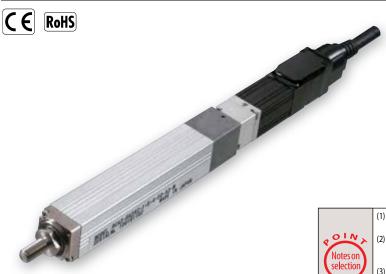
**A3** 

Applicable controller Cable length N: None P: 1m S: 3m

Options See Options below.

M:5m

 $X\square\square$ : Custom Length



I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

Technical References



(1) The load capacity is based on operation at an acceleration of 0.3G. This value is the upper limit for the acceleration. OIN

- (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.
- (4) See page A-71 for details on push motion.

## **Actuator Specifications**

Leaus allu rayloaus									
Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Capacity Horizontal (kg)   Vertical (kg)		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)	
RCA2-RA2AC-I-5-4-①-A3-②-③			4	0.5	0.25	21.4			
RCA2-RA2AC-I-5-2-①-A3-②-③	5	Ball screw	2	1	0.5	42.3	±0.02	25~100 (every 25mm)	
RCA2-RA2AC-I-5-1-①-A3-②-③			1	2	1	85.5			

■ Stroke and Maximum Speed								
Stroke (mm)		Leac	Stroke	25 (mm)	50 <sup>,</sup> (n			
25~100 (every 25mm)		Α .	4	180	2			
		Ball screw	2	10	00			
			1	5	0			

Stroke 25 50~100 4 180 200 2 100 1 50

(Unit: mm/s)

#### ① Stroke

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

	Cab		

Type	Cable symbol	Standard price
Charadanal	<b>P</b> (1m)	_
Standard (Robot Cables)	<b>S</b> (3m)	_
(Robot Cables)	<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.
\*See page A-59 for cables for maintenance.

Name	Option code	See page	Standard price
Non-motor end specification	NM	→ A-52	_

## Actuator Specifications

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

For Special Orders

P.15

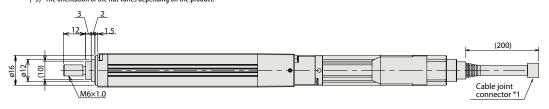
③

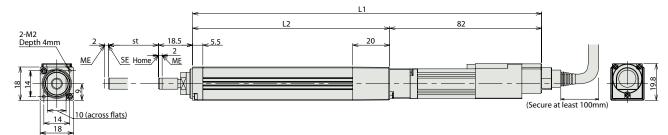
Dimensional Drawings

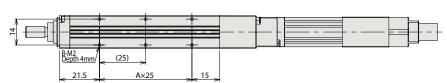
# www.intelligentactuator.com

2D CAD 3D CAD

- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- $\begin{tabular}{ll} (*3) & The orientation of the nut varies depending on the product. \end{tabular}$







SE: Stroke end ME: Mechanical end

# Dimensions of nut at tip of rod



Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

## ■ 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
Weight (kg)	0.17	0.19	0.2	0.22

## Applicable Controllers

NCAZ series actuators can be operated with the controllers indicated below. Select the type according to your intended application.									
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page	
Solenoid valve type		ASEP-C-5SI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547	
Solenoid valve multi-axis type PIO specification		MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected		DC24V	1A rated 2A max.		→ P563	
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				→ P563	

\*① indicates I/O type (NP/PN). \*① indicates number of axes (1 to 8). \*⑩ indicates field network specification symbol.

# RCA2-RA2AR

Robo Cylinder, Mini Rod Type, Side-mounted Motor Type, Actuator Width 18mm, 24V Servo Motor, Ball Screw Specification

Model Specification Items

RCA2 -RA2AR-Series — Type

5

5: Servo motor

5W

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

— Encoder type — Motor type — Lead

2:2mm

1:1mm

OIN

Notes on

Stroke 25: 25mm 4:4mm

100: 100mm (every 25mm)

**A3** — Applicable controller — Cable length — Options

A3:ASEP MSEP

N: None P: 1m S: 3m M:5m

See Options below. \*Be sure to specify which side the motor is to be  $X\square\square$ : Custom Length mounted (ML/MR).

\* See page Pre-47 for details on the model descriptions

C E RoHS





References (1) The load capacity is based on operation at an acceleration of 0.3G. This value is the

Technical

upper limit for the acceleration. (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.

(4) See page A-71 for details on push motion.

## **Actuator Specifications**

E Leaus and Payloads								
Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Horizontal (kg)		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	Ball screw	2	1	0.5	42.3	±0.02	25~100 (every 25mm)
RCA2-RA2AR-I-5-1-①-A3-②-③			1	2	1	85.5		

■ Stroke and Maximum Speed							
Leac	Stroke	25 (mm)	50~100 (mm)				
W	4	180	200				
screw	2	10	00				

Code explanation ① Stroke ② Cable length ③ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

50

#### ① Stroke

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

#### ②Cable Length

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

Ball

#### ③ Options

Name	Option code	See page	Standard price
Side-mounted motor to the left	ML	→ A-52	_
Side-mounted motor to the right	MR	→ A-52	_
Side-mounted motor to the top	MT	→ A-52	_
Non-motor end specification	NM	→ A-52	_

### Actuator Specifications

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

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.
\*See page A-59 for cables for maintenance.

# www.intelligentactuator.com

For Special Orders





Note:

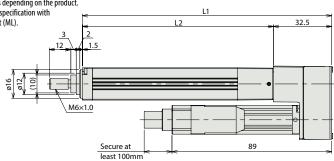


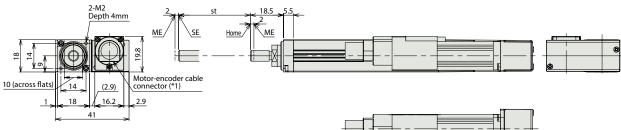
Do not apply any external force on the rod from any direction other than the direction of the rod's motion.

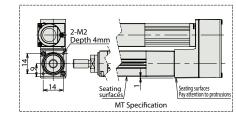
If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

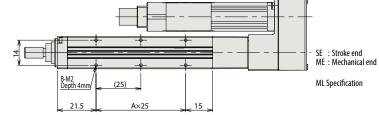
- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.

(\*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).









1	■ Dimensions and	d Wei	ght b	y Stro	ke
Dimensions of nut at tip of rod	Stroke	25	50	75	100
M6×1.0	L1	114	139	164	189
	L2	81.5	106.5	131.5	156.5
<del>-[]</del> -{(♥)- ≦	Α	1	2	3	4
H Y	В	4	6	8	10
3.6 10	Weight (kg)	0.21	0.22	0.24	0.25

## Applicable Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Solenoid valve type		ASEP-C-5SI-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	line"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected		DC24V	1A rated 2A max.		, DEC2
Solenoid valve multi-axis type Network specification	iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563

<sup>\*</sup>① indicates I/O type (NP/PN). \*① indicates number of axes (1 to 8). \*⑩ indicates field network specification symbol.



# RCA2-RN3NA

Robo Cylinder, Mini Rod Type, Short-Length Nut Mounting Type, Actuator Width 28mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items

RCA2 — RN3NA — Series — Type

10 - Encoder type l: Incremental

\* The Simple absolute

considered type "I".

encoder is also

 Motor type 10: 10W Servo motor

Lead Stroke 4: Ball screw 4mm 30: 30mm Ball screw 2mm Ball screw 1mm

1S: Lead screw 1mm

50: 50mm 4S: Lead screw 4mm 2S: Lead screw 2mm

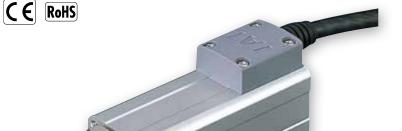
Applicable controller

A1:ACON ASEL A3:AMEC

N: None P: 1m S: 3m M:5m

Cable length

**ASEP** MSFP X□□: Custom Length



Technical



- Options

**Power-saving** 

See options below.

References (1) The screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the screw prior to use. (If there is no anti-rotation device attached, the screw

joint. Please refer to page A-11 for the instruction details. (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 1, if used vertically and for lead screw specification). The acceleration limit is the value indicated above.

cannot extend or retract.) When connecting the anti-rotation device to the rod, do not use a floating

(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.

(6) See page A-71 for details on push motion.

### Actuator Specifications ■ Leads and Payloads

RCA2-RN3NA-I-10-1S-①-②-③-④

Motor output (W) Feed Lead Max. Load Capacity Positioning Repeatability Stroke Model number screw (mm) thrust (N) (mm) RCA2-RN3NA-I-10-4-①-②-③-④ Ball 30 50 RCA2-RN3NA-I-10-2-①-②-③-④ 2 1.5 0.5 85.5 ±0.02 screw RCA2-RN3NA-I-10-1-10-12-3-4 3 1 170.9 1 RCA2-RN3NA-I-10-4S-①-②-③-④ 4 0.25 0.125 25.1 30 50 Lead RCA2-RN3NA-I-10-2S-①-②-③-④ 10 2 0.5 0.25 50.3 ±0.05

■ Stroke and Maximum Speed

		Lead		30 (mm)	50 (mm)
		<b>%</b>	4	20	00
	Ball screw		2	10	00
		Ba	1	5	0
1		Wei	4	20	00
		Lead screw	2	10	00
		, Fe	1	5	0

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

1

0.5

(Unit: mm/s)

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

## ③Cable Length

100.5

Туре	Cable symbol	Standard price
Standard	<b>P</b> (1m)	_
(Robot Cables)	<b>S</b> (3m)	_
(NODOL Cables)	<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. \* See page A-59 for cables for maintenance.

#### Actuator Specifications

	Item	Description			
Drive System	1	Ball screw/Lead screw, ø4mm, rolled C10			
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)			
Frame		Material: Aluminum, white alumite treated			
Ambient ope	erating 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	5,000km or 50 million cycles			

#### **4** Options Name Option code See page Standard price Brake R → A-42 Connector cable exits from the left **K**1 → A-51 Connector cable exits from the front → A-51 Connector cable exits from the right КЗ → A-51 Power-saving specification

RCA2-RN3NA



Dimensional Drawings

## www.intelligentactuator.com

For Special Orders

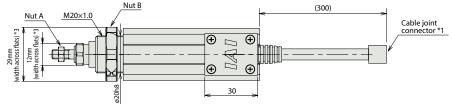


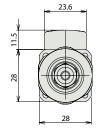


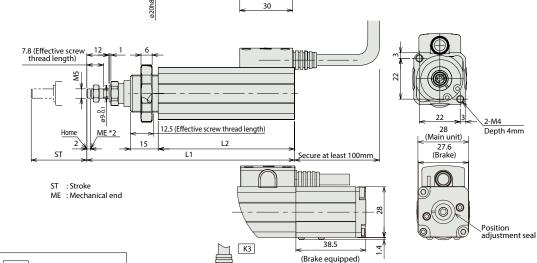


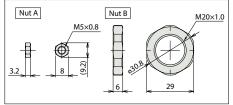
- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- (\*3) The orientation of the nut varies depending on the product.

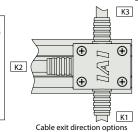
Note: This product doesn't come with an anti-rotation device. Please add an anti-rotation device such as a guide or similar locking device to the tip of the screw prior to use.











\* Brake-equipped models are heavier by 0.1kg. ■ Dimensions and Weight by Stroke Stroke 30 L1 L2 112 132 73.5 93.5 Weight (kg) 0.25 0.27

# ②Applicable Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
	34	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid Valve Type	1	ASEP-C-10I①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	un	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			(Standard) 1.3A rated 4.4A max. (Power-saving)		→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P503
Positioner type		ACON-C-10I①-①-2-0	Positioning is possible for up to 512	512 points DC24V			_	
Safety-Compliant Positioner Type		ACON-CG-10I①-①-2-0	points		DC24V		-	
Pulse Train Input Type (Differential Line Driver)	É.	ACON-PL-10I①-①-2-0	Pulse train input type with differential line driver support	(—)		1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-10I()-(i)-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-10I①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-10I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ① indicates I/O type (NP/PN). \* ⑩ indicates number of axes (1 to 8). \* ⑩ indicates field network specification symbol.

IAI



# RCA2-RN4NA

Robo Cylinder, Mini Rod Type, Short-Length Nut Mounting Type, Actuator Width 34mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items

C € RoHS

RCA2 - RN4NA -Series — Type

20 – Encoder type – l: Incremental

encoder is also

considered type "I".

- Motor type 20: 20W Servo \* The Simple absolute motor

Lead Ball screw 2mm

Stroke 6: Ball screw 6mm 30: 30mm 4: Ball screw 4mm 50: 50mm

6S: Lead screw 6mm 4S: Lead screw 4mm 2S: Lead screw 2mm Applicable controller A1:ACON ASEL A3:AMEC

N: None P: 1m S: 3m M:5m

**ASEP** MSFP X□□: Custom Length

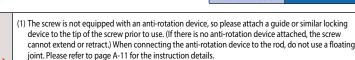
Cable length

Technical References

**Power-saving** 

- Options

See options below.



- (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 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.
- (6) See page A-71 for details on push motion.

Actuator Specifications
<b>Actuator Specifications</b>

■ Leads and Payloads Motor output (W) Feed Lead Max. Load Capacity Rated Positioning Repeatability Stroke Model number (mm) thrust (N) (mm) RCA2-RN4NA-I-20-6-①-②-③-④ Ball 30 50 RCA2-RN4NA-I-20-4-①-②-③-④ 20 4 3 0.75 50.7 ±0.02 RCA2-RN4NA-I-20-2-1-2-3-4 2 6 1.5 101.5 RCA2-RN4NA-I-20-6S-10-2-3-4 0.25 0.125 19.9 Lead 30 RCA2-RN4NA-I-20-4S-①-②-③-④ 20 4 0.5 0.25 29.8 ±0.05 50 RCA2-RN4NA-I-20-2S-①-②-③-④ 2 0.5 59.7

	■ St	Stroke and Maximum Speed							
	Lead	Stroke 30 (mm)		50 (mm)					
	<b>≱</b>	6	270 <220>	300					
	Ball screw	4	200						
	Ba	2	100						
	Na Na	6	220	300					
	ead screw	4	20	00					
	Les	2	10	00					
-	* The values enclosed in < > /Unit: mm/s								

(Unit: mm/s) Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion. \*The values enclosed in c

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

## ③ Cable Length

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

<sup>\*</sup>The standard cable for the RCA2 is the robot cable. \*See page A-59 for cables for maintenance.

### 4 Options

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the front	K2	→ A-51	_
Connector cable exits from the right	К3	→ A-51	_
Power-saving specification	LA	→ A-52	_

#### Actuator Specifications

rictuate	or opecimentations			
	Item	Description		
Drive System	1	Ball screw/Lead screw, ø6mm, rolled C10		
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)		
Frame		Material: Aluminum, white alumite treated		
Ambient ope	erating 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	5,000km or 50 million cycles		



Dimensional Drawings

# www.intelligentactuator.com

For Special Orders

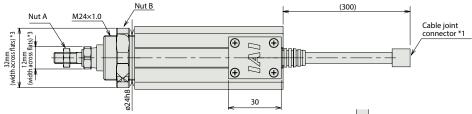


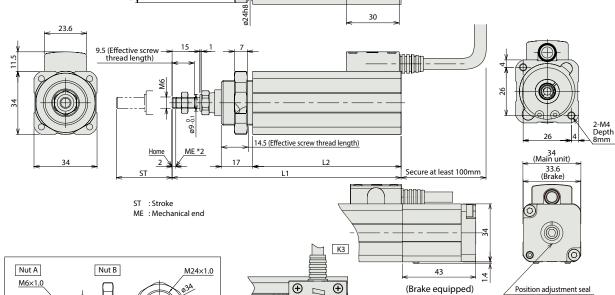




- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- (\*3) The orientation of the nut varies depending on the product.

Note: This product doesn't come with an anti-rotation device. Please add an anti-rotation device such as a guide or similar locking device to the tip of the screw prior to use.





**① ①** (Brake equipped) K2 **① ①** 

K1

 $^{st}$  Brake-equipped models are heavier by 0.15kg. ■ Dimensions and Weight by Stroke Stroke

30 123 143.5 L1 L2 80 100 Weight (kg) 0.4 0.44

②Applicable Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Cable exit direction options

ncaz series actuators can be operated with the controllers molicated below, seriest the type according to your intended application.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	- T	AMEC-C-20I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid valve Type	3	ASEP-C-20I①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	mi	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			(Standard) 1.3A rated		→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_  -	
Positioner type	I.	ACON-C-20I①-①-2-0	Positioning is possible for up to 512	512 points			_	
Safety-Compliant Positioner Type		ACON-CG-20I()-())-2-0	points	DC24V	4.4A max. (Power-saving)	-		
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I①-①-2-0	Pulse train input type with differential line driver support	(—)		1.3A rated 2.5A max.		→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I①-⑪-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points				
Program Control Type		ASEL-CS-1-20I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

RCA2-RN4NA ELECTROMATE

# RCA2-RP3NA

Robo Cylinder, Mini Rod Type, Short-Length Tapped-Hole Mounting Type, Actuator Width 28mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Applicable controller -

MSEP

Model Specification Items

C € RoHS

RCA2 - RP3NASeries — Type

10 Encoder type –

I: Incremental

encoder is also

considered type "I".

 Motor type — 10: 10W Servo motor \* The Simple absolute

Lead

15: Lead screw 1mm

1: Ball screw 1mm 4S: Lead screw 4mm 2S: Lead screw 2mm

Stroke 4: Ball screw 4mm 30: 30mm 2: Ball screw 2mm 50: 50mm

A1:ACON ASEL A3:AMEC ASEP

N: None P: 1m S: 3m M:5m

Cable length

X□□: Custom Length

See options below.

Power-saving

Options

Technical References



- (1) The screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the screw prior to use. (If there is no anti-rotation device attached, the screw cannot extend or retract.) When connecting the anti-rotation device to the rod, do not use a floating joint. Please refer to page A-11 for the instruction details.
- (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 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 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.
- (6) See page A-71 for details on push motion.

Actuator Specifications

■ Leads and Payloads Motor output (W) Feed Lead Max. Load Capacity Rated Positioning Repeatability Stroke Model number (mm) thrust (N) (mm) RCA2-RP3NA-I-10-4-①-②-③-④ Ball RCA2-RP3NA-I-10-2-①-②-③-④ 10 2 1.5 0.5 85.5 ±0.02 screw RCA2-RP3NA-I-10-1-10-12-13-4 3 1 170.9 1 RCA2-RP3NA-I-10-4S-①-②-③-④ 4 0.25 0.125 25.1 30 50 Lead RCA2-RP3NA-I-10-2S-①-②-③-④ 10 2 0.5 0.25 50.3 ±0.05 RCA2-RP3NA-I-10-1S-①-②-③-④ 1 0.5 100.5

■ Stroke and Maximum Speed (mm) 4 200 Ball screw 2 100 1 50 4 200 screw 2 100 Lead 1 50

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

①Stroke

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

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the front	K2	→ A-51	_
Connector cable exits from the right	К3	→ A-51	
Power-saving specification	LA	→ A-52	_

## ③Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	<b>P</b> (1m)	_
	<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)	_

<sup>\*</sup> The standard cable for the RCA2 is the robot cable. \* See page A-59 for cables for maintenance

#### Actuator Specifications

Actuator Specifications				
	ltem	Description		
Drive System	1	Ball screw/Lead screw, ø4mm, rolled C10		
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)		
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		
	Ball screw specification	5,000km or 50 million cycles		



## Dimensional Drawings

# www.intelligentactuator.com

For Special Orders







(\*1) Connect the motor-encoder integrated cable here.

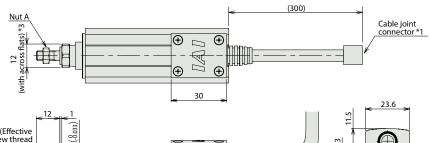
K2

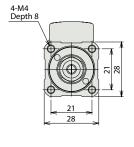
**①** 

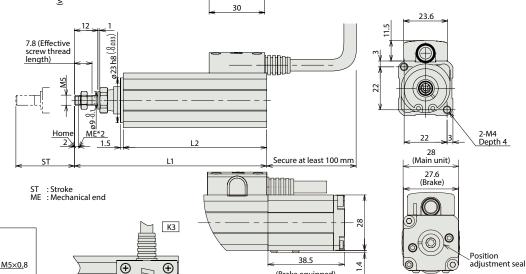
Cable exit direction options

- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- $\begin{tabular}{ll} (*3) & The orientation of the nut varies depending on the product. \end{tabular}$

Note: This product doesn't come with an anti-rotation device. Please add an anti-rotation device such as a guide or similar locking device to the tip of the screw prior to use.







(Brake equipped)

\* Brake-equipped models are heavier by 0.1kg.

■ Dimensions and Weight by Strok									
Stroke	30	50							
L1	98.5	118.5							
L2	73.5	93.5							
Weight (kg)	0.2	0.22							

## ② Applicable Controllers

Nut A

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

**①** 

K1

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calanaid Valua Tura	W.	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid Valve Type	3	ASEP-C-10I()-())-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lund.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification	iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P503
Positioner type		ACON-C-10I①-①-2-0	Positioning is possible for up to 512 points	512 points		(Standard) 1.3A rated	_	
Safety-Compliant Positioner Type		ACON-CG-10I①-①-2-0		312 points	DC24V	4.4A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)	Ó	ACON-PL-10I①-①-2-0	Pulse train input type with differential line driver support	(—)		1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-10I①-⑪-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-10I①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-10I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

RCA2-RP3NA

ELECTROMATE

# RCA2-RP4NA

Robo Cylinder, Mini Rod Type, Short-Length Tapped-Hole Mounting Type, Actuator Width 34mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items

RCA2 – RP4NA Series — Type

Encoder type – I: Incremental

encoder is also

considered type "I".

- Motor type — \* The Simple absolute

20

Lead Stroke

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

20: 20W Servo 6: Ball screw 6mm 30: 30mm motor 4: Ball screw 4mm 50: 50mm

2S: Lead screw 2mm

Applicable controller — Cable length — Options A1:ACON N: None

ASEL P: 1m S: 3m A3:AMEC ASEP M:5m

MSEP X□□: Custom Length



**Power-saving** 

See options below.

Technical References

(1) The screw is not equipped with an anti-rotation device, so please attach a guide or similar locking device to the tip of the screw prior to use. (If there is no anti-rotation device attached, the screw cannot extend or retract.) When connecting the anti-rotation device to the rod, do not use a floating joint. Please refer to page A-11 for the instruction details.

(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 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.

(6) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Loac Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)	Lea	Stroke	30 (mm)		
RCA2-RP4NA-I-20-6-①-②-③-④			6	2	0.5	33.8			×	6	270 < 22		
RCA2-RP4NA-I-20-4-①-②-③-④	20	20	20	Ball screw	4	3	0.75	50.7	±0.02	30 50	Ball screw	4	
RCA2-RP4NA-I-20-2-①-②-③-④			2	6	1.5	101.5			Ba	2			
RCA2-RP4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9			Ne.	6	220		
RCA2-RP4NA-I-20-4S-①-②-③-④	20	20	20 Lead screw	4	0.5	0.25	29.8	±0.05	30 50	id screw	4		
RCA2-RP4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7			Lead	2			
Code explanation ① Stroke ② Applicable co	*The values enclosed in < > apply to vertical settings.  *The values enclosed in < > apply to vertical settings.												

■ Stroke and Maximum Speed

	Stroke Lead							
	Ņ	6	270 <220>	300				
	Ball screw		200					
	Be	2	100					
ſ	ew.	6	220	300				
	Lead screw	4	200					
	Геё	2	10	00				

(Unit: mm/s)

## ① Stroke

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

#### ③Cable Length

Туре	Cable symbol	Standard price
Chara dand	<b>P</b> (1m)	_
Standard (Robot Cables)	<b>S</b> (3m)	_
(RODOL Cables)	<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. \*See page A-59 for cables for maintenance.

#### Actuator Specifications

Actuator Specifications					
	Item	Description			
Drive System		Ball screw/Lead screw, ø6mm, rolled C10			
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)			
Frame		Material: Aluminum, white alumite treated			
Ambient ope	erating 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	5,000km or 50 million cycles			

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the front	K2	→ A-51	
Connector cable exits from the right	К3	→ A-51	
Power-saving specification	LA	→ A-52	

**207** RCA2-RP4NA



For Special Orders

P.15

# Dimensional Drawings

3D

CAD

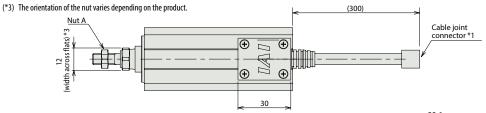
# www.intelligentactuator.com

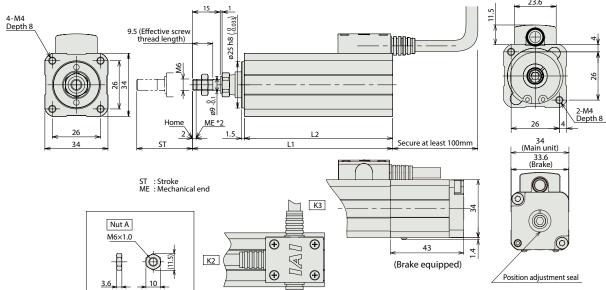
(\*1) Connect the motor-encoder integrated cable here.

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

Note: This product doesn't come with an anti-rotation device. Please add an anti-rotation device such as a guide or similar locking device to the tip of the screw prior to use.

2D CAD





 $^{st}$  Brake-equipped models are heavier by 0.15kg.

# ensions and Weight by Stroke

■ Dimensions and weight by Stroke							
Stroke	30	50					
L1	108	128					
L2	80	100					
Weight (kg)	0.32	0.36					

(2) A	 	L L	C	 ΑII	ors	

Cable exit direction options

K1

	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colon oid Value Tuno	W.	AMEC-C-20I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid Valve Type	3	ASEP-C-20I①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lund.	MSEP-C2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	7 7503
Positioner type	-	ACON-C-20I①-⑪-2-0	Positioning is possible for up to 512	512 points		(Standard) 1.3A rated	_	
Safety-Compliant Positioner Type		ACON-CG-20I①-①-2-0	points	512 points	DC24V	4.4A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)	Ó	ACON-PL-20I①-①-2-0	Pulse train input type with differential line driver support	, ,		1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-20I()-(i)-2-0	Pulse train input type with open collector support	(—)				
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

# RCA2-GS3NA

Robo Cylinder, Mini Rod Type, Short-Length Single-Guide Type, Actuator Width 28mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items

RCA2 – GS3NA – Series — Type

— Encoder type — Motor type I: Incremental

encoder is also

considered type "I".

10: 10W Servo \* The Simple absolute

10

Lead Stroke Ball screw 1mm

1S: Lead screw 1mm

4: Ball screw 4mm 30: 30mm 2: Ball screw 2mm 50: 50mm 4S: Lead screw 4mm 2S: Lead screw 2mm

Applicable controller — Cable length

A1:ACON N: None ASEL P: 1m A3:AMEC S: 3m ASEP

M:5m MSFP X□□: Custom Length

**Power-saving** 

Options

See options below.

CE RoHS

Technical References



- (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. Please refer to page A-110 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.
- (4) See page A-71 for details on push motion.

## Actuator Specification

■ Leads and Payloads

Motor Feed Lead Max. Load Capacity Rated Positioning Stroke Model numbe

Modernamber	output (W)	screw	(mm)	Horizontal (kg)	Vertical (kg)	thrust (N)	(mm)	(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)				
	Ball screw	4	20	00				
		2	10	00				
		1	5	0				
	W	4	20	00				
	ead screw	2	10	00				
	Leg	1	5	0				

■ Stroke and Maximum Speed

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

#### ① Stroke

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

(4) Options			
Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the front	K2	→ A-51	_
Connector cable exits from the right	К3	→ A-51	_
Power-saving specification	LA	→ A-52	_

## ③Cable Length

Type	Cable symbol	Standard price
Chanadanal	<b>P</b> (1m)	_
Standard (Robot Cables)	<b>S</b> (3m)	_
(RODOL Cables)	<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 RCA2 is the robot cable.

\* See page A-59 for cables for maintenance.

#### Actuator Specifications

Actuator Specifications						
	ltem	Description				
Drive System	1	Ball screw/Lead screw, ø4mm, rolled C10				
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)				
Frame		Material: Aluminum, white alumite treated				
Ambient ope	erating 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	5,000km or 50 million cycles				



For Special Orders

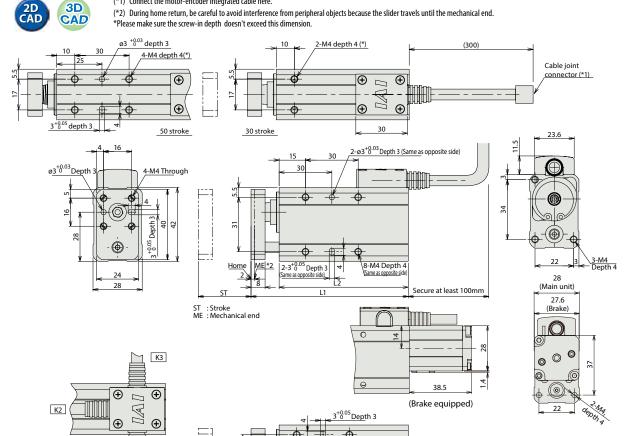
P.15

## Dimensional Drawings

## www.intelligentactuator.com

(\*1) Connect the motor-encoder integrated cable here.

(\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end. 
\*Please make sure the screw-in depth doesn't exceed this dimension.



\* Brake-equipped models are heavier by 0.1kg.

#### ■ Dimensions and Weight by Stroke Stroke 30 109.5 89.5 73.5 93.5 Weight (kg) 0.32 0.36

(2) A	nnl	icak	ا ماد	Cont	troll	ors

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

ø3<sup>+0.03</sup> Depth 3

nera serial security surface controllers managed serial series (specification). The controllers are controllers and controllers are controllers and controllers are controllers and controllers are controllers.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solehold valve Type	1	ASEP-C-10I①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lune"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification	iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P303
Positioner type	I.	ACON-C-10I①-①-2-0	Positioning is possible for up to 512	512 points	DC24V	(Standard) 1.3A rated 4.4A max. (Power-saving)	_	
Safety-Compliant Positioner Type		ACON-CG-10I()-())-2-0	points				1	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-10I①-①-2-0	Pulse train input type with differential line driver support			1.3A rated 2.5A max.		→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-10I①-①-2-0	Pulse train input type with open collector support				_	
Serial Communication Type		ACON-SE-10I①-N-0-0	Dedicated Serial Communication	64 points				
Program Control Type		ASEL-CS-1-10I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

K1

Cable exit direction option

# RCA2-GS4NA

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

Model Specification Items

C E RoHS

RCA2 – GS4NA – Series — Type

— Encoder type — Motor type

l: Incremental

encoder is also

considered type "I".

20: 20W Servo \* The Simple absolute motor

20

Lead Ball screw 2mm

Stroke 6: Ball screw 6mm 30: 30mm 4: Ball screw 4mm 50: 50mm

6S: Lead screw 6mm 4S: Lead screw 4mm 2S: Lead screw 2mm Applicable controller — Cable length

A1:ACON N: None ASEL P: 1m A3:AMEC S: 3m

**ASEP** M:5m MSFP X□□: Custom Length

**Power-saving** 

Options

See options below.

Technical References



- (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. Please refer to page A-110 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 when the power is turned off.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Loac Horizontal (kg)	Capacity Vertical (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

	Leac	Stroke	30 (mm)	50 (mm)
	Ball screw	6	270 <220>	300
		4	20	00
		2	10	00
	- M	6	220	300
	ead screw	4	20	00
	Pe	2	10	00

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion. \*The values enclosed in < > apply to vertical settings.

(Unit: mm/s)

## ① Stroke

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

#### ③Cable Length

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

<sup>\*</sup>The standard cable for the RCA2 is the robot cable.
\*See page A-59 for cables for maintenance.

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the front	K2	→ A-51	_
Connector cable exits from the right	К3	→ A-51	_
Power-saving specification	LA	→ A-52	_

#### Actuator Specifications

- Addition of the second of th						
	ltem	Description				
Drive System		Ball screw/Lead screw, ø6mm, rolled C10				
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)				
Frame		Material: Aluminum, white alumite treated				
Ambient ope	erating 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	5,000km or 50 million cycles				



Cable joint

connector \*1

 $\oplus$ 

34 (Main unit)

33.6 (Brake)

 $\bigcirc$ 

 $(\bigcirc)$ 

For Special Orders

(300)

P.15

Dimensional Drawings gs can be downloaded www.intelligentactuator.com

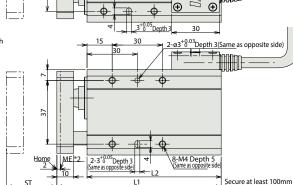
2D CAD CAD

(\*1) Connect the motor-encoder integrated cable here.

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

\*Please make sure the screw-in depth doesn't exceed this dimension.

4-M4 Through  $ø3^{+0.03}_{0}$ Depth Depth 3 (<del>(</del> 30 34



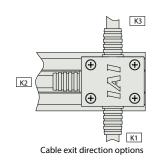
ST : Stroke ME : Mechanical end

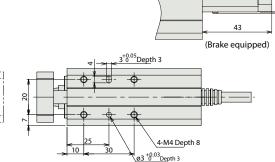
ø3<sup>+8.03</sup>Depth 3

**①** 

4-M4 Depth 5 (\*)

**①** П





\* Brake-equipped models are heavier by 0.15kg.

Weight (kg)

#### ■ Dimensions and Weight by Stroke Stroke 30 98 118 80 100

0.55

0.63

② Applicable Controllers

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Solenoid Valve Type	No.	AMEC-C-20I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
Soleriola valve Type	1	ASEP-C-20I①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points				→ P547	
Solenoid valve multi-axis type PIO specification	lune.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563	
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P503	
Positioner type		ACON-C-20I①-①-2-0	Positioning is possible for up to 512	512		(Standard) 1.3A rated	_		
Safety-Compliant Positioner Type			points	512 points	DC24V	4.4A max. (Power-saving)	-		
Pulse Train Input Type (Differential Line Driver)	Ď.	ACON-PL-20I①-①-2-0	Pulse train input type with differential line driver support	( )		1.3A rated 2.5A max.	_	→ P631	
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I()-(i)-2-0	Pulse train input type with open collector support	(—)	(—)			_	
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points			_		
Program Control Type		ASEL-CS-1-20I①	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ① indicates I/O type (NP/PN). \* ① indicates number of axes (1 to 8). \* ② indicates field network specification symbol.

# RCA2-GD3NA

Robo Cylinder, Mini Rod Type, Short-Length Double-Guide Type, Actuator Width 28mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items

C E RoHS

RCA2 — GD3NA — Series — Type

— Encoder type — Motor type I: Incremental \* The Simple absolute

encoder is also

considered type "I".

10: 10W Servo motor

10

Lead Stroke Ball screw 1mm

4: Ball screw 4mm 30: 30mm 2: Ball screw 2mm 50: 50mm 4S: Lead screw 4mm 2S: Lead screw 2mm 1S: Lead screw 1mm

Applicable controller — Cable length

A1:ACON N: None ASEL P: 1m A3:AMEC

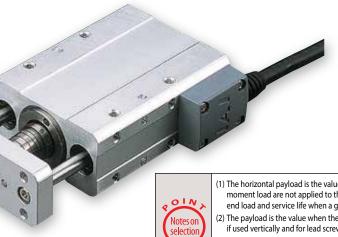
S: 3m M:5m

ASEP MSFP X□□: Custom Length

**Power-saving** 

Options

See options below.



(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. Please refer to page A-111 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 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.
- (4) See page A-71 for details on push motion.

## Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Loac Horizontal (kg)	Capacity Vertical (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-10-1-①-②-③-④			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-10-1S-①-②-③-④			1	1	0.5	100.5		

# ■ Stroke and Maximum Speed

References

		Leac	Stroke	50 (mm)	
1		W	4	20	00
		Ball screw	2	10	00
		Ba	1	5	0
	Na.		4	20	00
		Lead screw	2	10	00
	Leg		1	5	0

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

#### ① Stroke

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

#### ③Cable Length

Type	Cable symbol	Standard price
Charland	<b>P</b> (1m)	_
Standard	<b>S</b> (3m)	_
(Robot Cables)	<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. \* See page A-59 for cables for maintenance.

#### Actuator Specifications

Terrando o premiento do como de como d						
	ltem	Description				
Drive System		Ball screw/Lead screw, Ø4mm, rolled C10				
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)				
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				
	Ball screw specification	5,000km or 50 million cycles				

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the front	K2	→ A-51	_
Connector cable exits from the right	К3	→ A-51	_
Power-saving specification	LA	→ A-52	_

213 RCA2-GD3NA



50 109.5

93.5

0.48

30

89.5

73.5

0.41

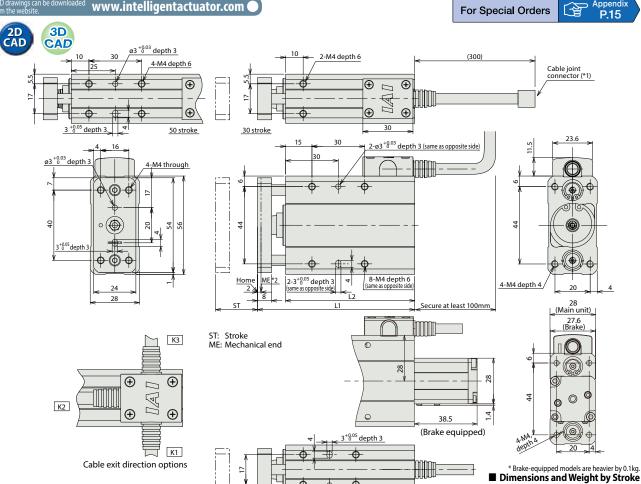
Dimensional Drawings

CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders

Stroke

Weight (kg)



(\*1) Connect the motor-encoder integrated cable here.

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

② Applicable Controllers	
RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.	* ACON-CY also can be used.

4-M4 depth 6

× ÿ3 <sup>+0.03</sup> depth 3

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. * ACON-CY also can be used.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	34	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Soleriola valve Type	1	ASEP-C-10I①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	True i	MSEP-C2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification	iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P503
Positioner type	Positioning is possible for up to 512		512 mainte		(Standard) 1.3A rated	_		
Safety-Compliant Positioner Type		ACON-CG-10I①-①-2-0	points	512 points	DC24V	4.4A max. (Power-saving)	-	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-10I①-①-2-0	Pulse train input type with differential line driver support	(—)		1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-10I()-(i)-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-10I①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-10I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ① indicates I/O type (NP/PN). \* ⑩ indicates number of axes (1 to 8). \* ⑩ indicates field network specification symbol.



Robo Cylinder, Mini Rod Type, Short-Length Double-Guide Type, Actuator Width 34mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items

C E RoHS

RCA2 — GD4NA — Series — Type

– Encoder type –

I: Incremental

encoder is also

considered type "I".

- Motor type — \* The Simple absolute

20

Lead —

Stroke 20: 20W Servo 6: Ball screw 6mm 30: 30mm motor 4: Ball screw 4mm 50: 50mm

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

Applicable controller — Cable length — Options A1:ACON ASEL

N: None P: 1m S: 3m A3:AMEC ASEP M:5m MSEP

X□□: Custom Length

**Power-saving** 

See options below.

moment load are not applied to the rod. Please refer to page A-111 for correlation diagrams of the end load and service life when a guide is not installed.

electio

(1) The horizontal payload is the value when used in combination with a guide so that a radial load and

Technical References

(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.

(4) See page A-71 for details on push motion.

## Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Loac Horizontal (kg)	Capacity 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-20-6S-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-20-2S-①-②-③-④			2	1	0.5	59.7		

■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)		
Ņ	6	270 <220>	300		
Ball screw	4	20	00		
Be	2	100			
We	6	220	300		
ead screw	4	200			
řež	2	10	00		

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion. \*The values enclosed in < > apply to vertical settings.

(Unit: mm/s)

## ① Stroke

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

## ③Cable Length

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

<sup>\*</sup>The standard cable for the RCA2 is the robot cable. \*See page A-59 for cables for maintenance.

#### Actuator Specifications **4** Options

ltem		Description		
Drive System		Ball screw/Lead screw, ø6mm, rolled C10		
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)		
Frame		Material: Aluminum, white alumite treated		
Ambient ope	erating 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	5,000km or 50 million cycles		

Option code	See page	Standard price
В	→ A-42	_
K1	→ A-51	_
K2	→ A-51	_
К3	→ A-51	_
LA	→ A-52	_
	B K1 K2 K3	B → A-42 K1 → A-51 K2 → A-51 K3 → A-51

215 RCA2-GD4NA



Dimensional Drawings www.intelligentactuator.com For Special Orders P.15 ø3<sup>+0.03</sup>Depth 3 2D CAD 4-M4 Depth 8 CAD Cable joint connector \*1 ① **(+) ①** 3<sup>+0.05</sup>Depth 3 ø<u>3<sup>+0.03</sup>De</u>pth 3 2-ø3<sup>+0.03</sup>Depth 3 (Same as opposite side) ME\*2 -4-M4 Through 19 99 89 (⊕ 2-3<sup>+0.05</sup> Depth 3 8-M4 Depth 8 34 (Main unit) Secure at least 100mm 33.6 (Brake ST: Stroke ME: Mechanical end K3 0 **(**  $\oplus$ 11/4 0 **①** ①  $(\odot)$ 3<sup>+0.05</sup> Depth 3 (Brake equipped) K1 Cable exit direction options \* Brake-equipped models are heavier by 0.15kg. ■ Dimensions and Weight by Stroke (\*1) Connect the motor-encoder integrated cable here. Stroke 30 (\*2) During home return, be careful to avoid interference 4-M4 Depth 8 98 118

from peripheral objects because the slider travels until the mechanical end.

②Applicable Controllers RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

ø<u>3<sup>+0.03</sup>Depth 3</u>

nch2 series actuators can be operated with the controllers indicated below. Select the type according to your interided application. Acord-or also can be used.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		AMEC-C-20I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
	1	ASEP-C-20I①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		_	→ P547	
Solenoid valve multi-axis type PIO specification		MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.	_	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points	DC24V			
Positioner type		ACON-C-20I①-①-2-0	Positioning is possible for up to 512	512 points			_	→ P631
Safety-Compliant Positioner Type		ACON-CG-20I()-())-2-0	points				-	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I①-⑪-2-0	Pulse train input type with differential line driver support	(—)			_	
Pulse Train Input Type (Open Collector)		ACON-PO-20I①-⑪-2-0	Pulse train input type with open collector support				_	
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points				
Program Control Type		ASEL-CS-1-20I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL. \*Enter the code "LA" in ① when the power-saving specification is specified. \*① indicates I/O type (NP/PN).
\*⑩ indicates number of axes (1 to 8). \*⑩ indicates field network specification symbol.

80

0.64

Weight (kg)

100

0.76



Robo Cylinder, Mini Rod Type, Short-Length Double-Guide Slide Unit Type, Actuator Width 60mm, 24V Servo Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items

RCA2 — SD3NA — Type

Encoder type – I: Incremental

encoder is also

considered type "I".

- Motor type — 10: 10W Servo \* The Simple absolute motor

10

Lead Stroke 4: Ball screw 4mm 25: 25mm 2: Ball screw 2mm 50: 50mm

15: Lead screw 1mm

1: Ball screw 1mm 4S: Lead screw 4mm 2S: Lead screw 2mm

Applicable controller -

Cable length A1:ACON N: None ASEL P: 1m S: 3m

A3:AMEC ASEP M:5m

MSEP X□□: Custom Length



References



Options

**Power-saving** 

See options below.

(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. Please refer to page A-111 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 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.
- (5) See page A-71 for details on push motion.

(\*1)When the main unit side is fixed.

### Actuator Specification

■ Leads and Payloads

Motor output (W) Max. Load Capacity Rated Positioning Repeatability Stroke Feed Lead Model number (mm) thrust (N) Vertical (kg) 0.25 RCA2-SD3NA-I-10-4-①-②-③-④ Ball 0.5 (\*1) RCA2-SD3NA-I-10-2-①-②-③-④ 2 1.5 85.5 ±0.02 screw 1 (\*1) RCA2-SD3NA-I-10-1-10-2-3-4 1 3 170.9 0.125 (\*1) RCA2-SD3NA-I-10-4S-①-②-③-④ 4 0.25 25.1 0.25 (\*1) RCA2-SD3NA-I-10-2S-①-②-③-④ Lead 25 2 0.5 50.3 ±0.05 0.5 (\*1) RCA2-SD3NA-I-10-1S-10-2-3-4 100.5 1

(mm) 4 200 Ball screw 2 100 50 1 4 200 Lead screw 2 100 50

■ Stroke and Maximum Speed

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

### ① Stroke

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

Name	Option code	See page	Standard price
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the right	К3	→ A-51	_
Power-saving specification	LA	→ A-52	_

#### ③Cable Length

Type	Cable symbol	Standard price
Chara danal	<b>P</b> (1m)	_
Standard (Robot Cables)	<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)	_

<sup>\*</sup>The standard cable for the RCA2 is the robot cable. See page A-59 for cables for maintenance

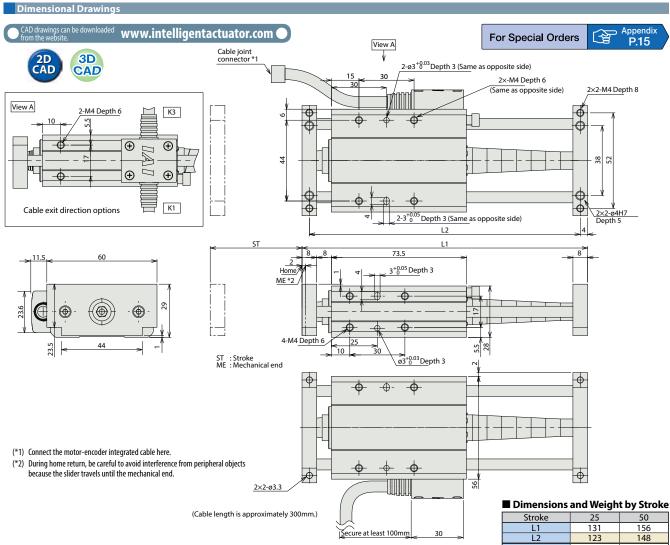
#### Actuator Specifications

	Item	Description		
Drive System	1	Ball screw/Lead screw, ø4mm, rolled C10		
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)		
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		
	Ball screw specification	5,000km or 50 million cycles		

Weight (kg)

0.48

0.5



② Applicable Controllers	
--------------------------	--

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colonaid Value Tuna	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated		→ P537
Solenoid Valve Type	1	ASEP-C-10I()-())-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lune"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.		→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points	DC24V			→ F303
Positioner type	A	ACON-C-10I①-①-2-0	Positioning is possible for up to 512	512 points			_	
Safety-Compliant Positioner Type		ACON-CG-10I①-①-2-0	points				_	
Pulse Train Input Type (Differential Line Driver)	Ó.	ACON-PL-10I①-⑪-2-0	Pulse train input type with differential line driver support	( )			_	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-10I①-⑪-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-10I①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-10I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

## RCA2-SD4NA

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

Model Specification Items RCA2 – SD4NA – Series — Type

20 — Encoder type — Motor type —

I: Incremental \* The Simple absolute encoder is also considered type "I".

Lead — Stroke 20: 20W Servo 6: Ball screw 6mm 25: 25mm 4: Ball screw 4mm 50: 50mm 2: Ball screw 2mm 75: 75mm

2S: Lead screw 2mm

6S: Lead screw 6mm 4S: Lead screw 4mm

Applicable controller — Cable length

A1:ACON N: None ASEL A3:AMEC **ASEP** 

MSFP

P: 1m S: 3m M:5m

X□□: Custom Length



Technical References



Options

**Power-saving** 

See options below.

(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. Please refer to page A-111 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 2mm-lead 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.
- (5) See page A-71 for details on push motion.

#### **Actuator Specifications** eads and Payloads

Leads and Payloads (*1)When the main unit side is fixed						e is fixed.						
Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Loac Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)				
RCA2-SD4NA-I-20-6-①-②-③-④	20		6	2	0.5 (*1)	33.8						
RCA2-SD4NA-I-20-4-①-②-③-④		1 20 1	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)
RCA2-SD4NA-I-20-6S-①-②-③-④	20		6	0.25	0.125 (*1)	19.9						
RCA2-SD4NA-I-20-4S-①-②-③-④		Lead screw	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				

Notes or selection

■ Stroke and Maximum Speed

Lead	Stroke	25 (mm)	50~75 (mm)
W	6	240 <200>	300
Ball screw	4	20	00
Ba	2	100	
We	6	200	300
ead screw	4	200	
297	2	100	

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion. \*The values enclosed in < > apply to vertical settings.

(Unit: mm/s)

### ① Stroke

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

#### **4** Options

Name	Option code	See page	Standard price
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the right	К3	→ A-51	_
Power-saving specification	LA	→ A-52	_

### ③Cable Length

	Type	Cable symbol	Standard price
	Canada ad	<b>P</b> (1m)	_
	Standard	<b>S</b> (3m)	_
(K	(Robot Cables)	<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. \* See page A-59 for cables for maintenance.

#### Actuator Specifications

	ltem	Description	
Drive System	1	Ball screw/Lead screw, ø6mm, rolled C10	
Lost Motion		Ball screw: 0.1mm or less Lead screw: 0.3mm or less (initial value)	
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	
	Ball screw specification	5,000km or 50 million cycles	

•

50 166

0.75

75 191

181

0.77

■ Dimensions and Weight by Stroke

25

131

0.73

Stroke

Weight (kg)

Dimensional Drawings www.intelligentactuator.com P.15 For Special Orders 2D CAD 3D View A CAD Cable joint connector 8-M4 Depth 8 (Same as opposite side) 2×2-M5 Depth 10 2-ø3 0 Depth 3 (Same as opposite side)  $\phi$ View A K3 Φ ф **①**  $\oplus$ ⊕ • 2×2-ø4H7 Depth 5 K2 Cable exit direction options 10 80 10 3<sup>+0.05</sup>Depth 3 \_2 H<u>ome</u> ME \*2 φ  $\oplus$ ø3 +0.03 Depth 3 4-M4 Depth 8 ST:Stroke **\( \phi \) \rightarrow** ME: Mechanical end Φ (\*1) Connect the motor-encoder integrated cable here. (\*2) During home return, be careful to avoid interference from peripheral

② Applicable Controllers	
--------------------------	--

objects because the slider travels until the mechanical end.

RCA2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

2×2-ø4.2

(Cable length is approximately 300mm.)

RCAZ series actuators can be operated with the controllers indicated below. Select the type according to your intended application. ACON-CT also can be used.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	341	AMEC-C-20I①-⑪-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid valve Type	1	ASEP-C-20I①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lund.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.		→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				7 1505
Positioner type	-	ACON-C-20I①-①-2-0	Positioning is possible for up to 512	512 points	1.3A rate		_	
Safety-Compliant Positioner Type	420	ACON-CG-20I(]-( )-2-0	points	312 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I①-①-2-0	Pulse train input type with differential line driver support	(—)			_	→ P631
Pulse Train Input Type (Open Collector)	-	ACON-PO-20I①-⑪-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points		_		
Program Control Type		ASEL-CS-1-20I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \*① indicates I/O type (NP/PN). \*⑩ indicates number of axes (1 to 8). \* ⑩ indicates field network specification symbol.

C E RoHS

# RCA-RA3C

Robo Cylinder, Rod Type, ø32mm Diameter, 24V Servo Motor, Coupled

Model Specification Items RCA - RA3C -20 Series — Type - Encoder type -Motor type

20: 20W Servo l: Incremental \* The Simple absolute motor encoder is also considered type "I".

Lead 10: 10mm 5: 5mm 2.5:2.5mm

Stroke 50: 50mm 200: 200mm

(excluding the2.5-mm lead model)

Applicable controller A1:ASEP MSEP A3:AMEC **ASEP** MSFP

N: None See Options below. P: 1m S: 3m M:5m X□□: Custom Length R□□: Robot Cable

Cable length

**Power-saving** 

— Options

For High Acceleration/Deceleration

Technical References



Notes on selection

- (1) When the stroke increases, the maximum will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 2.5mm-lead), and 1G acceleration for the high-acceleration models (2.5mm-lead model excluded). (The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RA3C-I-20-10-①-②-③-④		10	4.0	1.5	36.2	
RCA-RA3C-I-20-5-①-②-③-④	20	5	9.0	3.0	72.4	50~200 (every 50mm)
RCA-RA3C-I-20-2.5-①-②-③-④		2.5	18.0	6.5	144.8	

#### ■ Stroke and Maximum Speed

Stroke Lead	50~200 (every 50mm)
10	500
5	250
2.5	125

(Unit: mm/s)

#### ① Stroke

Knuckle joint

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_

→ A-53

→ A-52

→ A-57

<b>4</b> Options			
Name	Option code	See page	Standard price
Brake	В	→ A-42	
Foot bracket	FT	→ A-49	_
Flange bracket (front)	FL	→ A-45	_
Flange bracket (back)	FLR	→ A-46	_
High-acceleration/deceleration (*1)	HA	→ A-50	_
Home sensor (*2)	HS	→ A-50	_
Power-caving (*3)	IΛ	- A 52	

NJ

NM

TRF

TRR

- Trunnion bracket (back) → A-58
- (\*1) The high-acceleration/deceleration option is not available for 2.5mm-lead model.
  (\*2) The home sensor (HS) cannot be used on the Non-motor end models.
- (\*3) The high-acceleration/deceleration option and the power-saving option cannot be used simultaneously.

#### ③ Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø16mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

RCA-RA3C

Non-motor end specification

Trunnion bracket (front)



## www.intelligentactuator.com

For Special Orders



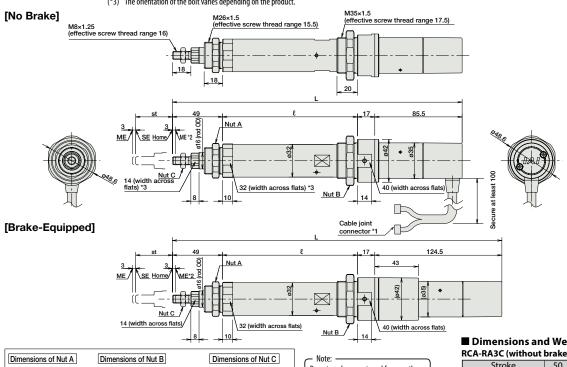




(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch

for any interference with surrounding objects.
ME: Mechanical end SE: Stroke end

(\*3) The orientation of the bolt varies depending on the product.



M8×1.25 ⊕ :

Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

#### ■ Dimensions and Weight by Stroke RCA-RA3C (without brake)

Stroke	50	100	150	200
L	283.5	333.5	383.5	433.5
l	132	182	232	282
Weight (kg)	0.7	0.8	0.9	1.0

#### DCA DAGC (with hyalra)

CA-RASC (WITH DIAKE)						
Stroke	50	100	150	200		
L	322.5	372.5	422.5	472.5		
l	132	182	232	282		
Weight (kg)	0.9	1.0	1.1	1.2		

(2) Apr	dicab	lo Co	ntrol	lore

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Solenoid Valve Type	1	AMEC-C-20SI①-⑪-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
Soleriola valve Type	1	ASEP-C-20SI()-( )-2-0	Simple controller operable with the same signal as a solenoid valve				_	→ P547	
Solenoid valve multi-axis type PIO specification	dine"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected						→ P563
Solenoid valve multi-axis type Network specification	iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	7 7503	
Positioner type		ACON-C-20SI①-⑪-2-0	Positioning is possible for up to 512	512 points		(Standard) 1.7A rated	_		
Safety-Compliant Positioner Type		ACON-CG-20SI①-①-2-0	points	312 points	DC24V	5.1A max. (Power-saving) 1.7A rated 3.4A max.	_		
Pulse Train Input Type (Differential Line Driver)	Ó	ACON-PL-20SI①-⑪-2-0	Pulse train input type with differential line driver support	(—)			_	→ P631	
Pulse Train Input Type (Open Collector)	è	ACON-PO-20SI①-①-2-0	Pulse train input type with open collector support	(—)			_		
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication 64 points			_			
Program Control Type		ASEL-CS-1-20SI()-())-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\*This is for the single-axis ASEL.
\* (I) indicates I/O type (NP/PN).

\* Enter the code "HA" or "LA" in ① when the high-acceleration/deceleration option or the power-saving option is specified.

\* ⑩ indicates number of axes (1 to 8).

\* ⑫ indicates field network specification symbol.

IAI

RCA-RA3C

## RCA-RA4C

Robo Cylinder, Rod Type, ø37mm Diameter, 24V Servo Motor, Coupled

Model Specification Items RCA — RA4C — Series — Type

\* See page Pre-47 for details on the model descriptions.

(\*1) Except all 20W models and 30W 3mm lead models

— Encoder type — Motor type I: Incremental A: Absolute \* The absolute models are

only compatible with ASEL. Simple absolute encoders are considered incremental.

20: 20W Servo motor 30: 30W Servo motor

Lead 12:12mm 6: 6mm 3: 3mm

Stroke Applicable controller 50: 50mm 300·300mm

A1:ACON **ASEL** A3:AMEC ASEP MSFP

N: None P: 1m S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

Cable length

**Power-saving** 

Options

See Options below.

C E RoHS

For High Acceleration/Deceleration

- (1) When the stroke increases, the maximum will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 3mm-lead), and 1G acceleration for the high-acceleration models (3mm-lead model excluded). (The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RA4C-①-20-12-②-③-④-⑤		12	3.0	1.0	18.9	
RCA-RA4C-①-20-6-②-③-④-⑤	20	6	6.0	2.0	37.7	
RCA-RA4C-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	50~300
RCA-RA4C-①-30-12-②-③-④-⑤		12	4.0	1.5	28.3	(every 50mm)
RCA-RA4C-①-30-6-②-③-④-⑤	30	6	9.0	3.0	56.6	
RCA-RA4C-①-30-3-②-③-④-⑤		3	18.0	6.5	113.1	

■ Stroke and Maximum Speed

Technical References

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150

(Unit: mm/s)

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

		Standa	rd price			
		①Encod	der Type			
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute			
	Motor Ou	utput (W)	Motor O	utput (W)		
	20W	20W 30W		30W		
50	_	_	_	_		
100	0 – –		_	_		
150	_	_	_	_		
200				_		
250	_	_	_	_		
300		_	_	_		

#### ⑤ Options

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-49	_
Flange bracket (front)	FL	→ A-45	_
Flange bracket (back)	FLR	→ A-46	_
High-acceleration/deceleration (*1)	HA	→ A-50	_
Home sensor (*2)	HS	→ A-50	_
Power-saving (*3)	LA	→ A-52	_
Knuckle joint	NJ	→ A-53	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (front)	TRF	→ A-57	_
Trunnion bracket (back)	TRR	→ A-58	_

<sup>(\*1)</sup> The high-acceleration/deceleration option is not available for all the 20W models, not 30W with 3mm-lead model.
(\*2) The home sensor (HS) cannot be used on the Non-motor end models.
(\*3) The high-acceleration/deceleration option and the power-saving option cannot be used simultaneously.

## **4** Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

#### **Actuator Specifications**

Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)









[No Brake]



Dimensional Drawings

 (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

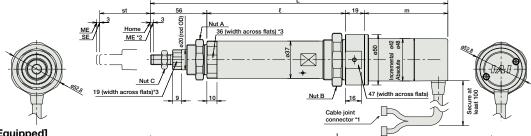
www.intelligentactuator.com

(effective screw thread range 20

ME : Mechanical end SE: Stroke end (\*3) The orientation of the bolt varies depending on the product. M30×1.5 (effective screw thread range 17.5)

. 20

Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

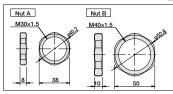


M40×1.5

22

fective screw thread range 19.5)

[Brake-Equipped] Nut C Nut A Nut B 19 (width cross flats Nut B ■ Dimensions and Weight by Stroke



RCA-RA4C (without brake) 50 | 100 | 150 | 200 | 250 | 300 Stroke 20W | Increm. 279.5 | 329.5 | 379.5 | 429.5 | 479.5 | 529.5 | 349.5 | 349.5 | 349.5 | 349.5 | 344.5 | 394.5 | 344.5 | 349.5 | 344.5 | 349.5 | 344.5 | 349.5 | 344.5 | 349.5 | 344.5 | 349.5 | 344.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 | 349.5 |

137 | 187 | 237 | 287 | 337 | 387 Increm. 67.5 20W Absol. 80.5 82.5 Increm. 30W Absol. 1.1 | 1.2 | 1.4 | 1.5 | 1.7 | 1.8

#### RCA-RA4C (with brake)

11	TCA-ITA-C (WICH DIAKE)							
Stroke		50	100	150	200	250	300	
	20W	Increm.	322.5	372.5	422.5	472.5	522.5	572.5
	2000	Absol.	335.5	385.5	435.5	485.5	535.5	585.5
L	30W	Increm.	337.5	387.5	437.5	487.5	537.5	587.5
	3000	Absol.	350.5	400.5	450.5	500.5	550.5	600.5
l			137	187	237	287	337	387
	20W	Increm.	110.5					
	2000	Absol.	123.5					
m	30W	Increm.	125.5					
Absol.			138.5					
	Weigh	t (ka)	13	14	16	17	19	2.0

### ③ Applicable Controllers

Nut C

M10x1.25

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	No.	AMEC-C-20I(  )-(  )-2-1 AMEC-C-30I(  )-(  )-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Soleriola valve type		ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			-	→ P547
Solenoid valve multi-axis type PIO specification	lunc	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 20W 1.3A rated		7 7 303
Positioner type		ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	512 points		4.4A max. 30W 1.3A rated	-	
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points	312 points	DC24V	4.4A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I (  ) - (  ) - 2 - 0 ACON-PL-30I (  ) - (  ) - 2 - 0	Pulse train input type with differential line driver support	(—)		20W 1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support	(—)		30W 1.3A rated 2.2A max.	-	
Serial Communication Type		ACON-SE-201 - N-0-0 ACON-SE-301 - N-0-0	Dedicated Serial Communication	64 points				
Program Control Type		ASEL-CS-1-20 ( ) -() -2-0 ASEL-CS-1-30 ( ) -() -2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

This is for the single-axis ASEL. \*① indicates encoder type (l: incremental, A: absolute) \*Enter the code "HA" or "LA" in ① when the high-acceleration/deceleration option or the power-saving option is specified. \*⑥ indicates I/O type (NP/PN). \*⑥ indicates number of axes (1 to 8). \*② indicates field network specification symbol. \* This is for the single-axis ASEL.



## **RCA-RA3D**

Robo Cylinder, Rod Type, ø32mm Diameter, 24V Servo Motor, Built-In (Direct-Coupled) Motor

Model Specification Items

RCA - RA3D -Series — Type

20 — Encoder type — Motor type

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

20: 20W Servo

motor

Lead 10: 10mm 2.5:2.5mm

50: 50mm 200: 200mm (50mm pitch increments)

Stroke

A1:ACON **ASEL** A3:AMEC

Applicable controller ASEP

MSEP

N: None P: 1m S: 3m

Cable length Options See Options below.

M:5m X□□: Custom Length R□□: Robot Cable

**Power-saving** 



Technical References



Notes on

- (1) When the stroke increases, the maximum will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2.5mm-lead model). These values are the upper limits for the acceleration.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) Please note that there is no brake option for the motor built-in specification.
- (5) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RA3D-I-20-10-①-②-③-④		10	4.0	1.5	36.2	
RCA-RA3D-I-20-5-①-②-③-④	20	5	9.0	3.0	72.4	50~200 (every 50mm)
RCA-RA3D-I-20-2.5-①-②-③-④		2.5	18.0	6.5	144.8	

#### ■ Stroke and Maximum Speed

Stroke Lead	50~200 (every 50mm)
10	500
5	250
2.5	125

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	

#### ③ Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

# Actuator Specifications

ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø16mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

## **4** Options

Name	Option code	See page	Standard price
Foot bracket	FT	→ A-49	_
Flange bracket (front)	FL	→ A-45	_
Flange bracket (back)	FLR	→ A-46	_
Home sensor	HS	→ A-50	_
Power-saving	LA	→ A-52	_
Knuckle joint	NJ	→ A-53	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (front)	TRF	→ A-57	_
Trunnion bracket (back)	TRR	→ A-58	_
*The home sensor (HS) cannot be used on the N	lon-motor end mo	odels.	

## CAD drawings can be downloaded www.intelligentactuator.com of the website.

For Special Orders



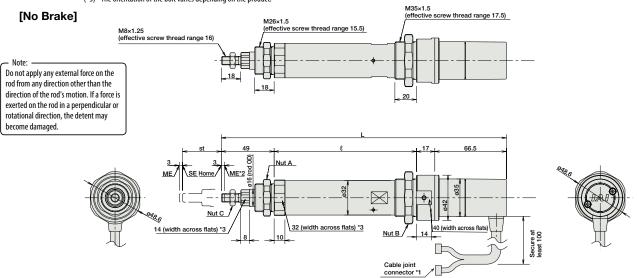


(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

with surrounding objects.
ME: Mechanical end

SE: Stroke end

(\*3) The orientation of the bolt varies depending on the product.



## Dimensions of Nut B Dimensions of Nut A Dimensions of Nut C M35x1.5

## ■ Dimensions and Weight by Stroke

NCA-NASD (WILLIOUT DIAKE)								
Stroke	50	100	150	200				
L	264.5	314.5	364.5	414.5				
l	132	182	232	282				
Weight (kg)	0.7	0.8	0.9	1.0				

RCA-RA3D models are not equipped with a brake.

(2) A	nnlical	hla (	Control	lore
<b>E</b> A	ppnca	DIE (	COILLIO	IIGI 5

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. ** ACON-C1 also can be used.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	Batter	AMEC-C-20SI()-())-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Soleriola valve Type		ASEP-C-20SI①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lane.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					, DEC2
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563
Positioner type		ACON-C-20SI①-⑪-2-0	Positioning is possible for up to 512	512 points		(Standard) 1.7A rated	_	
Safety-Compliant Positioner Type	4.55	ACON-CG-20SI()-(i)-2-0	0SI()-())-2-0 points	312 points	DC24V	5.1A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI①	Pulse train input type with differential line driver support	( )		1.7A rated 3.4A max.	_	→ P631
Pulse Train Input Type (Open Collector)	***	ACON-PO-20SI ①-①-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20SI()-())-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ① indicates I/O type (NP/PN). \* ② indicates number of axes (1 to 8). \* ② indicates field network specification symbol.

IAI

RCA-RA3D ELECTROMATE

RCA-RA4D

Robo Cylinder, Rod Type, ø37mm Diameter, 24V Servo Motor, Built-In (Direct-Coupled) Motor

Model Specification Items RCA - RA4D -Series — Туре

\* See page Pre-47 for details on the model descriptions.

C E RoHS

- Encoder type I:Incremental

A: Absolute
\* The absolute models are

only compatible with ASEL. Simple absolute encoders are considered incremental.

Motor type 20: 20W Servo motor 30:30W Servo

Lead 12:12mm 3: 3mm

50: 50mm 300: 300mm (50mm pitch increments)

Stroke

MSEP

A1:ACON ASEL A3:AMEC ASEP

Applicable controller

N: None P: 1m S: 3m

Cable length Options See Options below.

M:5m X□□: Custom Length R□□: Robot Cable

> Technical References

**Power-saving** 

(1) When the stroke increases, the maximum will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

(2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 3mm-lead model). These values are the upper limits for the acceleration.

(3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.

(4) Please note that there is no brake option for the motor built-in specification.

(5) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RA4D-①-20-12-②-③-④-⑤		12	3.0	1.0	18.9	
RCA-RA4D-①-20-6-②-③-④-⑤	20	6	6.0	2.0	37.7	
RCA-RA4D-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	50~300
RCA-RA4D-①-30-12-②-③-④-⑤		12	4.0	1.5	28.3	(every 50mm)
RCA-RA4D-①-30-6-②-③-④-⑤	30	6	9.0	3.0	56.6	
RCA-RA4D-①-30-3-②-③-④-⑤		3	18.0	6.5	113.1	

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

Notes or selection

#### ①Encoder Type/②Stroke

②Stroke (mm)	Standard price				
	①Encoder Type				
	Incremental		Abso	olute	
	Motor Output (W)		Motor Output (W)		
	20W	30W	20W	30W	
50	_	_	_	_	
100	_	_	_	_	
150	_	_	_	_	
200	_		_	_	
250	_		_	_	
300					

#### **⑤ Options**

Name	Option code	See page	Standard price
Foot bracket	FT	→ A-49	_
Flange bracket (front)	FL	→ A-45	_
Flange bracket (back)	FLR	→ A-46	_
Home sensor	HS	→ A-50	_
Power-saving	LA	→ A-52	_
Knuckle joint	NJ	→ A-53	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (front)	TRF	→ A-57	_
Trunnion bracket (back)	TRR	→ A-58	_
*The home concer (US) cannot be used on the N	lan mater and m	odolc	

### **4** Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

\* See page A-59 for cables for maintenance.

#### **Actuator Specifications**

ltem	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

**227** RCA-RA4D



RCA ROBO Cylinder

Dimensional Drawings

## ings can be downloaded www.intelligentactuator.com 🔵

For Special Orders



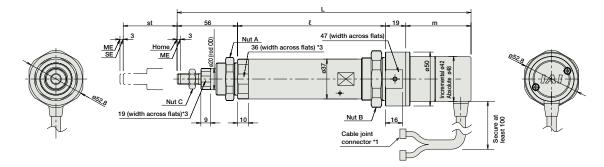


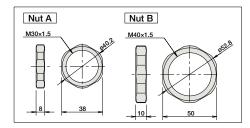
become damaged.

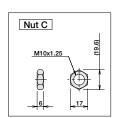
[No Brake]

Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may

M40×1.5 M30×1.5 ctive screw thread range 19.5) (effective screw thread range 17.5) M10×1.25 22







#### ■ Dimensions and Weight by Stroke RCA-RA4D (without brake)

	Stroke			100	150	200	250	300	
	20W Increm	Increm.	257.5	307.5	357.5	407.5	457.5	507.5	
L	2000	Absol.	270.5	320.5	370.5	420.5	470.5	520.5	
L	30W	Increm.	272.5	322.5	372.5	422.5	472.5	522.5	
	3000	Absol.	285.5	335.5	385.5	435.5	485.5	535.5	
	٤		137	187	237	287	337	387	
	20W Increm.		45.5						
	2000	Absol.			58	.5			
m	30W	Increm.	60.5						
	3000	Absol.		73.5					
	Weigh	t (kg)	1.0	1.2	1.3	1.5	1.6	1.8	

RCA-RA4D models are not equipped with a brake.

(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

with surrounding objects.
ME : Mechanical end SE : Stroke end

(\*3) The orientation of the bolt varies depending on the product.

G	Anr	12	C	

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \*ACON-CY also can be used.

NCA series actuators can be operated with the controllers indicated below. Serect the type according to your intended application.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	1	AMEC-C-20I(  )-(  )-2-1 AMEC-C-30I(  )-(  )-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solelloid valve Type	3	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lund.	MSEP-C-(\(\varphi\)-~-(\(\varphi\)-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification	iiii	MSEP-C-(\(\varphi\)-~-(\(\varphi\)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 20W 1.3A rated	_	→ P303
Positioner type		ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	512 points		4.4A max. 30W 1.3A rated	_	
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points	512 points	DC24V	4.4A max. (Power-saving)	-	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I (  ) - (  ) - 2 - 0 ACON-PL-30I (  ) - (  ) - 2 - 0	Pulse train input type with differential line driver support	(—)		20W 1.3A rated 2.5A max.	-	→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support	(—)		30W 1.3A rated 2.2A max.	_	
Serial Communication Type		ACON-SE-20I - N-0-0 ACON-SE-30I - N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20①①-⑩-2-0 ASEL-CS-1-30①①-⑩-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\* This is for the single-axis ASEL.
\* (III) indicates I/O type (NP/PN).

\* ① indicates encoder type (I: incremental, A: absolute)
\* ℚ indicates number of axes (1 to 8).

\* Enter the code "LA" in n when the power-saving specification is specified. \* n indicates field network specification symbol.

IAI

RCA-RA4D ELECTROMATE

RCA-RA3R

Robo Cylinder, Rod Type, ø32mm Diameter, 24V Servo Motor, Side-Mounted Motor

Model Specification Items

C E RoHS

RCA - RA3R -Series — Type

20 — Encoder type — Motor type —

l: Incremental

\* The Simple absolute encoder is also

considered type "I".

Lead 20: 20W Servo motor

10: 10mm 5: 5mm 2.5:2.5mm

Stroke 50: 50mm 200: 200mm (50mm pitch increments)

Applicable controller -

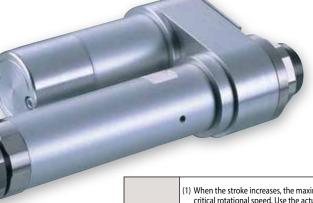
A1:ACON ASEL A3:AMEC **ASEP** MSFP

N: None P: 1m S: 3m

 Cable length — Options See Options below.

M:5m X□□: Custom Length R□□: Robot Cable

**Power-saving** 



Notes on

Technical References



- (1) When the stroke increases, the maximum will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2.5mm-lead model). These values are the upper limits for the acceleration.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)		Rated thrust (N)	Stroke (mm)
RCA-RA3R-I-20-10-①-②-③-④		10	4.0	1.5	36.2	
RCA-RA3R-I-20-5-①-②-③-④	20	5	9.0	3.0	72.4	50~200 (every 50mm)
RCA-RA3R-I-20-2.5-①-②-③-④		2.5	18.0	6.5	144.8	

#### ■ Stroke and Maximum Speed

Stroke Lead	50~200 (every 50mm)
10	500
5	250
2.5	125

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

(Unit: mm/s)

#### ① Stroke

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_

## **4** Options

Name	Option code	See page	Standard price			
Brake	В	→ A-42	_			
Foot bracket	FT	→ A-49	_			
Flange bracket (front)	FL	→ A-45	_			
Flange bracket (back)	FLR	→ A-46	_			
Home sensor	HS	→ A-50	_			
Power-saving	LA	→ A-52	_			
Knuckle joint	ИJ	→ A-53	_			
Non-motor end specification	NM	→ A-52	_			
Clevis bracket	QR	→ A-53	_			
Back-mounting plate	RP	→ A-54	_			
Trunnion bracket (front)	TRF	→ A-57	_			
*The home sensor (HS) cannot be used on the Non-motor end models.						

#### ③ Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

Actuator specifications	
ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø16mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

### www.intelligentactuator.com

For Special Orders





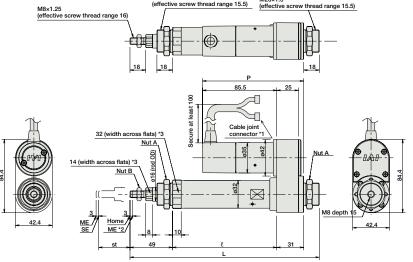


- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. SE : Stroke end ME: Mechanical end

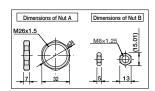
(\*3) The orientation of the bolt varies depending on the product.

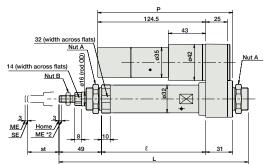
#### [No Brake]

Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



#### [Brake-Equipped]





## ■ Dimensions and Weight by Stroke

RCA-RASK (Without brake)					
Stroke	50   100   150   200				
L	218	268	318	368	
l	120	170	220	270	
P	116.5				
Weight (kg)	0.8	0.9	1.0	1.1	

RCA-RA3R (with brake)

itest intent	i bi aitc					
Stroke	50   100   150   20					
L	218	268	318	368		
l	120	170	220	270		
P	155.5					
Weight (kg)	1.0	1.1	1.2	1.3		

#### ② Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	- T	AMEC-C-20SI()-())-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid valve Type	3	ASEP-C-20SI①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lana i	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					, DE 63
Solenoid valve multi-axis type Network specification	11111	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563
Positioner type		ACON-C-20SI①2-0	Positioning is possible for up to 512	512 mainta		(Standard) 1.7A rated	_	
Safety-Compliant Positioner Type		ACON-CG-20SI①-①-2-0	points	512 points	DC24V	5.1A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)	Ó	ACON-PL-20SI (1)-(11)-2-0	Pulse train input type with differential line driver support	( )		1.7A rated 3.4A max.	_	→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-20SI①-①-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type	Î	ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20SI①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

RCA-RA3R ELECTROMATE

## RCA-RA4R

Robo Cylinder, Rod Type, ø37mm Diameter, 24V Servo Motor, Side-Mounted Motor

Model Specification Items

RCA - RA4R -Series Type

- Encoder type Motor type

I: Incremental
A: Absolute
\* The absolute models are
only compatible with ASEL.
Simple absolute encoders
are considered incremental. 20: 20W Servo motor 30: 30W Servo motor

Lead 12:12mm

Notes on

6: 6mm 3: 3mm

Stroke Applicable controller 50: 50mm 300·300mm

A1:ACON **ASEL** A3:AMEC ASEP

N: None P: 1m S: 3m

Cable length

See Options below.

- Options

**Power-saving** 

M:5m X□□: Custom Length R□□: Robot Cable MSFP



Technical

References



Append P.5

(1) When the stroke increases, the maximum will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire. (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for

- 3mm-lead model). These values are the upper limits for the acceleration.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) See page A-71 for details on push motion.

### Actuator Specifications

#### ■ Leads and Payloads Motor output (W) Max. Load Capacity Stroke Lead Model number thrust (N) (mm) RCA-RA4R-①-20-12-②-③-④-⑤ 12 3.0 18.9 RCA-RA4R-①-20-6-②-③-④-⑤ 2.0 37.7 6 6.0 RCA-RA4R-1 -20-3-2 -3 -4 -5 3 12.0 4.0 75.4 50~300 (every 50mm) RCA-RA4R-①-30-12-②-③-④-⑤ 12 4.0 1.5 28.3

6

3

9.0

18.0

3.0

6.5

56.6

113.1

30

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150

(Unit: mm/s)

### Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion. ①Encoder Type/②Stroke

RCA-RA4R-①-30-6-②-③-④-⑤

RCA-RA4R-①-30-3-②-③-④-⑤

· · · · · · · · · · · · · · · · · · ·						
	Standard price					
		①Encod	der Type			
<pre>②Stroke (mm)</pre>	Increr	nental	Abso	olute		
	Motor Ou	utput (W)	Motor Output (W)			
	20W	30W	20W	30W		
50	_	_	_	_		
100	_	_	_	_		
150	_	_	_	_		
200	_	_	_	_		
250	_	_	_	_		
300						

### ⑤ Options

Option code	See page	Standard price
В	→ A-42	_
FT	→ A-49	_
FL	→ A-45	_
FLR	→ A-46	_
HS	→ A-50	_
LA	→ A-52	_
NJ	→ A-53	_
NM	→ A-52	_
QR	→ A-53	_
RP	→ A-54	_
TRF	→ A-57	_
	B FT FL FLR HS LA NJ NM QR	B → A-42 FT → A-49 FL → A-45 FLR → A-46 HS → A-50 LA → A-52 NJ → A-53 NM → A-52 QR → A-53 RP → A-54

#### **4** Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

Actuator Specifications	
ltem	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

## www.intelligentactuator.com



[No Brake]

Nut A M30×1. 5



M10×1.25

Nut B

M10x1.25

(effective screw thread range 20

Nut B 19 (width across flats)\*

- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. SE : Stroke end ME: Mechanical end

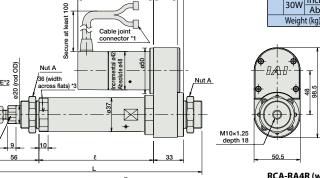
1.5 M30×1.5 tive screw thread range 17.5) (effective screen

(\*3) The orientation of the bolt varies depending on the product.

#### ■ Dimensions and Weight by Stroke RCA-RA4R (without brake)

For Special Orders

	Stroke		50	100	150	200	250	300		
	20W	Increm.	234	284	334	384	434	484		
١,	2000	Absol.	234	284	334	384	434	484		
L	2014/	Increm.	234	284	334	384	434	484		
	30W	Absol.	234	284	334	384	434	484		
	l		125	175	225	275	325	375		
	2014 Incre	Increm.			67	.5				
	20W	Absol.	80.5							
m	30W	Increm.	82.5							
	3000	Absol.	95.5							
	20W	Increm.			10	0.5				
Р	2000	Absol.				113.5				
	30W	Increm.			11:	5.5				
	3000	Absol.			12	8.5				
	Weigh	t (kg)	1.2	1.4	1.5	1.7	1.8	2.0		



Nut A

Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

#### RCA-RA4R (with brake)

	Stro	ke	50	100	150	200	250	300	
	20W	Increm.	234	284	334	384	434	484	
١.		Absol.	234	284	334	384	434	484	
L	30W	Increm.	234	284	334	384	434	484	
	3000	Absol.	234	284	334	384	434	484	
	l		125	175	225	275	325	375	
	20W	Increm.	110.5						
	2000	Absol.	123.5						
m	30W	Increm.	125.5						
	3000	Absol.			13	8.5			
	20W	Increm.	143.5						
Р	2000	Absol.	156.5						
-	30W	Increm.	158.5						
		Absol.	171.5						
	Weigh	t (ka)	1.4	1.6	1.7	1.9	2.0	2.2	

#### ③ Applicable Controllers

\* This is for the single-axis ASEL.
\* (ii) indicates I/O type (NP/PN).

[Brake-Equipped]

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \*ACON-CY also can be used.

36 (width across flats)

The series actualors can be operated with the controllers maleuted below. Select the type according to your mentaed application.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	No.	AMEC-C-20I(  )-(  )-2-1 AMEC-C-30I(  )-(  )-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Soleriola valve type	3	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	and a	MSEP-C-(\(\varphi\)-~-(\(\mathbb{\pi}\)-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected					. DECO
Solenoid valve multi-axis type Network specification	Hill .	MSEP-C-(\(\varphi\)-~-(\(\varphi\)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 20W 1.3A rated	_	→ P563
Positioner type	E .	ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	512 points	DC24V	4.4A max. 30W 1.3A rated 4.4A max. (Power-saving)	_	
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points				_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I (  ) - (  ) - 2-0 ACON-PL-30I (  ) - (  ) - 2-0	Pulse train input type with differential line driver support	ver support		20W 1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support	(—)		30W 1.3A rated 2.2A max.	_	
Serial Communication Type		ACON-SE-20I  -N-0-0 ACON-SE-30I  -N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20①①-⑩-2-0 ASEL-CS-1-30①①-⑩-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

\* ⊕ indicates encoder type (l: incremental, A: absolute)
\* ⊕ indicates number of axes (1 to 8).

\* Enter the code "LA" in ()) when the power-saving specification is specified.
\* (v) indicates field network specification symbol.

C E RoHS

## RCA-SRA4R

Robo Cylinder, Rod Type, Actuator Width 45mm, Servo Motor, Short-Length Type

Model Specification Items RCA - SRA4R -20 Series — Type — Encoder type — Motor type — Lead Stroke -Applicable controller 20: 20mm A1:ACON 20: 20W Servo 5: 5mm I: Incremental motor

\* The Simple absolute encoder is also considered type "I".

200: 200mm (10mm pitch increments)
\* Set in 50mm increments
over 100mm

ASEL A3:AMEC ASEP MSFP

Cable length N: None P: 1m S: 3m

Options See Options below.

M:5m X□□: Custom Length

**Power-saving** 



Technical References





- (1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the  $2.5 mm\hbox{-lead model, or when used vertically). This is the upper limit of the acceleration.}\\$
- (2) The horizontal load capacity is based on the use of an external guide. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.
- (3) See page A-71 for details on push motion.

Actuator Specifications								
■ Leads and Payloads (Note A) 50mm increments over 100mm. ■ Stroke and Maximum Speed				d Maximum Speed				
Model number	Motor output (W)			Stroke Lead	20~200 (every 10mm)			
RCA-SRA4R-I-20-5-①-②-③-④	20	5	9 (Note1)	3	41	20~200 (every 10mm)	5	250
RCA-SRA4R-I-20-2.5-①-②-③-④		2.5	18 (Note1)	6.5	81	(Note A)	2.5	125
Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options *See page A-71 for details on push motion.								

①Stroke (mm)	Standard price
20~50	_
60~100	_
150	_
200	_

<b>4</b> Options			
Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Flange bracket (front)	FL	→ A-44	_
Flange bracket (back)	FLR	→ A-46	_
Foot bracket 1 (base mounting)	FT	→ A-48	_
Foot bracket 2 (right/left side mounting)	FT2/FT4	→ A-50	_
Power-saving	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_

\*The brake is available for strokes of 70mm or more.

### ③ Cable Length

Туре	Cable symbol	Standard Price
Chara da ud	<b>P</b> (1m)	_
Standard (Robot Cables)	<b>S</b> (3m)	_
(Nobol Cables)	<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 cable is a motor-encoder integrated cable, and is provided as a robot cable. \* See page A-59 for cables for maintenance.

#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod diameter	ø22mm
Non-rotating accuracy of rod	_
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)



Dimensional Drawings www.intelligentactuator.com For Special Orders P.15 7.5 (width across flats) 2D CAD 22 Cable joint connector (\*1) least 100 M10×1.25 (210) Secure at width across flats (\*3) 0 (0) E-M4 depth 10 4-M6 depth 12 4-M6 depth 12 **( (** (H) <u>( )</u>

ME (\*2)

\*The exterior dimensions for the brake-equipped model is no different than the standard model. However, 70mm is the minimum stroke of the brake-equipped models. (i.e. The brake is not compatible at 60mm strokes and under.)

Note:

Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

- (\*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables.
  (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
- (\*3) The orientation of the bolt varies depending on the product.

\_ 15

■ Dimensions and Weight by Stroke (Add 0.2kg for brake equipped) 20 30 40 50 60 70 80 90 100 150 200 
 124.5
 134.5
 144.5
 154.5
 164.5
 174.5
 184.5
 194.5
 204.5
 254.5
 304.5

 84
 94
 104
 114
 124
 134
 144
 154
 164
 214
 264

 62
 72
 82
 92
 102
 112
 122
 132
 142
 192
 242

 30
 40
 50
 60
 70
 30
 40
 50
 60
 60
 60

 0
 0
 0
 0
 1
 1
 1
 1
 2
 3
 3 10 4 4 4 4 4 6 6 6 6 8

0.78 | 0.84 | 0.9 | 0.96 | 1.03 | 1.09 | 1.15 | 1.21 | 1.27 | 1.59 | 1.9

<u></u>●

② Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Weight (kg)

	Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
	Solenoid Valve Type	100	AMEC-C-20I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
	Soletiola valve Type	1	ASEP-C-20I()-())-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Sol	lenoid valve multi-axis type PIO specification	lune.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Sol	lenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	7 7503
	Positioner type		ACON-C-20I①-⑪-2-0	Positioning is possible for up to 512	512 points	DC24V	(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.	_	
	Safety-Compliant Positioner Type			points				_	
	Pulse Train Input Type (Differential Line Driver)	É.	ACON-PL-20I①-⑪-2-0	Pulse train input type with differential line driver support	(—)			_	→ P631
	Pulse Train Input Type (Open Collector)	ė		Pulse train input type with open collector support	(—)			_	
Se	erial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points			_	
	Program Control Type		ASEL-CS-1-20I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ① indicates I/O type (NP/PN).
\* ① indicates number of axes (1 to 8). \* ② indicates field network specification symbol.

IAI

RCA-SRA4R ELECTROMATE

# RCA-RGS3C

\* See page Pre-47 for details on the model descriptions.

Robo Cylinder, Rod Type with Single Guide, ø32mm Diameter, 24V Servo Motor, Coupled

Model Specification Items

C E RoHS

RCA -RGS3C-Series Type

20 Encoder type – - Motor type

motor

I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

Lead 20: 20W Servo 10: 10mm

2.5:2.5mm

Applicable controller Stroke 50: 50mm 200: 200mm (50mm pitch increments)

A1:ACON **ASEL** A3:AMEC ASEP

N: None P: 1m S: 3m

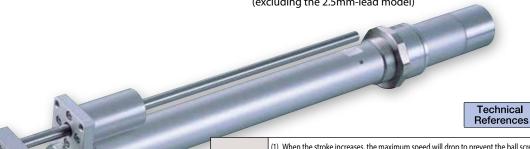
Cable length — Options See Options below.

P.5

(Unit: mm/s)

M:5m X□□: Custom Length MSEP R□□: Robot Cable

**Power-saving** For High Acceleration/Deceleration (excluding the 2.5mm-lead model)



OIN

Notes on selection

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke vou desire. (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 2.5mm-lead), and 1G acceleration for the high-acceleration models (2.5mm-lead model excluded). The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.

- (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-110) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RGS3C-I-20-10-①-②-③-④		10	4.0	1.2	36.2	
RCA-RGS3C-I-20-5-①-②-③-④	20	5	9.0	2.7	72.4	50~200 (every 50mm)
RCA-RGS3C-I-20-2.5-①-②-③-④		2.5	18.0	6.2	144.8	

## ■ Stroke and Maximum Speed

Stroke Lead	50~200 (every 50mm)
10	500
5	250
2.5	125

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

①Stroke	
①Stroke (mm)	

①Stroke (mm)	Standard price
50	_
100	
150	<del>-</del>
200	_

#### ③ Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

© options								
Name	Option code	See page	Standard price					
Brake	В	→ A-42						
Foot bracket	FT	→ A-49	_					
High-acceleration/deceleration (*1)	HA	→ A-50	_					
Home sensor (*2)	HS	→ A-50	_					
Power-saving (*3)	LA	→ A-52	_					
Non-motor end specification	NM	→ A-52	_					
Trunnion bracket (back)	TRR	→ A-58	_					

(\*1) The high-acceleration/deceleration option is not available for 2.5mm-lead model.
(\*2) The home sensor (HS) cannot be used on the non-motor end models.
(\*3) The high-acceleration/deceleration option and the power-saving option cannot be used simultaneously.

235 RCA-RGS3C





For Special Orders

P.15

Dimensional Drawings

## gs can be downloaded www.intelligentactuator.com o

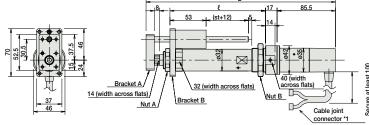


#### [No Brake]

- (\*1) Connect the motor and encoder cables here.
- See page A-59 for details on cables.
  After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

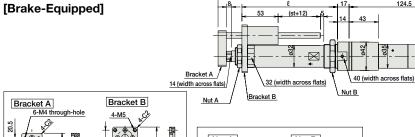
ME : Mechanical end SE : Stroke end

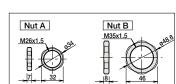
(guide rod OD) ø16 (rod OD) M35×1.5 (effective screw thread range 17.5) Home hang at SE





124.5





## ■ Dimensions and Weight by Stroke

RCA-RG53C (without brake)           Stroke         50         100         150         200           L         277.5         327.5         377.5         427.5           &         140         190         240         290					
Stroke	50	100	150	200	
L	277.5	327.5	377.5	427.5	
l	140	190	240	290	
Weight (kg)	0.9	1.1	1.2	1.3	

Stroke   50   100   150   200     L   316.5   366.5   416.5   466.5   &   140   190   240   290   &   240   &				
Stroke	50	100	150	200
L	316.5	366.5	416.5	466.5
l	140	190	240	290
Weight (kg)	1.1	1.3	1.4	1.5

(2) Ann	licable	Contro	llars

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. "ACON-C1 also can be used.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		AMEC-C-20SI()-())-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Soleriola valve Type	1	ASEP-C-20SI①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	lune.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				7 2003
Positioner type		ACON-C-20SI①-⑪-2-0	Positioning is possible for up to 512	512 points		(Standard) 1.7A rated	-	
Safety-Compliant Positioner Type	i i	ACON-CG-20SI①-①-2-0	points	312 points	DC24V	5.1A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI①	Pulse train input type with differential line driver support	(—)		1.7A rated 3.4A max.	1	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-20SI①-①-2-0	Pulse train input type with open collector support	(—)			-	
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20SI()-())-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

\*This is for the single-axis ASEL.
\*(II) indicates I/O type (NP/PN).

\* Enter the code "HA" or "LA" in ① when the high-acceleration/deceleration option or the power-saving option is specified.
\* ③ indicates number of axes (1 to 8).
\* ② indicates field network specification symbol.

RCA-RGS3C

## RCA-RGS4C

Robo Cylinder, Rod Type with Single Guide, ø37mm Diameter, 24V Servo Motor, Coupled

Model Specification Items

RCA -RGS4C-Type

- Encoder type Motor type

I: Incremental
A: Absolute
\* Absolute encoder models can
only use ASEL. When the actuator
is used with the simple absolute
encoder, the model is considered
an incremental model. 20: 20W Servo motor 30: 30W Servo

Lead 12:12mm 3: 3mm

Stroke 50: 50mm

300: 300mm (50mm pitch increments)

A1:ACON ASEL A3:AMEC ASEP MSEP

Applicable controller

N: None P: 1m S: 3m

M:5m X□□: Custom Length

R□□: Robot Cable

Cable length — Options

C € RoHS

## For High Acceleration/Deceleration

**Power-saving** 



(\*1) Except all 20W models and 30W 3mm lead models

Technical References



See Options below.

OIA Notes on selection

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke
- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 3mm-lead), and 1G acceleration for the high-acceleration models (3mm-lead model excluded).  $(The \ values \ in \ the \ table \ below \ are \ the \ upper \ limits, even \ if \ the \ acceleration/deceleration \ is \ decreased.)$
- (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-111) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads Motor Lead Max. Load Capacity Stroke Model number R R R

	output (w)	(111111)	Horizontal (kg)	Vertical (kg)	tillust (IV)	(111111)
RCA-RGS4C-①-20-12-②-③-④-⑤		12	3.0	0.5	18.9	
RCA-RGS4C-①-20-6-②-③-④-⑤	20	6	6.0	1.5	37.7	
RCA-RGS4C-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	50~300
RCA-RGS4C-①-30-12-②-③-④-⑤		12	4.0	1.0	28.3	(every 50mm)
RCA-RGS4C-①-30-6-②-③-④-⑤	30	6	9.0	2.5	56.6	
RCA-RGS4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150

Description

Single guide (guide rod diameter ø10mm, Ball bush type)

Ball screw, ø10mm, rolled C10

±0.02mm

ø20mm

±0.05 deg Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

0.1mm or less

(Unit: mm/s)

		٠.		П	
$\Box$	ы	ш	O	33	ŝ

	Standard price						
		①Encoder Type					
<pre>②Stroke (mm)</pre>	Increr	nental	Absolute				
	Motor Output (W)		Motor Output (W)				
	20W	30W	20W	30W			
50	_	_	_	_			
100	_	_	_	_			
150	_	_	_	_			
200	_	_	_	_			
250	_	_	_	_			
300	_	_	_	_			

#### 4 Cable Length

	<u> </u>	,	
	Туре	Cable symbol	Standard Price
		<b>P</b> (1m)	_
	Standard	<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)	_
		R01 (1m) ~ R03 (3m)	_
	Robot Cable	R04 (4m) ~ R05 (5m)	_
		R06 (6m) ~ R10 (10m)	_
		<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
		R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

**Actuator Specifications** Item

Non-rotating accuracy of rod

Drive System Positioning Repeatability

Lost Motion

Guide Rod diameter

#### (5) Options

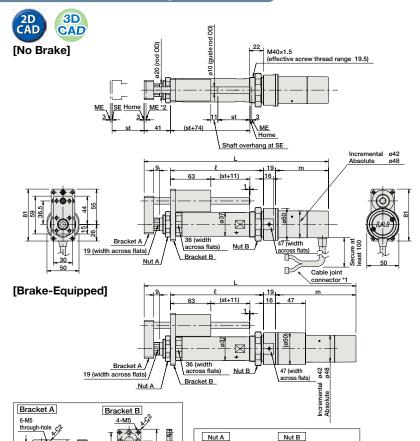
© opilolio			
Name	Option code	See page	Standard price
Brake	В	→ A-42	
Foot bracket	FT	→ A-49	_
High-acceleration/deceleration (*1)	HA	→ A-50	_
Home sensor (*2)	HS	→ A-50	_
Power-saving (*3)	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (back)	TRR	→ A-58	_

- (\*1) The high-acceleration/deceleration option is not available for all 20W models and 30W model with 3mm lead.
  (\*2) The home sensor (HS) cannot be used on the non-motor end models.
  (\*3) The high-acceleration/deceleration option and the power-saving option cannot be used simultaneously.

237 RCA-RGS4C



## ngs can be downloaded www.intelligentactuator.com



M30×1.5

### For Special Orders



(\*1) Connect the motor and encoder cables here.

See page A-59 for details on cables.

(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. ME : Mechanical end SE : Stroke end

#### ■ Dimensions and Weight by Stroke RCA-RGS4C (without brake)

	Stro	oke	50	100	150	200	250	300	
	20W	Increm.	272.5	322.5	372.5	422.5	472.5	522.5	
L	2000	Absol.	285.5	335.5	385.5	435.5	485.5	535.5	
-	30W	Increm.	287.5	337.5	387.5	437.5	487.5	537.5	
	3000	Absol.	300.5	350.5	400.5	450.5	500.5	550.5	
	٤			195	245	295	345	395	
	20W	Increm.	67.5						
m	2000	Absol.	80.5						
m	30W	Increm.	82.5						
	3000	Absol.	95.5						
	Weight (kg)			1.6	1.8	2.0	2.2	2.4	

#### RCA-RGS4C (with brake)

ſ	Stroke		50	100	150	200	250	300		
ſ		20W	Increm.	315.5	365.5	415.5	465.5	515.5	565.5	
١	L	2000	Absol.	328.5	378.5	428.5	478.5	528.5	578.5	
١	L	30W	Increm.	330.5	380.5	430.5	480.5	530.5	580.5	
١		3000	Absol.	343.5	393.5	443.5	493.5	543.5	593.5	
		٤			195	245	295	345	395	
		20W	Increm.	110.5						
١	m	2000	Absol.	123.5						
١	111	30W	Increm.	125.5						
ı	3000		Absol.	138.5						
ſ	Weight (kg)			1.7	1.8	2.0	2.2	2.4	2.6	

#### ③ Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

M40×1.5

ПСА	NCA series actuators can be operated with the controllers indicated below. Select the type according to your interface application. ACON-C1 also can be used.									
	Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
	lenoid Valve Type		AMEC-C-20I(  )-(  )-2-1 AMEC-C-30I(  )-(  )-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
30	ienoid valve Type	1	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547	
	d valve multi-axis type PIO specification	dine"	MSEP-C-(\(\varphi\)-~-(\(\varphi\)-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected						→ P563
	d valve multi-axis type work specification		MSEP-C-(\(\varphi\)-~-(\(\varphi\)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected 256 points			(Standard) 20W 1.3A rated	_	→ P303	
	Positioner type	E .	ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	512 points	DC24V	4.4A max. 30W 1.3A rated 4.4A max. (Power-saving)	_		
	afety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points				_		
Pul: (Diff	se Train Input Type erential Line Driver)		ACON-PL-20I (  ) - (  ) - 2-0 ACON-PL-30I (  ) - (  ) - 2-0	Pulse train input type with differential line driver support	( )		20W 1.3A rated 2.5A max.	_	→ P631	
	se Train Input Type Open Collector)	è	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support			30W 1.3A rated 2.2A max.	_		
Serial	Communication Type		ACON-SE-20I - N-0-0 ACON-SE-30I - N-0-0	Dedicated Serial Communication	64 points			_		
	Program Control Type		ASEL-CS-1-20①①-⑩-2-0 ASEL-CS-1-30①①-⑩-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\*This is for the single-axis ASEL. \* ① indicates encoder type (l: incremental, A: absolute) \* Enter the code "HA" or "LA" in ① when the high-acceleration/deceleration option or the power-saving option is specified. \* ⑩ indicates I/O type (NP/PN). \* ⑩ indicates number of axes (1 to 8). \* ② indicates field network specification symbol. \* This is for the single-axis ASEL.



# RCA-RGS3D

Robo Cylinder, Rod Type with Single Guide, ø32mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

C E RoHS

RCA -RGS3D-Series — Type

20 — Encoder type – Motor type

I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

20: 20W Servo

motor

Lead

10: 10mm 2.5:2.5mm

50: 50mm 200: 200mm (50mm pitch increments)

Stroke Applicable controller

A1:ACON **ASEL** A3:AMEC ASEP MSEP

N: None P: 1m S: 3m

Cable length Options See Options below.

M:5m X□□: Custom Length R□□: Robot Cable

**Power-saving** 



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model). This is the upper limit of the acceleration.
- (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-110) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

### Actuator Specifications

■ Leads and Payloads

200

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RGS3D-I-20-10-①-②-③-④		10	4.0	1.2	36.2	
RCA-RGS3D-I-20-5-①-②-③-④	20	5	9.0	2.7	72.4	50~200 (every 50mm)
RCA-RGS3D-I-20-2.5-①-②-③-④		2.5	18.0	6.2	144.8	

oke m)	Stroke Lead
	10
200	5

Lead	(every 50mm)
10	500
5	250
2.5	125

■ Stroke and Maximum Speed

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

Notes on selection

(Unit: mm/s)

#### ①Stroke ①Stroke (mm) Standard price 50 100 150

	Cab		

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

<b>④ Options</b>							
Name	Option code	See page	Standard price				
Foot bracket	FT	→ A-49	_				
Home sensor	HS	→ A-50	_				
Power-saving	LA	→ A-52	_				
Non-motor end specification	NM	→ A-52	_				
Trunnion bracket (back)	TRR	→ A-58	_				

<sup>\*</sup> The home sensor (HS) cannot be used on the non-motor end models.

## **Actuator Specifications**

Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø8mm, Ball bush type)
Rod diameter	ø16mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

### www.intelligentactuator.com

For Special Orders



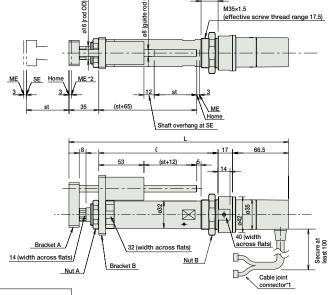


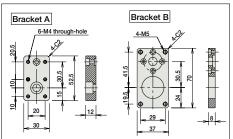
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

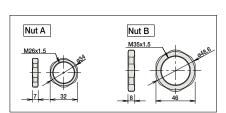
with surrounding objects. ME : Mechanical end

SE : Stroke end

[No Brake]







#### ■ Dimensions and Weight by Stroke RCA-RGS3D (without brake)

, , , , , , , , , , , , , , , , , , , ,								
Stroke	50	100	150	200				
L	258.5	308.5	358.5	408.5				
e e	140	190	240	290				
Weight (kg)	0.9	1.1	1.2	1.3				

RCA-RGS3D models are not equipped with a brake.

	②Ap	plicable	e Cont	rollers
--	-----	----------	--------	---------

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \*ACON-CY also can be used.

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application.								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	341	AMEC-C-20SI()-())-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid valve Type	1	ASEP-C-20SI①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points				→ P547
Solenoid valve multi-axis type PIO specification	and a	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					, DEC2
Solenoid valve multi-axis type Network specification	iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563
Positioner type	-	ACON-C-20SI()-())-2-0	Positioning is possible for up to 512	512 points		(Standard) 1.7A rated	_	
Safety-Compliant Positioner Type	420	ACON-CG-20SI①-①-2-0	points	312 points	DC24V	5.1A max. (Power-saving) 1.7A rated 3.4A max.	_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI①	Pulse train input type with differential line driver support	( )	(—)		_	→ P631
Pulse Train Input Type (Open Collector)	·	ACON-PO-20SI ①- ①-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20SI(])-(  )-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL. \* (ii) indicates I/O type (NP/PN).

\*Enter the code "LA" in () when the power-saving specification is specified.
\*(iii) indicates number of axes (1 to 8).
\*(iii) indicates field network specification symbol.

IAI

RCA-RGS3D **ELECTROMATE** 

# RCA-RGS4D

Robo Cylinder, Rod Type with Single Guide, ø37mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

CE RoHS

RCA -RGS4D-Series

— Encoder type Type Motor type

l: Incremental

20: 20W Servo I: Incremental
A: Absolute
\* Absolute encoder models can
only use ASEL. When the actuator
is used with the simple absolute
encoder, the model is considered
an incremental model. motor 30: 30W Servo

motor

Lead 12:12mm 6: 6mm 3: 3mm

Notes on

Stroke 50: 50mm

Applicable controller 300: 300mm (50mm pitch increments)

A1:ACON ASEL A3: AMEC ASEP MSEP

Cable length N: None P: 1m S: 3m

M:5m X□□: Custom Length

R□□: Robot Cable

**Power-saving** 

Options

See Options below.

reaching the critical rotational speed. Use the actuator specification table below to check

References (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from

Technical

- the maximum speed at the stroke you desire. (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model). This is the upper limit of the acceleration.
- (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-111) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads Rated thrust (N) Motor output (W) Max. Load Capacity Model number RCA-RGS4D-①-20-12-②-③-④-⑤ 12 RCA-RGS4D-①-20-6-②-③-④-⑤ 20 6 6.0 1.5 37.7 RCA-RGS4D-①-20-3-②-③-④-⑤ 3 12.0 3.5 75.4 50~300 (every 50mm) RCA-RGS4D-10-30-12-20-30-40-6 12 1.0 28.3 4.0 RCA-RGS4D-①-30-6-②-③-④-⑤ 30 9.0 2.5 56.6 RCA-RGS4D-①-30-3-②-③-④-⑤ 18.0 6.0 113.1

■ Stroke and Maximum Speed Stroke 50~300 (every 50mm 12 600

6 300 3 150

(Unit: mm/s)

#### ① Stroke

	Standard price					
②Stroke (mm)	①Encoder Type					
	Incremental		Absolute			
	Motor O	utput (W)	Motor Output (W)			
	20W	30W	20W	30W		
50	_	_	_	_		
100	_	_		_		
150	_	_	_	_		
200	_	_	_	_		
250	_	_	_	_		
300	_	_	_	_		

### **4** Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

## **⑤ Options**

Name	Option code	See page	Standard price
Foot bracket	FT	→ A-49	_
Home sensor	HS	→ A-50	_
Power-saving	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (back)	TRR	→ A-58	_

<sup>\*</sup>The home sensor (HS) cannot be used on the non-motor end models.

#### Actuator Specifications

Actuator Specifications					
ltem	Description				
Drive System	Ball screw, ø10mm, rolled C10				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1mm or less				
Guide	Single guide (guide rod diameter ø10mm, Ball bush type)				
Rod diameter	ø20mm				
Non-rotating accuracy of rod	±0.05 deg				
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)				

241 BCA-BGS4D



P.15

For Special Orders

2D CAD

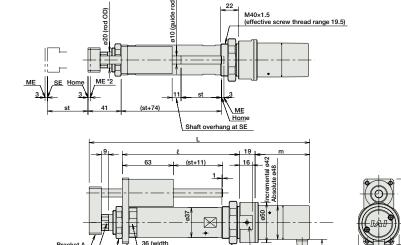
Dimensional Drawings

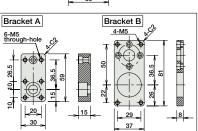
ings can be downloaded www.intelligentactuator.com

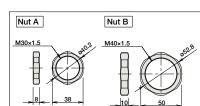
[No Brake]

- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

ME: Mechanical end SE : Stroke end







19 (width across flats)

Nut A

■ Dimensions and Weight by Stroke

Cable joint

R	RCA-RGS4D (without brake)								
	Stroke		50	100	150	200	250	300	
Г		20W	Increm.	250.5	300.5	350.5	400.5	450.5	500.5
	.	2000	Absol.	263.5	313.5	363.5	413.5	463.5	513.5
	-	30W	Increm.	265.5	315.5	365.5	415.5	465.5	515.5
			Absol.	278.5	328.5	378.5	428.5	478.5	528.5
	l			145	195	245	295	345	395
		20W A	Increm.	45.5					
١.			Absol.			58	.5		
Ι'	m		Increm.	60.5					
			Absol.	73.5					
		Weigh	t (kg)	1.3	1.5	1.7	1.9	2.1	2.3

RCA-RGS4D models are not equipped with a brake.

	<b>③Ар</b>	plicable	Control	lers
--	------------	----------	---------	------

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

men series decaders can be	operated w	Titl the controllers maleuted		иттепаса аррік		- CT diso cuit	De asea.	
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type	AMEC-C-20I①-①-①-2-1 Easy-to-use controller, even for beginners			AC100V	2.4A rated	_	→ P537	
Solenoid valve Type	3	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points		(Standard) 20W 1.3A rated	-	→ P547
Solenoid valve multi-axis type PIO specification	dine.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					, DC(2
Solenoid valve multi-axis type Network specification		MSEP-C-Ŵ-~-Ŵ-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563
Positioner type	ACON-C-30I(  )-(  )-2-0  ACON-CG-20I(  )-(  )-2-0		Positioning is possible for up to 512	512 points	DC24V	4.4A max. 30W 1.3A rated 4.4A max. (Power-saving)	-	
Safety-Compliant Positioner Type			points	312 points			_	
Pulse Train Input Type (Differential Line Driver)	Ć.	ACON-PL-20I (  ) - (  ) - 2-0 ACON-PL-30I (  ) - (  ) - 2-0	Pulse train input type with differential line driver support	( )		20W 1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support			30W 1.3A rated 2.2A max.	-	
Serial Communication Type	ACON-SE-20I①-N-0-0 ACON-SE-30I①-N-0-0		Dedicated Serial Communication	64 points			_	
		Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\* This is for the single-axis ASEL.
\* (||) indicates I/O type (NP/PN).

\* ⊕ indicates encoder type (I: incremental, A: absolute)
\* ⊕ indicates number of axes (1 to 8).

\* Enter the code "LA" in ① when the power-saving specification is specified.
\* ② indicates field network specification symbol.

IAI

# RCA-SRGS4R

Robo Cylinder, Rod Type with Single Guide, Actuator Width 45mm, Servo Motor, Short-Length Model, Side-Mounted Motor

Model Specification Items

C E RoHS

\* See page Pre-47 for details on the model descriptions.

RCA - SRGS4R -Series — Type

20 — Encoder type — Motor type —

motor

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

Lead 20: 20W Servo 5: 5mm

Stroke -20: 20mm

200: 200mm (10mm pitch increments)
\* Set in 50mm increments
over 100mm

A1:ACON ASEL A3:AMEC ASEP MSEP

Applicable controller -

Cable length N: None P: 1m S: 3m

Options See Options below.

M:5m X□□: Custom Length

**Power-saving** 

Technical References



(1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the  $2.5 mm\hbox{-lead model, or when used vertically)}. This is the upper limit of the acceleration.$ 

 $(2) \ The \ values \ for \ the \ horizontal \ load \ capacity \ reflect \ the \ use \ of \ an \ external \ guide. \ See \ the$ technical resources (page A-111) for the allowable weight using the supplied guide alone. (3) See page A-71 for details on push motion.

Actuator Specifications											
■ Leads and Payloads (Note A) 50mm increments over 100mm. ■ Stroke and Maximum Speed											
Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)	Stroke Lead	20~200 (every 10mm)			
RCA-SRGS4R-I-20-5-①-②-③-④	20	5	9 (Note1)	2	41	20~200	5	250			
RCA-SRGS4R-I-20-2.5-①-②-③-④		2.5	18 (Note1)	5.5	81	(every 10mm) (Note A)	2.5	125			
Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options *See page A-71 for details on push motion.											

Notes on

selection

①Stroke	
①Stroke (mm)	Standard price
20~50	_
60~100	_
150	_
200	_

<b>4</b> Options			
Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Flange bracket (back)	FLR	→ A-46	_
Foot bracket 2 (right/left side mounting)	FT2/FT4	→ A-50	_
Guide mounting direction	GS2 ~ GS4	→ A-50	_
Power-saving	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_

- \*The brake is available for strokes of 70mm or more.

  \*Please be sure that the mounting direction of the guide is specified in the product name.

  \*The guide and the foot bracket cannot be mounted in the same direction.

  (Combination of GS2 and F14, GS4 and F12 can be mounted. The foot bracket cannot be mounted in the GS3 direction.)

#### ③ Cable Length

Non-rotating accuracy of rod

Туре	Cable symbol	Standard Price
Standard (Robot Cables)	<b>P</b> (1m)	_
	<b>S</b> (3m)	_
(Nobol Cables)	<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 cable is a motor-encoder integrated cable, and is provided as a robot cable. \* See page A-59 for cables for maintenance.

Actuator Specifications	
ltem	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod diameter	ø22mm

±0.05 deg Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

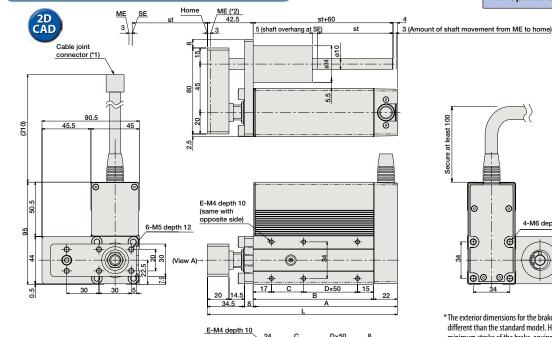
RCA-SRGS4R



www.intelligentactuator.com

For Special Orders





4-M6 depth 12 € **(** <u>o</u>( <u></u>●©i

\*The exterior dimensions for the brake-equipped model is no different than the standard model. However, 70mm is the minimum stroke of the brake-equipped models. (i.e. The brake is not compatible at 60mm strokes and under.)

ST : Stroke SE : Stroke end ME: Mechanical end

GS3

Guide mounting direction (as viewed from View A)

■ Dimensions and Weight by Stroke (Add 0.2kg for brake equipped)

Stroke	20	30	40	50	60	70	80	90	100	150	200
L	126.5	136.5	146.5	156.5	166.5	176.5	186.5	196.5	206.5	256.5	306.5
Α	84	94	104	114	124	134	144	154	164	214	264
В	62	72	82	92	102	112	122	132	142	192	242
С	30	40	50	60	70	30	40	50	60	60	60
D	0	0	0	0	0	1	1	1	1	2	3
E	4	4	4	4	4	6	6	6	6	8	10
Weight (kg)	1.15	1.21	1.28	1.35	1.42	1.49	1.56	1.62	1.69	2.03	2.38

(\*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables. (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

	② Applicat	ole Con	trollers
--	------------	---------	----------

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Calanaid Valua Tura	100 m	AMEC-C-20I①-⑪-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
Solenoid Valve Type	1	ASEP-C-20I①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points				→ P547	
Solenoid valve multi-axis type PIO specification	lune.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.		, D563	
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563	
Positioner type		ACON-C-20I①-①-2-0	Positioning is possible for up to 512	512 it-	DC24V		_		
Safety-Compliant Positioner Type		ACON-CG-20I①-①-2-0	points	512 points			_		
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I①-⑪-2-0	Pulse train input type with differential line driver support	( )			_	→ P631	
Pulse Train Input Type (Open Collector)		ACON-PO-20I①-⑪-2-0	Pulse train input type with open collector support	(—)			_		
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points			_		
Program Control Type		ASEL-CS-1-20I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ① indicates I/O type (NP/PN).
\* ⑩ indicates number of axes (1 to 8). \* ⑩ indicates field network specification symbol.

IAI

RCA-SRGS4R **ELECTROMATE** 

## RCA-RGD3C

Robo Cylinder, Rod Type with Double Guide, ø32mm Diameter, 24V Servo Motor, Coupled

Model Specification Items RCA -RGD3C-20 Series Type Stroke Applicable controller Options Encoder type – - Motor type Lead Cable length 20: 20W Servo 10: 10mm 50: 50mm l: Incremental A1:ACON N: None See Options below. P: 1m S: 3m motor **ASEL** \* The Simple absolute 2.5:2.5mm 200: 200mm (50mm pitch increments) A3:AMEC encoder is also M:5m X□□: Custom Length ASEP considered type "I". \* See page Pre-47 for details on the model descriptions. MSEP R□□: Robot Cable

C E RoHS

### For High Acceleration/Deceleration

**Power-saving** 



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 2.5mm-lead), and 1G acceleration for the high-acceleration models (2.5mm-lead model excluded). The values in the table below are the upper limits, even if the acceleration/deceleration is decreased
- (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

Actuator Specifications											
■ Leads and Payloads	■ Stroke and	d Maximum Speed									
Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)	Stroke Lead	50~200 (every 50mm)			
RCA-RGD3C-I-20-10-①-②-③-④		10	4.0	1.2	36.2		10	500			
RCA-RGD3C-I-20-5-①-②-③-④	20	5	9.0	2.7	72.4	50~200 (every 50mm)	5	250			
RCA-RGD3C-I-20-2.5-①-②-③-④		2.5	18.0	6.2	144.8		2.5	125			
Code explanation											

①Stroke			3
①Stroke (mm)	Standard price		

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

① Jti okc	
①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_

③ Cable Leng	jth	
Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	
	R01 (1m) ~ R03 (3m)	
	R04 (4m) ~ R05 (5m)	_
Robot Cable	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance

Actuator Specifications

#### 4 Options Option code | See page | Standard price Name Brake → A-42 Foot bracket → A-49 High-acceleration/deceleration (\*1) HA → A-50 Home sensor (\*2) → A-50 Power-saving (\*3) LA → A-52 Non-motor end specification → A-52 Trunnion bracket (back) TRR → A-58

- (\*1) The high-acceleration/deceleration option is not available for 2.5mm-lead model. (\*2) The home sensor (HS) cannot be used on the non-motor end models.
- (\*3) The high-acceleration/deceleration option and the power-saving option cannot be used simultaneously.

**245** RCA-RGD3C

Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø8mm, Ball bush type)
Rod diameter	ø16mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

## www.intelligentactuator.com

For Special Orders



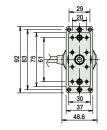


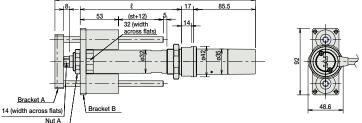


(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

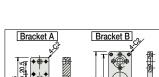
with surrounding objects. ME: Mechanical end

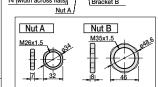
SE : Stroke end [No Brake] ø16 (rod OD) °7M35×1.5 (effective screw thread range 17.5) 40 (width across flats) Nut B ME Home rhang at SE Cable joint





[Brake-Equipped]





### ■ Dimensions and Weight by Stroke

RCA-RGD3C (without brake)						
Stroke	50	100	150	200		
L	277.5	327.5	377.5	427.5		
l	140	190	240	290		
Weight (kg)	1.1	1.2	1.4	1.5		

RCA-RGD3C (	with brake

RCA-RODSC (WITH Drake)						
Stroke	50	100	150	200		
L	316.5	366.5	416.5	466.5		
l	140	190	240	290		
Weight (kg)	1.3	1.4	1.6	1.7		

#### ② Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

(st+12) 32 (width across flats)

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colonoid Value Tuno	The state of the s	AMEC-C-20SI()-())-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid Valve Type		ASEP-C-20SI①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points				→ P547
Solenoid valve multi-axis type PIO specification	lune"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points				→ P303
Positioner type		ACON-C-20SI()-())-2-0	Positioning is possible for up to 512	F12 points		(Standard) 1.7A rated	_	
Safety-Compliant Positioner Type		ACON-CG-20SI()-())-2-0	points	oints 512 points		5.1A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20SI①	Pulse train input type with differential line driver support	(—)		1.7A rated 3.4A max.	_	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-20SI ①-①-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20SI()-(i)-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL.
\* (i) indicates I/O type (NP/PN).

\* Enter the code "HA" or "LA" in ① when the high-acceleration/deceleration option or the power-saving option is specified.
\* ⑩ indicates number of axes (1 to 8).
\* ⑫ indicates field network specification symbol.

IAI

RCA-RGD3C **ELECTROMATE** 

# RCA-RGD4C

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 24V Servo Motor, Coupled

Applicable controller

Model Specification Items

C € RoHS

RCA -RGD4C-

Type - Encoder type Motor type

I: Incremental
A: Absolute
\* Absolute encoder models can
only use ASEL. When the actuator
is used with the simple absolute
encoder, the model is considered
an incremental model. 20: 20W Servo motor 30: 30W Servo

Lead 12:12mm 3: 3mm

Stroke 50: 50mm 300: 300mm (50mm pitch increments)

A1:ACON ASEL A3:AMEC ASEP MSEP

N: None P: 1m S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

Cable length

### For High Acceleration/Deceleration



(\*1) Except all 20W models and 30W 3mm lead models

Technical References (A)

- Options

**Power-saving** 

See Options below.

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire. (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 3mm-lead),

- and 1G acceleration for the high-acceleration models (3mm-lead model excluded). (The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RGD4C-①-20-12-②-③-④-⑤		12	3.0	0.5	18.9	
RCA-RGD4C-①-20-6-②-③-④-⑤	20	6	6.0	1.5	37.7	
RCA-RGD4C-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	50~300
RCA-RGD4C-①-30-12-②-③-④-⑤		12	4.0	1.0	28.3	(every 50mm)
RCA-RGD4C-①-30-6-②-③-④-⑤	30	6	9.0	2.5	56.6	
RCA-RGD4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

#### Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)				
12	600				
6	300				
3	150				

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

	Standard price					
②Stroke (mm)	①Encoder Type					
	Incremental		Absolute			
	Motor O	utput (W)	Motor Output (W)			
	20W	30W	20W	30W		
50	_	_	_	_		
100	_	_	_	_		
150	_	_	_	_		
200	_	_	_			
250	_	_	_	_		
300	_	_	_	_		

#### 4 Cable Length

Actuator Specifications Item

Drive System

Lost Motion

Guide Rod diameter

Positioning Repeatability

Non-rotating accuracy of rod

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

Ball screw, Ø10mm, rolled C10

±0.02mm

ø20mm ±0.05 deg

Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

0.1mm or less

Description

Double guide (guide rod diameter ø10mm, Ball bush type)

© 0 pulous			
Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-49	
High-acceleration/deceleration (*1)	HA	→ A-50	_
Home sensor (*2)	HS	→ A-50	_
Power-saving (*3)	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (back)	TRR	→ A-58	_

- (\*1) The high-acceleration/deceleration option is not available for all 20W models and 30W model with 3mm lead.
  (\*2) The home sensor (HS) cannot be used on the non-motor end models.
  (\*3) The high-acceleration/deceleration option and the power-saving option cannot be used simultaneously.

**247** RCA-RGD4C



<sup>\*</sup> See page A-59 for cables for maintenance.

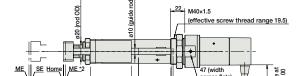
For Special Orders

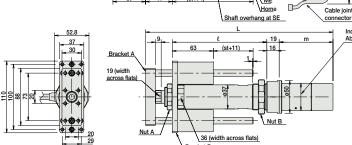
P.15

(\*1) Connect the motor and encoder cables here.

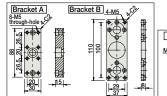
See page A-59 for details on cables.

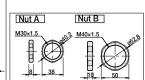
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. ME: Mechanical end SE : Stroke end





Bracket B [Brake-19 **Equipped**] 19 (width across flats) 942 948 36 (width across flats)
Bracket B





#### ■ Dimensions and Weight by Stroke RCA-RGD4C (without brake)

Stro	Local								
Stroke		50	100	150	200	250	300		
014/	Increm.	272.5	322.5	372.5	422.5	472.5	522.		
.UVV	Absol.	285.5	335.5	385.5	435.5	485.5	535.		
014/	Increm.	287.5	337.5	387.5	437.5	487.5	537.		
VVV	Absol.	300.5	350.5	400.5	450.5	500.5	550.		
l		145	195	245	295	345	395		
014/	Increm.	67.5							
.UVV	Absol.			80	.5				
014/	Increm.	82.5							
Absol.		95.5							
leigh	t (kg)	1.8	2.0	2.2	2.4	2.6	2.8		
11	ew wo wo	Absol.  W Absol.  Absol.  Increm.  Absol.  Increm.  Absol.  Increm.  Absol.  Increm.	Absol. 285.5 0W Absol. 287.5 Absol. 300.5 0W Increm. 45sol. 45 0W Absol. 45sol.	Absol. 285.5 335.5    OW Absol. 287.5 337.5    Absol. 300.5 350.5    V 145 195    OW Absol.    OW Absol.    OW Absol.    OW Absol.	OW     Absol.     285.5     335.5     385.5       OW     Increm.     287.5     337.5     387.5       Absol.     300.5     350.5     400.5       V     145     195     245       OW     Absol.     80       Increm.     82       Absol.     95	OW Absol. 285.5 335.5 385.5 435.5 OW Absol. 300.5 350.5 400.5 450.5 ℓ 145 195 245 295 OW Increm. Absol. 800.5 OW Increm. 82.5 OW Absol. 95.5	OW Absol.     285.5     335.5     385.5     435.5     485.5       OW Absol.     287.5     337.5     387.5     437.5     487.5       Absol.     300.5     350.5     400.5     450.5     500.5       W Increm.     67.5       Absol.     80.5       Absol.     95.5		

#### RCA-RGD4C (with brake)

ſ		Stro	ke	50	100	150	200	250	300		
ſ	20W		Increm.	315.5	365.5	415.5	465.5	515.5	565.5		
١	L	2000	Absol.	328.5	378.5	428.5	478.5	528.5	578.5		
١	30W	2014/	Increm.	330.5	380.5	430.5	480.5	530.5	580.5		
١		3000	Absol.	343.5	393.5	443.5	493.5	543.5	593.5		
		l		145	195	245	295	345	395		
ſ		20W	lncrem.		110.5						
١	m	2000	Absol.			12:	3.5				
-	111	30W	Increm.	125.5							
ı	Absol.					13	3.5				
ſ	Weight (kg)		2.0	2.2	2.4	2.6	2.8	3.0			

3 Applicable Controllers	

Dimensional Drawings

[No Brake]

CAD

CAD drawings can be downloaded www.intelligentactuator.com

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

nex series actuators can be	operated w	Titl the controllers indicated	below. Select the type according to you	ит ппенией арри	ation. At	CON CT also carl	be useu.		
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
	2	AMEC-C-20I(  )-(  )-2-1 AMEC-C-30I(  )-(  )-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
Solenoid Valve Type	1	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547	
Solenoid valve multi-axis type PIO specification	The same of	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected		DC24V	(Standard) 20W 1.3A rated 4.4A max. 30W 1.3A rated 4.4A max. (Power-saving) 20W 1.3A rated 2.5A max.			→ P563
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P503	
Positioner type		ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	512 points (—)			_		
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points				_		
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I (  ) - (  ) - 2-0 ACON-PL-30I (  ) - (  ) - 2-0	Pulse train input type with differential line driver support				_	→ P631	
Pulse Train Input Type (Open Collector)	ě	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support			30W 1.3A rated 2.2A max.	_		
Serial Communication Type		ACON-SE-20I (II) -N-0-0 ACON-SE-30I (II) -N-0-0	Dedicated Serial Communication	64 points			_		
Program Control Type		ASEL-CS-1-20①①-⑩-2-0 ASEL-CS-1-30①①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\*This is for the single-axis ASEL. \* ① indicates encoder type (l: incremental, A: absolute) \* Enter the code "HA" or "LA" in ① when the high-acceleration/deceleration option or the power-saving option is specified. \* ⑥ indicates I/O type (NP/PN). \* ② indicates number of axes (1 to 8). \* ② indicates field network specification symbol. \* This is for the single-axis ASEL.

# RCA-RGD3D

Robo Cylinder, Rod Type with Double Guide, ø32mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

RCA —RGD3D— Series — Type

20 — Encoder type – Motor type

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

20: 20W Servo

motor

Lead

Stroke 10: 10mm 2.5:2.5mm

50: 50mm

Applicable controller 200: 200mm (50mm pitch increments)

A1:ACON **ASEL** A3:AMEC ASEP MSEP

Cable length N: None P: 1m S: 3m

Options See Options below.

M:5m X□□: Custom Length R□□: Robot Cable



**Power-saving** 

Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the criticalrotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire. (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2.5mm-lead model). These values are the upper limits for the acceleration. . Notes or (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.

(4) See page A-71 for details on push motion.

**Actuator Specifications** 

■ Leads and Payloads						
Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)		Rated thrust (N)	Stroke (mm)
RCA-RGD3D-I-20-10-①-②-③-④		10	4	1.2	36.2	
RCA-RGD3D-I-20-5-①-②-③-④	20	5	9	2.7	72.4	50~200 (every 50mm)
RCA-RGD3D-I-20-2.5-①-②-③-④		2.5	18	6.2	144.8	

■ Stroke and Maximum Speed

= Stroke and maximum speed							
Stroke Lead	50~200 (every 50mm)						
10	500						
5	250						
2.5	125						

(Unit: mm/s)

## ①Stroke

①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_

③ Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<b>S</b> (3m)	_
Í	<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)	_
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

<b>4</b> Options								
Name	Option code	See page	Standard price					
Foot bracket	FT	→ A-49						
Home sensor	HS	→ A-50	_					
Power-saving	LA	→ A-52	_					
Non-motor end specification	NM	→ A-52	_					
Trunnion bracket (back)	TRR	→ A-58	_					

<sup>\*</sup>The home sensor (HS) cannot be used on the non-motor end models

Actuator Specifications	
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Double guide (guide rod diameter ø8mm, Ball bush type)
Rod diameter	ø16mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

249

## CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders

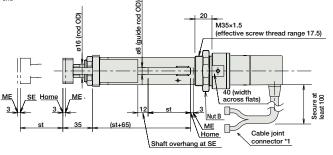


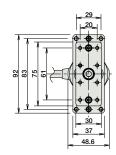


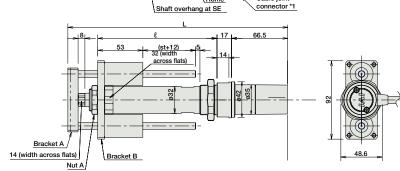
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables. (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

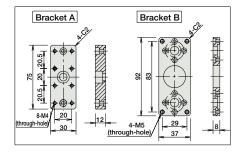
with surrounding objects. ME : Mechanical end SE: Stroke end

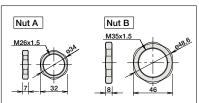
[No Brake]











#### ■ Dimensions and Weight by Stroke RCA-RGD3D (without brake)

50	100	150	200					
258.5	308.5	358.5	408.5					
140	190	240	290					
1.1	1.2	1.4	1.5					
	258.5 140	258.5 308.5 140 190	258.5 308.5 358.5 140 190 240					

RCA-RGD3D models are not equipped with a brake.

### ② Applicable Controllers

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

		1							
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
	1	AMEC-C-20SI()-())-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
Solenoid Valve Type	1	ASEP-C-20SI①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547	
Solenoid valve multi-axis type PIO specification	and a	MSEP-C-(II)-~-(II)-2-0 a	Positioner type based on PIO control, allowing up to 8 axes to be connected		DC24V	(Standard) 1.7A rated 5.1A max. (Power-saving) 1.7A rated 3.4A max.		, DEC2	
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563	
Positioner type		ACON-C-20SI()-())-2-0	Positioning is possible for up to 512 points	512 points (—)				_	
Safety-Compliant Positioner Type		ACON-CG-20SI①-①-2-0					_		
Pulse Train Input Type (Differential Line Driver)	e)	ACON-PL-20SI①	Pulse train input type with differential line driver support				_	→ P631	
Pulse Train Input Type (Open Collector)	·	ACON-PO-20SI ①- ①-2-0	Pulse train input type with open collector support				_		
Serial Communication Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			_		
Program Control Type		ASEL-CS-1-20SI①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ① indicates I/O type (NP/PN). \* ② indicates number of axes (1 to 8). \* ② indicates field network specification symbol.

IAI



# RCA-RGD4D

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

RCA -RGD4D-Type

— Encoder type Motor type I: Incremental A: Absolute \* Absolute encoder models can only use ASEL. When the actuator is used with the simple absolute encoder, the model is considered an incremental model.

20: 20W Servo motor 30: 30W Servo

Lead 12:12mm 3: 3mm

Stroke

50: 50mm 300: 300mm (50mm pitch increments) A1:ACON ASEL A3: AMEC ASEP MSEP

Applicable controller

N: None P: 1m S: 3m

Options See Options below.

M:5m X□□: Custom Length R□□: Robot Cable

Cable length

**Power-saving** 

CE RoHS

Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 3mm-lead model). These values are the upper limits for the acceleration.
- (3) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)
	12	3.0	0.5	18.9	
20	6	6.0	1.5	37.7	
	3	12.0	3.5	75.4	50~300
	12	4.0	1.0	28.3	(every 50mm)
30	6	9.0	2.5	56.6	
	3	18.0	6.0	113.1	
	20 30	output (W) (mm)  12 20 6 3  12 30 6 3	output (W)         (mm)         Horizontal (kg)           20         6         6.0           3         12.0           12         4.0           30         6         9.0           3         18.0	output (W)         (mm)         Horizontal (kg)         Vertical (kg)           20         6         6.0         1.5           3         12.0         3.5           12         4.0         1.0           30         6         9.0         2.5           3         18.0         6.0	output (W)         (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)           20         6         6.0         1.5         37.7           3         12.0         3.5         75.4           12         4.0         1.0         28.3           30         6         9.0         2.5         56.6           3         18.0         6.0         113.1

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion

#### ①Encoder Type/②Stroke

	Standard price					
	①Encoder Type					
②Stroke (mm)	Increr	nental	Absolute			
	Motor O	utput (W)	Motor O	utput (W)		
	20W	30W	20W	30W		
50			_	_		
100			_	_		
150			_	_		
200			_			
250			_	_		
300	_	_	_	_		

## ④ Cable Length

Type	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

#### (5) Options

Name	Option code	See page	Standard price
Foot bracket	FT	→ A-49	_
Home sensor	HS	→ A-50	_
Power-saving	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (back)	TRR	→ A-58	_

\*The home sensor (HS) cannot be used on the non-motor end models.

Actuator Specifications	
Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Double guide (guide rod diameter ø10mm, Ball bush type)
Rod diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

251

## ings can be downloaded www.intelligentactuator.com

For Special Orders



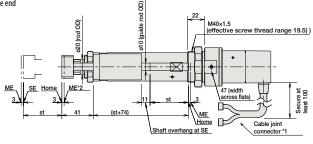


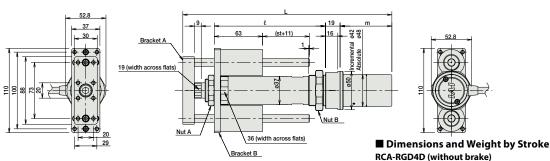
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

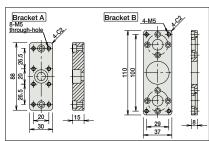
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

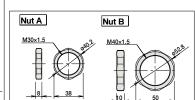
ME: Mechanical end SE: Stroke end

[No Brake]









	KCA	-KGD	4D (With	nout b	rake)						
		Stro	ke	50	100	150	200	250	300		
		2014/	Increm.	250.5	300.5	350.5	400.5	450.5	500.5		
	L	20W	Absol.	263.5	313.5	363.5	413.5	463.5	513.5		
	L	30W	Increm.	265.5	315.5	365.5	415.5	465.5	515.5		
	3	3000	Absol.	278.5	328.5	378.5	428.5	478.5	528.5		
	l		145	195	245	295	345	395			
		20W	Increm.			45	.5	·			
	m	2000	Absol.		58.5						
	m	11 30W	Increm.	60.5							
m	3000	Absol.			73	.5					
		Weigh	t (ka)	16	1.8	2.1	2.3	2.5	2.7		

RCA-RGD4D models are not equipped with a brake.

	3Ar	plica	ble C	ontro	llers
--	-----	-------	-------	-------	-------

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Calamaid Value Tura		AMEC-C-20I(  )-(  )-2-1 AMEC-C-30I(  )-(  )-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
Solenoid Valve Type	3	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547	
Solenoid valve multi-axis type PIO specification	and a	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			(Standard) 20W 1.3A rated 4.4A max. 30W 1.3A rated 4.4A max. DC24V (Power-saving) 20W 1.3A rated 2.5A max.	_	→ P563	
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points					
Positioner type		ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	513 int-			30W	-	
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points	512 points	DC24V		_		
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I(  )-(  )-2-0 ACON-PL-30I(  )-(  )-2-0	Pulse train input type with differential line driver support	( )			_	→ P631	
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I①-⑩-2-0 ACON-PO-30I①-⑪-2-0	Pulse train input type with open collector support	(—)	30W 1.3A rated 2.2A max.	_			
Serial Communication Type		ACON-SE-20I(II)-N-0-0 ACON-SE-30I(II)-N-0-0	Dedicated Serial Communication	64 points			_		
Program Control Type		ASEL-CS-1-20()(  )-(  )-2-0 ASEL-CS-1-30()(  )-(  )-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	

\* This is for the single-axis ASEL.
\* iii indicates I/O type (NP/PN).

\* ⊕ indicates encoder type (I: incremental, A: absolute)
\* ⊕ indicates number of axes (1 to 8).

\* Enter the code "LA" in ① when the power-saving specification is specified.
\* ② indicates field network specification symbol.

IAI



# RCA-RGD3R

Robo Cylinder, Rod Type with Double Guide, ø32mm Diameter, 24V Servo Motor, Side-mounted Motor

Model Specification Items

RCA -RGD3R-Series Type

20 Encoder type –

20: 20W Servo

motor

- Motor type

Lead 10: 10mm 2.5:2.5mm

Stroke 50: 50mm 200: 200mm (50mm pitch increments)

Applicable controller A1:ACON **ASEL** A3:AMEC

Cable length N: None P: 1m S: 3m

- Options See Options below.

**Power-saving** 

M:5m X□□: Custom Length ASEP MSEP R□□: Robot Cable



I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

Technical References



- $(1) \ \ When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical$ rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 2.5mm-lead model). These values are the upper limits for the acceleration. (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external
- force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion

### **Actuator Specification**

■ Leads and Payloads Motor output (W) Max. Load Capacity Rated Lead Stroke Model number thrust (N) RCA-RGD3R-I-20-10-10-2-3-4 10 4.0 1.2 36.2 50~200 RCA-RGD3R-I-20-5-①-②-③-④ 20 5 9.0 2.7 72.4 RCA-RGD3R-I-20-2.5-①-②-③-④ 2.5 18.0 6.2 144.8

Stroke Lead	50~200 (every 50mm)					
10	500					
5	250					
2.5	125					

■ Stroke and Maximum Speed

Notes on selection

(Unit: mm/s)

① Stroke									
①Stroke (mm)	Standard price								
50	_								
100	_								
150	_								
200	_								

#### ③ Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	ı

<sup>\*</sup> See page A-59 for cables for maintenance.

Actuator Specifications

#### Option code | See page | Standard price Brake → A-42 → A-49 FLR → A-46

Foot bracket Flange bracket (back) Home sensor → A-50 LA Power-saving → A-52 NM → A-52 Non-motor end specification Clevis bracket QR → A-53 Back-mounting plate → A-54

RCA-RGD3R

**4** Options

Actuator Specifications	
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø16mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

e sensor (HS) cannot be used on the non-motor end models.

## Dimensional Drawings

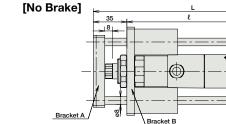
## ngs can be downloaded www.intelligentactuator.com o

For Special Orders



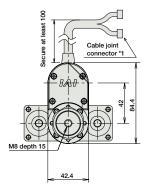




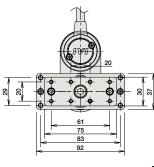


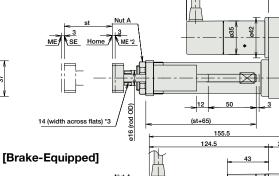
- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
- ME : Mechanical end SE : Stroke end

  (\*3) The orientation of the bolt varies depending on the

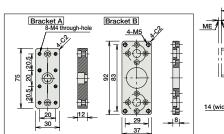


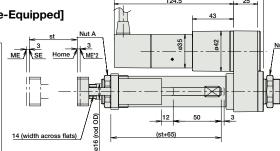
Nut A





116.5





## ■ Dimensions and Weight by Stroke

- 1	RCA-RGD3R (without brake)									
	Stroke	50	100	150	200					
	L	212	262	312	362					
	l	128	178	228	278					
	Weight (kg)	1.2	1.3	1.5	1.6					

-	RCA-RGD3R	(with	brak	e
	0. 1		-	п

KCA-KGD3K (With brake)							
Stroke	50	100	150	200			
L	212	262	312	362			
l	128	178	228	278			
Weight (kg)	1.4	1.5	1.7	1.8			

	② Applicable Controllers	
--	--------------------------	--

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \* ACON-CY also can be used.

Name		External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calanaid Valva T	Calan aid Value Tura		AMEC-C-20SI①-⑪-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid valve i	Solenoid Valve Type	1	ASEP-C-20SI①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi- PIO specification		lune.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi- Network specifica			MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	7 2503
Positioner typ	Positioner type  Safety-Compliant Positioner Type  Pulse Train Input Type Differential Line Driver)		ACON-C-20SI①-⑪-2-0	Positioning is possible for up to 512	512 points		(Standard) 1.7A rated	_	
		4.00	ACON-CG-20SI()-())-2-0	points	312 points	DC24V	5.1A max. (Power-saving)	_	
			ACON-PL-20SI①	Pulse train input type with differential line driver support	( )		1.7A rated 3.4A max.	_	→ P631
	se Train Input Type (Open Collector)		ACON-PO-20SI①-①-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication	on Type		ACON-SE-20SI①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type	2		ASEL-CS-1-20SI()-())-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

\*This is for the single-axis ASEL. \* Enter the code "LA" in ① when the power-saving specification is specified. \* ⑩ indicates I/O type (NP/PN). \* ⑪ indicates number of axes (1 to 8). \* ⑫ indicates field network specification symbol.

RCA-RGD3R ELECTROMATE

# RCA-RGD4R

Robo Cylinder, Rod Type with Double Guide, Actuator Width 37mm, 24V Servo Motor, Side-mounted Motor

Model Specification Items

CE RoHS

RCA -RGD4R-Series Type



Motor type I: Incremental A: Absolute \* Absolute encoder models can only use ASEL. When the actuator is used with the simple absolute encoder, the model is considered an incremental model. 20: 20W Servo motor 30: 30W Servo

Lead 12:12mm 3: 3mm

Stroke 50: 50mm 300: 300mm (50mm pitch increments)

A1:ACON ASEL A3: AMEC ASEP

Applicable controller

MSEP

N: None P: 1m S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

Cable length — Options

**Power-saving** 

See Options below.

Technical References





- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 3mm-lead model). These values are the upper limits for the acceleration.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RGD4R-①-20-12-②-③-④-⑤		12	3.0	0.5	18.9	
RCA-RGD4R-①-20-6-②-③-④-⑤	20	6	6.0	1.5	37.7	
RCA-RGD4R-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	50~300
RCA-RGD4R-①-30-12-②-③-④-⑤		12	4.0	1.0	28.3	(every 50mm)
RCA-RGD4R-①-30-6-②-③-④-⑤	30	6	9.0	2.5	56.6	
RCA-RGD4R-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)				
12	600				
6	300				
3	150				

(Unit: mm/s)

① Encoder Type/② Stroke

Samesare in part of the same								
	Standard price							
		①Encoder Type						
@Stroke (mm)	Incremental		Absolute					
	Motor Output (W)		Motor Output (W)					
	20W	30W	20W	30W				
50	_	_	_	_				
100	_	_	_	_				
150	_	_	_	_				
200	_	_	_	_				
250	_	_	_	_				
300	_	_		_				

<b>4</b> Cable Lengtl	h
-----------------------	---

Type	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

# (5) Options

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Foot bracket	FT	→ A-49	_
Flange bracket (back)	FLR	→ A-46	_
Home sensor	HS	→ A-50	_
Power-saving	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_
Clevis bracket	QR	→ A-53	_
Rack-mounting plate	RP	→ A-54	_

<sup>\*</sup>The home sensor (HS) cannot be used on the non-motor end models.

## Actuator Specifications

Actuator Specifications	
ltem	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

255 RCA-RGD4R

P.15

#### Dimensional Drawings

## www.intelligentactuator.com

 $\supset$ 



[No Brake] Nut A M30×1.5

(\*3) The orientation of the bolt varies depending on the product.

SE Home ME \*2

19 (width across flats)\*3

20 (rod OD)

(st+74)

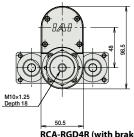
(st+74)

#### (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables. (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. ME : Mechanical end SE: Stroke end

RCA-RGD4R (without brake) | 50 | 100 | 150 | 200 | 250 | 300 | 227 | 277 | 327 | 377 | 427 | 477 | 477 | 227 | 277 | 327 | 377 | 327 | 377 | 427 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | 477 | Stroke 20W Increm. Absol. Increm. 30W Absol. 133 183 233 283 333 383 67.5 20W Absol. 80.5 m Increm 82.5 30W Absol. Increm. 100.5 20W Absol. Increm. 113.5 115.5 Р 30W Absol. 2.2 2.3 2.6 2.7 3.0 Weight (kg)

For Special Orders

■ Dimensions and Weight by Stroke



#### RCA-RGD4R (with brake)

	Stro	ke	50	100	150	200	250	300		
	20W	Increm.	227	277	327	377	427	477		
L	2000	Absol.	227	277	327	377	427	477		
L	30W	Increm.	227	277	327	377	427	477		
	3000	Absol.	227	277	327	377	427	477		
	l		133	183	233	283	333	383		
	m 20W Increm. Absol. 30W Increm. Absol.			110	0.5					
		Absol.	123.5							
m		Increm.	125.5							
		Absol.			138	3.5				
	20W	Increm.			143	3.5				
Р	2000	Absol.			156	5.5				
7	30W	Increm.			158	3.5		27 477		
	3000	Absol.			17	1.5				
	Weigh	t (kg)	2.1	2.4	2.5	2.8	2.9	3.2		

#### ③ Applicable Controllers

\* This is for the single-axis ASEL.
\* (||) indicates I/O type (NP/PN).

100

[Brake-Equipped]

8-M5 through-hole

Bracket A Bracket B

RCA series actuators can be operated with the controllers indicated below. Select the type according to your intended application. \*ACON-CY also can be used.

47

	.,		r					
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colonaid Valva Tyna		AMEC-C-20I(  )-(  )-2-1 AMEC-C-30I(  )-(  )-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid Valve Type	3	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					, DEC2
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 20W 1.3A rated	_	→ P563
Positioner type		ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	F12 points	4.4A max. 30W 1.3A rated	_		
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points	512 points	DC24V	4.4A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)	Ó	ACON-PL-20I (  ) - (  ) - 2-0 ACON-PL-30I (  ) - (  ) - 2-0	Pulse train input type with differential line driver support	( )	(—)	20W 1.3A rated 2.5A max. 30W 1.3A rated 2.2A max.	_	→ P631
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-201  -N-0-0 ACON-SE-301 -N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20①①2-0 ASEL-CS-1-30①①2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

\* ⊕ indicates encoder type (l: incremental, A: absolute)
\* ⊕ indicates number of axes (1 to 8).

ELECTROMATE

\* Enter the code "LA" in ⊕ when the power-saving specification is specified.
\* ⊕ indicates field network specification symbol.

# RCA-SRGD4R

Robo Cylinder, Rod Type with Double Guide, Actuator Width 45mm, Servo Motor, Short-Length Model

Model Specification Items

RCA -SRGD4R-Series — Type

20 — Encoder type — – Motor type —

I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

20: 20W Servo

motor

Lead

Stroke 5: 5mm 2.5:2.5mm 20: 20mm

Applicable controller -200: 200mm (10mm pitch increments)
\* Set in 50mm increments
over 100mm

A1:ACON ASEL A3:AMEC ASEP

MSEP

N: None P: 1m S: 3m See Options below.

Cable length

M:5m X□□: Custom Length

Options

Power-saving

C E RoHS



**Technical** References





- (1) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 2.5mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (2) The values for the horizontal load capacity reflect the use of an external guide. See the technical resources (page A-112) for the allowable weight using the supplied guide alone
- (3) See page A-71 for details on push motion.

Actuator Specifications								
■ Leads and Payloads (Note A) 50mm increments over 100mm. ■ Stroke and Maximum Speed								
Model number   Motor output (W)   Lead output (W)   Horizontal (kg)   Vertical (kg)   Wertical							Stroke Lead	20~200 (every 10mm)
RCA-SRGD4R-I-20-5-①-②-③-④	20	5	9 (Note1)	2	41	20~200	5	250
RCA-SRGD4R-I-20-2.5-①-②-③-④			2.5	18 (Note1)	5.5	81	(every 10mm) (Note A)	2.5
Code explanation ① Stroke ② Applica	able contro	ller	3 Cable len	gth ④Op	otions *	See page A-71 for details o	n push motion.	(Unit: mm/

①Stroke	
①Stroke (mm)	Standard price
20~50	_
60~100	ı
150	
200	- 1

<b>4</b> Options			
Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Flange bracket (back)	FLR	→ A-46	_
Power-saving	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_

<sup>\*</sup>The brake is available for strokes of 70mm or more.

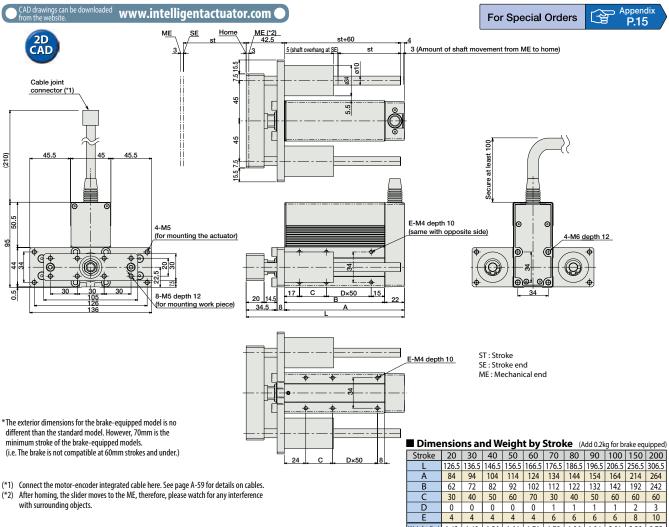
## ③ Cable Length

Туре	Cable symbol	Standard Price
Charada ad	<b>P</b> (1m)	_
Standard (Robot Cables)	<b>S</b> (3m)	_
(Nobol Cables)	<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 is the motor-encoder integrated robot cable. \* See page A-59 for cables for maintenance.

Actuator Specifications	
Item	Description
Drive System	Ball screw, ø8mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod diameter	ø22mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

Dimensional Drawings



with surrounding objects.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Referen page
Solenoid Valve Type	THE STATE OF THE S	AMEC-C-20I①-⑪-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P53
Solenoid valve Type	1	ASEP-C-20I①-①-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P54
Solenoid valve multi-axis type PIO specification	un	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected		DC24V			→ P56
Solenoid valve multi-axis type Network specification		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 1.3A rated	_	→ P50
Positioner type		ACON-C-20I①-⑪-2-0	Positioning is possible for up to 512				_	
Safety-Compliant Positioner Type		ACON-CG-20I①-①-2-0	points	512 points		4.4A max. (Power-saving)	_	
Pulse Train Input Type (Differential Line Driver)	É	ACON-PL-20I①-⑪-2-0	Pulse train input type with differential line driver support	( )		1.3A rated 2.5A max.	_	→ P6
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I()-(i)-2-0	Pulse train input type with open collector support	(—)			_	
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type		ASEL-CS-1-20I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P6

IAI

RCA-SRGD4R ELECTROMATE

Weight (kg) 1.42 1.49 1.56 1.64 1.71 1.79 1.86 1.94 2.01 2.38 2.75

# CS2-RN5N

Robo Cylinder, Mini Rod Type, Short-Length Tapped-Hole Mounting Type, Actuator Width 46mm, 200V Servo Motor, Ball Screw Specification

Model Specification Items

RCS2 — RN5N — Type

\* See page Pre-47 for details on the model descriptions.

I:Incremental

specification

- Encoder type -

60 Motor type 60:60W Servo

motor

Lead 10: 10mm 5: 5mm

2.5:2.5mm

Stroke 50: 50mm 75: 75mm Applicable controller T2: SCON-CA SSEL XSEL-P/Q

**T2** 

N: None P: 1m S: 3m

Options Cable length See options below.

M:5m X□□: Custom Length R□□: Robot Cable



Technical References



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. Please refer to page A-11 for the instruction details. (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 2.5mm-lead) 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 rodis 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.
- (6) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads

75

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Horizontal (kg)		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
RCS2-RN5N-I-60-10-①-T2-②-③			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		
Code explanation ① Stroke ② Cable length ③ Options *See page A-71 for details on push motion.								

■ Stroke and Maximum Speed

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

\* The values enclosed in < > apply to vertical settings. (Unit: mm/s)

①Stroke	
Stroke (mm)	Standard price
50	_

② Cable Length

	easie zengan					
Туре	Cable symbol	Standard Price				
	<b>P</b> (1m)	_				
Standard	<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)	_				
	R04 (4m) ~ R05 (5m)	_				
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_				
	R11 (11m) ~ R15 (15m)	_				
	R16 (16m) ~ R20 (20m)	_				

<sup>\*</sup> See page A-59 for cables for maintenance.

③ Options			
Name	Option code	See page	Standard price
Brake	В	→ A-42	
CE compliance	CE	→ A-42	_
Connector cable exits (left)	K1	→ A-51	_
Connector cable exits (front)	K2	→ A-51	_
Connector cable exits (right)	К3	→ A-51	_

#### Actuator Specifications

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	5,000km or 50 million cycles

RCS2-RN5N

This product doesn't come with the screw stopper.

Please add a stopper before use.

P.15

#### For Special Orders

Note:

(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

with surrounding objects. ME : Mechanical end SE: Stroke end

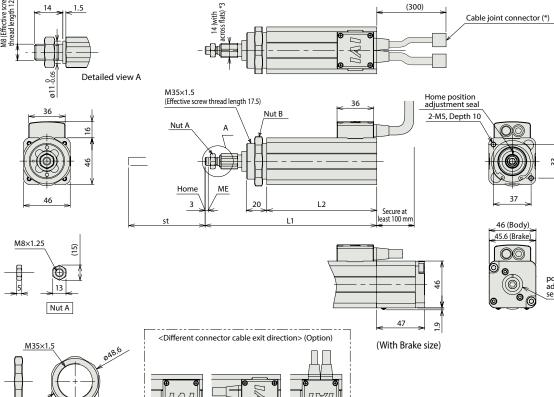
www.intelligentactuator.com

(\*3) The orientation of the nut varies depending on the product.

Dimensional Drawings

3D CAD

2D CAD



\* Brake-equipped models are heavier by 0.26kg.

#### ■ Dimensions and Weight by Stroke

position adjustment seal

Stroke         50         75           L1         168.5         193.5           L2         108         133			
	Stroke	50	75
L2 108 133	L1	168.5	193.5
	L2	108	133
Weight (kg) 1.0 1.1	Weight (kg)	1.0	1.1

#### Applicable Controllers

Nut B

RCS2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application

Model number: K1 Model number: K2 (Exits from the left) (Exits from the front)

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner Type			Up to 512 positioning points are supported	512 points		218 VA max.  * Varies		
Solenoid mode	11	SCON CA COL NID 2 ①	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC Single- phase		_	D. 42
Network mode	14	SCON-CA-60I-NP-2-①	Can be moved by direct numerical specification	768 points				→ P643
Pulse-train input control mode			Can be controlled using pulse trains	(—)	200 VAC	controller. Refer to the operation	_	
Program control type 1 or 2 axes		SSEL-CS-1-60I-NP-2-①	Program operation is supported Up to two axes can be operated	20,000 points	3-phase 200 VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes	Pilita	XSEL-(II)-1-60I-N1-EEE-2-3	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695

\*The values of SSEL and XSEL assume a 1-axis specification. \*() indicates the type of power-supply voltage (1: 100 V/2: Single-phase 200 V). \*() indicates the XSEL type (P/Q).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis), XSEL-R/S type, or MSCON.

# S2-RP5N

 $Robo\ Cylinder,\ Mini\ Rod\ Type,\ Short-Length\ Tapped-Hole\ Mounting\ Type,$ Actuator Width 46mm, 200V Servo Motor, Ball Screw Specification

Model Specification Items

RCS2 — RP5N — Series — Type

Т — Encoder type –

l:Incremental

specification

60 Motor type -

60:60W Servo

motor

Lead

2.5:2.5mm

10: 10mm 5: 5mm

Stroke 50: 50mm

75: 75mm

- Applicable controller -T2: SCON-CA SSEL XSEL-P/Q

**T2** 

N: None

Cable length — Options See options below.

N: None See
P: 1m
S: 3m
M:5m
X: Custom Length
R: Robot Cable



Technical References



- cannot extend or retract.) When connecting the anti-rotation device and rod, do not use a floating joint. Please refer to page A-11 for the instruction details.
- (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 2.5mm-lead) 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 rodis 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.
- (6) See page A-71 for details on push motion.

### Actuator Specifications

■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (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		
Code explanation								

■ Stroke and Maximum Speed

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

\* The values enclosed in < > apply to vertical settings. (Unit: mm/s)

①Stroke	
Stroke (mm)	Standard price
50	_
75	

② Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

# **3Options**

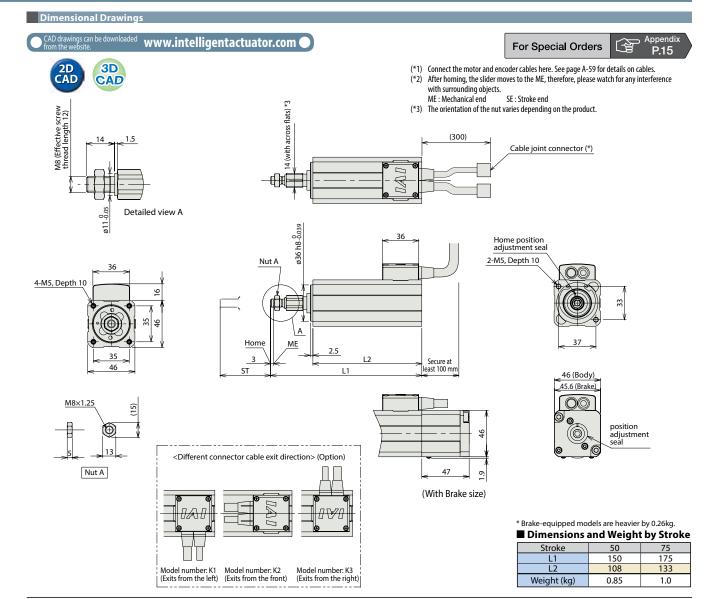
Name	Option code	See page	Standard price
Brake	В	→ A-42	
CE compliance	CE	→ A-42	_
Connector cable exits (left)	K1	→ A-51	_
Connector cable exits (front)	K2	→ A-51	_
Connector cable exits (right)	К3	→ A-51	_

#### Actuator Specifications

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	5,000km or 50 million cycles



Toll Free Fax (877) SERV099 www.electromate.com sales@electromate.com



#### Applicable Controllers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner Type			Up to 512 positioning points are supported	512 points				
Solenoid mode	11	SCON CA COLAID 2 ©	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC	218 VA max.	_	D. 42
Network mode	14	SCON-CA-60I-NP-2-①	Can be moved by direct numerical specification	768 points	Single- phase	* Varies depending on the controller. Refer to the operation		→ P643
Pulse-train input control mode			Can be controlled using pulse trains	(—)	200 VAC		_	
Program control type 1 or 2 axes		SSEL-CS-1-60I-NP-2-①	Program operation is supported Up to two axes can be operated	20,000 points	200 VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes	Pilita	XSEL-(II)-1-60I-N1-EEE-2-3	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695

\*The values of SSEL and XSEL assume a 1-axis specification. \* 🕦 indicates the type of power-supply voltage (1: 100 V/2: Single-phase 200 V). \* 🕦 indicates the XSEL type (P/Q).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis), XSEL-R/S type, or MSCON.

# **S2-GS5N**

 $Robo\ Cylinder,\ Mini\ Rod\ Type,\ Short-Length\ Single-Guide\ Type,\ Actuator\ Width\ 46mm,$ 200V Servo Motor, Ball Screw Specification

Model Specification Items

RCS2 - GS5NType

- Encoder type -

I:Incremental

specification

60 Motor type

motor

Lead 60:60W Servo 10: 10mm

Stroke 2.5:2.5mm

50: 50mm 75: 75mm Applicable controller T2: SCON-CA SSEL

XSEL-P/Q

**T2** 

N: None P: 1m S: 3m

See options below.

Options

M:5m X□□: Custom Length

Cable length

R□□: Robot Cable





selectio

Technical References

moment load are not applied to the rod. See page A-110 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 2.5mm-lead) 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.
- (4) See page A-71 for details on push motion.

### Actuator Specifications

#### ■ Leads and Payloads

75

③ Options

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Loac 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	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			
Code explanation Stroke Cable length Options *See page A-71 for details on push motion.									

#### ■ Stroke and Maximum Speed

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

\* The values enclosed in < > apply to vertical settings. (Unit: mm/s)

①Stroke	
Stroke (mm)	Standard price
50	_

#### ②Cable Length

© cable length					
Туре	Cable symbol	Standard Price			
	<b>P</b> (1m)	_			
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_			
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_			
	R16 (16m) ~ R20 (20m)	_			

<sup>\*</sup> See page A-59 for cables for maintenance.

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
CE compliance	CE	→ A-42	
Connector cable exits (left)	K1	→ A-51	_
Connector cable exits (front)	K2	→ A-51	_
Connector cable exits (right)	K.S	► A E1	

#### **Actuator Specifications**

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	5,000km or 50 million cycles



### www.intelligentactuator.com

For Special Orders

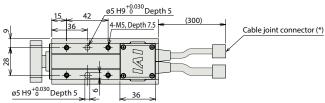


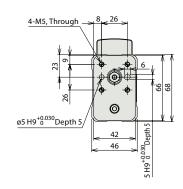


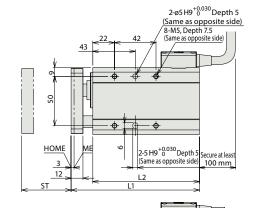


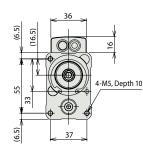
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

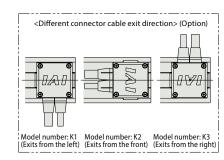
with surrounding objects. ME : Mechanical end SE : Stroke end 36

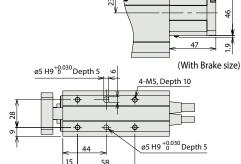


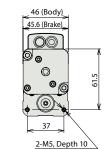












\* Brake-equipped models are heavier by 0.26kg.

#### ■ Dimensions and Weight by Stroke

	- Difficultions and Weight by Stroke							
ſ	Stroke	50	75					
ı	L1	130	155					
	L2	108	133					
	Weight (kg)	1.3	1.4					

#### Applicable Controllers

RCS2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner Type			Up to 512 positioning points are supported	512 points		218 VA max.  * Varies depending on the controller. Refer to the operation manual for details.		
Solenoid mode		SCON CA COLAID 2 ©	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC		_	Boto
Network mode		SCON-CA-60I-NP-2-①	Can be moved by direct numerical specification	768 points	Single- phase			→ P643
Pulse-train input control mode			Can be controlled using pulse trains	(—)	200 VAC		_	
Program control type 1 or 2 axes		SSEL-CS-1-60I-NP-2-①	Program operation is supported Up to two axes can be operated	20,000 points	200 VAC (XSEL-P/ Q only)		_	→ P685
Program control type 1 or 6 axes	11174	XSEL-(II)-1-60I-N1-EEE-2-3	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695

\*The values of SSEL and XSEL assume a 1-axis specification. \*① indicates the type of power-supply voltage (1: 100 V/2: Single-phase 200 V). \*⑪ indicates the XSEL type (P/Q).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis), XSEL-R/S type, or MSCON.

IAI

RCS2-GS5N TROMATE

# CS2-GD5N

 $Robo\ Cylinder, Mini\ Rod\ Type,\ Short-Length\ Double-Guide\ Type,\ Actuator\ Width\ 46mm,$ 200V Servo Motor, Ball Screw Specification

Model Specification Items

RCS2 - GD5NType

- Encoder type -

I:Incremental

specification

60 Motor type

60:60W Servo

motor

Lead 10: 10mm 5: 5mm

2.5:2.5mm

Stroke 50: 50mm 75: 75mm Applicable controller T2: SCON-CA SSEL XSEL-P/Q

**T2** 

Cable length N: None P: 1m S: 3m

Options See options below.

M:5m X□□: Custom Length

R□□: Robot Cable

CE RoHS

\*CE compliance is optional.



Technical References

Notes or

- (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 page A-111 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  $2.5 mm\hbox{-lead})\ horizontally\ and\ 0.2 G\ vertically. The\ acceleration\ limit\ is\ the\ value\ indicated\ above.$
- $(3) \ \ \text{If the actuator is used vertically, pay attention to rod contact because the rod will come down}$ when the power is turned off.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Loac 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	60	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				
Code explanation										

#### ■ Stroke and Maximum Speed

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

\* The values enclosed in < > apply to vertical settings. (Unit: mm/s)

|--|

Stroke (mm)	Standard price
50	_
75	_

#### ②Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

# ③ Options

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
CE compliance	CE	→ A-42	_
Connector cable exits (left)	K1	→ A-51	_
Connector cable exits (front)	K2	→ A-51	_
Connector cable exits (right)	K3	→ A 51	

#### Actuator Specifications

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	5,000km or 50 million cycles

### www.intelligentactuator.com

For Special Orders

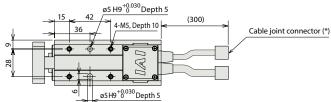




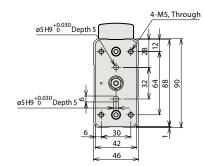


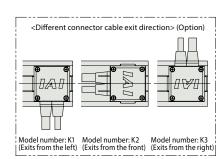
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

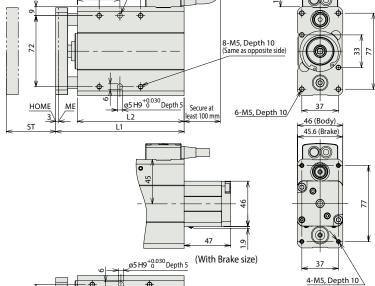
with surrounding objects.
ME: Mechanical end SE : Stroke end

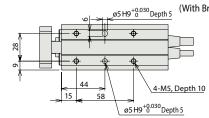


ø5 H9 <sup>+0.030</sup> Depth 5









\* Brake-equipped models are heavier by 0.26kg.

## ■ Dimensions and Weight by Stroke

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

#### Applicable Controllers

RCS2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner Type			Up to 512 positioning points are supported	512 points				
Solenoid mode	n	SCON CA COLNID 2 ①	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC	218 VA max.	_	. 0.42
Network mode	Už	SCON-CA-60I-NP-2-①	Can be moved by direct numerical specification	768 points	Single- phase	* Varies depending on the		→ P643
Pulse-train input control mode			Can be controlled using pulse trains	(—)	200 VAC	controller. Refer to the operation	_	
Program control type 1 or 2 axes		SSEL-CS-1-60I-NP-2-①	Program operation is supported Up to two axes can be operated	20,000 points	200 VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes	Pilita	XSEL-(I)-1-60I-N1-EEE-2-3	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695

\*The values of SSEL and XSEL assume a 1-axis specification. \*① indicates the type of power-supply voltage (1: 100 V/2: Single-phase 200 V). \*⑩ indicates the XSEL type (P/Q).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis), XSEL-R/S type, or MSCON.

IAI

RCS2-GD5N **ECTROMATE** 

# CS2-SD51

Robo Cylinder, Mini Rod Type, Short-Length Double-Guide Slide Unit Type, Actuator Width 94mm, 200V Servo Motor, Ball Screw Specification

Model Specification Items

RCS2 - SD5NType

- Encoder type -I:Incremental

specification

60 Motor type

. Notes on

60:60W Servo

motor

Lead 10: 10mm

2.5:2.5mm

Stroke 50: 50mm 75: 75mm Applicable controller T2: SCON-CA SSEL

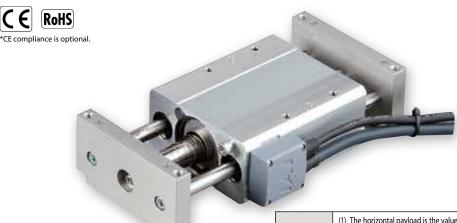
**T2** 

XSEL-P/Q

Options Cable length N: None P: 1m S: 3m

See options below.

M:5m X□□: Custom Length R□□: Robot Cable



Technical References



(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 page A-111 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

- 2.5mm-lead) horizontally and 0.2G vertically. The acceleration limit is the value indicated above. (3) The vertical payload is the value when the acuator 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.
- (5) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Horizontal (kg)		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
RCS2-SD5N-I-60-10-①-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		
Code explanation Stroke Cable length Options *See page A-71 for details on push motion.								

#### ■ Stroke and Maximum Speed

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

\* The values enclosed in < > apply to (Unit: mm/s)

#### ① Stroke

Stroke (mm)	Standard price
50	_
75	_

#### ② Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
	R16 (16m) ~ R20 (20m)	_

See page A-59 for cables for maintenance.

#### **Actuator Specifications**

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	5,000km or 50 million cycles

③ Options Name Option code See page Standard price CE compliance CE → A-42 Connector cable exits (left) K1 → A-51 Connector cable exits (right) **K3** → A-51

267 RCS2-SD5N



For Special Orders

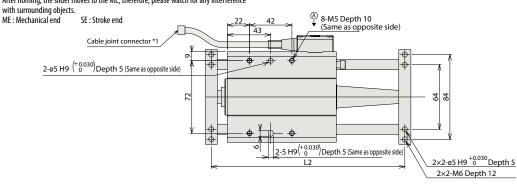
Appendi **P.15** 

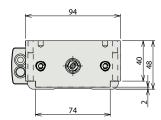
Dimensional Drawings

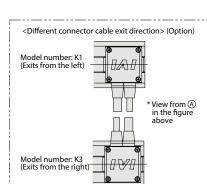


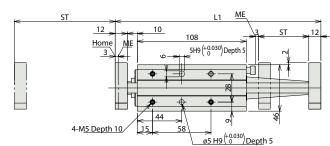


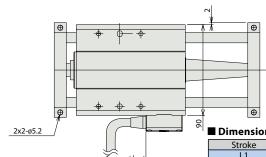
(\*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables.
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference











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

#### Applicable Controllers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner Type			Up to 512 positioning points are supported	512 points				
Solenoid mode	F1	SCON CA COL NID 2 (1)	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC Single- phase 200 VAC	phase 20 VAC 218 VA max. * Varies depending	_	De to
Network mode		SCON-CA-60I-NP-2-①	Can be moved by direct numerical specification	768 points				→ P643
Pulse-train input control mode			Can be controlled using pulse trains	(—)		controller. Refer to the operation	_	
Program control type 1 or 2 axes		SSEL-CS-1-60I-NP-2-①	Program operation is supported Up to two axes can be operated	20,000 points	3-phase 200 VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes	e mira	XSEL-(I)-1-60I-N1-EEE-2-3	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695

\*The values of SSEL and XSEL assume a 1-axis specification. \*① indicates the type of power-supply voltage (1:100 V/2: Single-phase 200 V). \* (II) indicates the XSEL type (P/Q).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis/6-axis), XSEL-R/S type, or MSCON.

# CS2-RA4C

Robo Cylinder, Rod Type, ø37mm Diameter, 200V Servo Motor, Coupled

Model Specification Items

RCS2 - RA4C -Series — Type

- Encoder type I:Incremental A: Absoulute

Motor type 20:20W Servo motor 30:30W Servo

Lead 12:12mm 3: 3mm

Stroke 50: 50mm 300: 300mm

(50mm pitch increments)

Applicable controller T1: XSEL-J/K MSCON SSEL XSEL-P/Q

(\*1)

N: None P: 1m S: 3m

M:5m X□□: Custom Length

Cable length

XSEL-R/S R□□: Robot Cable

For High Acceleration/Deceleration

CE RoHS

\*CE compliance is optional.

\* See page Pre-47 for details on the model descriptions.

(\*1) Except all 20W models and 30W 3mm lead models

Technical References



- Options

See options below.

OIN Notes or selection

- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- The load capacity is based on operation of the standard model at 0.3G (0.2G for 3mm-lead), and the high acceleration/deceleration model at 1G (excluding the 3mm-lead model). (Even when the acceleration/deceleration is dropped, the maximum load capacity values shown in the table below are the upper limits.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) See page A-71 for details on push motion.

Actuator Specifications

■ Leads and Payloads						
Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-RA4C-①-20-12-②-③-④-⑤		12	3.0	1.0	18.9	
RCS2-RA4C-①-20-6-②-③-④-⑤	20	6	6.0	2.0	37.7	
RCS2-RA4C-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	50~300
RCS2-RA4C-①-30-12-②-③-④-⑤		12	4.0	1.5	28.3	(every 50mm)
RCS2-RA4C-①-30-6-②-③-④-⑤	30	6	9.0	3.0	56.6	
RCS2-RA4C-①-30-3-②-③-④-⑤		3	18.0	6.5	113.1	

■ Stroke and Maximum Speed

	-
Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

①Encoder Type/②Stroke

© Encode: Type, © Stroke							
	Standard price						
②Stroke (mm)	①Encoder Type						
	Incren	nental	Absolute				
	Motor Output (W)		Motor Output (W)				
	20W	30W	20W	30W			
50	_	_	_	_			
100	_	_	_	_			
150	_	_	_				
200			_				
250	_		_	_			
300	_	_	_	_			

(5)		1	-	10.0
	Lu,		4 [ 0 ]	ПP

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
CE compliance	CE	→ A-42	_
Foot bracket	FT	→ A-49	_
Flange bracket (front)	FL	→ A-45	_
Flange bracket (back)	FLR	→ A-47	_
High-acceleration/deceleration (*1)	HA	→ A-50	_
Home sensor (*2)	HS	→ A-50	_
Knuckle joint	NJ	→ A-53	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (front)	TRF	→ A-57	_
Trunnion bracket (back)	TRR	→ A-58	_

(\*1) The high-acceleration/deceleration option is not available for all 20W models and 30W model with 3mm lead.
(\*2) The home sensor (HS) cannot be used on the non-motor end models.

Cable Length

9		
Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (3m)	_
	R04 (4m) ~ R05 (5m)	_
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

Actuator Specifications

Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

RCS2-RA4C



## P.15

### For Special Orders

### www.intelligentactuator.com



Dimensional Drawings

- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
   (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference
- with surrounding objects.

ME : Mechanical end SE: Stroke end

(\*3) The orientation of the bolt varies depending on the product.

M30×1.5 [No Brake] (effective screw thread range 19.5) (effective screw thread range 17.5) M10×1.25 Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on 20 the rod in a perpendicular or rotational direction,the detent may become damaged. Nut A 36 (width across flats)\*3 19 (width across flats)\*3 [Brake-Equipped] Nut A 36 (width across flats) Nut A Nut B M30×1.5 ■ Dimensions and Weight by Stroke RCS2-RA4C (without brake) RCS2-RA4C (with brake) Nut C

	Stroke	50	100	150	200	250	300
	20W	292.5	342.5	392.5	442.5	492.5	542.5
L	30W	307.5	357.5	407.5	457.5	507.5	557.5
	l		187	237	287	337	487
	20W			80	.5		
m	30W			95	.5		
V	Veight (kg)	1.1	1.2	1.4	1.5	1.7	1.8

	1002 10110 (1111110)							
	Stroke		100	150	200	250	300	
	20W	335.5	385.5	435.5	485.5	535.5	585.5	
L	30W	350.5	400.5	450.5	500.5	550.5	600.5	
	l	137	187	237	287	337	487	
	20W		123.5					
m	30W			13	8.5			
١	Weight (kg)	1.3	1.5	1.6	1.7	1.9	2.0	

#### ③ Applicable Controllers

 $\oplus$ 

M10x1.25

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	III	SCON-CA-20([)-NP-2-([])	Actuators can be operated through the same control used for solenoid valves.	7 points		126 VA max.	_	, DC 43
Field network type		SCON-CA-30D①-NP-2-①	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will	_	→ P643
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_	
Positioner multi-axis, network type	相称	MSCON-C-1-20①-②-0-⑪ MSCON-C-1-30D①-②-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	please refer to the instruction manual for details.	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uetaiis.	_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL-@-1-20①-N1-EEE-2-® XSEL-@-1-30D①-N1-EEE-2-®	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

IAI

\*This is for the single-axis MSCON, SSEL, and XSEL.

\*① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).



#### CS2-RA5C Robo Cylinder, Rod Type, Actuator Width 55mm, 200V Servo Motor, Coupled Model Specification Items RCS2 - RA5C -Stroke Applicable controller - Options Type - Encoder type Motor type Lead Cable length 60:60W Servo 16:16mm motor 8:8mm T1: XSEL-J/K I:Incremental 50: 50mm N: None See options below. P: 1m S: 3m A: Absoulute motor 4: 4mm MSCON 300: 300mm 100: 100W Servo SSEL XSEL-P/Q M:5m X□□: Custom Length (50mm pitch increments) motor

C € RoHS \*CE compliance is optional.

## For High Acceleration/Deceleration

R□□: Robot Cable

XSEL-R/S

(\*1) Except all 60W models and 100W 4mm lead models

Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

- (2) The load capacity is based on operation of the standard model at 0.3G (0.2G for 4mm-lead), and the high acceleration/deceleration model at 1G (0.2G for 4mm-lead).
  (Even when the acceleration/deceleration is dropped, the maximum load capacity values shown in the table below are the upper limits.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) See page A-71 for details on push motion.

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

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-RA5C-①-60-16-②-③-④-⑤		16	12.0	2.0	63.8	
RCS2-RA5C-①-60-8-②-③-④-⑤	60	8	25.0	5.0	127.5	
RCS2-RA5C-①-60-4-②-③-④-⑤		4	50.0	11.5	255.1	50~300
RCS2-RA5C-①-100-16-②-③-④-⑤		16	15.0	3.5	105.8	(every 50mm)
RCS2-RA5C-①-100-8-②-③-④-⑤	100	8	30.0	9.0	212.7	
RCS2-RA5C-①-100-4-②-③-④-⑤		4	60.0	18.0	424.3	

Stroke Lead	50~250 (every 50mm)	300 (mm)
16	800	755
8	400	377
4	200	188
		(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

## ①Encoder Type/②Stroke

	Standard price				
	① Encoder Type				
②Stroke (mm)	Incremental		Absolute		
	Motor Ou	utput (W)	Motor Output (W)		
	60W	100W	60W	100W	
50	_	_	_	_	
100		_	_		
150	_	_	_	_	
200		_	_		
250		_	_	_	
300	_	_	_	_	

<b>4</b> Cable Length	
-----------------------	--

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

# (5) Options

Name	Option code	See page	Standard price
Connector cable exit direction	A2	→ A-41	
Brake	В	→ A-42	_
CE compliance	CE	→ A-42	_
Flange bracket	FL	→ A-45	_
Foot bracket	FT	→ A-49	_
High-acceleration/deceleration (*1)	HA	→ A-50	_
High-acceleration/deceleration (*1)	HA	→ A-50	_

(\*1) The high-acceleration/deceleration option is not available for all 60W models and 100W model with 4mm lead.

#### **Actuator Specifications**

Item	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø30mm
Non-rotating accuracy of rod	±0.7 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)



For Special Orders

Dimensional Drawings





Do not apply any external force on the rod

from any direction other than the direction

of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

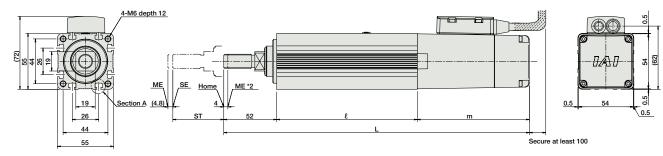
Note:

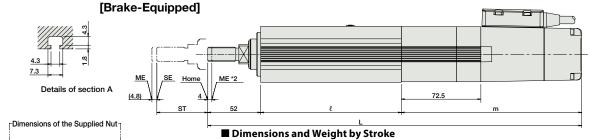
\*The RA5C is not available in non-motor end configuration, due to its construction.

(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

with surrounding objects.
ME : Mechanical end SE : Stroke end

[No Brake] 30.5 (\*3) The orientation of the bolt varies depending on the product. Cable joint 9.5 (width across flats) \*3 (300) M14×1.5





RCS2-RA5C (without brake) 50 100 150 200 250 300 282 332 382 432 482 532 300 350 400 450 500 550 138 188 238 288 338 388 Stroke 60W 100W 60W 100W m Weight (kg)

RCS2-RA5C (with brake) 50 100 150 200 250 300 354.5 404.5 454.5 504.5 554.5 604.5 372.5 422.5 472.5 522.5 572.5 622.5 138 188 238 288 338 388 Stroke 60W 100W 60W 164.5 100W 2.2 | 2.5 | 2.8 | 3.1 | 3.4 | 3.7

**3 Applicable Controllers** 

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	I	SCON-CA-60([)-NP-2-([])	Actuators can be operated through the same control used for solenoid valves.	7 points		2141/4	_	, DC 42
Field network type	ius/	SCON-CA-100①-NP-2-①	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will	_	→ P643
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_	
Positioner multi-axis, network type	田椒	MSCON-C-1-60①-﴿◇-0-﴿﴾ MSCON-C-1-100①-﴿◇-0-﴿॥	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC please refer to the instruction manual for details.		_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-60①-NP-2-⑪ SSEL-CS-1-100①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		details.	_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL-@-1-60①-N1-EEE-2-® XSEL-@-1-100①-N1-EEE-2-®	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

\*This is for the single-axis MSCON, SSEL, and XSEL.

\* ① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).

\* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

Weight (kg)

# RCS2-RA4D

Robo Cylinder, Rod Type, ø37mm Diameter, 200V Servo Motor, Built-in (Direct-Coupled) Motor

Model Specification Items

RCS2 — RA4D Series — Type

- Encoder type

I:Incremental

A: Absoulute

Motor type 20:20W Servo 12:12mm motor

motor

Lead 6: 6mm 3: 3mm 30:30W Servo

Stroke — Applicable controller 50: 50mm 300: 300mm (50mm pitch increments)

SSEL XSEL-P/Q XSEL-R/S

T1: XSEL-J/K SCON MSCON

N: None P: 1m S: 3m

Technical References

M:5m X□□: Custom Length R□□: Robot Cable

— Options

See options below.

Cable length

CE RoHS \*CE compliance is optional.

> OLN Notes on selection

When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for 3mm-lead model), This is the upper limit of the acceleration.

The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.

(4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads Motor Stroke Lead Max. Load Capacity Rated Model number output (W) thrust (N) Horizontal (kg) | Vertical (kg) RCS2-RA4D-①-20-12-②-③-④-⑤ 12 3.0 1.0 18.9 RCS2-RA4D-①-20-6-②-③-④-⑤ 20 6 2.0 37.7 RCS2-RA4D-①-20-3-②-③-④-⑤ 12.0 4.0 75.4 3 50~300 (every 50mm) RCS2-RA4D-①-30-12-②-③-④-⑤ 12 4.0 1.5 28.3

3

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

18.0

30 6 9.0 3.0 56.6

6.5

113.1

■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150

(Unit: mm/s)

① Encoder Type/② Stroke

RCS2-RA4D-①-30-6-②-③-④-⑤

RCS2-RA4D-①-30-3-②-③-④-⑤

Theoder Type Stroke						
	Standard price					
②Stroke (mm)	①Encoder Type					
	Incremental		Absolute			
	Motor Output (W)		Motor Output (W)			
	20W	30W	20W	30W		
50	_	_	_	_		
100	_	_	_	_		
150	_	_	_	_		
200		_	I			
250	_	_		_		
300	_	_	_	_		

<b>⑤ Options</b>			
Name	Option code	See page	Standard price
CE compliance	CE	→ A-42	_
Foot bracket	FT	→ A-49	_
Flange bracket (front)	FL	→ A-45	_
Flange bracket (back)	FLR	→ A-46	_
Home sensor	HS	→ A-50	_
Knuckle joint	NJ	→ A-53	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (front)	TRF	→ A-57	_
Trunnion bracket (back)	TRR	→ A-58	_
*The home sensor (HS) cannot be used on	the non-motor e	end models	

#### **4** Cable Length

Туре	Cable symbol	Standard Price						
	<b>P</b> (1m)	_						
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_						
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_						
	R16 (16m) ~ R20 (20m)	_						

<sup>\*</sup> See page A-59 for cables for maintenance.

#### Actuator Specifications

Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

273 RCS2-RA4D

## CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders

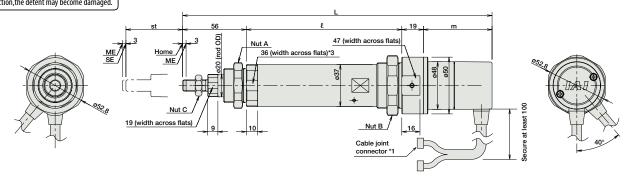


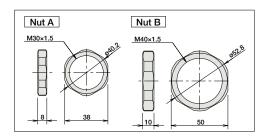


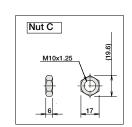
 (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

SE: Stroke end ME: Mechanical end

(\*3) The orientation of the bolt varies depending on the product. [No Brake] M40×1.5 M30×1.5 (effective screw thread range 19.5) (effective screw thread range 17.5) M10×1.25 (effective screw thread range 20) Note: Do not apply any external force on the rod from any direction other than the direction 20 of the rod's motion. If a force is exerted on 22 the rod in a perpendicular or rotational direction,the detent may become damaged.







#### ■ Dimensions and Weight by Stroke RCS2-RA4D (without brake)

(								
	Stroke	50	100	150	200	250	300	
1	20W		320.5					
_	30W	285.5	335.5	385.5	435.5	485.5	535.5	
	l	137	187	237	287	337	487	
m	20W	58.5						
m	30W	73.5						
١	Weight (kg)	1.0	1.2	1.3	1.5	1.6	1.8	

RCS2-RA4D models are not equipped with a brake.

③ Applicable Controllers	5
--------------------------	---

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page		
Positioner mode			Up to 512 positioning points are supported.	512 points						
Solenoid valve mode	1	SCON-CA-20(ĵ)-NP-2-(ii)	Actuators can be operated through the same control used for solenoid valves.	7 points		1261/4		. DC 43		
Field network type	iue/	SCON-CA-30D①-NP-2-⑪	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	126 VA max.  *Power supply capacity will	-	→ P643		
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_			
Positioner multi-axis, network type	田椒	MSCON-C-1-20①-②-0-⑪ MSCON-C-1-30D①-②-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	manual for	the instruction manual for	the instruction	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uetaiis.	_	→ P685		
Program control type, 1 to 8 axes	emira	XSEL-@-1-20①-N1-EEE-2-⑩ XSEL-@-1-30D①-N1-EEE-2-⑩	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695		

\*This is for the single-axis MSCON, SSEL, and XSEL.

\*① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).



Model Specification Items

RoHS

### CS2-SRA7BD Robo Cylinder, Rod Type, Actuator Width 75mm, 200V Servo Motor, Short-Length Type

Motor

RCS2 - SRA7BD-Series — Type — Encoder type – Motor type –

I : Incremental

Lead 60:60W Servo 16:16mm motor 8:8mm 100:100W Servo 4: 4mm motor 150 : 150W Servo

50: 50mm 300: 300mm (50mm pitch increments)

Stroke

 Applicable controller T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q

Cable length N: None P: 1m S: 3m

Options See options below.

M:5m X□□: Custom Length R□□: Robot Cable

Technical References



Notes on

(1) When operated at the rated acceleration, the maximum load capacity is the load capacity at the rated acceleration.

When operated at the maximum acceleration, the maximum load capacity is the load capacity at the maximum acceleration.

If positioning repeatability and/or lost motion is required, the rotation of the rod must be restricted. In this case, select a model with a guide, or add a separate guide.

The standard model may exhibit vibration of the rod at long strokes. If this is an issue, select a model with a guide, or add a separate guide

(5) The values for the horizontal load capacity reflect the use of an external guide.

(6) See page A-71 for details on push motion.

#### Actuator Specifications ■ Stroke and Maximum Speed

■ Leads and Payloads										
Model number	Motor	Lead	Rated	Load Capacity at Ra	ated Acceleration	Max	Load Capacity at I	Max. Acceleration	Rated	Stroke
Model Humber	output (W)	(mm)	Acceleration (G)	Horizontal (kg)	Vertical (kg)	Acceleration (G)	Horizontal (kg)	Vertical (kg)	thrust (N)	(mm)
RCS2-SRA7BD-I-60-16-①-②-③-④		16	0.25	5	2	0.35	2.5	1	63	
RCS2-SRA7BD-I-60-8-①-②-③-④	60	8	0.15	10	5	0.25	5	2.5	127	
RCS2-SRA7BD-I-60-4-①-②-③-④		4	0.05	20	10	0.15	10	5	254	
RCS2-SRA7BD-I-100-16-①-②-③-④		16	0.3	10	3.5	0.4	5	1.5	103	50~300
RCS2-SRA7BD-I-100-8-①-②-③-④	100	8	0.2	22	9	0.3	10	4.5	207	(every
RCS2-SRA7BD-I-100-4-①-②-③-④		4	0.1	40	19.5	0.2	20	9	414	50mm)
RCS2-SRA7BD-I-150-16-①-②-③-④		16	0.3	15	6.5	0.4	7.5	3	157	
RCS2-SRA7BD-I-150-8-①-②-③-④	150	8	0.2	35	14.5	0.3	17.5	7	314	
RCS2-SRA7BD-I-150-4-①-②-③-④		4	0.1	55	22.5	0.2	27.5	11	628	

Stroke 50~300 (every 50mm) 16 8 400 4 200 (Unit: mm/s)

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*The values for the horizontal load capacity reflect the use of an external guide. \*See page A-71 for details on push motion.

①Stroke (mm)	Standard price Motor Output (W)					
	60W	100W	150W			
50	_	_				
100	_	_	_			
150	_	_				
200	_	_				
250	_	_				
300	_	_				

#### ③ Cable Length

© camic zenigan							
Туре	Cable symbol	Standard Price					
	<b>P</b> (1m)	_					
Standard	<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 (15m)	_					
ĺ	R16 (16m) ~ R20 (20m)	_					

\* See page A-59 for cables for maintenance.

#### 4 Options Actuator Specifications

0 -			
Name	Option code	See page	Standard price
Connector cable exit direction	A1~A3	→ A-41	_
Brake	В	→ A-42	_
Flange	FL	→ A-45	_
Foot bracket	FT	→ A-49	_
Extended rod tip	RE	→ A-54	_

Actuator Specifications	
ltem	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø35mm
Non-rotating accuracy of rod	
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

#### **Dimensional Drawings**

### vings can be downloaded www.intelligentactuator.com

M12 x 1.25

ME

4-M5 depth 12

For Special Orders





\*The SRA7BD is not available in non-motor end configuration, due to its construction.

(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables. (\*2)

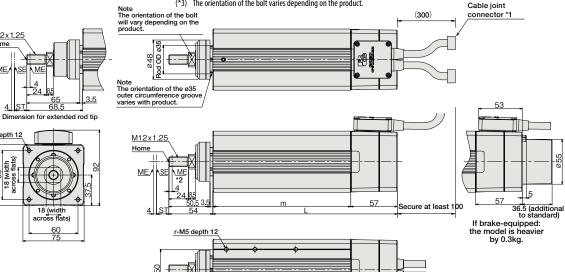
After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

ST: Stroke

SE: Stroke end

ME : Mechanical end

(\*3) The orientation of the bolt varies depending on the product.



Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become

Note:

damaged.

Note:

M12 x 1.25

Dimensions of the Supplied Nut (1pc)

A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation.

Please be careful when operating in the dusty environment. The dust  $% \left( \frac{1}{2}\right) =\left( \frac{1}{2}\right) \left( \frac{1}{2}$ may enter inside from the slit.

■ Dimensions and Weight by Stroke									
Stroke		50	100	150	200	250	300		
	60W	126	176	226	276	326	376		
L	100W	133	176	226	276	326	376		

	60W	126	176	226	276	326	376
L	100W	133	176	226	276	326	376
m	150W	145	176	226	276	326	376
	60W	69	119	169	219	269	319
	100W	76	119	169	219	269	319
	150W	88	119	169	219	269	319
n		25	35	35	35	35	35
р		0	0	1	2	3	4
r		4	4	6	8	10	12
	60W	2.4	2.9	3.5	4.1	4.6	5.2
Weight (kg)	100W	2.6	3.1	3.7	4.2	4.8	5.4
	150W	2.9	3.3	3.9	4.4	5	5.6

#### ②Applicable Controllers

 $RCS2\ series\ actuators\ can\ be\ operated\ with\ the\ controllers\ indicated\ below.\ Select\ the\ type\ according\ to\ your\ intended\ application.$ 

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	11	CCON CA (QUIND 2 (Q	Actuators can be operated through the same control used for solenoid valves.	7 points	Single- phase 100VAC	408 VA max.  * Varies depending on the	_	
Field network type	18	SCON-CA-①I-NP-2-⑪	Movement by numerical specification is supported.	768 points	Single- phase			→ P643
Pulse-train input control type			Dedicated pulse-train input type	(—)	200VAC 3-phase	controller. Refer to the operation	_	
Program control type 1 or 2 axes		SSEL-CS-1-①I-NP-2-⑪	Program operation is supported Up to two axes can be operated	20,000 points	200VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes	Pilita	XSEL-@-1-①I-N1-EEE-2-⑩	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695

\* This is for the single-axis SSEL, and XSEL.

\* (i) Indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V).

\* (ii) Indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V / 3: Three-phase 200 V).

\* ① Indicates the wattage (60/100/150). \* m Indicates the XSEL type (J / K / P / Q ).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis/6-axis), XSEL-R/S type, or MSCON.

IAI

RCS2-SRA7BD

ECTROMATE

Slider Type

Mini

Standard

Rod Type

Mir

Standard

Table

iat typ

0:

Linear Servo

Clean roor Typ

Splash Proo Type

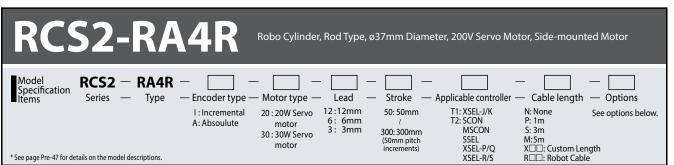
> Puls Moto

Servo Motor (24V)

Servo Motor (200V)

Linea Servo Moto

\*The home sensor (HS) ca





Motor

output (W)

20

30

Lead

12

6

3

12

6

3

Max. Load Capacity

Horizontal (kg) | Vertical (kg)

1.0

2.0

4.0

1.5

3.0

6.5

3.0

6.0

12.0

4.0

9.0

18.0

When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for 3mm-lead model),
 This is the upper limit of the acceleration.

3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.

(4) See page A-71 for details on push motion.

Stroke

50~300 (every 50mm)

Rated

thrust (N)

18.9

37.7

75.4

28.3

56.6

113.1

Actuator Specifications

### ■ Stroke and Maximum Speed

Technical References

Stroke	50~300 (every 50mm)
12	600
6	300
3	150
	(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

Actuator Specifications

Leads and Payloads

Model number

RCS2-RA4R-①-20-12-②-③-④-⑤

RCS2-RA4R-①-20-6-②-③-④-⑤

RCS2-RA4R-①-20-3-②-③-④-⑤

RCS2-RA4R-①-30-12-②-③-④-⑤

RCS2-RA4R-①-30-6-②-③-④-⑤

RCS2-RA4R-1 -30-3-2 -3 -4 -6

	Standard price					
	①Encoder Type					
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute			
	Motor Output (W)		Motor Output (W)			
	20W	30W	20W	30W		
50	_	_	_	_		
100			_	_		
150	_	_	_	_		
200	_		_	_		
250			_	_		
300			_	_		

#### (5) Options

Option code	See page	Standard price
В	→ A-42	_
CE	→ A-42	_
FT	→ A-49	_
FL	→ A-45	_
FLR	→ A-46	_
HS	→ A-50	_
NJ	→ A-53	_
NM	→ A-52	_
QR	→ A-53	_
RP	→ A-54	_
TRF	→ A-57	_
	B CE FT FL FLR HS NJ NM QR RP	CE → A-42 FT → A-49 FL → A-45 FLR → A-60 NJ → A-50 NM → A-52 QR → A-53 RP → A-54

ltem	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

4 Cable Length

Table Length						
Туре	Cable symbol	Standard Price				
	<b>P</b> (1m)	_				
Standard	<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 (15m)	_				
	R16 (16m) ~ R20 (20m)	_				

\* See page A-59 for cables for maintenance.

Sold & Serviced By:

ELECTROMATE

Toll Free Phone (877) SERV098

Toll Free Fax (877) SERV099

www.electromate.com
sales@electromate.com

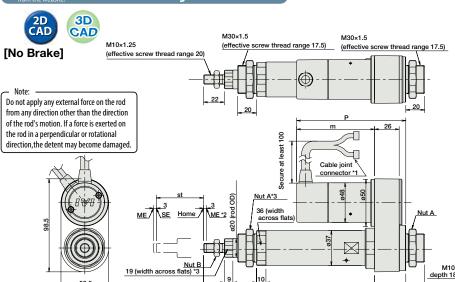
 $(\mbox{*1})$  Connect the motor and encoder cables here. See page A-59 for details on cables.

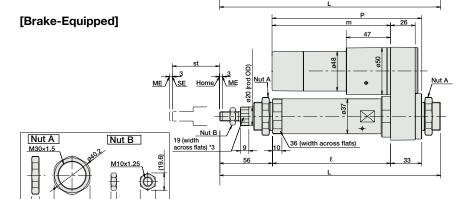
(\*2) After homing, the slider moves to the ME, therefore, please (\*3) The orientation of the bolt varies depending on the product.

For Special Orders

Dimensional Drawings







#### ■ Dimensions and Weight by Stroke RCS2-RA4R (without brake)

	Stroke		100	150	200	250	300	
_	20W	234	284	334	384	434	484	
	30W	234	284	334	384	434	484	
l		125	175	225	275	325	375	
	20W	80.5						
m	30W	95.5						
Р	20W	113.5						
Р	30W	128.5						
١	Veight (kg)	1.2	1.4	1.5	1.7	1.8	2.0	

#### RCS2-RA4R (with brake)

,								
Stroke		50	100	150	200	250	300	
	20W	234	284	334	384	434	484	
L	30W	234	284	334	384	434	484	
	l		175	225	275	325	375	
	20W	123.5						
m	30W	138.5						
P 20W		156.5						
٢	30W	171.5						
Weight (kg)		1.4	1.6	1.7	1.9	2.0	2.2	

**3 Applicable Controllers** 

RCS2-series actuators can be operated with the following controllers. Select an appropriate controller type according to your application

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	1	SCON-CA-20①-NP-2-⑪	Actuators can be operated through the same control used for solenoid valves.	7 points		126 VA max.	_	→ P643
Field network type	iug/	SCON-CA-30D①-NP-2-⑪	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will	_	→ P643
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_	
Positioner multi-axis, network type	開報	MSCON-C-1-20①-(⑦-0-⑪) MSCON-C-1-30D①-(⑦-0-⑪)	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	please refer to the instruction manual for details.	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uctaiis.	_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL-@-1-20①-N1-EEE-2-® XSEL-@-1-30D①-N1-EEE-2-®	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

- \*This is for the single-axis MSCON, SSEL, and XSEL.

  \* ① indicates the encoder type (l: Incremental / A: Absolute).

  \* ① indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V).

  \* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V / 3: Three-phase 200 V).

  \* ② indicates field network specification symbol.

Slider Type

Mini

Standard

Controllers Integrated

> Rod Type

Mir

Stanuaru

Table/ Arm/

Mini

Linear Servo

Cleanroom Type

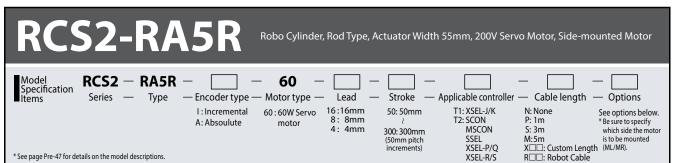
Splash-Proo Type

> Pulse Moto

Servo Motor (24V

Servo Motor (200V)

Linear Servo Motor



Notes on selection



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the

(2) The load capacity is based on operation at an acceleration of 0.3G (0.2G for 4mm-lead model), This is the upper limit of the acceleration.

(3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.

(4) See page A-71 for details on push motion.

### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-RA5R-①-60-16-②-③-④-⑤		16	12.0	2.0	63.8	
RCS2-RA5R-①-60-8-②-③-④-⑤	60	8	25.0	5.0	127.5	50~300 (every 50mm)
RCS2-RA5R-①-60-4-②-③-④-⑤		4	50.0	11.5	255.1	

#### ■ Stroke and Maximum Speed

Technical References

	-	
Stroke Lead	50~250 (every 50mm)	300 (mm)
16	800	755
8	400	377
4	200	188
		(Unit: mm/s)

Code explanation [1] Encoder [2] Stroke [3] Applicable controller [4] Cable length [5] Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

	Standard price				
②Stroke (mm)	①Encoder Type				
©Stroke (IIIII)	Incremental	Absolute			
	I	Α			
50	_	_			
100	_	_			
150		_			
200	_	_			
250	_	_			
300	_	_			

#### 4 Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	ı
Standard	<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)	_
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

## © Options Name Option code

Name	Option code	See page	Standard price
Connector cable exit direction	A2	→ A-41	_
Brake	В	→ A-42	_
CE compliance	CE	→ A-42	
Flange	FL	→ A-45	_
Foot bracket	FT	→ A-49	_
Left-mounted motor (standard)	ML	→ A-52	_
Right-mounted motor	MR	→ A-52	_

#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø30mm
Non-rotating accuracy of rod	±0.7 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

For Special Orders

(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
(\*2) After homing, the slider moves to the ME, therefore,

please watch for any interference with surrounding objects. ME : Mechanical end SE : Sti

\*The RA5R is not available in non-motor end configuration, due to its construction.

SE : Stroke end

Do not apply any external force on the rod

from any direction other than the direction of the rod's motion. If a force is exerted on

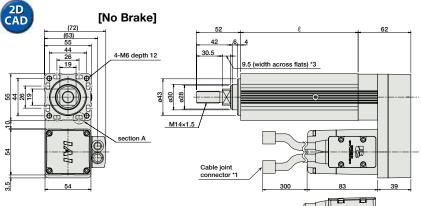
direction, the detent may become damaged.

the rod in a perpendicular or rotational

ppendi **P.15** 

Dimensional Drawings

www.intelligentactuator.com



(4.8)

(\*3) The orientation of the bolt varies depending on the product. [Brake-Equipped] 52 72.5 39 42 30.5 9.5 (width across flats) \*3 Dimensions of the Supplied Nut M14×1.5 1

■ Dimensions and Weight by Stroke

RCS2-RA5R (without brake)							
Stroke	50	100	150	200	250	300	
L	252	302	352	402	452	502	
l	138	188	238	288	338	388	
Weight (kg)	2.3	2.6	2.9	3.2	3.5	3.8	

-	RCS2-RA5R (with brake)								
ı	Stroke	50	100	150	200	250	300		
	L	301.5	351.5	401.5	451.5	501.5	551.5		
	l	138	188	238	288	338	388		
	Weight (kg)	2.6	2.9	3.2	3.5	3.8	4.1		

③ Applicable Controllers

Details of section A

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	1	SCON CA 60(1) ND 2 (1)	Actuators can be operated through the same control used for solenoid valves.	7 points	Single-phase 100VAC		_	→ P643
Field network type	iue/		Movement by numerical specification is supported.	768 points		*Power supply capacity will vary depending on the controller, so please refer to the instruction manual for	_	→ P043
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase		_	
Positioner multi-axis, network type	日本	MSCON-C-1-60①-⑩-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)		_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-60①-NP-2-⑩	Program operation is supported. Up to 2 axes can be operated.	20,000 points		details.	_	→ P685
Program control type, 1 to 8 axes	Pilled	XSEL	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

\*This is for the single-axis MSCON, SSEL, and XSEL.

\*① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\*② indicates the work specification symbol.

**S2-RA13R** 

Robo Cylinder, Ultra High Thrust Rod Type, Actuator Width 130mm, 200V Servo Motor, Side-mounted Motor

Model Specification Items

RCS2 -RA13R-Series — Type

750

A: Absoulute

- Encoder type — Motor type — Lead 1: Incremental 750: 750W Servo 2.5: 2.5mm A: Absoulute motor 1.25: 1.25mm motor

Stroke 50: 50mm

— Applicable controller 200: 200mm (50mm pitch

T2: SCON SSEL XSEL-P/Q XSEL-R/S

**T2** 

N: None P: 1m S: 3m M:5m X□□: Custom Length R□□: Robot Cable

Cable length

See options below.
\* Please be sure to specify one of the codes for the motor mounting direction and the cable exit direction.

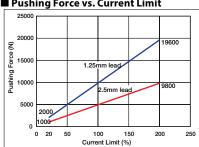
- Options

\* See page Pre-47 for details on the model descriptions



■ Pushing Force vs. Current Limit

increments)



- The correlation between the pushing force and the current limit are only rough guide values, and may deviate from the actual numbers.
- The pushing force may be inconsistent if the current limit is low. Therefore, please set it at 20% or higher.
- The travel speed while the pushing force is acting is fixed at 10mm/s. The graph shows pushing action at 10mm/s. Please note that the pushing force will decrease if the speed changes.
- Depending on operational conditions, the pushing force may decrease due to the rise in the temperature of the motor.

\*Continuous pushing is allowed if the current limit value during push motion is equal to 70% or less, but there is a pushing time limit when 71% or more. See page A-83 for the details.



- (1) When performing pushing operation, duration of continuous use is preset for the set pushing force. In addition, the continuous thrust (with load and duty factored in) must be less than the rated thrust. For details, please see selection reference material (-page A-83).
- (2) The load capacity is based on operation at an acceleration of 0.02G for 2.5mm-lead, and 0.01G for 1.25mm-lead. This is the upper limit of the acceleration.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod.
- (4) The brake option requires, in addition to the actuator and the controller, a brake box (see accessories on page 282).

## Actuator Specifications

#### and Paylands

■ Leads and Payloads									
Model number	Motor	Lead Max		Max. Load Capacity		Rated	Continuous	Maximum	Stroke
	output (W)	tput (W) (mm) Ac	Acceleration (G)	Horizontal (kg)	Vertical (kg)	thrust (N)	Pushing Force (N)	Push Force (N)	(mm)
RCS2-RA13R-①-750-2.5-②-T2③-④	750	2.5	0.02	400	200	5106	3567	9800	50~200
RCS2-RA13R-①-750-1.25-②-T2③-④		1.25	0.01	500	300	10211	7141	19600	(every 50mm)
Code explanation									

an external guide.
\* See page A-71 for details on push motion.

120 (Unit: mm/s)

150 200

125

■ Stroke and Maximum Speed

50 100

85

Stroke

2.5

①Encoder Type/②Stroke

		Standa	rd price			
②Stroke (mm)	①Encoder Type					
©Stroke (IIIII)	Increi	mental	Absolute			
	1t type (2.5mm lead)	2t type (1.25mm lead)	1t type (2.5mm lead)	2t type (1.25mm lead)		
50	_	_	_	_		
100 —		_	_	_		
150	_	_	_	_		
200	_	_	_	_		

Technical

References

© Cable Length						
Туре	Cable symbol	Standard Price				
	<b>P</b> (1m)	_				
Standard	<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)	_				
	<b>X16</b> (16m) ~ <b>X20</b> (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> (15m)					
	R16 (16m) ~ R20 (20m)	_				

<sup>\*</sup> See page A-59 for cables for maintenance.

<b>4</b> Options						
Name	Option code	See page	Standard price			
Brake (with brake box)	В	→ A-42	_			
Brake (without brake box)	BN	→ A-42	_			
CE compliance	CE	→ A-42	_			
Top-mounted motor	MT1/MT2/MT3	→ P282	_			
Right-mounted motor	MR1/MR2	→ P282	_			
Left-mounted motor	ML1/ML3	→ P282	_			
Flange	FL	→ A-46	_			
Foot bracket	FT	→ A-49	_			
Load cell type (with cable track)	LCT	→ A-51	_			
Load cell type (without cable track)	LCN	→ A-51	_			

(Note: )
The load cell type option can be operable only when the SCON-CA controller is used.
The load cell type (with cable track) option and a flange option cannot be selected simultaneously.

Actuator Specifications					
ltem	Description				
Drive System	Ball screw, ø32mm, rolled C10				
Positioning Repeatability	±0.01mm				
Backlash	0.2mm or less				
Rod diameter	ø50mm (ball spline)				
Allowable load moment of the rod	120 N·m				
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)				
Push force service life	10 million pushes (*1)				

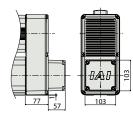
(\*1) The number of pushes arwe based on the maximum pushing force and a distance of 1mm.

RCS2-RA13R

ppend. **P.15** 

### [Brake-Equipped]

For Special Orders



 $\Pi A \Pi$ Brake box (included) ipped model) Standalone model: RCB-110-RA13-0

Note: The brake box requires a DC24V (max1A) power.

SE : Stroke end ME: Mechanical end

The brake-equipped model (option code: "-B")

If you want to order just the brake-equipped actuator,

always comes with a brake box.

specify the option code "-BN".

77

D-M12, depth 18

## ■ Dimensions and Weight by Stroke RCS2-RA13R

Adding a brake will increase the actuator's overall length by 57mm, and its weight by 2.0kg.

	,						
Stroke	50	100	150	200			
L	599.5	649.5	699.5	749.5			
Α	40	65	40	65			
В	2	2	3	3			
С	42.5	67.5	42.5	67.5			
D	6	6	8	8			
E	90	115	90	115			
Weight (kg)	33	34	35	36			

### (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

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

[Load cell type]

The orientation of the bolt varies depending on the product.

#### Motor-mounting direction / Cable exit direction (options

#### Note:

Please be sure to specify one of the codes for the motor mounting direction and the cable exit direction.

Dimensional Drawings

2D CAD

8M-12, depth24

CAD drawings can be downloaded www.intelligentactuator.com

M30×1.5

45 (effective screv thread range

Home 16 (width across flats)

(110)

[No Brake]







Cable joint connector \*1

st+232.5

ST+439.5

Ĺ

Secure at least 100

2-ø8H7, depth 10

E









Option Code	MT1	MT2	MT3	MR1	ML1	MR2	ML3
Motor-mounting direction	Top (standard)	Тор	Тор	Right	Left	Right	Left
Cable exit direction	Top (standard)	Right	Left	Тор	Тор	Right	Left

	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page				
Positioner mode	type (Stand SCON-		Up to 512 positioning points are supported.	512 points								
Solenoid valve mode		-				(Standard) SCON-CA-750①-NP-2-2	Actuators can be operated through the same control used for solenoid valves.	7 points	Single-Phase 200VAC		-	. 0642
Field network type							(Load cell type) SCON-CA-750S①-NP-2-2	Movement by numerical specification is supported.	768 points	(SCON-CA/SSEL only)	1569VA max. * When	
Pulse-train input control type			Dedicated pulse-train input type	(—)	Three-phase 200VAC	operating a 750W single-axis	_					
Program control type 1 or 2 axes		SSEL-CS-1-750①-NP-2	Program operation is supported Up to two axes can be operated	20,000 points	(XSEL-P/Q/R/S only)	model.	_	→ P68				
Program control type 1 or 6 axes	emira.	XSEL-(1)-1-750(1)-N1-EEE-2-(1)	Program operation is supported Up to eight axes can be operated	Varies depending on the number of axes connected			_	→ P69				

- \* This is for the single-axis SSEL, and XSEL \*  $(M \cap M)$  Indicates the XSEL type (P / Q / R / S).

(Note:) The load cell type option can be operable only when the SCON-CA controller is used.

#### CS2-RGS40 Robo Cylinder, Rod Type with Single Guide, ø37mm Diameter, 200V Servo Motor, Model Specification Items RCS2 - RGS4C -- Encoder type Stroke Applicable controller - Type - Motor type -Lead Cable length - Options 20:20W Servo 12:12mm motor 6:6mm T1: XSEL-J/K I:Incremental 50: 50mm N: None See options below. P: 1m S: 3m SCON MSCON A: Absoulute motor 3: 3mm 300: 300mm 30:30W Servo SSEL XSEL-P/Q M:5m X□□: Custom Length (50mm pitch increments)



motor

(\*1) Except all 20W models and 30W 3mm lead models

**Technical** References

R□□: Robot Cable



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum

XSEL-R/S

- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 3mm-lead), and 1G acceleration for the high-acceleration models (3mm-lead model excluded). (The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-111) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

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

Notes on selection

Model number	Motor output (W)	Lead (mm)	Max. Load		Rated thrust (N)	Stroke (mm)
	output (W)	(111111)	Horizontal (kg)	Vertical (kg)	tiliust (IV)	(111111)
RCS2-RGS4C-①-20-12-②-③-④-⑤		12	3.0	0.5	18.9	
RCS2-RGS4C-①-20-6-②-③-④-⑤	20	6	6.0	1.5	37.7	
RCS2-RGS4C-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	50~300
RCS2-RGS4C-①-30-12-②-③-④-⑤		12	4.0	1.0	28.3	(every 50mm)
RCS2-RGS4C-①-30-6-②-③-④-⑤	30	6	9.0	2.5	56.6	
RCS2-RGS4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150
	(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

		Standa	rd price						
		①Encod	der Type						
<pre>②Stroke (mm)</pre>	Incremental		Absolute						
	Motor Output (W)		Motor O	utput (W)					
	20W	30W	20W	30W					
50	_	_	_	_					
100	_		_	_					
150	_	_	_	_					
200	_	_	_	_					
250	_		_	_					
300			_	_					

#### **4** Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

#### (5) Options Option code See page | Standard price Brake → A-42 → A-42 CE compliance Foot bracket → A-49 High-acceleration/deceleration (\*1) HA → A-50 Home sensor (\*2) → A-50 Non-motor end specification NM → A-52

(\*1) The high-acceleration/deceleration option is not available for all 20W models and 30W model with 3mm lead.
(\*2) The home sensor (HS) cannot be used on the non-motor end models.

#### TRR → A-58

Actuator Specifications	
ltem	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø10mm, ball bush type)
Rod diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature humidity	0 to 40°C 85% RH or less (Non-condensing)

283 RCS2-RGS4C

Trunnion bracket (back)

## gs can be downloaded www.intelligentactuator.com O

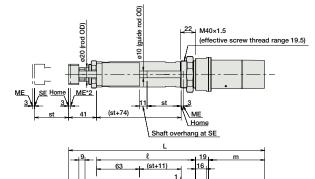


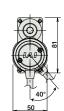
[No Brake]



Bracket A

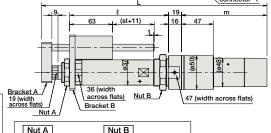
19 (width across flats) \*3,





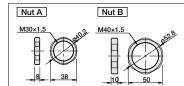
[Brake-Equipped]

## Bracket A Bracket B 6-M5 through-h 37



across flats) \*3

Bracket B



## RCS2-RGS4C (without brake)

	Stroke	50	100	150	200	250	300
	20W	285.5	335.5	385.5	435.5	485.5	535.5
L	30W	300.5	350.5	400.5	450.5	500.5	550.5
	l	145	195	245	295	345	395
	20W			80	1.5		
m	30W			95	.5		
	Weight (kg)	1.5	1.6	1.8	2.0	2.2	2.4

③ Applicable Controllers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	1	SCON-CA-20①-NP-2-⑪ SCON-CA-30D①-NP-2-⑪	Actuators can be operated through the same control used for solenoid valves.  7 points		126 VA max.	_	, DC 43	
Field network type	ium/	SCON-CA-SUD(T)-NP-2-(II)	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will	_	→ P643
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_	
Positioner multi-axis, network type	開稿	MSCON-C-1-20①-(⑦-0-⑪ MSCON-C-1-30D①-(⑦-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	please refer to the instruction manual for details.	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uetaiis.	_	→ P685
Program control type, 1 to 8 axes	emira	XSEL-(1)-1-20(1)-N1-EEE-2-(1) XSEL-(1)-1-30D(1)-N1-EEE-2-(1)	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

\*This is for the single-axis MSCON, SSEL, and XSEL.

\* ① indicates the encoder type (I: Incremental / A: Absolute).

\* ① indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V).

\* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\* ② indicates field network specification symbol.

For Special Orders



(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

ME: Mechanical end SE: Stroke end

(\*3) The orientation of the bolt varies depending on the product.

Cable joint

## ■ Dimensions and Weight by Stroke

			, ,				
	Stroke	50	100	150	200	250	300
	20W	285.5	335.5	385.5	435.5	485.5	535.5
-	30W		350.5	400.5	450.5	500.5	550.5
	l	145	195	245	295	345	395
	m 20W 30W		80.5				
m				95	.5		
Weight (kg)		1.5	1.6	1.8	2.0	2.2	2.4

RC	S2-R	GS4C	: (with	n brake)

	- 1105 10 (1111	w. u.	,				
Stroke		50	100	150	200	250	300
_	20W	328.5	387.5	428.5	478.5	528.5	578.5
L	30W	343.5	393.5	443.5	493.5	543.5	593.5
l		145	195	245	295	345	395
m	20W	123.5					
m	30W			13	3.5		
Weight (kg)		1.7	1.8	2.0	2.2	2.4	2.6

IAI

RCS2-RGS4C **ECTROMATE** 

Slider Type

Controllers Integrated

> Rod Type

Min

Controllers

Table/ Arm/ Flat Type

Mini

Gripper/

Linear Servo Type

Clean roon Type

Splash-Proo Type

> Puls Moto

Servo Motor (24V)

Servo Moto (200V

Linear Servo Motor

#### CS2-RGS5C Robo Cylinder, Rod Type with Single Guide, Actuator Width 55mm, 200V Servo Motor, Model Specification Items RCS2 - RGS5C -Stroke Applicable controller - Type - Encoder type Motor type Lead Cable length Options 60:60W Servo 16:16mm 8: 8mm T1: XSEL-J/K N: None P: 1m S: 3m I:Incremental 50: 50mm See options below. A: Absoulute motor MSCON 4: 4mm 300: 300mm 100: 100W Servo SSEL XSEL-P/Q M:5m X□□: Custom Length (50mm pitch increments) motor

Notes or

For High Acceleration/Deceleration

\*CE compliance is optional. (\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*1)

(\*2)

(\*2)

(\*3)

(\*4)

(\*1) Except all 60W models and 100W 4mm lead models

Technical References

R□□: Robot Cable

Appendix P.5

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

XSEL-R/S

- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 4mm-lead), and 1G acceleration for the high-acceleration models (4mm-lead model excluded). (The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-111) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-RGS5C-①-60-16-②-③-④-⑤		16	12.0	1.3	63.8	
RCS2-RGS5C-①-60-8-②-③-④-⑤	60	8	25.0	4.3	127.5	
RCS2-RGS5C-①-60-4-②-③-④-⑤		4	50.0	10.8	255.1	50~300
RCS2-RGS5C-①-100-16-②-③-④-⑤		16	15.0	2.8	105.8	(every 50mm)
RCS2-RGS5C-①-100-8-②-③-④-⑤	100	8	30.0	8.3	212.7	
RCS2-RGS5C-①-100-4-②-③-④-⑤		4	60.0	17.3	424.3	

#### ■ Stroke and Maximum Speed

Stroke Lead	50~250 (every 50mm)	300 (mm)
16	800	755
8	400	377
4	200	188

(Unit: mm/

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

	Standard price			
		①Encoder Type		
@Stroke (mm)	Increr	nental	Abso	olute
	Motor Ou	utput (W)	Motor Ou	utput (W)
	60W	100W	60W	100W
50	_	_	_	_
100	_	_	_	_
150	_	_	_	_
200	_	_	_	_
250	_	_	_	_
300	_	_	_	_

#### **4** Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

### **⑤** Options

Name	Option code	See page	Standard price
Connector cable exit direction	A2	→ A-41	
Brake	В	→ A-42	_
CE compliance	CE	→ A-42	_
Foot bracket	FT	→ A-49	_
Guide mounting direction	GS2~GS4	→ A-50	_
High acceleration/deceleration (*1)	HA	→ A-50	_

(\*1) The high-acceleration/deceleration option is not available for all 60W models and 100W model with 4mm lead

#### Actuator Specifications

Item	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø10mm, ball bush type)
Rod diameter	ø30mm
Non-rotating accuracy of rod	±0.1 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

285 RCS2-RGS5C



#### Dimensional Drawings

## www.intelligentactuator.com

For Special Orders

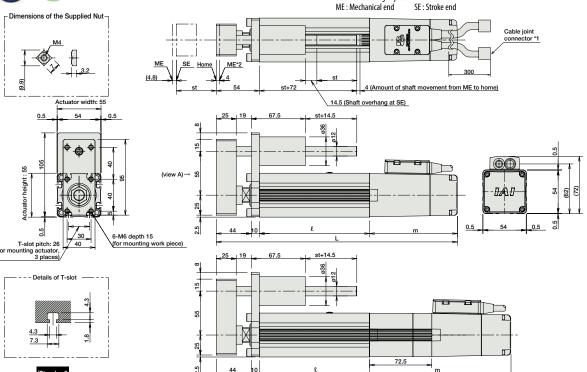


2D CAD



\*The RGS5C is not available in non-motor end configuration, due to its construction.

(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.



■ Dimensions and Weight by Stroke

RCS2-RGS5C (without brake)

	Stroke		100	150	200	250	300
	60W	284	334	384	434	484	534
-	100W	302	352	402	452	502	552
	l	138	188	238	288	338	388
m	60W	92					
m	100W			11	0		
	Weight (kg)	2.5	2.8	3.2	3.6	3.9	4.3

Deep Deep ( ... it b. ... b. .)

	RCS2-RGS5C (with brake)									
	Stroke		Stroke		50	100	150	200	250	300
	_	60W		406.5						
	_	100W	374.5	424.5	474.5	524.5	574.5	624.5		
	l		138	188	238	288	338	388		
	m	60W			16	4.5				
	m	100W	182.5							
	,	Weight (kg)	2.8	3.1	3.5	3.0	42	46		

③ Applicable Controllers

Guide mounting direction (as viewed from view A)

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page		
Positioner mode			Up to 512 positioning points are supported.	512 points						
Solenoid valve mode	1	SCON-CA-60①-NP-2-① SCON-CA-100①-NP-2-①	Actuators can be operated through the same control used for solenoid valves.	7 points		314 VA max.	_	→ P643		
Field network type	ille/	3CON-CA-100()-INF-2-(II)	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will	_	→ P043		
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	hase vary depending on the controller, so	_			
Positioner multi-axis, network type	開板	MSCON-C-1-60①-②-0-⑪ MSCON-C-1-100①-②-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	3-phase 200VAC (XSEL-P/Q/R/S ONLY)	200VAC (XSEL-P/Q/R/S	200VAC please refer to the instruction manual for	the instruction	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-60①-NP-2-⑪ SSEL-CS-1-100①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uetalis.	_	→ P685		
Program control type, 1 to 8 axes	Pilled	XSEL-@-1-60①-N1-EEE-2-® XSEL-@-1-100①-N1-EEE-2-®	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695		

\*This is for the single-axis MSCON, SSEL, and XSEL.

\* ① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).

\* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\* ② indicates the encoder type (I: Incremental / A: Absolute).

\* ③ indicates the Encoder type (I: Incremental / A: Absolute).

\* ③ indicates the encoder type (I: Incremental / A: Absolute).

\* ③ indicates the encoder type (I: Incremental / A: Absolute).

\* ③ indicates the encoder type (I: Incremental / A: Absolute).

RCS2-RGS5C ELECTROMATE

# RCS2-RGS4D

Robo Cylinder, Rod Type with Single Guide, ø37mm Diameter, 200V Servo Motor,

Model Specification Items

RCS2 -RGS4D-Type

- Encoder type

I : Incremental

A: Absoulute

Motor type 20:20W Servo 12:12mm motor 30:30W Servo

motor

Notes o

Lead 3: 3mm

Stroke 50: 50mm 300: 300mm

(50mm pitch

increments)

T1: XSEL-J/K SCON MSCON SSEL XSEL-P/Q

Applicable controller

N: None P: 1m S: 3m

Technical References

Cable length

See options below.

- Options

M:5m X□□: Custom Length XSEL-R/S R□□: Robot Cable



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum

The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 3mm-lead model). This is the upper limit of the acceleration.

(3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-111) for the allowable weight using the supplied guide alone.

(4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads Motor Lead Max. Load Capacity Rated Stroke Model number output (W) thrust (N) (mm) (mm) Horizontal (kg) | Vertical (kg) RCS2-RGS4D-①-20-12-②-③-④-⑤ 12 3.0 0.5 18.9 RCS2-RGS4D-①-20-6-②-③-④-⑤ 20 6 6.0 1.5 37.7 RCS2-RGS4D-①-20-3-②-③-④-⑤ 3 12.0 3.5 75.4 50~300 (every 50mm) RCS2-RGS4D-①-30-12-②-③-④-⑤ 12 28.3 RCS2-RGS4D-①-30-6-②-③-④-⑤ 30 6 9.0 2.5 56.6 RCS2-RGS4D-①-30-3-②-③-④-⑤ 3 18.0 113.1

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)			
12	600			
6	300			
3	150			

(Unit: mm/s)

#### ①Encoder Type/②Stroke

Theoder Type Stroke					
	Standard price				
		①Encod	①Encoder Type		
<pre>②Stroke (mm)</pre>	Incren	nental	Abso	olute	
	Motor Ou	itput (W)	Motor Ou	ıtput (W)	
	20W	30W	20W	30W	
50	_	_	_	_	
100	_	_	_	_	
150		_	_	_	
200	_	_	_	_	
250	_	_	_	_	
300	_	_	_	_	

#### **4** Cable Length

O cable Ecligati					
Туре	Cable symbol	Standard Price			
	<b>P</b> (1m)	_			
Standard	<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	R06 (6m) ~ R10 (10m)	_			
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_			
	R16 (16m) ~ R20 (20m)	_			

<sup>\*</sup> See page A-59 for cables for maintenance.

Name	Option code	See page	Standard price
CE compliance	CE	→ A-42	_
Foot bracket	FT	→ A-49	_
Home sensor	HS	→ A-50	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (back)	TRR	→ A-58	_

<sup>\*</sup>The home sensor (HS) cannot be used on the non-motor end models.

#### Actuator Specifications

Item	Description		
Drive System	Ball screw, ø10mm, rolled C10		
Positioning Repeatability	±0.02mm		
Lost Motion	0.1mm or less		
Guide	Single guide (guide rod diameter ø10mm, ball bush type)		
Rod diameter	ø20mm		
Non-rotating accuracy of rod	±0.05 deg		
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)		

287 RCS2-RGS4D



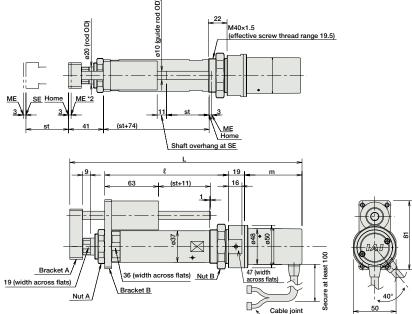
## CAD drawings can be downloaded www.intelligentactuator.com

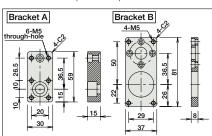
For Special Orders



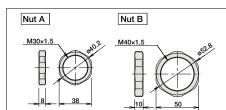


(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
 ME: Mechanical end SE: Stroke end





30



#### ■ Dimensions and Weight by Stroke RCS2-RGS4D (without brake)

		Stroke	50	100	150	200	250	300
	L	20W	263.5	313.5	363.5	413.5	463.5	513.5
		30W	278.5	328.5	378.5	428.5	478.5	528.5
		l	145	195	245	295	345	395
	m	20W	58.5					
		30W	73.5					
	Weight (kg)		1.3	1.5	1.7	1.9	2.1	2.3

RCS2-RGS4D models are not equipped with a brake.

③ Applicable Controllers	s
--------------------------	---

erated with the following controllers. Select an appropriate controller type according to your application

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points		126 VA max.	_	
Solenoid valve mode	1	SCON-CA-20①-NP-2-① SCON-CA-30D①-NP-2-①	Actuators can be operated through the same control used for solenoid valves.	7 points				→ P643
Field network type	iug/		Movement by numerical specification is supported.	768 points	Single-phase 100VAC *Power supply capacity will	_	→ P043	
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_	
Positioner multi-axis, network type	THE STATE OF	MSCON-C-1-20①-(⑦-0-⑪) MSCON-C-1-30D①-(⑦-0-⑪)	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	please refer to the instruction manual for details.	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uctaiis.	_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL-@-1-20①-N1-EEE-2-⑫ XSEL-@-1-30D①-N1-EEE-2-⑫	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected				→ P695

IAI

\*This is for the single-axis MSCON, SSEL, and XSEL.

\* ① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).

\* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\* ② indicates the network specification symbol.

RCS2-RGS4D

ELECTROMATE

Toll Free Phone (877) SERV098 Toll Free Fax (877) SERV099 www.electromate.com sales@electromate.com

Rod Type

#### CS2-SRGS7BD Robo Cylinder, Rod Type with Single Guide, Actuator Width 75mm, 200V Servo Motor, Short-Length Model Model Specification Items RCS2 —SRGS7BD— Type — Encoder type – Stroke Applicable controller Cable length Motor type -Lead

I : Incremental

60:60W Servo 16:16mm motor 8:8mm 100:100W Servo 4: 4mm motor 150 : 150W Servo Motor

50: 50mm 300: 300mm (50mm pitch increments) T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q

N: None P: 1m S: 3m

See options below.

- Options

M:5m X□□: Custom Length R□□: Robot Cable

RoHS



**Technical** References



Notes or

- (1) When operated at the rated acceleration, the maximum load capacity is the load capacity at the rated acceleration.
- When operated at the maximum acceleration, the maximum load capacity is the load capacity at the maximum acceleration.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-111) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads										
Model number	Motor output (W)	Lead (mm)			Rated Acceleration	Max Acceleration (G)		Max. Acceleration	Rated thrust (N)	Stroke (mm)
RCS2-SRGS7BD-I-60-16-①-②-③-④	output (W)	16	0.25	Horizontal (kg)	Vertical (kg)	0.35	Horizontal (kg)	Vertical (kg)  0.5	63	(IIIII)
		10	0.23	J	1.5	0.55	2.3	0.5	03	
RCS2-SRGS7BD-I-60-8-①-②-③-④	60	8	0.15	10	4.5	0.25	5	2	127	
RCS2-SRGS7BD-I-60-4-①-②-③-④		4	0.05	20	9.5	0.15	10	4.5	254	
RCS2-SRGS7BD-I-100-16-①-②-③-④		16	0.3	10	3	0.4	5	1	103	50~300
RCS2-SRGS7BD-I-100-8-①-②-③-④	100	8	0.2	22	8.5	0.3	10	4	207	(every 50mm)
RCS2-SRGS7BD-I-100-4-①-②-③-④		4	0.1	40	19	0.2	20	8.5	414	30(1)(1)
RCS2-SRGS7BD-I-150-16-①-②-③-④		16	0.3	15	6	0.4	7.5	2.5	157	
RCS2-SRGS7BD-I-150-8-①-②-③-④	150	8	0.2	35	14	0.3	17.5	6.5	314	
RCS2-SRGS7BD-I-150-4-①-②-③-④		4	0.1	55	22	0.2	27.5	10.5	628	

■ Stroke and Maximum Speed

	Stroke Lead	50~300 (every 50mm)
	16	800
	8	400
	4	200
		(Unit: mm/s)

(Unit: mm/s)

Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

Option code | See page | Standard price

→ A-41

→ A-42

→ A-49

→ A-50

GS2~GS4

#### ① Stroke

4 Options

Brake

Foot bracket

Extended rod tip

	Standard price				
①Stroke (mm)		Motor Output (W)			
	60W	100W	150W		
50	_	_	_		
100	_	_	_		
150	_	_	_		
200	_	_	_		
250	_	_	_		
300	_	_	_		

© Cable Length					
Type	Cable symbol	Standard Price			
	<b>P</b> (1m)	_			
Standard	<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)	_			
	<b>X16</b> (16m) ~ <b>X20</b> (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 (15m)	_			
	R16 (16m) ~ R20 (20m)	_			

<sup>\*</sup> See page A-59 for cables for maintenance.

#### Actuator Specifications

ltem	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Single guide (guide rod diameter ø10mm, ball bush type)
Rod diameter	ø35mm
Non-rotating accuracy of rod	±0.1 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

RCS2-SRGS7BD

Name

Connector cable exit direction

Guide mounting direction



#### Dimensional Drawings

## ngs can be downloaded www.intelligentactuator.com 💽

For Special Orders

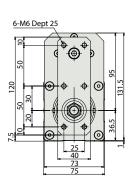


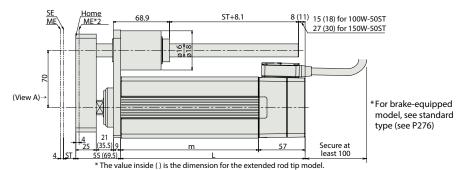
2D CAD

\*The SRGS7BD is not available in n on-motor end configuration, due to its construction.

 (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
ST: Stroke
SE : Stroke end

ME: Mechanical end







Cable joint connector \*1 (300) r-M5, depth 12 px50 pitch

Guide mounting direction (as viewed from view A)

### ■ Dimensions and Weight by Stroke

	Stroke	50	100	150	200	250	300
	60W	126	176	226	276	326	376
L	100W	133	176	226	276	326	376
	150W	145	176	226	276	326	376
	60W	69	119	169	219	269	319
m	100W	76	119	169	219	269	319
	150W	88	119	169	219	269	319
	n	25	35	35	35	35	35
	р	0	0	1	2	3	4
	r	4	4	6	8	10	12
\A/=:= =+	60W	3.5	4.1	4.8	5.4	6.1	6.7
Weight	100W	3.7	4.3	4.9	5.6	6.2	6.9
(kg)	150W	4	4.5	5.1	5.8	6.4	7.1

#### Note:

A slit is provided in the side of the actuator body to prevent pauses due to forward/ backward operation.

Please make a separate request for a dustproof/splash-proof model. Please be careful when operating in the dusty environment. The dust may enter inside from the slit.

② Applicable Controlle	rs
------------------------	----

(S2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application

ness series actuators can be	Name External Model number Features Maximum number of Input Power-supply				Power-supply	Standard	Reference	
Name	view	Model number	Features	positioning points	power	capacity	price	page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	FI	CCON CA (QUIND 2 (Q	Actuators can be operated through the same control used for solenoid valves.	7 points	Single- phase 100VAC	408 VA max.	_	, DC42
Field network type	14		Movement by numerical specification is supported.	768 points	Single- phase 200VAC	on the controller. Refer to the operation		→ P643
Pulse-train input control type			Dedicated pulse-train input type	(—)			-	
Program control type 1 or 2 axes		SSEL-CS-1-①I-NP-2-⑪	Program operation is supported Up to two axes can be operated	20,000 points	200VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes	Pilita	XSEL-@-1-①I-N1-EEE-2-®	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695

\* This is for the single-axis SSEL, and XSEL.

\*(ii) Indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V).

\*(iii) Indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V / 3: Three-phase 200 V).

\* ① Indicates the wattage (60/100/150). \* m Indicates the XSEL type (J / K / P / Q ).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis/6-axis), XSEL-R/S type, or MSCON.

IAI

RCS2-SRGS7BD



# CS2-RGD4C

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 200V Servo Motor,

Model Specification Items

C € RoHS

RCS2 -RGD4C-Series — Type

Encoder type

I : Incremental

A: Absoulute

Motor type -20:20W Servo 12:12mm motor 30:30W Servo

motor

Lead 3: 3mm

Stroke Applicable controller 50: 50mm 300: 300mm

(50mm pitch increments)

T1: XSEL-J/K T2: SCON MSCON

Cable length N: None P: 1m S: 3m

- Options See options below.

SSEL XSEL-P/Q M:5m X□□: Custom Length XSEL-R/S R□□: Robot Cable

For High Acceleration/Deceleration



(\*1) Except all 20W models and 30W 3mm lead models

Technical References



Notes or

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 3mm-lead), and 1G acceleration for the high-acceleration models (3mm-lead model excluded). (The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

■ Leads and Payloads						
Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-RGD4C-①-20-12-②-③-④-⑤		12	3.0	0.5	18.9	
RCS2-RGD4C-①-20-6-②-③-④-⑤	20	6	6.0	1.5	37.7	
RCS2-RGD4C-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	50~300
RCS2-RGD4C-①-30-12-②-③-④-⑤		12	4.0	1.0	28.3	(every 50mm)
RCS2-RGD4C-①-30-6-②-③-④-⑤	30	6	9.0	2.5	56.6	
RCS2-RGD4C-①-30-3-②-③-④-⑤		3	18.0	6.0	113.1	

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)				
12	600				
6	300				
3	150				

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

S = =							
	Standard price						
		①Encoder Type					
<pre>②Stroke (mm)</pre>	Increr	Incremental		olute			
	Motor O	itput (W)	Motor O	utput (W)			
	20W	30W	20W	30W			
50	_	_	_	_			
100	_	_	_	_			
150	_	_	_	_			
200	_	_	_	_			
250	_	_	_	_			
300	_	_	_	_			

#### (4) Cable Length

- Cable Length					
Туре	Cable symbol	Standard Price			
	<b>P</b> (1m)	_			
Standard	<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)	_			
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_			
	R16 (16m) ~ R20 (20m)	_			

<sup>\*</sup> See page A-59 for cables for maintenance.

Name	Option code	See page	Standard price
Brake	В	→ A-42	_
CE compliance	CE	→ A-42	_
Foot bracket	FT	→ A-49	_
High-acceleration/deceleration (*1)	HA	→ A-50	_
Home sensor (*2)	HS	→ A-50	_
Non-motor end specification	NM	→ A-52	_
Trunnion bracket (back)	TRR	→ A-58	_

(\*1) The high-acceleration/deceleration option is not available for all 20W models and 30W model with 3mm lead.
(\*2) The home sensor (HS) cannot be used on the non-motor end models.

#### Actuator Specifications

rictuator specifications	
ltem	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Double guide (guide rod diameter ø10mm, ball bush type)
Rod diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

RCS2-RGD4C



## www.intelligentactuator.com

For Special Orders

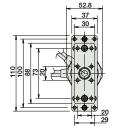


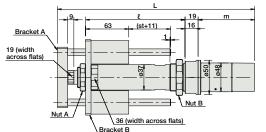




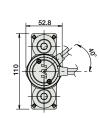
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

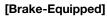
SE: Stroke end ME: Mechanical end [No Brake] rod OD) (rod OD) <u>22</u> M40×1.5 (effective screw thread range 19.5) across flats) Cable joint connector \*1

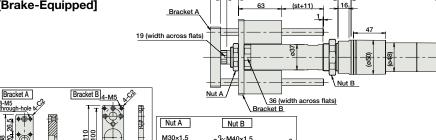




overhang at SE







#### ■ Dimensions and Weight by Stroke RCS2-RGD4C (without brake)

	,								
	Stroke		100	150	200	250	300		
	20W	285.5	335.5	385.5	435.5	485.5	535.5		
L	30W	300.5	350.5	400.5	450.5	500.5	550.5		
	l	145	195	245	295	345	395		
	20W	80.5							
m	30W	95.5							
	Weight (kg)	1.8	2.0	2.2	2.4	2.6	2.8		

#### RCS2-RGD4C (with brake)

		Stroke	50	100	150	200	250	300
	L	20W	328.5	378.5	428.5	478.5	528.5	578.5
		30W	343.5	393.5	443.5	493.5	543.5	593.5
		l	145	195	245	295	345	395
	m	20W			123	3.5		
	m	30W	138.5					
	Weight (kg)		2.0	2.2	2.4	2.6	2.8	3.0

#### ③ Applicable Controllers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page	
Positioner mode			Up to 512 positioning points are supported.	512 points					
Solenoid valve mode	1	SCON-CA-20①-NP-2-①	Actuators can be operated through the same control used for solenoid valves.	7 points			_	. 0643	
Field network type	ius/	SCON-CA-30D①-NP-2-⑪	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	126 VA max.  *Power supply capacity will	_	→ P643	
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase va 200VAC or	Single-phase 200VAC vary depends on the	vary depending	_	
Positioner multi-axis, network type	田椒	MSCON-C-1-20①-②-0-⑪ MSCON-C-1-30D①-②-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	please refer to the instruction manual for details.	_	→ P655	
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uetalis.	_	→ P685	
Program control type, 1 to 8 axes	Mita	XSEL-@-1-20①-N1-EEE-2-⑫ XSEL-@-1-30D①-N1-EEE-2-⑫	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695	

IAI

\*This is for the single-axis MSCON, SSEL, and XSEL.

\*① indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\*⑩ indicates the encoder type (I: Incremental / A: Absolute).

\*⑪ indicates the Encoder type (I: Incremental / A: Absolute).

\*⑪ indicates the power-supply voltage type (I: 100 V / 2: Single-phase 200V).

\*⑪ indicates the encoder type (I: Incremental / A: Absolute).

RCS2-RGD4C



Toll Free Phone (877) SERV098 Toll Free Fax (877) SERV099 www.electromate.com sales@electromate.com

**C** € RoHS \*CE compliance is optional.

CS2-RGD50 Robo Cylinder, Rod Type with Double Guide, Actuator Width 55mm, 200V Servo Motor, Coupled Model Specification Items RCS2 -RGD5C-Type Stroke Applicable controller Options - Encoder type Motor type Lead Cable length 60:60W Servo 16:16mm motor 8:8mm T1: XSEL-J/K N: None P: 1m S: 3m I:Incremental 50: 50mm See options below. SCON MSCON A: Absoulute motor 4: 4mm 300: 300mm 100:100W Servo SSEL XSEL-P/Q M:5m X□□: Custom Length (50mm pitch increments) motor \* See page Pre-47 for details on the model descriptions

For High Acceleration/Deceleration

(\*1) Except all 60W models and 100W 4mm lead models

Technical References

R□□: Robot Cable



Notes or

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

XSEL-R/S

- (2) The load capacity is based on operating the standard and power-saving models at 0.3G (0.2G for 4mm-lead), and 1G acceleration for the high-acceleration models (4mm-lead model excluded). (The values in the table below are the upper limits, even if the acceleration/deceleration is decreased.)
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

Actuator Specifications ■ Leads and Payloads ■ Stroke and Maximum Speed

Model number	Motor output (W)	Lead (mm)	Max. Loac	l Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-RGD5C-①-60-16-②-③-④-⑤		16	12.0	1.3	63.8	
RCS2-RGD5C-①-60-8-②-③-④-⑤	60	8	25.0	4.3	127.5	
RCS2-RGD5C-①-60-4-②-③-④-⑤		4	50.0	10.8	255.1	50~300
RCS2-RGD5C-①-100-16-②-③-④-⑤		16	15.0	2.8	105.8	(every 50mm)
RCS2-RGD5C-①-100-8-②-③-④-⑤	100	8	30.0	8.3	212.7	
RCS2-RGD5C-①-100-4-②-③-④-⑤		4	60.0	17.3	424.3	

Stroke Lead	50~250 (every 50mm)	300 (mm)
16	800	755
8	400	377
4	200	188
		(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

①Encoder Type	/②Stroke					
	Standard price					
	①Encoder Type					
<pre>②Stroke (mm)</pre>	Increr	nental	Absolute			
	Motor Output (W)		Motor Output (W)			
	60W	100W	60W	100W		
50	_	_	_	_		
100	_	_		_		
150	_	_	_	_		
200	_	_	_	_		
250				_		

@ Cable Length					
Туре	Cable symbol	Standard Price			
	<b>P</b> (1m)	_			
Standard	<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	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_			
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_			
	R16 (16m) ~ R20 (20m)	_			

<sup>\*</sup> See page A-59 for cables for maintenance.

(5) Options							
Name	Option code	See page	Standard price				
Connector cable exit direction	A2	→ A-41	_				
Brake	В	→ A-42	_				
CE compliance	CE	→ A-42	_				
Foot bracket	FT	→ A-49	_				
High acceleration/deceleration (*1)	HA	→ A-50	_				

(\*1) The high-acceleration/deceleration option is not available for all 60W models and 100W model with 4mm lead.

Actuator Specifications	
ltem	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Double guide (guide rod diameter ø12mm, ball bush type)
Rod diameter	ø30mm
Non-rotating accuracy of rod	±0.08 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)



Cable joint

For Special Orders

(62) (72)

P.15

Dimensional Drawings

3D

CAD

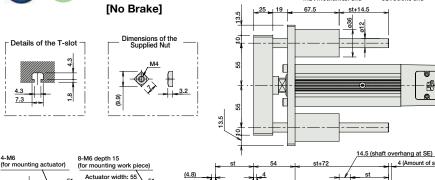
2D CAD

## www.intelligentactuator.com

\*The RGD5C is not available in non-motor end configuration, due to its construction.

- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
   (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
   ME: Mechanical end SE: Stroke end

4 (Amount of shaft movement from ME to home)



Actuator height: <del>11/4</del>\1) 54 T-slot pitch: 26 (For mounting actuator, 2 places) /130 14.5 (shaft overhang at SE) 147 4 (Amount of shaft movement from ME to home) 157 [Brake-Equipped] 72.5

■ Dimensions and Weight by Stroke

RCS2-RGD5C (without brake)

Stroke		50	100	150	200	250	300	
	60W	284	334	384	434	484	524	
L	100W	302	352	402	452	502	552	
	l	138	188	238	288	338	388	
m	60W	92						
m	100W	110						
	Weight (kg)	2.7	3.0	3.4	3.8	4.2	5.5	

RCS2-RGD5C (with brake)

	rC2	NC32-NGD3C (WILII Drake)									
1		Stroke	50	100	150	200	250	300			
1		60W	356.5	406.5	456.5	506.5	556.5	606.5			
1	L	100W	374.5	424.5	474.5	524.5	574.5	624.5			
1		l		188	238	288	338	388			
	m	60W		164.5							
1	m	100W			18	2.5					
1	Weight (kg)		3.0	3.3	3.7	4.1	4.5	5.8			
_											

### ③ Applicable Controllers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode	1	SCON-CA-60①-NP-2-⑪ SCON-CA-100①-NP-2-⑪	Actuators can be operated through the same control used for solenoid valves.	7 points		314 VA max.	_	→ P643
Field network type	ium/	SCON-CA-100(I)-NP-2-(II)	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will	_	→ P043
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_	
Positioner multi-axis, network type	田椒	MSCON-C-1-60①-②-0-⑪ MSCON-C-1-100①-②-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	please refer to the instruction manual for details.	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-60①-NP-2-⑪ SSEL-CS-1-100①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points		uetaiis.	_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL-(II)-1-60()-N1-EEE-2-(IV) XSEL-(II)-1-100()-N1-EEE-2-(IV)	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

\*This is for the single-axis MSCON, SSEL, and XSEL.

\*① indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\*⑩ indicates the encoder type (I: Incremental / A: Absolute).

\*⑪ indicates the Encoder type (I: Incremental / A: Absolute).

\*⑪ indicates the power-supply voltage type (I: 100 V / 2: Single-phase 200V).

\*⑪ indicates the encoder type (I: Incremental / A: Absolute).

# RCS2-RGD4D

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 200V Servo Motor,

Model Specification Items

RCS2 -RGD4D-Type

- Encoder type Motor type

I : Incremental

A: Absoulute

20:20W Servo 12:12mm motor 30:30W Servo

motor

Lead 3: 3mm

Stroke 50: 50mm 300: 300mm

(50mm pitch increments)

Applicable controller T1: XSEL-J/K SCON MSCON SSEL XSEL-P/Q

N: None P: 1m S: 3m

Cable length

See options below.

- Options

M:5m X□□: Custom Length XSEL-R/S R□□: Robot Cable

> Technical References



(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model). This is the upper limit of the acceleration.

The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.

(4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads Motor output (W) Lead Max. Load Capacity Rated Stroke Model number thrust (N) (mm) (mm) Horizontal (kg) | Vertical (kg) RCS2-RGD4D-①-20-12-②-③-④-⑤ 12 3.0 0.5 18.9 RCS2-RGD4D-①-20-6-②-③-④-⑤ 20 6 6.0 1.5 37.7 RCS2-RGD4D-①-20-3-②-③-④-⑤ 12.0 3 3.5 75.4 50~300 (every 50mm) RCS2-RGD4D-①-30-12-②-③-④-⑤ 12 4.0 1.0 28.3 RCS2-RGD4D-①-30-6-②-③-④-⑤ 2.5 30 6 9.0 56.6 RCS2-RGD4D-①-30-3-②-③-④-⑤ 18.0 6.0 113.1

#### ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150
	(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

9 = 11 = 2 = 1 = 1 = 1							
		Standa	rd price				
	①Encoder Type						
<pre>②Stroke (mm)</pre>	Increr	nental	Abso	olute			
	Motor Output (W)		Motor Output (W)				
	20W	30W	20W	30W			
50	_	_	_	_			
100	_	_	_	_			
150	_	_	_	_			
200	_	_	_	_			
250	_	_	_	_			
300	_	_	_	_			

#### **4** Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

#### (5) Ontions

Name	Option code	See page	Standard price						
CE compliance	CE	→ A-42	_						
Foot bracket	FT	→ A-49	_						
Home sensor	HS	→ A-50	_						
Non-motor end specification	NM	→ A-52	_						
Trunnion bracket (back)	TRR	→ A-58	_						

\*The home sensor (HS) cannot be used on the non-motor end models.

#### Actuator Specifications

Actuator Specifications					
ltem	Description				
Drive System	Ball screw, ø10mm, rolled C10				
Positioning Repeatability	±0.02mm				
Lost Motion	0.1mm or less				
Guide	Double guide (guide rod diameter ø10mm, ball bush type)				
Rod diameter	ø20mm				
Non-rotating accuracy of rod	±0.05 deg				
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)				

295 RCS2-RGD4D



#### Dimensional Drawings

## ngs can be downloaded www.intelligentactuator.com o

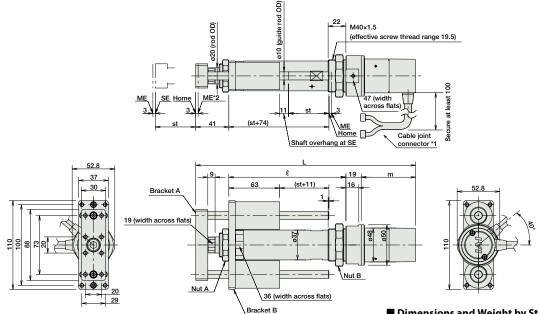
For Special Orders



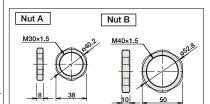


 (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. SE: Stroke end ME: Mechanical end

#### [No Brake]



# Bracket B 4-M5 Bracket A 8-M5 through-hole 8



#### ■ Dimensions and Weight by Stroke RCS2-RGD4D (without brake)

Stroke		50	100	150	200	250	300
	20W	263.5	313.5	363.5	413.5	463.5	513.5
_	30W	278.5	328.5	378.5	428.5	478.5	528.5
	l	145	195	245	295	345	395
m	20W	58.5					
m	30W	73.5					
Weight (kg)		1.6	1.8	2.1	2.3	2.5	2.7

RCS2-RGD4D models are not equipped with a brake.

#### ③ Applicable Controllers

RCS2-series actuators can be operated with the following controllers. Select an appropriate controller type according to your application

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode		SCON-CA-20①-NP-2-⑪ SCON-CA-30D①-NP-2-⑪	Actuators can be operated through the same control used for solenoid valves.	7 points		126 VA max.	_	→ P643
Field network type	iug/	SCON-CA-SUD (J-NF-2-11)	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply	_	7 7043
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase	vary depending on the controller, so	_	
Positioner multi-axis, network type	開稿	MSCON-C-1-20①-②-0-⑪ MSCON-C-1-30D①-②-0-⑪	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)	please refer to the instruction manual for	_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points	details.		_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL-(II)-1-20(I)-N1-EEE-2-(IV) XSEL-(II)-1-30D(I)-N1-EEE-2-(IV)	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

\*This is for the single-axis MSCON, SSEL, and XSEL.

\* ① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).

\* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\* ② indicates the network specification symbol.

RCS2-RGD4D



Toll Free Phone (877) SERV098 Toll Free Fax (877) SERV099 www.electromate.com sales@electromate.com

# RCS2-SRGD7BD

Robo Cylinder, Rod Type with Double Guide, Actuator Width 75mm, 200V Servo Motor, Short-Length Model

Model Specification Items

RCS2 —SRGD7BD— Series — Type

— Encoder type –

I : Incremental

Motor type –

100:100W Servo 4: 4mm

motor 150 : 150W Servo

motor

Lead 60:60W Servo 16:16mm motor 8:8mm

Stroke 50: 50mm 300: 300mm

(50mm pitch increments)

 Applicable controller T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q

N: None P: 1m S: 3m

Cable length - Options See options below.

M:5m X□□: Custom Length R□□: Robot Cable

RoHS



Technical References



OIN Notes on

- (1) When operated at the rated acceleration, the maximum load capacity is the load capacity at the rated acceleration.
- When operated at the maximum acceleration, the maximum load capacity is the load capacity at the maximum acceleration.
- (3) The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-112) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

Actuator specifications										
■ Leads and Payloads										
Model number	Motor output (W)	Lead	Rated Acceleration (G)	Load Capacity at F		Max Acceleration (G)	Load Capacity at		Rated thrust (N)	Stroke
	output (w)	(mm)	Acceleration (d)	Horizontal (kg)	Vertical (kg)	Acceleration (G)	Horizontal (kg)	Vertical (kg)	trirust (IV)	(mm)
RCS2-SRGD7BD-I-60-16-①-②-③-④		16	0.25	5	1	0.35	2.5	(N/A)	63	
RCS2-SRGD7BD-I-60-8-①-②-③-④	60	8	0.15	10	4	0.25	5	1.5	127	
RCS2-SRGD7BD-I-60-4-①-②-③-④		4	0.05	20	9	0.15	10	4	254	
RCS2-SRGD7BD-I-100-16-①-②-③-④		16	0.3	10	2.5	0.4	5	0.5	103	50~300
RCS2-SRGD7BD-I-100-8-①-②-③-④	100	8	0.2	22	8	0.3	10	3.5	207	(every
RCS2-SRGD7BD-I-100-4-①-②-③-④		4	0.1	40	18.5	0.2	20	8	414	50mm)
RCS2-SRGD7BD-I-150-16-①-②-③-④		16	0.3	15	5.5	0.4	7.5	2	157	
RCS2-SRGD7BD-I-150-8-①-②-③-④	150	8	0.2	35	13.5	0.3	17.5	6	314	
RCS2-SRGD7BD-I-150-4-①-②-③-④		4	0.1	55	21.5	0.2	27.5	10	628	

■ Stroke and Maximum Speed

	Stroke Lead	50~300 (every 50mm)
	16	800
	8	400
	4	200
		(11.2)

(Unit: mm/s)

① Stroke

	Standard price						
①Stroke (mm)	Motor Output (W)						
	60W	100W	150W				
50	_	-	_				
100	_	_	_				
150	_						
200	_	_	_				
250	_	_	_				
300	-	_					

#### ③ Cable Length

Туре	Cable symbol	Standard Price
	<b>P</b> (1m)	_
Standard	<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 (15m)	_
	R16 (16m) ~ R20 (20m)	_

<sup>\*</sup> See page A-59 for cables for maintenance.

Name	Option code	See page	Standard price
Connector cable exit direction	A1~A3	→ A-41	_
Brake	В	→ A-42	_
Foot bracket	FT	→ A-49	_
Guide mounting direction	GS2~GS4	→ A-50	_
Extended rod tip	RE	→ A-54	_

#### Actuator Specifications

Actuator Specifications	
ltem	Description
Drive System	Ball screw, ø12mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Double guide (guide rod diameter ø16mm, ball bush type)
Rod diameter	ø35mm
Non-rotating accuracy of rod	±0.08 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

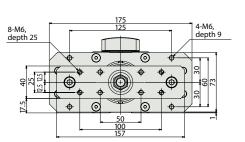
## ngs can be downloaded www.intelligentactuator.com

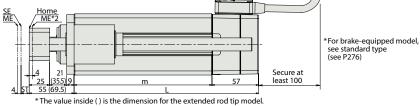
For Special Orders





\*The SRGD7BD is not available in non-motor end configuration, due to its construction.





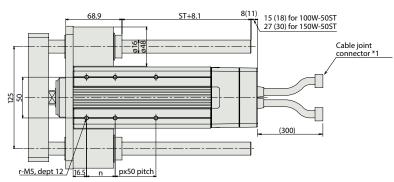
Note:

A slit is provided in the side of the actuator body to prevent pauses due to forward/backward operation.

Please make a separate request for a dustproof/splash-proof model.

Please be careful when operating in the dusty environment. The dust may enter inside from the slit.

- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.
  - SE: Stroke end
  - ME : Mechanical end



■ Dimensions and Weight by Stroke

	- Dimensions and Weight by Stroke								
	Stroke			150	200	250	300		
	60W	126	176	226	276	326	376		
L	100W	133	176	226	276	326	376		
	150W	145	176	226	276	326	376		
	60W	69	119	169	219	269	319		
m	100W	76	119	169	219	269	319		
	150W	88	119	169	219	269	319		
	n	25	35	35	35	35	35		
	р	0	0	1	2	3	4		
	r	4	4	6	8	10	12		
\A/=:= =+	60W	4.3	5	5.7	6.4	7.2	7.9		
Weight (kg)	100W	4.5	5.1	5.9	6.6	7.3	8		
(kg)	150W	4.8	5.3	6.1	6.8	7.5	8.2		

### ② Applicable Controllers

RCS2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page		
Positioner mode			Up to 512 positioning points are supported.	512 points						
Solenoid valve mode			th fo	Actuators can be operated through the same control used for solenoid valves.	7 points	Single- phase 100VAC	408 VA max.	_	, DC 42	
Field network type		SCON-CA-①I-NP-2-⑪	Movement by numerical specification is supported.	768 points	Single- phase	* Varies depending on the		→ P643		
Pulse-train input control type			Dedicated pulse-train input type	(—)	200VAC 3-phase	controller. Refer to the operation	_			
Program control type 1 or 2 axes		SSEL-CS-1-①I-NP-2-⑪	Program operation is supported Up to two axes can be operated	20,000 points	200VAC (XSEL-P/ Q only)	manual for details.	_	→ P685		
Program control type 1 or 6 axes	Pilita	XSEL-@-1-①I-N1-EEE-2-®	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695		

\* This is for the single-axis SSEL, and XSEL.

\* (ii) Indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V).

\* (iii) Indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V / 3: Three-phase 200 V).

\* ① Indicates the wattage (60/100/150). \* m Indicates the XSEL type (J / K / P / Q ).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis/6-axis), XSEL-R/S type, or MSCON.

IAI

RCS2-SRGD7BD

**ECTROMATE** 

Toll Free Phone (877) SERV098 Toll Free Fax (877) SERV099 www.electromate.com sales@electromate.com

# CS2-RGD4R

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 200V Servo Motor, Side-mounted Motor

Applicable controller

Model Specification Items

RCS2 -RGD4R-Type

- Encoder type I:Incremental

A: Absoulute

Motor type 20 : 20W Servo motor

motor

Lead 12:12mm 3: 3mm 30:30W Servo

Stroke 50: 50mm 300: 300mm (50mm pitch

increments)

T1: XSEL-J/K SCON MSCON SSEL XSEL-P/Q

XSEL-R/S

Cable length N: None See options below. P: 1m S: 3m

Options

M:5m X□□: Custom Length R□□: Robot Cable



Technical References

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum
- speed at the stroke you desire. The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model). This is the upper limit of the acceleration.
- The values for the horizontal load capacity assume the use of an external guide, so that there is no external force from any direction other than the forward/backward direction of the rod. See the technical resources (page A-112) for the allowable weight using the supplied
- (4) See page A-71 for details on push motion.

#### Actuator Specifications

#### ■ Leads and Payloads Motor Lead Max. Load Capacity Rated Stroke Model number output (W) thrust (N) (mm) (mm) Horizontal (kg) Vertical (kg) RCS2-RGD4R-①-20-12-②-③-④-⑤ 18.9 12 3.0 0.5 RCS2-RGD4R-①-20-6-②-③-④-⑤ 6 6.0 1.5 37.7 RCS2-RGD4R-10-20-3-20-3-40-6 3 12.0 3.5 75.4 50~300 (every 50mm) RCS2-RGD4R-①-30-12-②-③-④-⑤ 1.0 28.3 RCS2-RGD4R-①-30-6-②-③-④-⑤ 30 6 9.0 2.5 56.6 RCS2-RGD4R-10-30-3-20-30-40-65 3 18.0 6.0 113.1

#### ■ Stroke and Maximum Speed

50~300 (every 50mm)
600
300
150

(Unit: mm/s)

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke Standard price ①Encoder Type @Stroke (mm) Absolute Incremental Motor Output (W) Motor Output (W) 20W 30W 20W 30W 50 100 150 200

④ Cable Length							
Туре	Cable symbol	Standard Price					
	<b>P</b> (1m)	_					
Standard	<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)	_					
	<b>R04</b> (4m) ~ <b>R05</b> (5m)						
Robot Cable	R06 (6m) ~ R10 (10m)	_					
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_					
	R16 (16m) ~ R20 (20m)	_					

See page A-59 for cables for maintenance

© Options					
Option code	See page	Standard price			
В	→ A-42	_			
CE	→ A-42	_			
FT	→ A-49	_			
FLR	→ A-46	_			
HS	→ A-50	_			
NM	→ A-52	_			
QR	→ A-53	_			
RP	→ A-54	_			
	B CE FT FLR HS NM QR	$\begin{array}{cccccccccccccccccccccccccccccccccccc$			

Actuator Specifications	
Item	Description
Drive System	Ball screw, ø10mm, rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum, white alumite treated
Rod diameter	ø20mm
Non-rotating accuracy of rod	±0.05 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

250 300

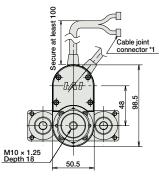


For Special Orders

(\*1) Connect the motor and encoder cables here.

See page A-59 for details on cables.
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. ME : Mechanical end

(\*3) The orientation of the bolt varies depending on the product.



#### ■ Dimensions and Weight by Stroke RCS2-RGD4R (without brake)

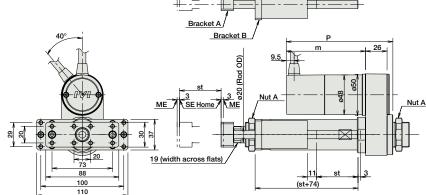
•		CSZ NGD-IN (WILIIOUT DIURE)								
		Stroke	50	100	150	200	250	300		
Π		20W	227	277	327	377	427	477		
		30W	227	277	327	377	427	477		
		Ł		183	233	283	333	383		
ſ	m –	20W	80.5							
- 1		30W	95.5							
ſ	Р	20W	113.5							
- 1	Р	30W	128.5							
[	1	Weight (kg)	1.9	2.2	2.3	2.6	2.7	3.0		

#### RCS2-RGD4R (with brake)

	,								
	Stroke		100	150	200	250	300		
	20W	227	277	327	377	427	477		
L	30W	227	277	327	377	427	477		
	l l		183	233	283	333	383		
	20W		123.w5						
m	30W	138.5							
Р	20W	156.5							
Г	30W			17	1.5				
	Weight (kg)	2.1	2.4	2.5	2.8	2.9	3.2		

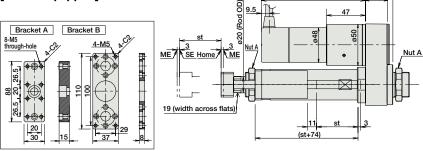
## 3D CAD 33 [No Brake]

gs can be downloaded www.intelligentactuator.com obsite.



## [Brake-Equipped]

Dimensional Drawings



③ Applicable Controllers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode			Up to 512 positioning points are supported.	512 points				
Solenoid valve mode		SCON-CA-20①-NP-2-⑪	Actuators can be operated through the same control used for solenoid valves.	7 points		126.1/4	_	→ P643
Field network type	ium/	SCON-CA-30D①-NP-2-⑪	Movement by numerical specification is supported.	768 points	Single-phase 100VAC Single-phase 200VAC 3-phase	*Power supply capacity will vary depending on the controller, so please refer to	_	→ P043
Pulse-train input control type			Dedicated pulse-train input type	(—)			_	
Positioner multi-axis, network type	翻稿	MSCON-C-1-20①-②-0-① MSCON-C-1-30D①-②-0-①	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points	200VAC (XSEL-P/Q/R/S ONLY)		_	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-20①-NP-2-⑪ SSEL-CS-1-30D①-NP-2-⑪	Program operation is supported. Up to 2 axes can be operated.	20,000 points			_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL-(ii)-1-20(j)-N1-EEE-2-(iv) XSEL-(ii)-1-30D(j)-N1-EEE-2-(iv)	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

\*This is for the single-axis MSCON, SSEL, and XSEL.

\*① indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V).

\*⑩ indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

\*⑩ indicates the encoder type (I: Incremental / A: Absolute).

\*⑪ indicates the Encoder type (I: Incremental / A: Absolute).

\*⑪ indicates the power-supply voltage type (I: 100 V / 2: Single-phase 200V).

\*⑪ indicates the encoder type (I: Incremental / A: Absolute).