**Rod Type** 



# **Rod Type**

RCP4	ERC3	RCA2
RCP3	ERC2	RCA
RCP2	RCD	RCS2

Pulse Motor	Туре				
	Standard Type	Coupling Type	52mm Width	RCP4-RA5C	147
RCP4		Side-Mounted Motor Type  Coupling Type  Side-Mounted Motor Type  Single-Guide Type  Single-Guide Type  Double-Guide Type  Standard Type  Standard Type  Standard Type  Standard Type  Sontroller-Integrated Type  Single-Guide Type  Double-Guide Type  Double-Guide Type  Double-Guide Type	61mm Width	RCP4-RA6C	149
series		Side-Mounted Motor Type	52mm Width	RCP4-RA5R	151
Series			61mm Width	m Width RCP4-RA6C 1 m Width RCP4-RA5R 1 m Width RCP4-RA6R 1 m Width RCP3-RA2AC 1 m Width RCP3-RA2BC 1 m Width RCP3-RA2BR 1 m Width RCP3-RA2BR 1 m Width RCP3-RA2BR 1 m Width RCP2-RA3C 1 m Width RCP2-RA3C 1 m Width RCP2-RA8C 1 m Width RCP2-RA8C 1 m Width RCP2-RA8C 1 m Width RCP2-RA8R 1 m Width RCP2-RA9C 1 m	153
	Mini Tyne	Counling Type	22mm Width	DCD2 DA2AC	155
RCP3	Willin Type	couping type			
		Side-Mounted Motor Type			
series	Standard Type  Standard Type  Coupling Type  High-Thrust Type  Side-Mounted Motor Type  Coupling Type  Side-Mounted Motor Type  Coupling Type  Side-Mounted Motor Type  Single-Guide Type  Single-Guide Type  Double-Guide Type  Iller-Integrated Type with Pulse Motor  Controller-Integrated Type  Standard Type  Standard Type				
				NCF3-NAZDN	
	Standard Type	Coupling Type			163
			35mm Width	RCP2-RA3C	165
DCDO	Standard Type  Coupling Type  Side-Mounted Motor Type  Side-Mounted Motor Type  Side-Mounted Motor Type  Standard Type  Coupling Type  Coupling Type  Side-Mounted Motor Type  Side-Mounted Motor Type  Side-Mounted Motor Type  Side-Mounted Motor Type  Single-Guide Type  Double-Guide Type  Standard Type  Standard Type  Single-Guide Type  Tontroller-Integrated Type  Standard Type  Standard Type  Standard Type  Standard Type  Single-Guide Type  Double-Guide Type  Double-Guide Type  Mini Cylinder		85mm Width		167
RCP2			85mm Width	RCP2-RA8R	169
Short-Length			100mm Width	RCP2-RA10C	171
	Short-Length Type		45mm Width		173
					175
		Double-Guide Type	61mm Width RCP4-RA6C ed Motor Type 52mm Width RCP4-RA5R 61mm Width RCP4-RA6R  pe 22mm Width RCP3-RA2AC 28mm Width RCP3-RA2BC ed Motor Type 22mm Width RCP3-RA2BR  pe 25mm Width RCP3-RA2BR  pe 25mm Width RCP3-RA2C 35mm Width RCP2-RA3C pe 85mm Width RCP2-RA3C pe 85mm Width RCP2-RA8C ed Motor Type 85mm Width RCP2-RA8C ed Motor Type 85mm Width RCP2-RA10C pe 45mm Width RCP2-SRA4R e Type 45mm Width RCP2-SRG54R de Type 45mm Width RCP2-SRGD4R  pe 45mm Width RCP2-SRGD4R  pe 45mm Width RCP2-SRGD4R  pe 58mm Width ERC3-RA6C 64mm Width ERC2-RA7C e Type 58mm Width ERC2-RA7C de Type 58mm Width ERC2-RG56C 68mm Width ERC2-RGD6C 68mm Width ERC2-RGD6C 68mm Width ERC2-RGD6C 68mm Width ERC2-RGD6C	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	FRC2-RA6C	183
	controller integrated type	Staridard Type			185
ERC2		Single-Guide Type			187
series		omgre caracitype			189
361163		Double-Guide Type			191
		Coupling Type   22mm Width   RCP3-RA2AC   15   28mm Width   RCP3-RA2BC   15   15   22mm Width   RCP3-RA2BC   15   22mm Width   RCP3-RA2BR   15   28mm Width   RCP3-RA2BR   16   28mm Width   RCP3-RA2BR   16   25mm Width   RCP2-RA2C   16   35mm Width   RCP2-RA3C   16   35mm Width   RCP2-RA3C   16   35mm Width   RCP2-RA8C   17   35mm Width   RCP2-RA8C   17   35mm Width   RCP2-SRG4R   17   35mm Width   RCP2-SRG5AR   18   35mm Width   RCP2-RA6C   35mm Width	193		
DC Brushles	ss Motor Type			22 11.057	
			12mm Width	DCD DA1D	105
RCD	Will in Cyllinder		וצווווו שומנו	RCD-KATU	170
series					
001103					

**145** Rod Type

# **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		3 ,,	34mm Width	RCA2-RN4NA	203
			28mm Width	RCA2-RP3NA	205
series			34mm Width	RCA2-RP4NA	207
24V		Single-Guide Type	28mm Width	RCA2-GS3NA	209
Servo		, , , , , , , , , , , , , , , , , , ,	34mm Width	RCA2-GS4NA	211
Motor Type		Double-Guide Type	28mm Width	RCA2-GD3NA	213
Турс			34mm Width	RCA2-GD4NA	215
		Slide Unit Type	60mm Width	RCA2-SD3NA	217
			72mm Width	RCA2-SD4NA	219
	Standard Type	Coupling Type	~22····		221
	Standard Type	Coupling Type	ø32mm	RCA-RA3C	221 223
		Build-in Type	ø37mm	RCA-RA4C	
		Bullu-III Type	ø32mm	RCA-RA3D	225
		Cide Manustad Mateu Ture	ø37mm	RCA-RA4D	227
		Side-Mounted Motor Type	ø32mm	RCA-RA3R	229
		Short-Length Type	ø37mm	RCA-RA4R	231
RCA	Single-Guide Type	<u> </u>	45mm Width	RCA-SRA4R	233
series	Single-Guide Type	Coupling Type	ø32mm	RCA-RGS3C	235
		Duild in Time	ø37mm	RCA-RGS4C	237
24V		Build-in Type	ø32mm	RCA-RGS3D	239
Servo		Chart Langth Tuna	ø37mm	RCA-RGS4D	241
Motor Type	Davida Tura	Short-Length Type	45mm Width	RCA-SRGS4R	243
.ypc	Double-Guide Type	Coupling Type	ø32mm	RCA-RGD3C	245
		Puild in Type	ø37mm	RCA-RGD4C	247
		Build-in Type	ø32mm	RCA-RGD3D	249
		Cide Marinted Mater True	ø37mm	RCA-RGD4D	251
		Side-Mounted Motor Type	ø32mm	RCA-RGD3R	253
		Short-Length Type	ø37mm	RCA-RGD4R	255
			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
					40

Slider Type

Mini

Standard

Rod

Mini

Standard

Controllers Integrated

Table/ Arm/ Flat Type

Mini

Gripper/

Rotary Type

Linear Servo Type

cleanoom ype

plashroof ype

Pulse Motor

Servo Motor (24V)

Servo Motor (200V)

Linear Servo Motor

ROBO Cylinder, Rod Type, Motor Unit Coupled, Actuator Width 52mm, 24-V Pulse Motor

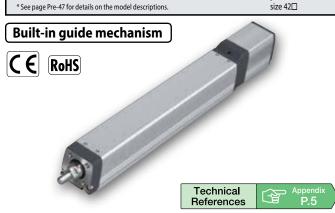
Model Specification Items RCP4 — RA5C — **P3** Motor type - Applicable controller Type Encoder type Stroke Cable length Options I: Incremental See Options below.

42P: Pulse motor, 20: 20mm 50: 50mm size 42□ 12:12mm

400: 400mm 42SP: High-thrust 6: 6mm (50mm pitch increments) pulse motor 3: 3mm size 42□

P3: PCON-CA MSEP-C N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable

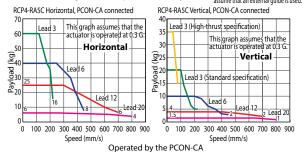
\* If the high-thrust pulse motor is selected, the actuator comes standard with option B (Brake).



OLN 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 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.

### ■ Correlation Diagrams of Speed and Payload \*The values of the horizontal specification



RCP4-RA5C Horizontal, MSEP connected RCP4-RA5C Vertical, MSEP connected 40 Lead 3 The values for leads 3/6/12 are based on operation at 0.2G, This graph assumes that the actuator is operated at 0.2 G. and-lead-20-is-0:30 Vertical Payload (kg) Horizontal Payload (0 Lead 6 Lead 12 Lead.20. 100 200 300 400 500 600 700 200 300 400 500 600 700 Speed (mm/s) Speed (mm/s) Operated by the MSEP-C

### Actuator Specifications ■ Leads and Payloads

(\*) When operated at 0.2 G Connected Maximum payload Max. push Model number controller Horizontal (kg) | Vertical (kg) force (N) PCON-CA RCP4-RA5C-I-42P-20-1 -P3-2 - 3 20 56 MSEP-C 6 1.5 (\*) PCON-CA 25 4 RCP4-RA5C-I-42P-12-1 -P3-2 -3 93 Standard specification MSEP-C 25 (\*) 4 (\*) 50 to PCON-CA 40 10 400 RCP4-RA5C-I-42P-6-①-P3-②-③ 185 MSEP-C 40 (\*) 10 (\*) (every PCON-CA MSEP-C 20 50mm) RCP4-RA5C-I-42P-3-①-P3-②-③ 370

High-thrust	DCDA DAEC LASCD		,	PCON-CA	_	35	750
specification	RCP4-RA5C-I-42SP-	D-[[]-F3-[2]-[]-B	3	_	_	_	/30
	xplanation ①Stroke						

### ■ 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				
	MSEP-C	250				
3	PCON-CA	225				
(Standard)	MSEP-C	125				
3 (High-thrust)	PCON-CA	80				

(Unit: mm/s)

Stroke (mm)	Standard price				
Stroke (IIIII)		High-thrust			
50	_	_			
100	—	_			
150	_	_			
200	_	_			
250	_	_			
300	_	_			
350	_	_			
400	_	_			

_			ì

③Options							
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

Turan	Cablagumabal	Ctandard price
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)	_

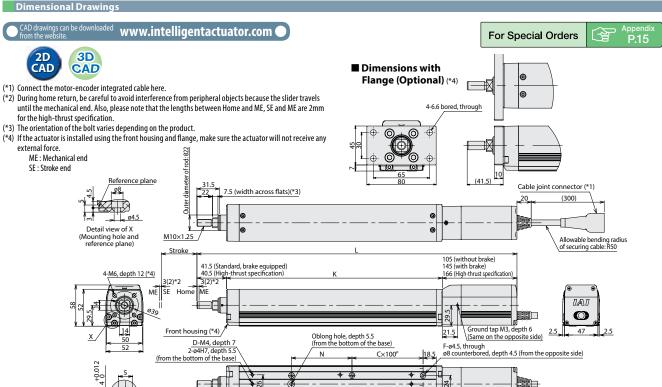
\* See page A-59 for cables for maintenance.

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 [].

Option code: CJT Cable: Top

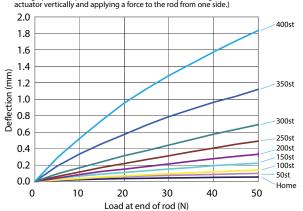
# RCP4-RA5C 148 IAI



J (reamed hole and oblong hole pitch) B×100<sup>P</sup>

### ■ 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

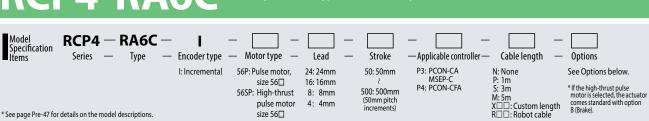
	= Differsions and Mass by Stroke									
	Stı	oke	50	100	150	200	250	300	350	400
	W	ithout brake	300	350	400	450	500	550	600	650
L		With brake	340	390	440	490	540	590	640	690
Higl	High-th	rust specification	360	410	460	510	560	610	660	710
		A	73.5	123.5	173.5	223.5	273.5	323.5	373.5	423.5
		В	0	0	1	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
		M	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 lo	ad at end of rod (N)	65.6	51.2	41.7	34.9	29.8	25.7	22.4	19.7
Allowable	dynamic	Load offset 0mm	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 torqu	e at end of rod (N•m)	6.6	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	/ithout 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

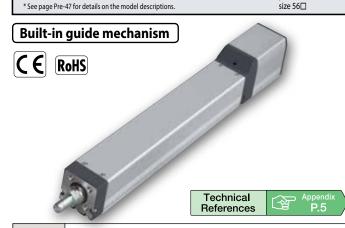
113.5 (without brake) 153.5 (with brake) 174.5 (High-thrust specification)

Cable exit 4 directions (optional)

Option code: CJB Cable: Bottom

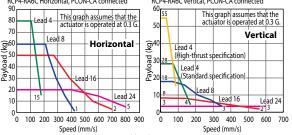
Applicable Controllers									
RCP4 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.									
External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page		
ii)	PCON-CA-42○I-⊕-2-0	Equipped with a high-output driver PIO control supported	512 points			_			
	PCON-CA-42○I-PL□-2-0	Equipped with a high-output driver Pulse-train input supported	_		Refer to P618	_	→ P607		
	PCON-CA-42OI-@-0-0	Equipped with a high-output driver Field network supported	768 points	DC24V		_			
(Assert		Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points		Refer to		, DE62		
iiii		Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572		→ P563		
	an be opera	PCON-CA-42OI-@-0-0  MSEP-C-@-~-@-2-0	an be operated with the controllers indicated below. Select the type according to your interesternal view Model number Features  PCON-CA-42○I-⊕-2-0 Equipped with a high-output driver PlO control supported  PCON-CA-42○I-PL□-2-0 Equipped with a high-output driver Pulse-train input supported  PCON-CA-42○I-⊕-0-0 Equipped with a high-output driver Field network supported  MSEP-C-⊕-~-⊕-2-0 Positioner type based on PlO control, allowing up to 8 axes to be connected  MSEP-C-⊕-~-⊕-2-0 Field network-ready positioner type, allowing up to 8 axes	An be operated with the controllers indicated below. Select the type according to your intended application.    External   Model number   Features   Maximum number of positioning points	External view   Model number   Features   Maximum number of positioning points   PCON-CA-42○I-⊕-2-0   Equipped with a high-output driver PlO control supported   PCON-CA-42○I-PL□-2-0   Equipped with a high-output driver PlO control supported   PCON-CA-42○I-PL□-2-0   Equipped with a high-output driver Plo control supported   PCON-CA-42○I-PL□-2-0   Equipped with a high-output driver Plose-train input supported   PCON-CA-42○I-PL□-2-0   Equipped with a high-output driver Field network supported   768 points   DC24V   Positioner type based on PlO control, allowing up to 8 axes to be connected   Positioner type, allowing up to 8 axes   356 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type, allowing up to 8 axes   256 points   Positioner type type type type type type type type	An be operated with the controllers indicated below. Select the type according to your intended application.    External   Model number   Features   Maximum number of positioning points   Input power   Power supply capacity	External wiew Model number Features Maximum number of positioning points PCON-CA-42OI-①-2-0 Equipped with a high-output driver PlO control supported PCON-CA-42OI-①-0-0 Equipped with a high-output driver Pulse-train input supported PCON-CA-42OI-①-0-0 Equipped with a high-output driver Pulse-train input supported PCON-CA-42OI-①-0-0 Equipped with a high-output driver Pulse-train input supported PCON-CA-42OI-①-0-0 Equipped with a high-output driver Pulse-train input supported PCON-CA-42OI-①-0-0 Equipped with a high-output driver Field network supported PCON-CA-42OI-①-0-0 Field network supported PCON-CA-42OI-0 Field network supported PCON-CA-42OI-0 Field network supported PCON-CA-42OI-0 Field network supported PCON-CA-42OI-0 Field network supported PC		





- (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.

### ■ Correlation Diagrams of Speed and Payload \*The values of the horizontal specification assume that an external guide is used. RCP4-RA6C Horizontal, PCON-CA connected RCP4-RA6C Vertical, PCON-CA connected



Operated by the PCON-CA RCP4-RA6C Horizontal, MSEP connected RCP4-RA6C Vertical, MSEP connected This graph assumes that the actuator is operated at 0.2 G The values for leads 4/8/16 are 50 55 based on operation at 0.2G and lead 24 is 0.3G 25 Vertical Horizontal osq 30 P 15 17. ead 16-15 300 400 600 700 Speed (mm/s) Speed (mm/s) Operated by the MSEP-C

Actuator Specifications

■ Leads and Payloads

Stroke (mm)
(mm)
50 to
500
(every
50mm)

■ Stroke and Maximum Speed

= 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>				
16	MSEP-C	420				
8	PCON-CA	420				
0	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 v	rertically. (Unit: mm/s)				

The values in < > apply when the actuator is used vertically.

Stroke (mm)	Standar	d price
Stroke (IIIII)	Standard	High-thrust
50	_	_
100		_
150	_	_
200	_	_
250	_	_
300	_	_
350	_	_
400	_	_
450	_	_
500	_	_

**3Options** 

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

<u> </u>		
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)	_
	R01 (1m) ~ R03 (3m)	_
	R04(4m) ~ R05(5m)	_
Robot cable	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
1	R16 (16m) ~ R20 (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 150 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 [].

RCP4-RA6C

For Special Orders

Dimensional Drawings

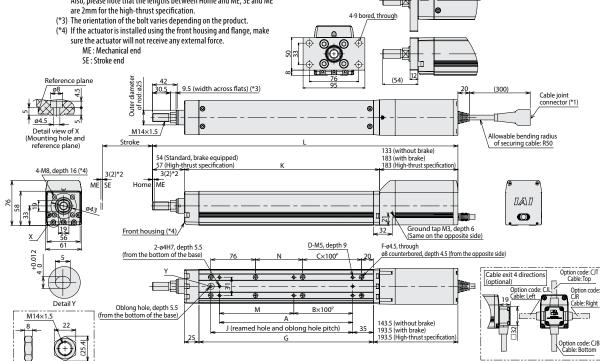
# www.intelligentactuator.com





(\*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. Also, please note that the lengths between Home and ME, SE and ME

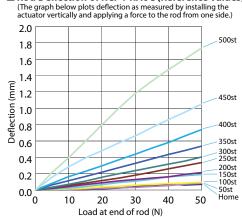


**■** Dimensions with

Flange (Optional) (\*4)

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

Supplied rod end nut



### ■ Dimensions and Mass by Stroke

	Dimensions and mass by Stroke										
	Stroke	50	100	150	200	250	300	350	400	450	500
	Without brake	368.5	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5
L	With brake	418.5	468.5	518.5	568.5	618.5	668.5	718.5	768.5	818.5	868.5
	High-thrust specification	421.5	471.5	521.5	571.5	621.5	671.5	721.5	771.5	821.5	871.5
	Α	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	8	8	10	10	12	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	76	126	76	126	76	126	76	126	76	126
	N	30	80	130	80	130	80	130	80	130	80
Allowa	ble static load 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	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 en	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	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	Allowable dynamic torque at end of rod (N•m)		3.1	2.5	2.1	1.8	1.5	1.3	1.1	1.0	0.8
Weight	Without 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

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		PCON-CA-56PI-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-56PI-@-0-0	Equipped with a high-output driver Field network supported	768 points	DC24V		_	
Solenoid valve multi-axis type PIO specification	dina.	MSEP-C	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 ,	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572		7 1303
Positioner type		PCON-CFA-56SPI-①-2-0	High-thrust specification Positioner type based on PIO control	512 points			_	
Pulse-train type		PCON-CFA-56SPI-PL-□-2-0	High-thrust specification Pulse-train input type	_	DC24V	Refer to P618	_	→ P607
Field network type		PCON-CFA-56SPI-@-0-0	High-thrust specification Supporting 7 major field networks	768 points			_	
* ① indicates I/O type (NP/PN)	. * (11) indicat	tes number of axes (1 to 8). * 🕮	indicates field network specification symbol. $*\Box$ indi	cates N (NPN specific	ation) or P	(PNP specificat	ion) symbo	l.

ROBO Cylinder, Rod Type, Side-mounted Motor, Actuator Width 52mm, 24-V Pulse Motor

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



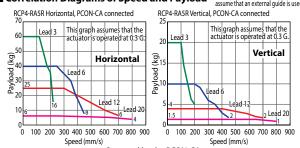
The "Motor side-mounted to the left (ML)" option is selected for the actuator shown above.

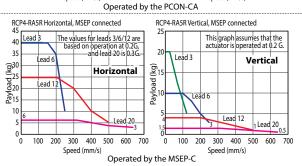
Technical References



- (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





### Actuator Specifications

### ■ Leads and Payloads

= 2 caus and 1 dy loads (*) when operated at 0.2 d							
Model number	Lead	Connected	Maximun	n payload	Max. push	Stroke	
Modernumber	(mm)	controller	Horizontal (kg)	Vertical (kg)	force (N)	(mm)	
RCP4-RA5R-I-42P-20-①-P3-②-③	20	PCON-CA	6	1.5	56		
NCF4-NA3N-1-42F-20-[[]-F3-[2]-[3]	20	MSEP-C	6	1.5 (*)	30		
RCP4-RA5R-I-42P-12-①-P3-②-③	12	PCON-CA	25	4	93	50 to	
NCF4-NA3N-1-42F-12-[U]-F3-[Z]-[S]	12	MSEP-C	25 (*)	4 (*)	93	400	
RCP4-RA5R-I-42P-6-①-P3-②-③	6	PCON-CA	40	10	185	(every	
RCP4-RASR-I-42P-6-[[]-P3-[2]-[3]		MSEP-C	40 (*)	10 (*)	100	50mm)	
RCP4-RA5R-I-42P-3-①-P3-②-③	,	PCON-CA	60	20	370		
RCP4-RASR-1-42P-3-[U]-P3-[Z]-[S]	)	MSEP-C	40 (*)	20 (*)	3/0		

### ■ 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
)	MSEP-C	125
		(Unit: mm/s)

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

	n	100		100	

© Options			
Name	Option code	Page	Standard Price
Brake (*)	В	→ A-42	_
Optional cable exit direction (top)	CJT	→ A-42	_
Optional cable exit direction (outside)	CJO	→ 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	_

\* 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)	_
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)	_
	<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.

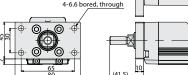
### Actuator Specifications

Item	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)

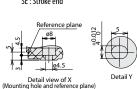
(\*1) The value at lead 20 is shown in [].

Stroke 41.5 **■** Dimensions with Flange (Optional) (\*4)

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



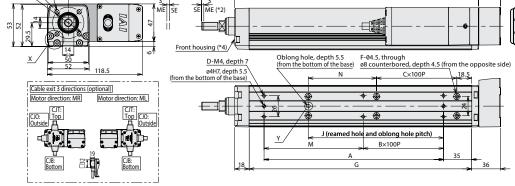
For Special Orders

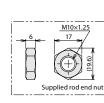


4-M6, depth 12, equal pitch of 90°

P.C.D.39

7.5 (width across flats) (\*3) Allowable bending radius of securing cable: R50 <(28)<sub>></sub> Cable ioint connector (\*1) 116 (ithout brake) 156 (with brake) Ground tap M3, depth 6 (Same on the opposite side) (32.5) (300)

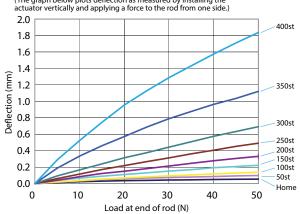




4-M5, depth 15

### ■ 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

	St	roke	50	100	150	200	250	300	350	400
		L	181	231	281	331	381	431	481	531
	A			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	35	85	135	85	135	85	135	85
Allowak	ole 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	dynamic	Load offset 0mm	32.4	23.6	18.1	14.4	11.6	9.5	7.7	6.2
load at end	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 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 dynamic torque at end of rod (N•m)		2.6	2.0	1.6	1.3	1.0	0.9	0.7	0.6	
Weight	t Without 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

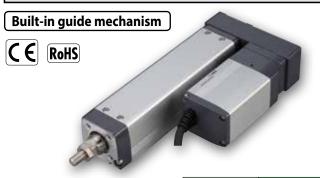
Applicable Controllers									
RCP4 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.									
Name External view Model number Features Maximum number of Input positioning points power capacity price page									
Positioner type High-output specification	ń	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		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	lane.		Positioner type based on PIO control, allowing up to 8 axes to be connected	3 points		Refer to		, 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		P572	_	→ P563	
* ① indicates I/O type (NP/PN). *	indicates n	umber of axes (1 to 8). * (11) indicate	tates field network specification symbol. $*\Box$ indicates N (NPN sp	ecification) or P (PNP s	pecification)	symbol.			

IAI

RCP4-RA5R 152

Rod Type

RCP4 — RA6R — 56P **P3** Encoder type Motor type Lead Stroke — Applicable controller Cable length **Options** P3: PCON-CA I: Incremental 56P: Pulse motor, 24: 24mm 50: 50mm N: None See Options below. P: 1m S: 3m M: 5m size 56□ 16: 16mm 500: 500mm 8: 8mm \* Be sure to specify either "ML" or "MR" as the motor side-mounted direction. (50mm pitch increments) X□□: Custom length R□□: Robot cable 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.

Technical References



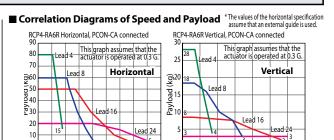
(1) The maximum payload is the value when operated at 0.3G (0.2G with some models) acceleration. The upper limit of acceleration is 1 G (\*).

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.

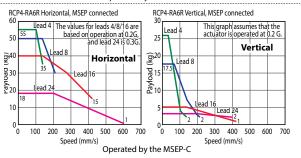
(4) See page A-71 for details on push motion.



Operated by the PCON-CA

300 400 500

100 200 300 400 500 600 700 800 900



### Actuator Specifications

■ Leads and Payloads (\*) When operated at 0.2 G Maximum payload Max. push Stroke Connected Model number controller Horizontal (kg) Vertical (kg) force (N) PCON-CA RCP4-RA6R-I-56P-24- 1 -P3- 2 - 3 24 182 MSEP-C 18 3 (\*) 50 to 500 PCON-CA 50 8 RCP4-RA6R-I-56P-16-1 -P3-2 -3 273 MSEP-C 40 (\*) 5 (\*) PCON-CA 60 18 (every RCP4-RA6R-I-56P-8-①-P3-②-③ 547 MSEP-C 50 (\*) 17.5 (\*) 50mm) PCON-CA RCP4-RA6R-I-56P-4-1 -P3-2 - 3 1094

G	■ 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
	10	MSEP-C	420
	8	PCON-CA	420<350>
	0	MSEP-C	210
	4	PCON-CA	175
	4	MSEP-C	140

\*The values of lead 8 apply when acceleration is at 0.1G.

The values in < > apply when the actuator is used vertically.

Stroke (mm)	Standard price
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 (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	_

\* 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)	_
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)	_
	<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

Item	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 [].

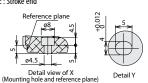
For Special Orders

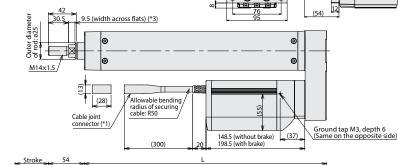


- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- (\*3) The orientation of the bolt varies depending on the product.
  (\*4) If the actuator is installed using the front housing and flange, make sure the actuator will not receive any external force.

ME: Mechanical end

SE: Stroke end

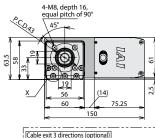


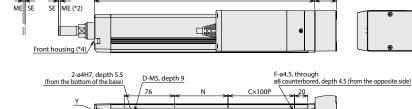


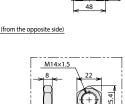
**■** Dimensions with

Flange (Optional) (\*4)

\* With brake option at 50 stroke, flange bracket can not be used because flange and motor cover may interfere. 4-9

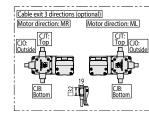






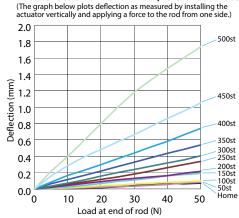
Supplied rod end nut

4-M6, depth 14



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

Oblong hole, depth 5.5 (from the bottom of the base)



### ■ Dimensions and Mass by Stroke

	Stı	oke	50	100	150	200	250	300	350	400	450	500
		L	214.5	264.5	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5
		A	76	126	176	226	276	326	376	426	476	526
		В	0	0	1	1	2	2	3	3	4	4
		C	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	2	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
Allowak	ole 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 end	load at end 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 torque 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 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	ght Without 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

B×100P

J (reamed hole and oblong hole pitch)

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		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	_	→ P607
Field network type High-output specification		PCON-CA-56PI0-0	Equipped with a high-output driver Field network supported	768 points	DC24V		_	
Solenoid valve multi-axis type PIO specification	day.		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			Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572		→ ٢٥٥3
*① indicates I/O type (NP/PN). *① indicates number of axes (1 to 8). *⑩ indicates field network specification symbol. *□ indicates N (NPN specification) or P (PNP specification) symbol.								

# 3-RA2AC

ROBO Cylinder, Mini Rod Type, Motor Unit Coupled Type, Actuator Width 22mm Pulse Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items RCP3 — RA2AC – 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, size 20☐ 45: Lead screw 4mm High thrust type 15: Lead screw 1mm

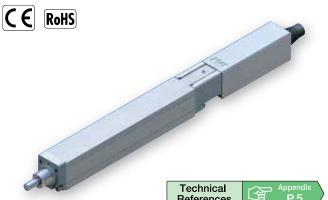
Lead 4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm

Stroke 25: 25mm 100: 100mm

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

Options Cable length N: None P: 1m S: 3m B: Brake NM: Non-motor end

M:5m X□□: Custom length

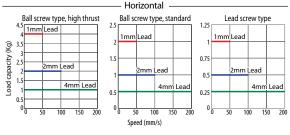


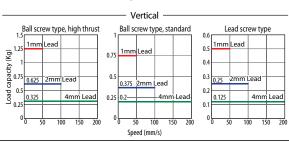
References (1) The payload is the value when the actuator is operated at an acceleration of 0.3G (0.2G for the lead screw specification, if used vertically). The acceleration limit is the value indicated above.

- (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	Feed	Lead	Maximun	n payload	Maximum pushing	Positioning repeatability	Stroke
Modernamber	type	screw	(mm)	Horizontal (kg)	Vertical (kg)	force (N)	(mm)	(mm)
RCP3-RA2AC-1-20SP-4-①-②-③-④			4	1	0.325			
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		±0.02	
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			
Logand Oftraka Applicable Controlle	- @Ca	ما مام	اطاء	Ø Onti	onc *c		** ( )	

### ■ Stroke and Maximum Speed

Lea	Stroke	25 (mm)	50~100 (mm)	
3	4	180	200	
Ball screw	2	100		
ä	1	50		
*	4	180	200	
ead screw	2	100		
Le	1	50		
_			/  Init: mana/s\	

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					
USLIOKE (IIIII)	Ball s	Lead screw					
	High thrust type	Standard type	Leau sciew				
25			_				
50	_	_	_				
75 —		_	_				
100	_	_	_				

### **4** Options

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

### **3 Cable Length**

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

ltem		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 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		

### www.intelligentactuator.com

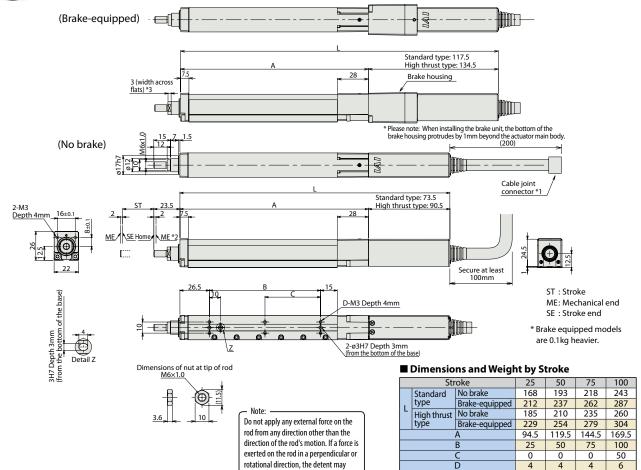
For Special Orders







- (\*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 bolt varies depending on the product.



### ② Applicable Controllers

become damaged.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Calanaid Valva 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	_	→ P54	
Solenoid valve multi-axis type PIO specification	dans.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		→ P56	
Solenoid valve multi-axis type Network specification	HIII	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P30	
Positioner type High-output specification	wi	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	_	→ P60
Field network type High-output specification		PCON-CA-20SPI-®-0-0 PCON-CA-20PI-®-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_		
Pulse Train Input Type (Differential Line Driver)	D	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	_	→ P62	
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	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.

Weight (kg)

156 RCP3-RA2AC

0.36

0.37

0.31

0.33

ROBO Cylinder, Mini Rod Type, Motor Unit Coupled Type, Actuator Width 28mm Pulse Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items RCP3 - RA2BC -Type

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

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

 Motor type 

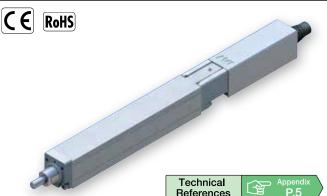
Lead

Stroke 25: 25mm 150: 150mm

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

Options Cable length N: None P: 1m B: Brake NM: Non-motor end S: 3m

M:5m X□□: Custom length



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.

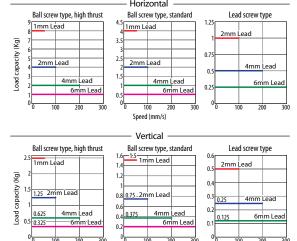
(3) The maximum pushing force is the value when the actuator is operated at a speed of 5mm/s. See page A-71 for details on push motion.

(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 Feed	Lead	Maximun	iximum payload M		Positioning repeatability	Stroke	
Modernamber		type	screw	(mm)	Horizontal (kg)	Vertical (kg)	pushing 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		±0.02	
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 (every
RCP3-RA2BC-1-20P- 2 - 1 - 2	-3-4	Stallualu		2	2	0.75	A-81.		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 screw	4	0.5	0.25		±0.05	
RCP3-RA2BC-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	
Ball screw	4	180	200		
Balls	2	100			
	1	50			
We	6	180	280	300	
ead 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				
①Stroke (mm)		Feed screw			
UStroke (IIIII)	Ball s	crew	Lead screw		
	High thrust type	Standard type	Leau Screw		
25	25 —		_		
50	_				
75	_	_	_		
100	_	_			
125 —		I			
150			_		

<b>4</b> Options	Name	Ontion
	<b>@Options</b>	

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Non-motor end specification	NM	→ A-52	-
	B NM	· · · -	-

### **3 Cable Length**

Туре	Cable symbol	Standard price	
6. 1 1.	<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.

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 quide		
Ambient ope	rating temperature/humidity	0 to 40°C, 85% RH max. (No condensing)		
C 1 1 1 . C .	Lead screw specification	Horizontal: 5 million cycles, Vertical: 10 million cycles		
Service life	Ball screw specification	5.000km or 50 million cycles		

### www.intelligentactuator.com

For Special Orders



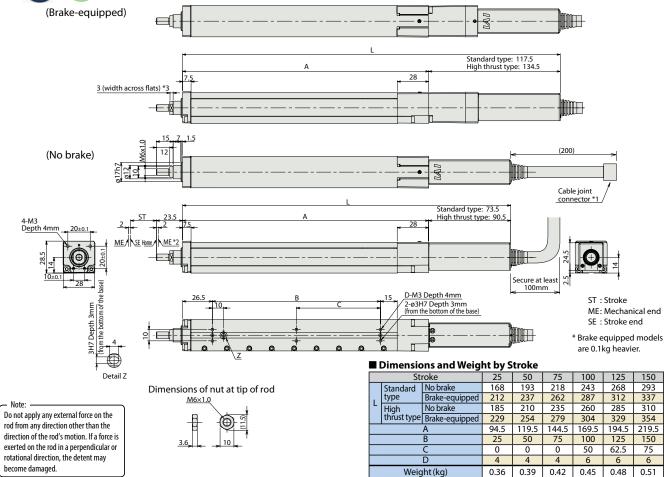




(\*1) Connect the motor-encoder integrated cable here.

(\*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 bolt varies depending on the product.



②Ap	ا ما ممثل م	la Can	Au a II	
$\omega_{AD}$	pilcap	ie con	поп	ers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Calanaid Valva 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	_	→ 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		, DEC	
Solenoid valve multi-axis type Network specification			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	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	_	→ P60
Field network type High-output specification		PCON-CA-20SPI-®-0-0 PCON-CA-20PI-®-0-0	Equipped with a high-output driver Supporting 7 major field networks				_		
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	_	→ P62	
Serial Communication Type	Ĩ	PCON-SE-20SPI-N-0-0 PCON-SE-20PI-N-0-0	Dedicated Serial Communication	64 points			_		
Program Control Type	.1	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	_	→ 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.

RCP3-RA2BC

Rod Type

# 3-RA2AR

ROBO Cylinder, Mini Rod Type, Side-mounted Motor Type, Actuator Width 22mm Pulse Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items RCP3 — RA2AR — Type

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

 Encoder type — Motor type 20P: Pulse motor, Standard type 20SP:Pulse motor, size 20☐ 45: Lead screw 4mm High thrust type 15: Lead screw 1mm

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

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

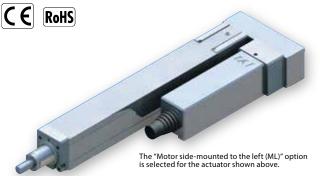
Applicable controller — Cable length P1: PCON-PL/PO/SE N: None **PSEL** P3: PCON-CA PMEC/PSEP MSEP

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** 

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

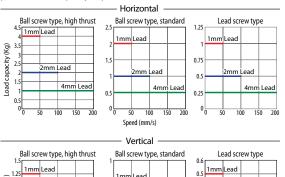


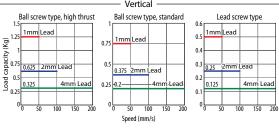
Technical References

- (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			Maximum payload		Maximum pushing	Positioning repeatability	Stroke		
Model Humber	type	screw	(mm)	Horizontal (kg)	Vertical (kg)	force (N)	(mm)	(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					
RCP3-RA2AR-1-20SP-1-①-②-③-④			Ball	1	4	1.25		±0.02		
RCP3-RA2AR-1-20P-4-①-②-③-④		screw	4	0.5	0.2	See	±0.02	25 to		
RCP3-RA2AR-1-20P-2-①-②-③-④	Standard	Standard	Standard		2	1	0.375	page		100 (every
RCP3-RA2AR-1-20P-1-①-②-③-④			1	2	0.75	A-81.		25mm)		
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		Jenem .	1	1	0.5					
	$\neg$			$\overline{}$						

### ■ Stroke and Maximum Speed

	Lea	Stroke d	25 (mm)	50~100 (mm)			
	<	4	180	200			
1000	Ball screw	2	100				
	ž Č	1	50				
	>	4	180	200			
0,00	Lead screw	2	100				
-	9	1	5	0			
				(Unit, mm/s)			

Cable symbol

**X06** (6m) ~ **X10** (10m)

X11 (11m) ~ X15 (15m) **X16** (16m) ~ **X20**(20m)

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

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

### \* 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, 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 ! !!C.	Lead screw specification	Horizontal: 10 million cycles, Vertical: 5 million cycles		
Service life	Ball screw specification	5.000km or 50 million cycles		

**P** (1m)

**S** (3m) **M** (5m)

**3 Cable Length** 

Type

Standard type

Special length

### **4** Options Name Option code Page Standard Price → A-42 Side-mounted motor to the left (standard) ML → A-52 MR Side-mounted motor to the right → A-52 Non-motor end specification NM → A-52

RCP3-RA2AR

2D CAD

3D CAD

www.intelligentactuator.com

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

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 bolt varies depending on the

(Brake-equipped) Standard type: 117.5 High thrust type: 134.5 3 (width across flats) \* (No brake) 0. \*Please note: When installing the brake unit, the bottom of the brake housing protrudes by 1mm beyond the actuator main body.

Cable joint Standard type: 88.5 High thrust type: 105.5 connector \*1 2-M3 Depth 4mm (Secure at least 100mm) 3H7 Depth 3mm (from the bottom of the base)

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

Detail Z

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.

Do not apply any external force on the



Note:

ST: Stroke ME: Mechanical end SE: Stroke end

\* Brake equipped models are 0.1kg heavier. ■ Dimensions and Weight by Stroke

<b>—</b> Dillicii3i0ii	= Dilliciisions and Weight by Stroke								
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					
С	0	0	0	50					
D	4	4	4	6					
Weight (kg)	0.34	0.36	0.39	0.4					

### ②Applicable Controllers

Dimensions of nut at tip of rod

M6x1.0

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

Name	External	Model number	Features	Maximum number of	Input	Power-supply	Standard	Reference
rturre	view	model number	reactives	positioning points	power	capacity	price	page
Solenoid Valve Type	N. S.	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	diam'	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	iiii	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		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			_	
Pulse Train Input Type (Differential Line Driver)		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.

160 RCP3-RA2AR

# 3-RA2BR

ROBO Cylinder, Mini Rod Type, Side-mounted Motor Type, Actuator Width 28mm Pulse Motor, Ball Screw Specification/Lead Screw Specification

Model Specification Items RCP3 — RA2BR — Type

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

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

 Encoder type — Motor type 

Lead (every 25mm)

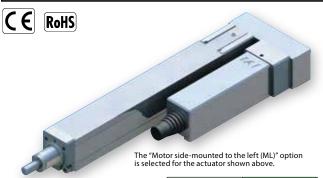
Stroke 25: 25mm 150: 150mm

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

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

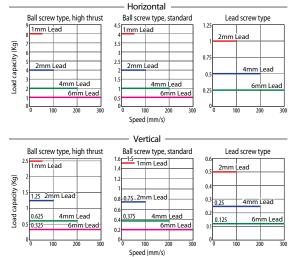


Technical References

- (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
- (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)		Maximum pushing force (N)	Positioning 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	61	Chandand	screw	6	0.5	0.2	See	±0.02	25 to 150
RCP3-RA2BR-1-20P-4-①-②-③-④				4	1	0.375	page		
RCP3-RA2BR-1-20P-2-①-②-③-④	Standard		2	2	0.75	A-81.		(every 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	4	0.5	0.25		±0.05		
RCP3-RA2BR-1-20P-2S-①-②-③-④		Je.ew	2	1	0.5				

### ■ Stroke and Maximum Speed

ıd	(mm)	50 (mm)	75~150 (mm)	
6	180	280	300	
4	180	20	00	
2		100		
1		50		
6	180	280	300	
4	180	20	00	
2		100		
	6 4 2 1 6 4	6 180 4 180 2 1 6 180 4 180	6 180 280  4 180 20  2 100  1 50  6 180 280  4 180 20	

Code explanation 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			
UStroke (IIIII)	Ball s	Lead screw		
	High thrust type	Standard type	Lead Sciew	
25			_	
50			_	
75	_	_	_	
100			_	
125			_	
150	_			

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	_

	© Cable Leligtii					
	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)	_			
ı	Special length	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_			
ı		<b>X16</b> (16m) ~ <b>X20</b> (20m)	_			

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

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		
	Ball screw specification	5.000km or 50 million cycles		

2D CAD

www.intelligentactuator.com

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

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  $\operatorname{rod}$  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  $% \left\{ \left( 1\right) \right\} =\left\{ \left( 1\right) \right\}$ 

rotational direction, the detent may

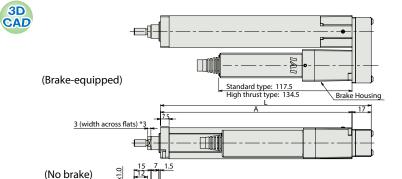
become damaged.



ST: Stroke ME: Mechanical end SE: Stroke end

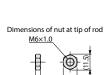
\* Brake equipped models are 0.1kg heavier.

■ Dimensions 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



Cable joint Standard type: 88.5 High thrust type: 105.5 connector \*1

Secure at least 100mm





②Applicable Controllers RCP3 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

D-M3 Depth 4mm 2-ø3H7 Depth 3mm (from the bottom of the base)

Detail Z

Name	External	Model number	Features	Maximum number of	Input	Power-supply	Standard	Reference
rturre	view	model number	reactives	positioning points	power	capacity	price	page
Solenoid Valve Type	N. S.	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	diam'	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	iiii	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		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)		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.

162 RCP3-RA2BR



# P2-RA2C

Model Specification Items

RCP2 - RA2C -Type

**20P** -Encoder type - Motor type

I: Incremental 20P: Pulse motor, \*The Simple absolute 20 □ size considered type "I".

1 Lead 1:1mm

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

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

MSEP

N: None P: 1m

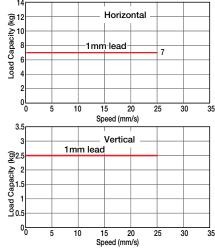
S: 3m M:5m X: Custom length X: Robot cable

Cable length — Options

See Options below.

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.



\* See page Pre-47 for details on the model descriptions. CE RoHS 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 0.05G. 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.

### Actuator Specifications

### ■ Lead and Payloads

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

### ■ Stroke and Maximum Speed

Stroke	25~100
Lead	(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 (mm)	Standard price
25	_
50	_
75	_
100	_

### **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)	_
	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)	_

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

© Options						
Name	Option code	Page	Standard Price			
Flange	FL	→ A-44	_			
Foot bracket	FT	→ A-48	_			

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)

### 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:

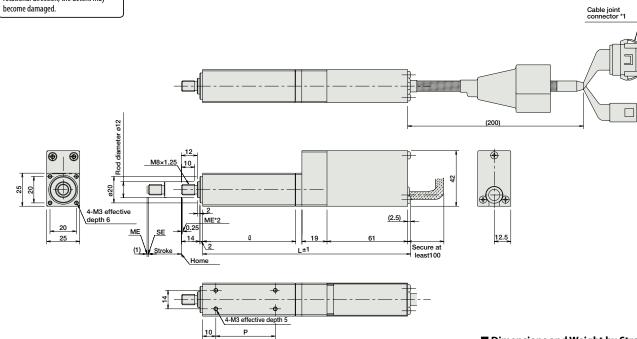


\* The RA2C is not available in non-motor end configuration, due to its construction.

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

ME: Mechanical end

SE: Stroke end



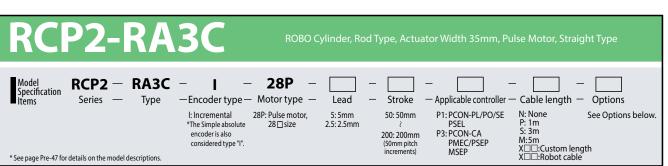
■ Dimension	s and v	weigni	by Str	оке
Stroke	25	50	75	10
ρ	70	95	120	14

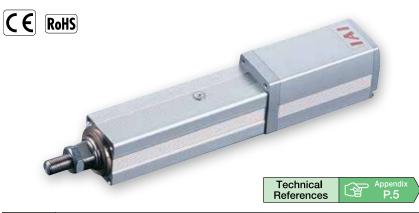
Stroke	25	50	75	100
l	70	95	120	145
L	157.5	182.5	207.5	232.5
Р	45	70	95	120
Weight (kg)	0.4	0.5	0.6	0.7

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Referenc 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		
olenoid 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			Refer to		→ P563	
olenoid valve multi-axis type Network specification	HH	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	→ P30	
Positioner type High-output specification	á l	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	(—)	DC34V	Refer to P618	_	→ P60	
Field network type High-output specification		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)	Ó	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	
erial 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	_	→ P66	

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

RCP2-RA2C





(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.

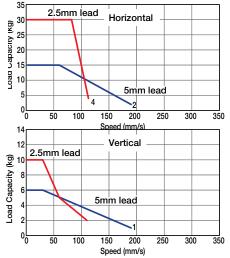
(3) The load capacity is based on operation at an acceleration of 0.02G. 0.02G is the upper limit of the acceleration.

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

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

Stroke and Maximum Speed

Model number	Lead (mm)	Maximum pay Horizontal (kg)	yload (Note 1) Vertical (kg)	Maximum pushing force (Note 2)	Stroke (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)

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)	_
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)	_
	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.

### **4** Options

Name	Option code	Page	Standard Price
Flange	FL	→ A-44	_
Foot bracket	FT	→ A-48	_
Non-motor end specification	NM	→ A-52	ı

Item	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





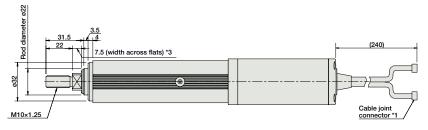


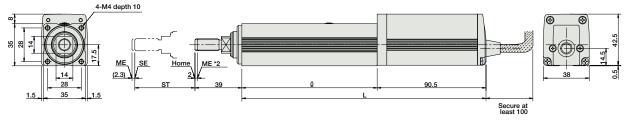
Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

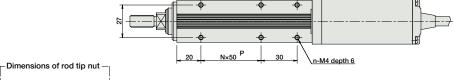
(\*1) Connect the motor and encoder cables here. (See page A-59 for details on cables.)

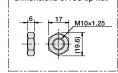
(\*2) When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end

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









### ■ Dimensions and Weight by Stroke

		verg	. Dy 5ti	0
Stroke	50	100	150	200
· l	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 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
Colored Webs Torre	101	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	Time.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		→ 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		P572	_	7 2503
Positioner type High-output specification	100	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	1	PCON-CA-28SPI-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-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)	4	PCON-PO-28SPI-①-2-0	Pulse train input type with open collector support	(—)		Refer to P628	1	→ P62
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	_	→ 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.

166 RCP2-RA3C



Model Specification Items

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

RCP2 - RA8C -Туре

-Encoder type - Motor type

I: Incremental

**60P** 

60P: Pulse motor, 60□size

Lead 10: 10mm 5:5mm

Stroke 50: 50mm 300: 300mm **P4** 

Applicable controller P4: PCON-CFA

Cable length - Options

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

X□□: Custom length X□□: Robot cable

See Options below.

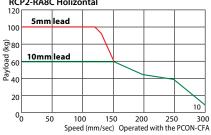


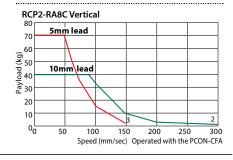
# Technical References

(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 RCP2-RA8C Holizontal 5mm lead 100





### Actuator Specifications

### ■ Leads and Payloads

Model number		Connection	Maximum payload		Maximum	Stroke
		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)

→ A-52

 $\hbox{Code explanation } \hbox{ \textcircled{\scriptsize 0} Stroke } \hbox{ \textcircled{\scriptsize 2} Cable length } \hbox{ \textcircled{\scriptsize 3} Options } \hbox{ *See page A-71 for details on push motion.}$ 

### ■ Stroke and Maximum Speed

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

(Unit: mm/s)

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)	_
	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)	_

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

### **3Options** 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

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

Non-motor end specification

### www.intelligentactuator.com

For Special Orders

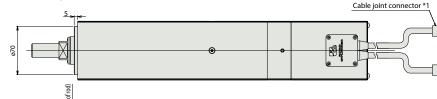


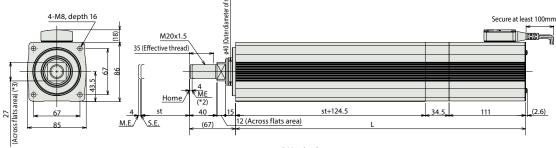


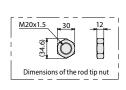


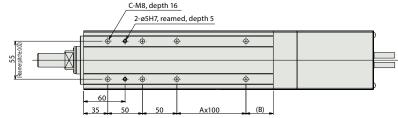
Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.

- (\*1) Connect the motor 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

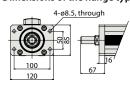


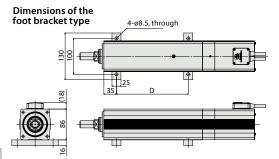




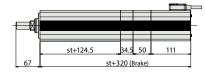


### Dimensions of the flange type

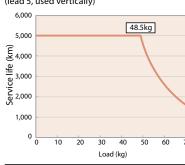




### Dimensions of the brake type



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



■ Dimensions and	■ Dimensions and weights by Stroke (mm)						
Stroke	50	100	150	200	250	300	
L	320	370	420	470	520	570	
A	0	0	1	1	2	2	
В	39.5	89.5	39.5	89.5	39.5	89.5	
С	6	6	8	8	10	10	
D	100	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

The 2 series declared search to special a with the controllers market a below. Select the type decoraing to your interface 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	1	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-①-0-0-□	Equipped with a high-output driver Supporting 7 major field networks	768 points			_	

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



# P2-RA8R

Model Specification Items

RCP2 - RA8R -Type

I: Incremental

- 60P -Encoder type - Motor type

60P: Pulse motor,

60□size

Lead 10: 10mm 5:5mm

Stroke 50: 50mm

300: 300mm

**P4** Applicable controller

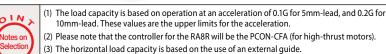
 Cable length N: None P: 1m S: 3m P4: PCON-CFA M:5m X□□:Custom length X□□:Robot cable

Options See Options below. \* Please specify side-mounted motor direction by an option

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

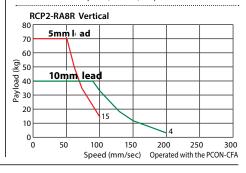


**Technical** References



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

### RCP2-RA8R Horizontal 5mm lead 100 § 80 10mm lead 9 60 6 40 12 150 250 Operated with the PCON-CFA Speed (mm/sec)



### Actuator Specifications

### ■ Leads and Payloads

Model number	Lead (mm)	Connection cable	Maximum Horizontal (kg)		Maximum pushing force (N	Stroke (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

 $\begin{tabular}{ll} \textbf{Code explanation} & \hline \textbf{① Stroke} & \hline \textbf{② Cable length} & \hline \textbf{③ Options} & *See page A-71 for details on push motion. \\ \end{tabular}$ 

(Unit: mm/s)

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)	_
	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)	_

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

### **3Options**

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			
nou non-rotation precision	±1.0 deg			
Ambient operating temperature/humidity	0 to 40°C 85% RH may (Non-condensing)			

### CAD drawings can be downloaded www.intelligentactuator.com (

For Special Orders







cernal force on the

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.

SE: Stroke end

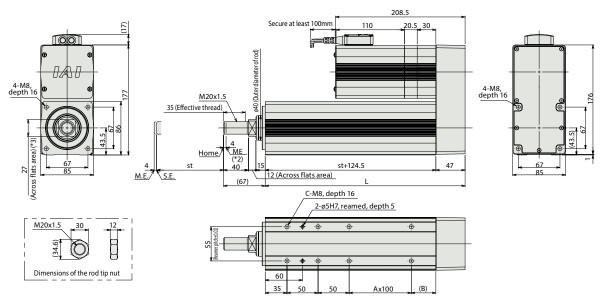
(\*2) When homing, the rod moves to the ME; therefore, please watch for any interference with the surrounding objects.

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

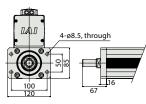
(\*4) When installing the actuator by using flange and front housing, be careful not to apply external force to the main body.

ME: Mechanical end

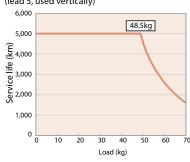
Cable joint connector \*1



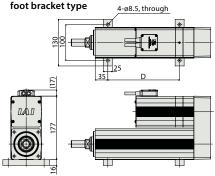
### Dimensions of the flange type



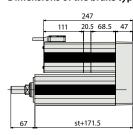
Relationship of payload and service life (lead 5, used vertically)



### Dimensions of the foot bracket type



### Dimensions of the brake type



### ■ Dimensions and Weights by Stroke (mm)

		_					
	Stroke	50	100	150	200	250	300
	L	221.5	271.5	321.5	371.5	421.5	471.5
A		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		PCON-CFA-60PI-NP-□-0-□ PCON-CFA-60PI-PN-□-0-□	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			_	

IAI

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

RCP2-RA8R 170

Slider Type

Mini

Standar

Controllers Integrated

Rod Type

Mini

Standa

Controllers Integrated

Table/ Arm/ Flat Type

Mini

Standard

Rotary Type

Linear Servo Type

> Cleanoom ype

Splash-Proof Type

Pulse

Servo Motor (24V)

> ervo Motor 200V)

Linear Servo Motor

Mini

Standard

integrated

Roo Type

Min

tandard

Table/

Arm/ Flat Type

Mini

Gripper/ Rotary

> Linear Servo Type

Clean roor Typ

Splash Proo Type

> Pulse Motor

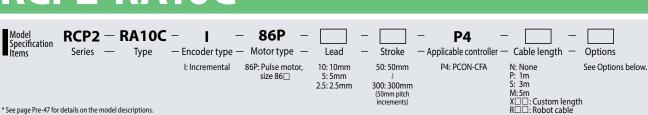
Servo Moto (24V

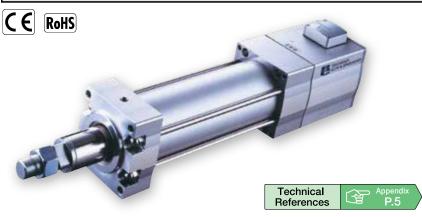
Servo Motor (200V)

Linear Servo Motor

# RCP2-RA10C

OBO Cylinder, High-Thrust Rod Type, Actuator Width 100mm, Pulse Motor, Straight Type



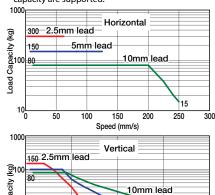


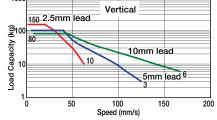
Notes on Selection

- (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.





### Actuator Specifications

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

Model nu	Model number			Vertical (kg)	Maximum pushing force (N)	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)

### ①Strok

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)	_
	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.

### **③Options**

•			
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	_

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)

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.

Dimensional Drawings

CAD

56

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

3D

CAD

100

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

The values enclosed in "()" are reference dimentions.
(\*3) The orientation of the bolt varies depending on the product.

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

ME : Mechanical end SE : Stroke end www.intelligentactuator.com

13.5 (width across flats) \*3

(81)

ME \*2

M22×1.5 37 (effective screw section)

Effective ST

SE Home

Dimensions of the supplied nut

4-M10 through

\* Compared to the standard model, the brake-equipped model is longer by 45.5mm and heavier by 1.5kg.

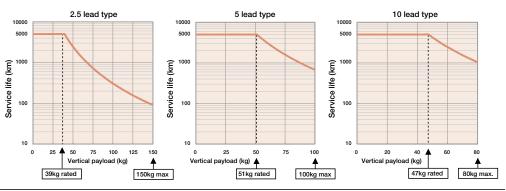
### ■ Dimensions and Weights by Stroke

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.



② Applicable Contro	② Applicable Controllers							
RCP2 series actuators ca	n be operate	ed with the controllers indicate	d below. Select the type according to you	ur 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		PCON-CFA-86PI-NP-□-0-□ PCON-CFA-86PI-PN-□-0-□	Equipped with a high-output driver Positioner type based on PIO control	512 points			_	
Pulse-train type	1	PCON-CFA-86PI-PLN-□-0-□ PCON-CFA-86PI-PLP-□-0-□	Equipped with a high-output driver Pulse-train input type	(—)	DC24V	Refer to P618	_	→ P607
Field network type		PCON-CFA-86PI-⊕-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, EG	C, EP).					

IAI

RCP2-RA10C 172

Slider Type

Mir

Controller Integrated

> Rod Type

Mini

Controllers

Table/ Arm/ Flat Type

Mini

Standard

Gripper/ Rotary Type

Linear Servo Type

> leanoom vpe

plash roof ype

Pulse

Servo Motor 24V)

Servo Motor

Linear Servo Motor

# **2-SRA4R**

RCP2 — SRA4R – Model Specification Items

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

Type

encoder is also

considered type "I".

35P — Encoder type — Motor type I: Incremental 35P: Pulse motor, size 35□ \*The Simple absolute

Lead 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 PSEL P3: PCON-CA PMEC/PSEP MSEP

Cable length

Options \* See options below.

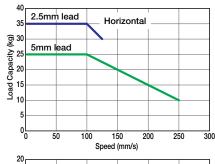
N: None P: 1m S: 3m M:5m X□□:Custom length

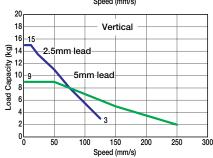


capacity are supported.

■ 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





**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.

### 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

Madal number	Lead	Maximum pa	yload (Note 1)	Maximum	Stroke	
Model number		Horizontal (kg)	Vertical (kg)	pushing force (N)	(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)	

Stroke 5 250

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
25 ~ 50	_
60 ~ 100	_
150	_
200	_

### **3Cable Length**

2.5

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)	_

125

- \* 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 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)

# **4**Options

Name	Option code	Page	Standard Price
Brake	В	→ A-42	_
Flange bracket (front)	FL	→ A-44	_
Flange bracket (rear)	FLR	→ A-46	_
Foot bracket 1 (base mounting)	FT	→ A-48	_
Foot bracket 2 (right/left side mounting)	FT2/FT4	→ A-48	_
Non-motor end specification	NM	→ A-52	_

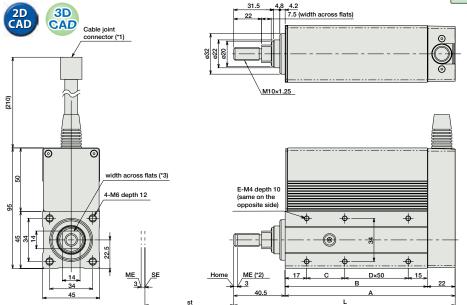
\* The brake is available for strokes of 70mm or more.

RCP2-SRA4R

### www.intelligentactuator.com

For Special Orders





Secure at least 100 0 0 4-M6 depth 12 **(** 0

\* 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.) E-M4 depth 10 φ ф D×50

Dimensions of the Supplied Nut

M10×1.25

ST : Stroke SE : Stroke end ME: Mechanical 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 the rod in a perpendicular or rotational direction, the detent may become damaged.

Note: -

- (\*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.

### ■ 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	
A	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	108	114	1 21	1 27	1 33	164	195	

### ② Applicable Controllers

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

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	
Solenoid Valve Type		PMEC-C-35PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537	
Solenoid Valve Type	1	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	dinner i	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected			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		→ P563	
Positioner type High-output specification	wi	PCON-CA-35PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points		Refer to P618	_		
Pulse-train type High-output specification	1	PCON-CA-35PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)	DC24V		_	→ P607	
Field network type High-output specification	10)	PCON-CA-35PI-W-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DCZ4V		_		
Pulse Train Input Type (Differential Line Driver)		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		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.

# 2-SRGS4R

RCP2 - SRGS4R-Model Specification Items Type

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

35P Encoder type — Motor type

35P: Pulse motor,

size 35□

Lead

Stroke 5: 5mm 2.5: 2.5mm 20: 20mm

- Applicable controller P1: PCON-PL/PO/SE **PSEL** 200: 200mm P3: PCON-CA (10mm pitch increments) \* 50mm increments over 100mm PMEC/PSEP MSEP

N: None P: 1m S: 3m

Options \* See options below.

M:5m X□□: Custom length

Cable length

CE RoHS

I: Incremental

encoder is also

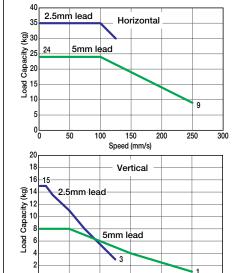
\*The Simple absolute

considered type "I".



■ 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.



(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-109) for the allowable weight using the supplied guide alone.
- (4) See page A-71 for details on push motion.

### 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	yload (Note 1)	Maximum	Stroke	
Model number	(mm)	Horizontal (kg)	Vertical (kg)	pushing force (N)	(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)	

50

100

150

Speed (mm/s)

200

250

300

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	_

### ③Cable Length

Туре	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)	_

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

  See page A-59 for cables for maintenance.

### 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

GS2 ~ GS4

NM

→ A-50

→ 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.)

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)					

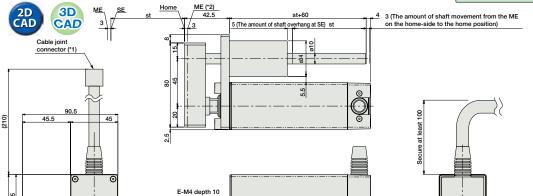
Guide mounting direction

Non-motor end specification

### www.intelligentactuator.com

For Special Orders



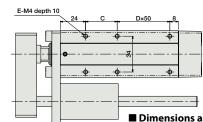


(same on the opposite side)

6-M5 depth 12

4-M6 depth 12 9 34

GS3 Bottom 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.)

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

(\*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.

$(2)$ $\mathbf{v}$	DO DO II	200	Con	t u a l l	OME
$\mathcal{L}_{A}$	เขามาเ	apre	COIL	поп	ers

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colored Miles Torre	100	PMEC-C-35PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid Valve Type	1	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	lane i	MSEP-C-(1)-~-(1)-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		. DEC
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	wi	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	1	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-®-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points	DC24V		_	
Pulse Train Input Type (Differential Line Driver)	D	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

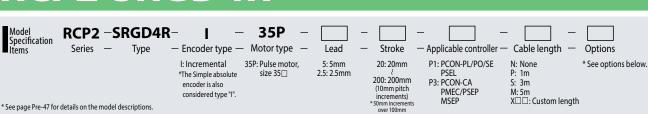
\*This is for the single-axis PSEL. \* ⊕ indicates I/O type (NP/PN). \* ⊕ indicates power supply voltage (1:100V / 2:100~240V). \* ⊕ indicates number of axes (1 to 8). \* ⊕ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.

176 RCP2-SRGS4R

IAI

# P2-SRGD4

Pulse Motor, Side-mounted Motor

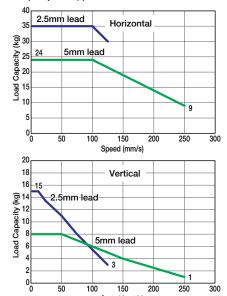




- (1) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
- (2) The load capacity is based on operation at an acceleration of 0.03G (0.2G is for the 2.5mm-lead model, 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	Maximum pa	yload (Note 1)	Maximum	Stroke	
woder number		Horizontal (kg)	Vertical (kg)	pushing force (N)	(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)	

50

100

150

Speed (mm/s)

200

250

300

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 (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)	_		

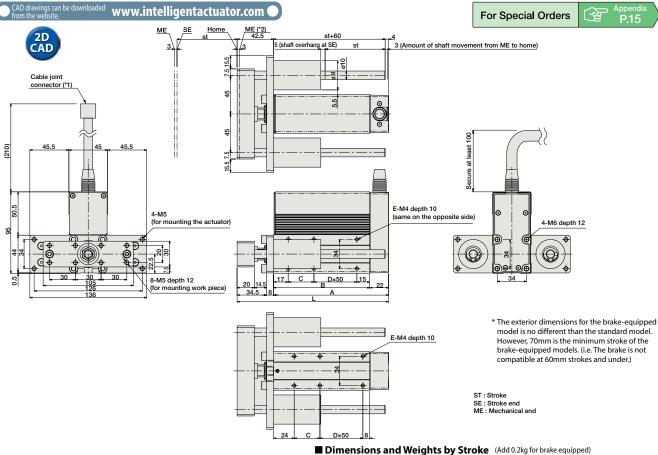
- \* The cable is a motor-encoder integrated cable, and is provided as a robot cable.
- \* See page A-59 for cables for maintenance.

**4** 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.

7.00.00.00					
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)				



			9	,				1- 1-1			
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
Ē	4	4	4	4	4	6	6	6	6	8	10
Weight (kg)	1 47	1 55	162	17	1 77	1.84	192	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
Solenoid Valve Type	***	PMEC-C-35PI-①-2-⑪	Easy-to-use controller, even for beginners		AC100V AC200V	Refer to P541	_	→ P537
Solenoid valve Type	1	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	day.	MSEP-C-(  )-~-( )-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected			Refer to		→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-(  )-~-( \vec{V}-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		P572	_	7 2303
Positioner type High-output specification	wi	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-ſℚ-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points			_	
Pulse Train Input Type (Differential Line Driver)	D	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

\* (indicates number of axes (1 to 8). (indicates field network specification symbol. (indicates N (NPN specification) or P (PNP specification) symbol.

# 3-RA40

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

Model Specification Items ERC3 - RA4C -42P Т Series — Type — Cable length — Controller Type - Encoder type - Motor type Lead I/O type Stroke Options 50: 50mm / NP: PIO (NPN) type PN: PIO (PNP) type
300: 300mm SE: SIO type
(50mm pitch PLN: pulse-train (NPN) type
PN: pulse-train (PNP) type CN: CON type MC: MEC type N: None P: 1m S: 3m M: 5m l: Incremental 42□: Pulse motor 20: 20mm · Brake NM 12: 12mm ABU : Simple absolute specification FL : Flange 6: 6mm 3: 3mm X□□: Custom length \* See page Pre-47 for details on the model descriptions : Foot bracket

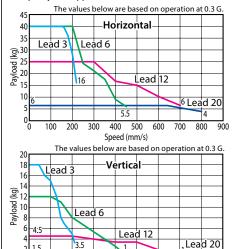
RoHS



- (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.



Speed (mm/s) High-output setting enabled (Factory default)

400 500

### 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 (mm)	Horizontal (kg)	Vertical (kg)	Maximum push force (N)	Stroke (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 Options \*See page A-71 for details on push motion.

### ■ Stroke and Maximum Speed

Stroke Lead	50~200 (every 50mm)	250 (mm)	300 (mm)
20		800	
12	700	695	485
6	450	345	240
3	225	170	120

(Unit: mm/s)

700 800 900

### ①Stroke

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

### **4** 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 specification	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 (Robot Cables)	<b>P</b> (1m)	_
	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (10m)	_

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

### Actuator Specifications

ltem	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.

### www.intelligentactuator.com

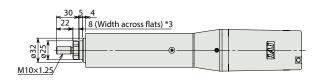
For Special Orders

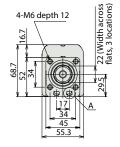


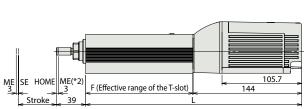


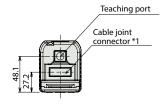












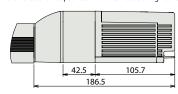




Supplied rod end nut

### 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)**

② I/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 enabled: 3.5A rated 4.2A max. High-output setting	_	→ P577		
SIO type		ERC3-RA4C-I-42P-□-□-SE-□-□	High-function type accommodating up to 512 positioning points (PIO converter is used)	512	DC24V					
Pulse-train type (NPN specification)		ERC3-RA4C-I-42PPLN	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

Controllers Integrated

> Rod Type

Min

Standard

Table/

Arm/ Flat Type

IVIIII

Gripper/ Rotary Type

> 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** — Encoder type — Motor type I/O type Type Lead Stroke Cable length — Controller Type Options CN: CON type B : Brake
MC: MEC type NM : Non-motor end
ABU : Simple absolute
specification
ngth FL : Flange
FT : Foot bracket 
 NP:
 PIO (NPN) type
 N:
 No

 PN:
 PIO (PNP) type
 P:
 1m

 SE:
 SIO type
 S:
 3m

 PLN:
 pulse-train (NPN) type
 M:
 5m
 N: None P: 1m S: 3m I: Incremental 56□: Pulse motor 24: 24mm 50: 50mm 16: 16mm 8: 8mm 300: 300mm 4: 4mm (50mm pitch increments) PLP: pulse-train (PNP) type X□□: Custom Length \* See page Pre-47 for details on the model descriptions

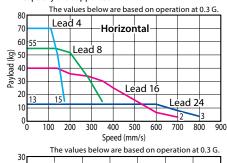


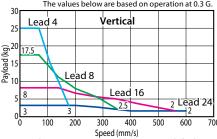
Notes on Selection

- (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

### ■ Leads and Payloads (Note 1) Please

(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

Stroke 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	_

### 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> See page 586 for cables for maintenance.

### **4**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.

### 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 20 mm.

**181** [

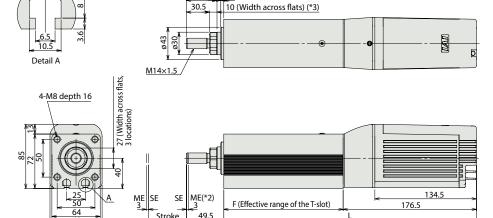
### www.intelligentactuator.com

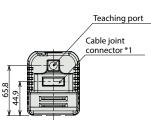
For Special Orders











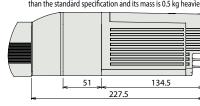


Supplied square nut for mounting via the T-slot (4 pcs are supplied)



Supplied rod end nut





- \*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 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-□-□	RA6C-I-56P-□-□-NP-□-□ Simple control type accommodating up to 16 16 positioning points					
PIO type (PNP specification)		ERC3-RA6C-I-56P-□-□-PN-□-□	I/O type supporting inputs/outputs of the PNP specification often used overseas	16	DC24V	High-output setting	_	→ P577
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		
Pulse-train type (NPN specification)		ERC3-RA6C-I-56PPLN	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	_				

ERC3-RA6C 182

# **[2-RA6C**

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

Model Specification Items

ERC2 - RA6C -

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

Type

— Encoder type —

I: Incremental

PM 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 S:3m X□□: W□□: P:1m M:5m

FT : Foot bracket NM : Non-motor end Custom length Double-ended cable

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

Options

: Brake : Foot bracket

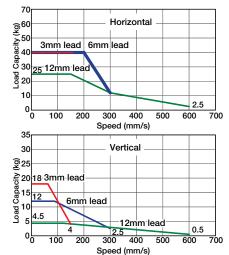




- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases at high speeds. Check 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 (mm)	Maximum pay Horizontal (kg)	/load (Note 1) 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

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

(Unit: mm/s)

### ①Stroke

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

### **©Cable 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	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	_
Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	
11000t cabic	<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 ce

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

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	±1.5 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

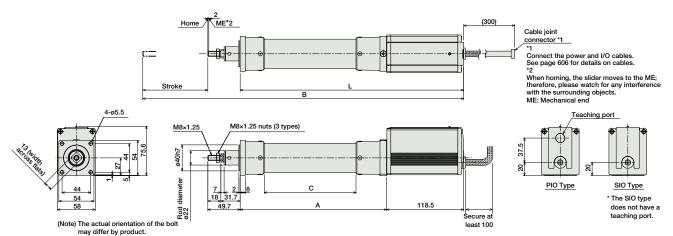
### CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders



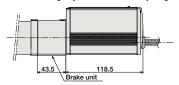


Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



### **Brake 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	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-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 184

# **2-RA7C**

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

Model Specification Items

ERC2 - RA7C -Type

 Encoder type — Motor type I: Incremental

PM

Lead PM: Pulse motor 16: 16mm 8: 8mm 4: 4mm

Stroke 50: 50mm

(50mm pitch increments)

I/O type 300: 300mm

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

Cable length N:None S:3m X□□: C W□□: E R□□: R

Custom length Double-ended cable Robot cable RW□□:Double-ended Robot cable

B : Brake FT : Foot bracket NM : Non-motor end

Options

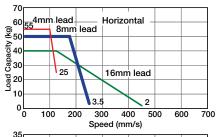
\* See page Pre-47 for details on the model descriptions.

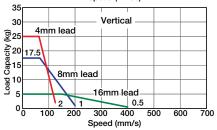


- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases 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)	Voad (Note 1) 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 Stroke I/O type Cable length 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.

### ①Stroke

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

### **3Cable Length**

Туре	Cable symbol	Standard price
	P (1m)	_
Standard type	<b>S</b> (3m)	_
	<b>M</b> (5m)	_
Special length	<b>X06</b> (6m) ~ <b>X10</b> (3m)	_
Double ended	<b>W01</b> (1m) ~ <b>W03</b> (5m)	_
	<b>W04</b> (4m) ~ <b>W05</b> (10m)	1
	<b>W06</b> (6m) ~ <b>W10</b> (10m)	1
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	_
Robot cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	1
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	1
Double ended	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	_
Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
110001 Cabic	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_

The values in < > apply to the SE type.

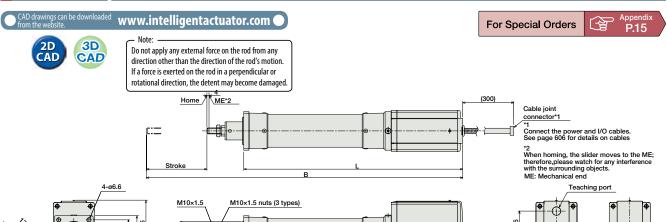
\* See page 606 for cables for maintenance.

# **4** Options

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

Item	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)

Dimensional Drawings



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

diameter

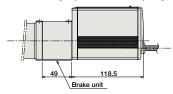
Rod 930

\*61

### **Brake Specifications Diagram**

Secure at

\* 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

SIO Type \* The SIO type

does not have a

teaching port.

### 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 purpos								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-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				

ERC2-RA7C 186

# C2-RGS6C

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

Model Specification Items

ERC2 - RA6C -Type

I Encoder type — Motor type

I: Incremental

PM

PM: Pulse motor

Lead Stroke 12: 12mm 50: 50mm

6: 6mm

3: 3mm

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

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

Cable length Options e P:1m B M:5m FT Custom length NN Double-ended cable : Brake S : 3m X□□: W□□: Foot bracket

NM: Non-motor end

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

C € RoHS

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

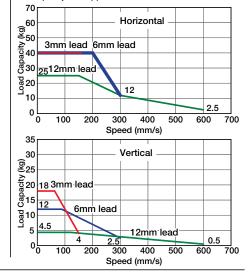


References

- (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 vou 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 (Note 1)		Maximum	Stroke
Modernumber	(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 Stroke I/O type Cable length 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

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)	I
	<b>R01</b> (1m) ~ <b>R03</b> (3m)	I
Robot cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	1
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	I
Double ended	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	
Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
Nobot cable	<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

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	±1.5 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

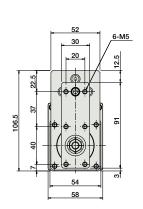
CAD drawings can be downloaded www.intelligentactuator.com

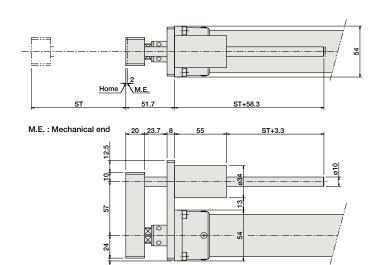
For Special Orders











 $\ensuremath{^{*}}$  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

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
PIO Type (NPN pecification)		ERC2-RGS6C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16	power	cupacity	price	page
PIO Type (PNP pecification)		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 188

Slider Type

Mini

Standard

Controller Integrated

Rod Type

Standard

Controllers

Integrated

Arm/ Flat Type

Mini

Standard

Gripper/ Rotary Type

Linear Servo Type

> Cleanoom vpe

Splash-Proof Type

Pulse Motor

Servo Motor (24V)

Servo Motor (200V)

> inear Servo Motor

# **12-RGS7**

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

Model Specification Items

ERC2 — RGS7C –

Encoder type — Motor type

I: Incremental

PM

Lead PM: Pulse motor 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

N:None S:3m X□□: M: 5m

Cable length

· Brake FT: Foot bracket NM: Non-motor end

Options

Custom length N Double-ended cable Robot cable RW□□: Double-ended Robot cable

C € RoHS



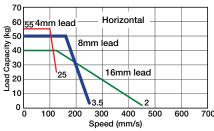
Technical References

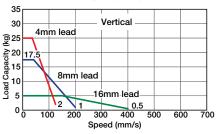


- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke vou desire.
- (2) Since the ERC2 series use a pulse motor, the load capacity decreases 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 Stroke I/O type Cable length 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

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

### **3 Cable 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)	_
Double ended	RW01 (1m) ~ RW03 (3m)	_
Robot cable	<b>RW04</b> (4m) ~ <b>RW05</b> (5m)	_
Nobol Cable	<b>RW06</b> (6m) ~ <b>RW10</b> (10m)	_
	I i il dei	

The values in < > apply to the SE type.

\* See page 606 for cables for maintenance.

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

	5
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)

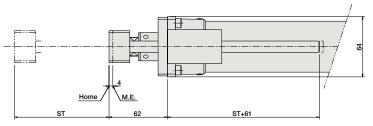
CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders

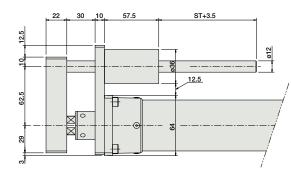




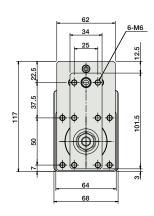




M.E.: Mechanical end



\* 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 + ac	tuator 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	series, one of the fo	llowing three types of built-in controller	s can be selected dependi	ng on the external inp	out/output (I/0	O) type. Select the	type that mee	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-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				

IAI

ERC2-RGS7C 190

# .2-RGD6

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

Model Specification Items

ERC2 - RGD6C -Type

I: Incremental

PM Encoder type — Motor type

PM: Pulse motor

Lead

12:12mm

6: 6mm

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□□:

P:1m M:5m 

B : Brake FT : Foot bracket

Options

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



**Technical** References

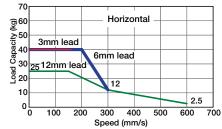
(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke vou desire. (2) Since the ERC2 series use a pulse motor, the load capacity decreases at 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

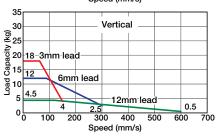
used vertically). This is the upper limit of the acceleration. (4) The value for the horizontal load capacity is with an external guide.

(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. Stroke and Maximum Speed

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	_

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

### **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	<b>RW01</b> (1m) ~ <b>RW03</b> (3m)	_
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.

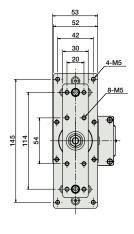
Actuator Specifications	
ltem	Description
Drive method	Ball screw, ø10mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
Rod diameter	ø22mm special SUS type
Rod non-rotation precision	±0.05 deg
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

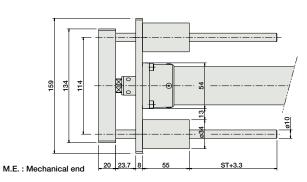
3D CAD

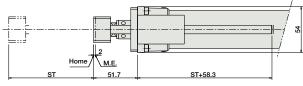
For Special Orders











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)	0.4	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)

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			_	→ P597
PIO Type (PNP Specification)		ERC2-RGD6C-I-PM-□-□-PN-□-□	Supports the PNP I/O commonly used overseas.	16	DC24V	2A max.		
SIO Type		ERC2-RGD6C-I-PM-□-□-SE-□-□	Field Network Connection Serial (Gateway unit used)	64				

IAI

ERC2-RGD6C 192

# **2-RGD7**

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

Model Specification Items

ERC2 - RGD7C -Type

Encoder type — Motor type

I: Incremental

Lead

16: 16mm

8: 8mm 4: 4mm

PM

PM: Pulse motor

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□□:

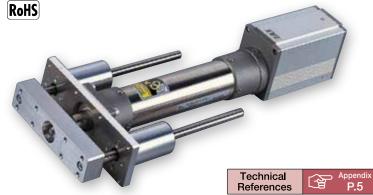
See Options below.

Options

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

CE RoHS

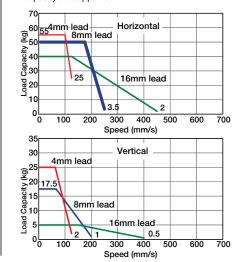
\* See page Pre-47 for details on the model descriptions.



- (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. 

Stroke and Maximum Speed

Model number	Lead	Maximum payload (Note 1)		Maximum	Stroke	
Modernamber	(mm)	Horizontal (kg)	Vertical (kg)	push force (N)	(mm)	
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 Lead	50~300 (every 50mm)
16	450 <400>
8	250 <200>
4	125

(Unit: mm/s)

### ①Stroke

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

### ③Cable Length

© Cable Leligtii						
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	RW01 (1m) ~ RW03 (3m)	_				
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.

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

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)

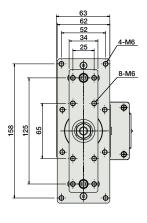
3D CAD

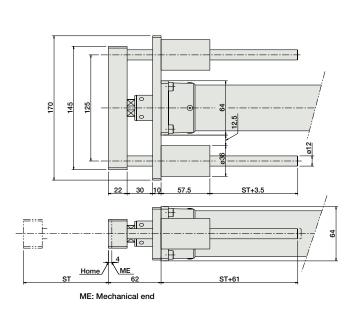
### Of CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders









<sup>\*</sup> 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

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   Substitute   Model number   September   Standard   Reference    Name   Substitute   Model number   September   Standard   Reference    Name   Substitute   Substit								
Name	External view	Model number	Features	positioning points	power	capacity	price	page
PIO Type (NPN pecification)		ERC2-RGD7C-I-PM-□-□-NP-□-□	Simple control type with up to 16-point positioning	16				
PIO Type (PNP pecification)		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 194

Slider Type

Mini

Standard

Controller Integrated

> Rod Type

Mini

Integrated

Table/ Arm/ Flat Type

Mini

Standar

Gripper/ Rotary Type

Linear Servo Type

> Cleanoom vpe

Splash-Proof Type

Pulse

Servo Motor (24V)

> ervo Motor 200V)

> inear Servo Motor

ROBO Cylinder, Ultra-Compact Rod Type, Actuator Width 12mm, DC24V Brushless Motor

Model Specification Items

RCD — RA1DA -Type

Encoder type

I: Incremental

3 Motor type

3: DC Brushless

Motor 2.5W

2 Lead

2: 2mm

Stroke

30: 30mm (Every 10mm)

**D3** Applicable Controller -10: 10mm

D3: DSEP

N:None P:1m :1m S:3m M:5m X\(\sum\_\): Custom length

Cable length

R□□: Robot cable

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



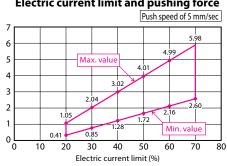
(1) The load capacity is based on operation at an acceleration of 1G. This is the upper limit of the acceleration/deceleration speed.

- (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 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

Model number	Motor output (w)	Feed Screw	Lead (mm)	Maximun Horizontal (kg)	n payload Vertical (kg)	Maximum push force (N)	Stroke (mm)
RCD-RA1DA-I-3-2-①-D3-②	2.5	Lead screw	2	0.7	0.3	4.2	10 to 30 (every 10 mm)

### ■ Stroke and Maximum Speed

Lead	10~30
(mm)	(every 10mm)
2	300

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

(Unit: mm/s)

### ①Stroke

95415112	
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)	_
	R16 (16m) ~ R20 (20m)	_

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

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)

### www.intelligentactuator.com

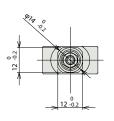
Technical References



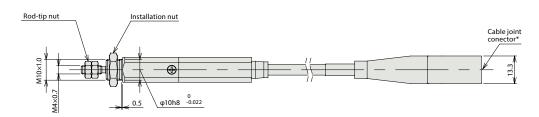


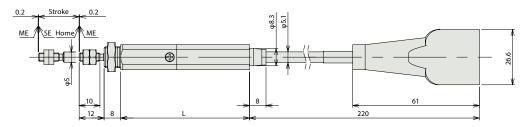


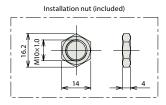
(\*) Connect the motor-encoder integrated cable here. (See page A-59 for details on cables.)

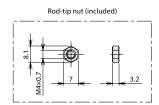


(Installation nut not shown)









ME: Mechanical end

SE: Stroke end

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

	Applicable Controllers
RCI	) series actuators can be operate

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

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

\* ① indicates I/O type (NP/PN).

Rod Type

# RCA2-RA2AC

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

Model Specification Items

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

RCA2 - RA2AC-

5 — Encoder type — Motor type

5: 5W Servo

motor

Lead

4:4mm

2:2mm

1:1mm

Stroke 25: 25mm 100: 100mm

**A3** Applicable controller

A3:ASEP MSEP

 Cable length N: None

Options See Options below.

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

X□□: Custom Length



I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

**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. (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

### ■ Leads and Payloads

Model number	Motor output (W)	Feed screw	Lead (mm)	Max. Load Horizontal (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

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

(Unit: mm/s)

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

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

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

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

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

### CAD drawings can be downloaded www.intelligentactuator.com

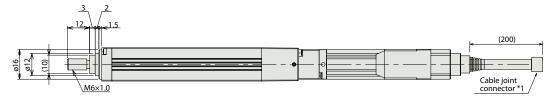
For Special Orders

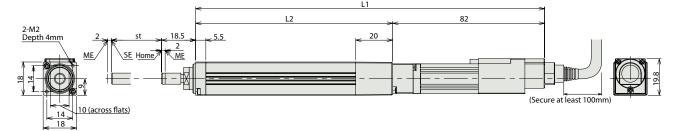


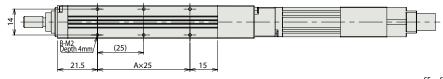




- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- (\*3) The orientation of the nut varies depending on the product.







SE : Stroke end ME : Mechanical end

# Dimensions of nut at tip of rod

— 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.

### ■ 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

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		D	DC24V	1A rated 2A 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 poir					→ P563	

Slider Type

Mini

Controller Integrated

> lod ype

> > Mini

Standard

Integrated

lable/ Arm/ Flat Type

Standard

Gripper/ Rotary Type

Linear Servo Type

> leanoom ype

Splash-Proof Type

> ulse otor

ervo lotor (4V)

Servo Motor 200V)

Linear Servo Motor

# 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-

5 — Encoder type — Motor type

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

2:2mm

1:1mm

Notes on

5: Servo motor

Stroke

25: 25mm

100: 100mm

**A3** - Applicable controller

A3:ASEP

MSEP

 Cable length — Options N: None

See Options below. \*Be sure to specify

P: 1m S: 3m which side the M:5m motor is to be X□□: Custom Length mounted (ML/MR).

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

RoHS



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

Stroke

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

### Actuator Specifications ■ Leads and Payloads

Model number	output (W)	screw	(mm)	Horizontal (kg)		thrust (N)	Repeatability (mm)	(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		

50~100 (mm) 180 200 4 screw 2 100 Ball 1 50

■ Stroke and Maximum Speed

(Unit: mm/s)

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

### ② Cable Length

Type	Cable symbol	Standard price
Charaland	<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
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	_

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

### Dimensional Drawings

### 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.

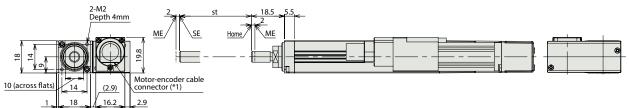
(\*1) Connect the motor-encoder integrated cable here.

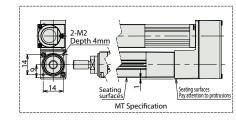
 $(*2) \ \ During \ home \ return, be \ careful \ to \ avoid \ interference \ from \ peripheral \ objects \ because \ the \ slider \ travels$ until the mechanical end.

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

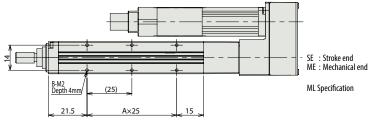
\*The drawing below shows the specification with motor side-mounted to the left (ML).

32.5 M6×1.0 89 Secure at least 100mm





41



# Dimensions of nut at tip of rod

■ Dimensions an	■ Dimensions and Weight by Stroke				
Stroke	25	50	75	100	
L1	114	139	164	189	
L2	81.5	106.5	131.5	156.5	
Α	1	2	3	4	
В	4	6	8	10	
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 — Encoder type — Motor type —

10

10: 10W Servo

motor

Ball screw 1mm

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

1S: Lead screw 1mm

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

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

> Technical References

Options

**Power-saving** 

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

ASEP MSEP X□□: Custom Length



I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

(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  $0.3\,\mathrm{G}$  ( $0.2\mathrm{G}$  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 screw	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
		4	0.75	0.25	42.7		
10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
		1	3	1	170.9		
		4	0.25	0.125	25.1		
10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
		1	1	0.5	100.5		
	output (W)	10 Ball screw	output (W) screw (mm)  10 Ball 2  1 1 4  Lead 2	output (W)         screw         (mm)         Horizontal (kg)           10         Ball screw         2         1.5           1         3           4         0.25           1         0.25           2         0.5	output (W)         screw         (mm)         Horizontal (kg)         Vertical (kg)           10         Ball screw         2         1.5         0.5           1         3         1           4         0.25         0.125           10         Lead screw         2         0.5         0.25	output (W)         screw         (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)           10         Ball screw         2         1.5         0.5         85.5           1         3         1         170.9           4         0.25         0.125         25.1           10         Lead screw         2         0.5         0.25         50.3	Output (W)         screw output (W)         crew screw (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)         Repeatability (mm)           10         Ball screw         2         1.5         0.5         85.5         ±0.02           1         3         1         170.9           4         0.25         0.125         25.1           10         Lead screw         2         0.5         0.25         50.3         ±0.05

Lead	Stroke	30 (mm)	50 (mm)			
>	4	20	00			
Ball screw	2	10	00			
Ba	1	50				
No.	4	20	00			
Lead screw	2	10	00			
Le	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 screw			
	Ball screw	Lead screw		
30	_	_		
50	_	_		

### ③ Cable Length

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

**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	_

### Dimensional Drawings

### www.intelligentactuator.com

For Special Orders

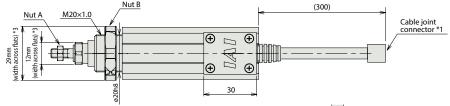


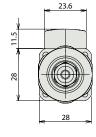


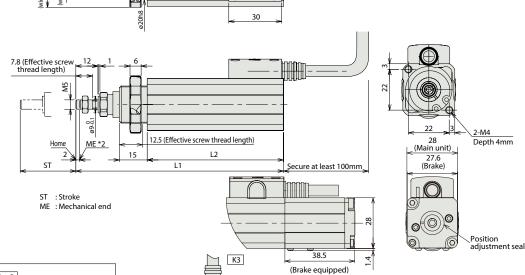


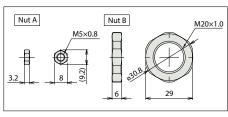
- (\*1) Connect the motor-encoder integrated cable here.
  - (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
  - $\begin{tabular}{ll} (*3) & The orientation of the nut varies depending on the product. \end{tabular}$

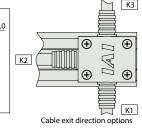
Note: This product doesn't come with an anti-rotation device. Please add an anti-rotation device such as a guide or similar locking device to the tip of the screw prior to use.











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

■ Dimensions and weight by Stroke							
Stroke	30	50					
L1	112	132					
L2	73.5	93.5					
Weight (kg)	0.25	0.27					

### 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	
Colonoid Valva Typa	- T	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	and a	MSEP-C-(  )-~-(  )-2-0	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	(Standard) 1.3A rated 4.4A max.  DC24V (Power-saving) 1.3A rated 2.5A max.	_	→ P303		
Positioner type	I.	ACON-C-10I①-①-2-0	Positioning is possible for up to 512	512 points				_	
Safety-Compliant Positioner Type		ACON-CG-10I()-())-2-0	points			(Power-saving) 1.3A rated	_		
Pulse Train Input Type (Differential Line Driver)		ACON-PL-10I①-①-2-0	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	

IAI

RCA2-RN3NA **202** 

# **RCA2-RN4NA**

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

A3:AMEC

Model Specification Items

RCA2 - RN4NA -Series — Type

20 – Encoder type — Motor type —

motor

selection

Lead

Ball screw 2mm

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

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

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

P: 1m S: 3m

Technical

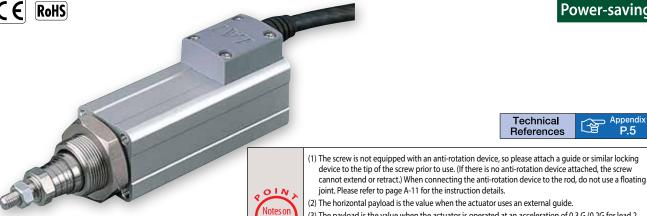
Options

**Power-saving** 

See options below.

**ASEP** M:5m MSEP X□□: Custom Length

2S: Lead screw 2mm



I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

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.

(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. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
RCA2-RN4NA-I-20-6-①-②-③-④	20		6	2	0.5	33.8		
RCA2-RN4NA-I-20-4-①-②-③-④		Ball screw	4	3	0.75	50.7	±0.02	30 50
RCA2-RN4NA-I-20-2-①-②-③-④			2	6	1.5	101.5		
RCA2-RN4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9		
RCA2-RN4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50
RCA2-RN4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7		

### ■ Stroke and Maximum Speed

;		Stroke Lead		30 (mm)	50 (mm)							
		Ņ	6	270 <220>	300							
		Ball screw	4	200								
	Ba		2	100								
		ew	6	220	300							
		ead screw		200								
	l lea		2	10	00							
			* The values enclosed in < > (Linit: mm/s)									

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

### ③Cable Length

Туре	Cable symbol	Standard price
Standard	<b>P</b> (1m)	_
(Robot Cables)	<b>S</b> (3m)	_
(Nobol 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.

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	_

	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 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

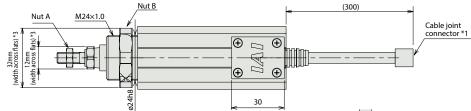


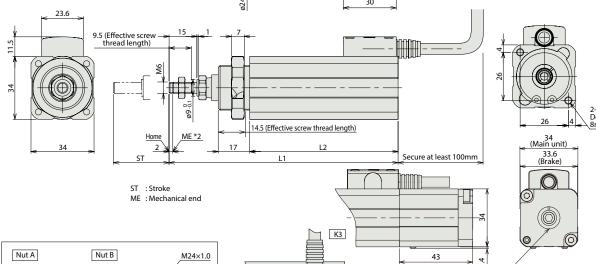




- (\*1) Connect the motor-encoder integrated cable here.
- (\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.
- $(\ensuremath{^{*}}\xspace3)$  The orientation of the nut varies depending on the product.

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.





M6×1.0

**① ①** (Brake equipped) [A] K2 **① ①** K1

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

Position adjustment seal

■ Dimensions and Weight by Stroke							
Stroke	30	50					
L1	123	143.5					
L2	80	100					
Weight (kg)	0.4	0.44					

### 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.

Cable exit direction options

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-20I①-①-2-1	Easy-to-use controller, even for beginners AC100V 2.4A rated		_	→ P537			
Soleriola valve type		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-(  )-~-( \)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points	(Standard)	256 points	_	7 7503	
Positioner type		ACON-C-20I①-⑪-2-0	Positioning is possible for up to 512	512 points DC24V				_	
Safety-Compliant Positioner Type		ACON-CG-20I()-())-2-0	points				_		
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)		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			_	→ P675	

IAI

\*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.

RCA2-RN4NA **204** 

# 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

Model Specification Items

RCA2 — RP3NA — Series — Type

10

10: 10W Servo

motor

– Encoder type — Motor type — Lead

Ball screw 1mm

4S: Lead screw 4mm

Stroke

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

— Applicable controller — Cable length A1:ACON N: None ASEL P: 1m

Options See options below.

**Power-saving** 

P.5

A3:AMEC S: 3m ASEP M:5m

2S: Lead screw 2mm X□□: Custom Length 1S: Lead screw 1mm



I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

(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 screw	Lead (mm)	Max. Load Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
10		4	0.75	0.25	42.7		
	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
		1	3	1	170.9		
		4	0.25	0.125	25.1		
10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
		1	1	0.5	100.5		
	output (W)	10 Ball screw	output (W) screw (mm)  10 Ball screw 1 1  Lead 2	Output (W)   Screw   (mm)   Horizontal (kg)	output (W)         screw         (mm)         Horizontal (kg)         Vertical (kg)           10         Ball screw         2         1.5         0.5           1         3         1           4         0.25         0.125           1         2         0.5         0.25	output (W)         screw         (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)           10         Ball screw         2         1.5         0.5         85.5           1         3         1         170.9           4         0.25         0.125         25.1           10         Lead screw         2         0.5         0.25         50.3	Output (W)         screw         (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)         Repeatability           10         Ball screw         2         1.5         0.5         85.5         ±0.02           1         3         1         170.9         ±0.02           Lead screw         2         0.5         0.25         50.3         ±0.05

■ Stroke and Maximum Speed

Technical References

	Stroke		30 (mm)	50 (mm)
	Ball screw	4	20	00
		2	10	00
		1	5	0
	Lead screw	4	20	00
		2	10	00
		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	_	_	

### **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
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.

	ltem	Description		
Drive System	ı	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		

### Dimensional Drawings

### www.intelligentactuator.com

For Special Orders





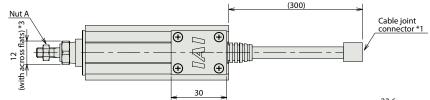


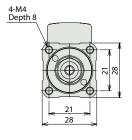
(\*1) Connect the motor-encoder integrated cable here.

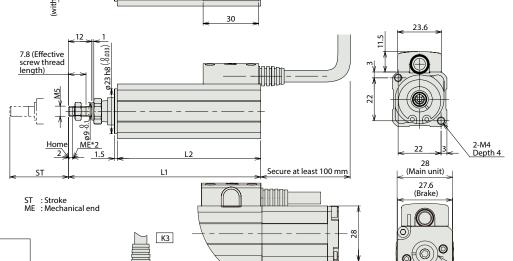
(\*2) During home return, be careful to avoid interference from peripheral objects because the slider travels until the mechanical end.

 $(\mbox{*3}) \;\;$  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.







38.5

(Brake equipped)

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

Position adjustment seal

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

### ② Applicable Controllers

Nut A

M5×0.8

K2

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** 

**①** 

Cable exit direction options

**①** 

**①** 

K1

External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
The state of the s	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
1	ASEP-C-10I()-(i)-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
lune.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points	DC24V	(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.	_	7 1303
I	ACON-C-10I①-①-2-0	Positioning is possible for up to 512 points	512 points			_	
	ACON-CG-10I①-①-2-0					_	
Ó.	ACON-PL-10I①-①-2-0	Pulse train input type with differential line driver support	( )			_	→ P631
ė	ACON-PO-10I()-(i)-2-0	Pulse train input type with open collector support	(—)			_	
	ACON-SE-10I①-N-0-0	Dedicated Serial Communication	64 points			_	
	ASEL-CS-1-10I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675
	view	AMEC-C-10 ①-①-2-1     ASEP-C-10 ①-①-2-0     MSEP-C-①	AMEC-C-10I①-①-2-1  Easy-to-use controller, even for beginners  Simple controller operable with the same signal as a solenoid valve  MSEP-C-①-①-②-0  MSEP-C-①-②-0  Positioner type based on PIO control, allowing up to 8 axes to be connected allowing up to 8 axes to be connected  ACON-C-10I①-①-2-0  ACON-C-10I①-①-2-0  ACON-PL-10I①-①-2-0  ACON-PL-10I①-①-2-0  Pulse train input type with differential line driver support  ACON-PO-10I①-①-2-0  Pulse train input type with open collector support  ACON-SE-10I①-N-0-0  Dedicated Serial Communication  Programmed operation is possible.	AMEC-C-10I①-①-2-1  Easy-to-use controller, even for beginners  ASEP-C-10I①-①-2-0  Simple controller operable with the same signal as a solenoid valve  MSEP-C-①-2-0  Positioner type based on PIO control, allowing up to 8 axes to be connected  MSEP-C-①-2-0  Field network-ready positioner type, allowing up to 8 axes to be connected  ACON-CG-10I①-①-2-0  Positioning is possible for up to 512 points  ACON-CG-10I①-①-2-0  Positioning is possible for up to 512 points  ACON-PD-10I①-①-2-0  Pulse train input type with differential line driver support  ACON-PO-10I①-①-2-0  Pulse train input type with open collector support  ACON-SE-10I①-N-0-0  Dedicated Serial Communication  ASEL-CS-1-10I①-0-2-0  Programmed operation is possible.	AMEC-C-10I①-①-2-1 Easy-to-use controller, even for beginners  ASEP-C-10I①-①-2-0 Simple controller operable with the same signal as a solenoid valve  MSEP-C-①-2-0 Positioner type based on PIO control, allowing up to 8 axes to be connected  MSEP-C-①-2-0 Field network-ready positioner type, allowing up to 8 axes to be connected  ACON-C-10I①-①-2-0 Positioning is possible for up to 512 points  ACON-C-10I①-①-2-0 Positioning is possible for up to 512 points  ACON-PD-10I①-①-2-0 Pulse train input type with differential line driver support  ACON-PD-10I①-①-2-0 Pulse train input type with open collector support  ACON-SE-10I①-N-0-0 Dedicated Serial Communication  ASEL-CS-1-10I①-0-2-0 Programmed operation is possible.	AMEC-C-10I①-①-2-1 Easy-to-use controller, even for beginners  ASEP-C-10I①-①-2-0 Simple controller operable with the same signal as a solenoid valve  MSEP-C-①	AMEC-C-10I()-()-2-1   Easy-to-use controller, even for beginners   AC100V   2.4A rated   —

\*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.

# 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 — Motor type —

20

motor

OLN

Notes or

selection

4S: Lead screw 4mm

2S: Lead screw 2mm

Lead Stroke

20: 20W Servo 6: Ball screw 6mm 30: 30mm Ball screw 4mm 50: 50mm Ball screw 2mm 6S: Lead screw 6mm

— Applicable controller — Cable length

A1:ACON ASEL A3:AMEC ASEP

MSEP

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

**Power-saving** 

X□□: Custom Length



I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

Technical References



Options

See options below.

(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)
RCA2-RP4NA-I-20-6-①-②-③-④			6	2	0.5	33.8		
RCA2-RP4NA-I-20-4-①-②-③-④	20	Ball screw	4	3	0.75	50.7	±0.02	30 50
RCA2-RP4NA-I-20-2-①-②-③-④			2	6	1.5	101.5		
RCA2-RP4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9		
RCA2-RP4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50
RCA2-RP4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7		
Code explanation								

### ■ Stroke and Maximum Speed

Leac	Stroke	30 (mm)	50 (mm)		
Ņ	6	270 <220>	300		
Ball screw	4	200			
Ba	2	100			
Wei	6	220	300		
Lead screw	4	200			
2		10	00		
	The values enclosed in < > apply to (Unit: mm/s)				

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

### ① Stroke

Stroke	Standard price		
(mm)	Feed screw		
(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

Туре	Cable symbol	Standard price
Chara dand	<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)	_

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

Actuati				
	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 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





This product doesn't come with an

anti-rotation device. Please add an

guide or similar locking device to the tip of the screw prior to use.

anti-rotation device such as a

Note:

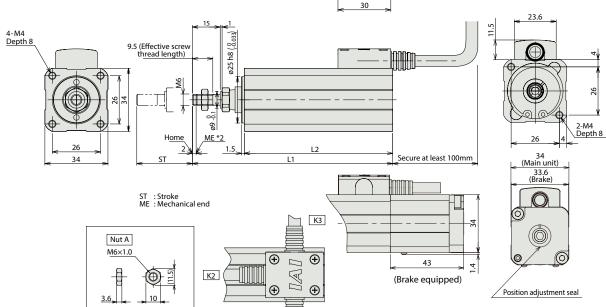


(\*1) Connect the motor-encoder integrated cable here.

(\*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.

(300)Nut A Cable joint connector \*1 12 (width across flats) \*3 • 114  $\oplus$ **①** 30



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

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

### 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.

Cable exit direction options

K1

External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
The state of the s	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	
lune.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected	positioner type,				→ P563	
iiii	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected				_	→ P503	
I	ACON-C-20I①-⑪-2-0	Positioning is possible for up to 512	512 mainte		(Standard) 1.3A rated	_		
	ACON-CG-20I①-①-2-0	points 512 po		DC24V	4.4A max. (Power-saving)	_		
Ó.	ACON-PL-20I①-①-2-0	Pulse train input type with differential line driver support		()		1.3A rated 2.5A max.	_	→ P631
ė	ACON-PO-20I①-⑪-2-0	Pulse train input type with open collector support	(—)			_		
	ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points			_		
	ASEL-CS-1-20I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675	
	view	AMEC-C-20 ①-①-2-1     ASEP-C-20 ①-①-2-0     MSEP-C-①-②-0-2-0     MSEP-C-①-②-0-2-0     ACON-C-20 ①-①-2-0     ACON-P0-20 ①-①-2-0     ACON-P0-20 ①-①-2-0     ACON-SE-20 ①-N-0-0	AMEC-C-20I①-①-2-1  Easy-to-use controller, even for beginners  Simple controller operable with the same signal as a solenoid valve  MSEP-C-①-①-2-0  MSEP-C-①①-2-0  Positioner type based on PIO control, allowing up to 8 axes to be connected allowing up to 8 axes to be connected  ACON-C-20I①-①-2-0  ACON-C-20I①-①-2-0  ACON-PL-20I①-①-2-0  ACON-PL-20I①-①-2-0  Pulse train input type with differential line driver support  ACON-PO-20I①-①-2-0  Pulse train input type with open collector support  ACON-SE-20I①-N-0-0  Dedicated Serial Communication  Programmed operation is possible.	AMEC-C-20I①-①-2-1  Easy-to-use controller, even for beginners  ASEP-C-20I①-①-2-0  Simple controller operable with the same signal as a solenoid valve  MSEP-C-①-2-0  Positioner type based on PIO control, allowing up to 8 axes to be connected  MSEP-C-①-2-0  Field network-ready positioner type, allowing up to 8 axes to be connected  ACON-C-20I①-①-2-0  Positioning is possible for up to 512 points  ACON-C-20I①-①-2-0  Positioning is possible for up to 512 points  ACON-PD-20I①-①-2-0  Pulse train input type with differential line driver support  ACON-PO-20I①-①-2-0  Pulse train input type with open collector support  ACON-SE-20I①-N-0-0  Dedicated Serial Communication  64 points	AMEC-C-20I①-①-2-1 Easy-to-use controller, even for beginners  ASEP-C-20I①-①-2-0 Simple controller operable with the same signal as a solenoid valve  MSEP-C-①-2-0 Positioner type based on PIO control, allowing up to 8 axes to be connected  MSEP-C-①-2-0 Field network-ready positioner type, allowing up to 8 axes to be connected  ACON-C-20I①-①-2-0 Positioning is possible for up to 512 points  ACON-C-20I①-①-2-0 Positioning is possible for up to 512 points  ACON-PD-20I①-①-2-0 Pulse train input type with differential line driver support  ACON-PO-20I①-①-2-0 Pulse train input type with open collector support  ACON-SE-20I①-N-0-0 Dedicated Serial Communication  ASEI_CS-1-20I①-0-2-0 Programmed operation is possible.	AMEC-C-20I①-①-2-1 Easy-to-use controller, even for beginners  ASEP-C-20I①-①-2-0 Simple controller operable with the same signal as a solenoid valve  MSEP-C-①	AMEC-C-20I()-()-()-2-1   Easy-to-use controller, even for beginners   AC100V   2.4A rated   —	

\*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.

# 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 —

10

10: 10W Servo

Notes or

motor

— Encoder type — Motor type —

Ball screw 1mm

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

1S: Lead screw 1mm

Lead Stroke

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

— Applicable controller — Cable length

A1:ACON ASEL A3:AMEC

N: None P: 1m S: 3m

M:5m

ASEP MSEP X□□: Custom Length

RoHS

I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

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  $moment\ load\ are\ not\ applied\ to\ the\ rod.\ Please\ refer\ to\ page\ A-110\ for\ correlation\ diagrams\ of\ the$ 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 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-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	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-10-15-①-②-③-④			1	1	0.5	100.5			

### ■ Stroke and Maximum Speed

Lead	Stroke	50 (mm)	
W	4	20	00
III scre	2 100		
Ba	1	5	0
Wei	4	20	00
ead screw	2	10	00
?eŢ	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

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

### **4** Options

Name	Option code	See page	Standard price
Brake	R P	→ 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
Ctondond	<b>P</b> (1m)	
(Robot Cables)	Standard S (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)	_

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

	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

### Dimensional Drawings

### www.intelligentactuator.com

For Special Orders

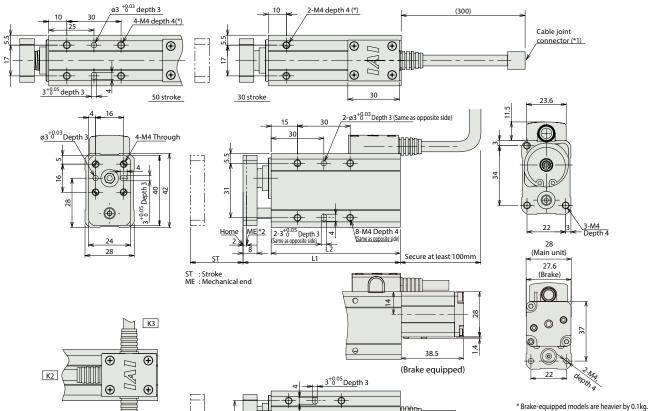






(\*1) Connect the motor-encoder integrated cable here.

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



■ Dimensions and Weight by Stroke							
Stroke	30	50					
L1	89.5	109.5					
L2	73.5	93.5					
Weight (kg)	0.32	0.36					

### 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 ø3<sup>+0.03</sup> Depth 3

	External			Maximum number of	Input	Power-supply	Standard	Reference
Name	view	Model number	Features	positioning points	Input power	capacity	price	page
Colone id Mohae Tana	No.	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid Valve Type	1	ASEP-C-10I①-①-2-0	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		(Standard) 1.3A rated	_	7 7503
Positioner type		ACON-C-10I①-①-2-0	Positioning is possible for up to 512	512 points			_	
Safety-Compliant Positioner Type		ACON-CG-10I()-())-2-0	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-1-10I①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

IAI

K1

Cable exit direction options

RCA2-GS3NA 210

Rod Type

# 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

RCA2 — GS4NA — — Encoder type — Motor type —

20

20: 20W Servo

selection

motor

Lead

Ball screw 2mm

6S: Lead screw 6mm

4S: Lead screw 4mm

2S: Lead screw 2mm

Stroke

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

— Applicable controller — Cable length

A1:ACON ASEL A3:AMEC

N: None See options below. P: 1m

S: 3m M:5m

ASEP MSEP X□□: Custom Length

RoHS

I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

Technical References



Options

**Power-saving** 

(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)	Le	ead	Stroke	30 (mm)
	RCA2-GS4NA-I-20-6-①-②-③-④			6	2	0.5	33.8				> _	6	270 < 220
	RCA2-GS4NA-I-20-4-①-②-③-④	20	Ball screw	4	3	0.75	50.7	±0.02	30 50	احق	III screw	4	
	RCA2-GS4NA-I-20-2-①-②-③-④			2	6	1.5	101.5			Lå	3	2	
	RCA2-GS4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9			1	A	6	220
	RCA2-GS4NA-I-20-4S-①-②-③-④	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50		Ledd Screw	4	
	RCA2-GS4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7			-	Ĕ	2	
(	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.												

### ■ Stroke and Maximum Speed

Leac	Stroke	30 (mm)	50 (mm)		
≥ 6		270 <220>	300		
Ball screw	4	20	0		
Ba	2	10	00		
ew.	6	220	300		
ead screw	4	20	00		
Pe	2	10	00		

(Unit: mm/s)

Stroke	Standard price				
(mm)	Feed screw				
(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
Chara da ad	<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.

	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		

P.15

→ P631

→ P675

### Dimensional Drawings

K1

Cable exit direction options

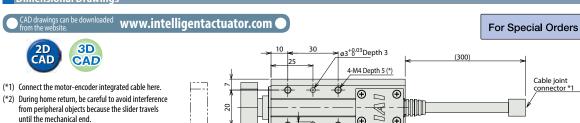
② Applicable Controllers

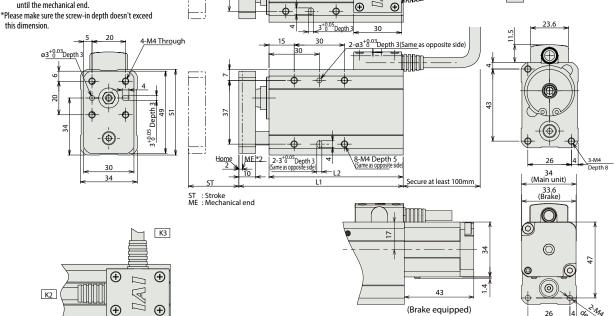
(Differential Line Driver)

Pulse Train Input Type

(Open Collector)

Serial Communication Type





	* Brake-equipped mode	Is are heavier by 0	).15kg.
	<b>■</b> Dimensions	and Weigh	t by Stroke
	Stroke	30	50
25 4-M4 Depth 8	L1	98	118
1 10   30 \	L2	80	100
ø <sub>3</sub> +0.03 Depth 3	Weight (kg)	0.55	0.63

(---)

64 points

### Easy-to-use controller, even for AMEC-C-20I (1)-(1)-2-1 AC100V 2.4A rated → P537 beginners Solenoid Valve Type Simple controller operable with the ASEP-C-20I(1)-(11)-2-0 3 points → P547 same signal as a solenoid valve Positioner type based on PIO control, Solenoid valve multi-axis type PIO specification allowing up to 8 axes to be connected → P563 Solenoid valve multi-axis type Field network-ready positioner type, MSEP-C-III-~-IV-0-0 256 points Network specification allowing up to 8 axes to be connected Positioner type ACON-C-20I()-())-2-0 (Standard) Positioning is possible for up to 512 1.3A rated 512 points 4.4A max. Safety-Compliant ACON-CG-20I()-())-2-0 DC24V Positioner Type Power-saving) 1.3A rated Pulse Train Input Type Pulse train input type with

differential line driver support

collector support

Pulse train input type with open

**Dedicated Serial Communication** 

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.

Program Control Type Programmed operation is possible. ASEL-CS-1-20I (1)-(1)-2-0 1,500 points Can operate up to 2 axes \*This is for the single-axis ASEL. \* Enter the code "LA" in  $\bigcirc$  when the power-saving specification is specified. \*  $\bigcirc$  indicates I/O type (NP/PN). \* (1) indicates number of axes (1 to 8). \* (1) indicates field network specification symbol.

ACON-PL-20I (1)-(1)-2-0

ACON-PO-20I()-())-2-0

ACON-SE-20I①-N-0-0

2.5A max.

# 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

RCA2 — GD3NA —

10 — Encoder type — Motor type —

10: 10W Servo

OIN

. Notes or

motor

Lead

Stroke

— Applicable controller — Cable length A1:ACON ASEL

N: None

Options See options below.

4: Ball screw 4mm 30: 30mm 2: Ball screw 2mm 50: 50mm P: 1m Ball screw 1mm A3:AMEC S: 3m 4S: Lead screw 4mm 2S: Lead screw 2mm ASEP M:5m MSEP X□□: Custom Length 1S: Lead screw 1mm

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



I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

**Power-saving** 

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-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

Motor output (W)	Feed screw	Lead (mm)	Max. Load Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
		4	0.75	0.25	42.7		
10	Ball screw	2	1.5	0.5	85.5	±0.02	30 50
		1	3	1	170.9		
		4	0.25	0.125	25.1		
10	Lead screw	2	0.5	0.25	50.3	±0.05	30 50
		1	1	0.5	100.5		
	10 10	10 Ball screw  10 Lead screw	output (W)         screw         (mm)           10         Ball screw         2           1         4           Lead screw         2           1         1	output (W)         screw         (mm)         Horizontal (kg)           10         Ball screw         2         1.5           1         3           4         0.25           1         0.25           2         0.5           1         1	output (W)         screw         (mm)         Horizontal (kg)         Vertical (kg)           10         Ball screw         2         1.5         0.5           1         3         1           4         0.25         0.125           1         2         0.5         0.25           1         1         1         0.5	output (W)         screw         (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)           10         Ball screw         2         1.5         0.5         85.5           1         3         1         170.9           4         0.25         0.125         25.1           10         Lead screw         2         0.5         0.25         50.3           1         1         1         0.5         100.5	Output (W)         screw output (W)         screw (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)         Repeatability           10         Ball screw         2         1.5         0.5         85.5         ±0.02           1         3         1         170.9         ±0.02           1         0.25         0.125         25.1         ±0.05           1         1         0.5         100.5         ±0.05

■ Stroke and Maximum Speed

Lead	Stroke	30 (mm)	50 (mm)		
>	4	200			
Ball screw	2	100			
Ba	1	50			
No.	4	200			
Lead screw	2	100			
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)

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

### ③Cable Length

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

Actuati	or opecifications			
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	_

For Special Orders

Stroke

L1 L2

Weight (kg)

30

109.5

93.5

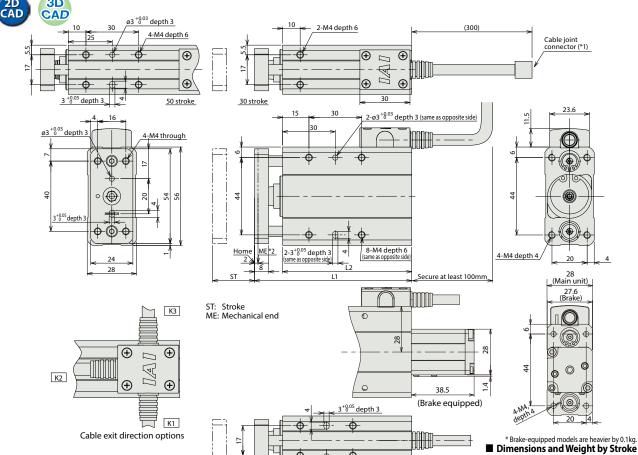
0.48

89.5 73.5

0.41

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.

© 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

>1 \ø3 <sup>+0.03</sup> depth 3

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Solenoid Valve Type	N. C. C.	AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537	
Solelloid 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			(Standard) 1.3A rated 4.4A max. (Power-saving)		→ P563	
Solenoid valve multi-axis type Network specification	iiii j	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P563	
Positioner type		ACON-C-10I①-①-2-0	Positioning is possible for up to 512	512 points	DC24V		_		
Safety-Compliant Positioner Type		ACON-CG-10I(])-(])-2-0	points				_		
Pulse Train Input Type (Differential Line Driver)	O.	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-1-10I①-⑪-2-0	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.

# RCA2-GD4NA

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

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

RCA2 — GD4NA —

20 – Encoder type — Motor type —

20: 20W Servo

motor

Lead

6S: Lead screw 6mm

4S: Lead screw 4mm

2S: Lead screw 2mm

Stroke

6: Ball screw 6mm 30: 30mm Ball screw 4mm 50: 50mm Ball screw 2mm

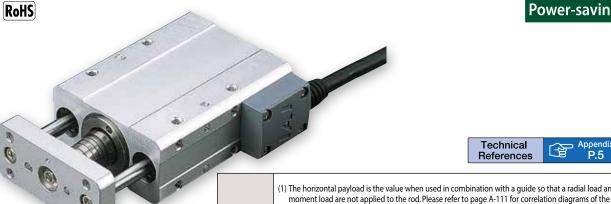
— Applicable controller — Cable length

A1:ACON ASEL A3:AMEC

N: None P: 1m

S: 3m M:5m

ASEP MSEP X□□: Custom Length



OIN

Notes on

selection

**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

- end load and service life when a guide is not installed. (2) The payload is the value when the actuator is operated at an acceleration of  $0.3\ G$  (0.2G for lead 2,
- if used vertically and for lead screw specification). The acceleration limit is the value indicated above. (3) 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. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)	Le	Stroke	30 (mm)	
	RCA2-GD4NA-I-20-6-①-②-③-④		Ball screw	6	2	0.5	33.8	±0.02	30 50	3	6	270 < 220	
	RCA2-GD4NA-I-20-4-①-②-③-④	20		4	3	0.75	50.7			Ball screw			
	RCA2-GD4NA-I-20-2-①-②-③-④			2	6	1.5	101.5			8	2		
	RCA2-GD4NA-I-20-6S-①-②-③-④			6	0.25	0.125	19.9			No.	6	220	
	RCA2-GD4NA-I-20-4S-①-②-③-④	20	20	Lead screw	4	0.5	0.25	29.8	±0.05	30 50	ad screw		
	RCA2-GD4NA-I-20-2S-①-②-③-④			2	1	0.5	59.7			Lead	2		
(	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.												

■ Stroke and Maximum Speed

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

(Unit: mm/s)

### ①Stroke

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

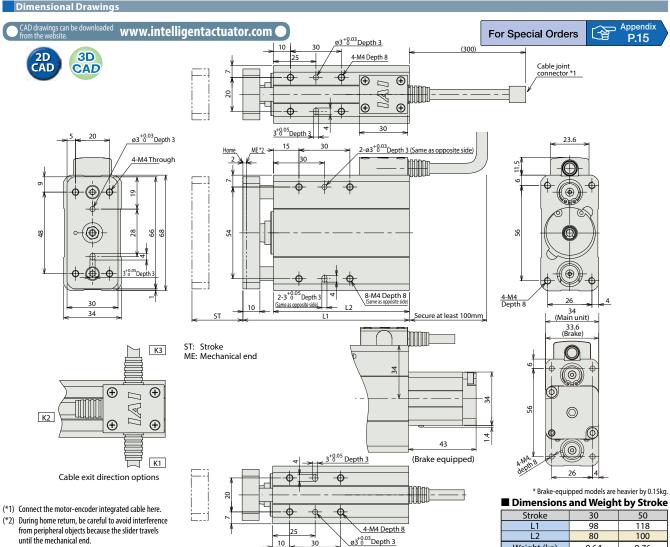
Name	Option code	See page	Standard price
Brake	В	→ A-42	_
Connector cable exits from the left	K1	→ A-51	_
Connector cable exits from the front	K2	→ A-51	_
Connector cable exits from the right	К3	→ A-51	_
Power-saving specification	LA	→ A-52	_

### ③Cable Length

Type	Cable symbol	Standard price
Standard (Robot Cables)	<b>P</b> (1m)	_
	<b>S</b> (3m)	_
(NODOL 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)	_

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

	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 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			



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.

10

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
Solenoid valve type	1	ASEP-C-20I①-⑪-2-0	Simple controller operable with the same signal as a solenoid valve	3 points	DC24V	(Standard) 1.3A rated 4.4A max. (Power-saving) 1.3A rated 2.5A max.	_	→ P547
Solenoid valve multi-axis type PIO specification	land 1	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			_	, 1303
Positioner type		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				_	
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-1-20I①-⑪-2-0	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.

Weight (kg)

0.64

0.76

# RCA2-SD3NA

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 —

10

10: 10W Servo

selection

motor

— Encoder type — Motor type — Lead

Ball screw 1mm

4S: Lead screw 4mm

2S: Lead screw 2mm

1S: Lead screw 1mm

Stroke

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

— Applicable controller — Cable length

A1:ACON N: None ASEL

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

X□□: Custom Length



I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

Technical



See options below.

**Power-saving** 

(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 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)		
RCA2-SD3NA-I-10-4-①-②-③-④			4	0.75	0.25 (*1)	42.7				
RCA2-SD3NA-I-10-2-①-②-③-④	10	10	10	Ball screw	2	1.5	0.5 (*1)	85.5	±0.02	25 50
RCA2-SD3NA-I-10-1-①-②-③-④			1	3	1 (*1)	170.9				
RCA2-SD3NA-I-10-4S-①-②-③-④			4	0.25	0.125 (*1)	25.1				
RCA2-SD3NA-I-10-2S-①-②-③-④	10	Lead screw	2	0.5	0.25 (*1)	50.3	±0.05	25 50		
RCA2-SD3NA-I-10-15-①-②-③-④			1	1	0.5 (*1)	100.5				

Stroke (mm) 4 200 2 100 Ball 1 50 4 \_ead screw 2 100

■ 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)

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

## **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
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)	_

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

Actuator Specifications			
Item		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 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	

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

Dimensional Drawings

3D

CAD

Cable exit direction options

2-M4 Depth 6

60

**①** 

**①** 

 $\oplus$ 

2D CAD

View A

www.intelligentactuator.com

К3

•

**(** 

K1

Cable joint connector \*1

Home ME \*2

ST : Stroke ME : Mechanical end

2×2-ø3.3

(Cable length is approximately 300mm.)

4-M4 Depth 6

•

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

> ■ Dimensions and Weight by Stroke Stroke L1 L2 131 123 156 148

> > 0.5

•

Weight (kg) 0.48 ② Applicable Controllers

Secure at least 100mm

View A

73.5

<del>-</del>**+**-

Φ-

3<sup>+0.05</sup> Depth 3

<del>-</del>

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
		AMEC-C-10I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid Valve Type		ASEP-C-10I(1)-(1)-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
Solenoid valve multi-axis type PIO specification	l more	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-(  )-~-( \vec{V}-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 1.3A rated 4.4A max. (Power-saving)	_	7 2303
Positioner type	L	ACON-C-10I①-①-2-0	Positioning is possible for up to 512	F12 points			_	
Safety-Compliant Positioner Type		ACON-CG-10I()-())-2-0	points	512 points	DC24V		_	
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-10I①-⑪-2-0	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

\*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.

# 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 -

20 — Encoder type — Motor type —

I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

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

2S: Lead screw 2mm

20: 20W Servo

Stroke

6: Ball screw 6mm 25: 25mm 4: Ball screw 4mm 50: 50mm Ball screw 2mm 75: 75mm

— Applicable controller — Cable length A1:ACON ASEL

Options N: None P: 1m

See options below.

A3:AMEC S: 3m **ASEP** M:5m MSEP X□□: Custom Length



**Power-saving** 

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-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

■ 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)		
RCA2-SD4NA-I-20-6-①-②-③-④			6	2	0.5 (*1)	33.8				
RCA2-SD4NA-I-20-4-①-②-③-④	20	20	20	Ball screw	4	3	0.75 (*1)	50.7	±0.02	25 50 75
RCA2-SD4NA-I-20-2-①-②-③-④				2	6	1.5 (*1)	101.5		/5	
RCA2-SD4NA-I-20-6S-①-②-③-④			6	0.25	0.125 (*1)	19.9				
RCA2-SD4NA-I-20-4S-①-②-③-④	20	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		

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

Stroke and Maximum Speed

	Leac	Stroke	25 (mm)	50~75 (mm)		
	>	6	240 <200>	300		
	Ball screw	4	200			
	Ba	2	100			
	We	6	200	300		
	ead screw	4	200			
	Fe	2	100			
*	* The values enclosed in < > apply to (Units and					

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

(Unit: mm/s)

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

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

rictuate	rictuator specifications				
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			

able/

Mini

Standard

Gripper/ Rotary Type

Linear Servo Type

lean-

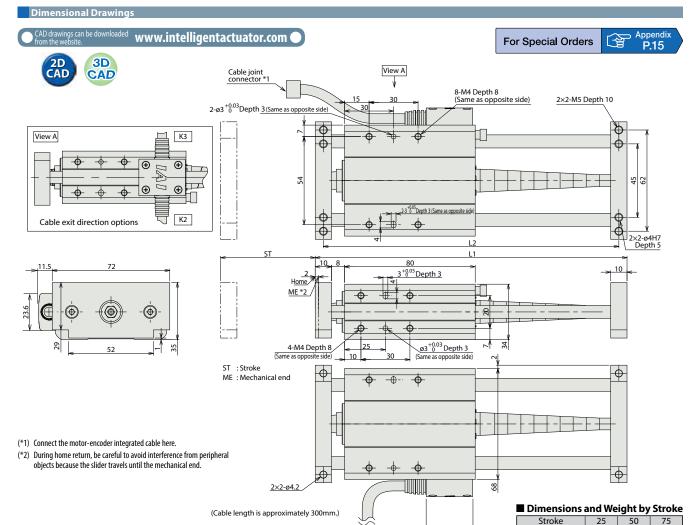
Splash-Proof

ulse

ervo Motor 24V)

Servo Motor (200V)

Linear Servo Motor



Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Referen page
C. L M. L. T	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	3	ASEP-C-20I()-())-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P54
Solenoid valve multi-axis type PIO specification		MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					. D.
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-20I①-①-2-0	Positioning is possible for up to 512		(Standard) 1.3A rated	_		
Safety-Compliant Positioner Type		ACON-CG-20I①-⑪-2-0	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	( )			_	→ P6
Pulse Train Input Type (Open Collector)	è	ACON-PO-20I()-())-2-0	Pulse train input type with open collector support				_	
Serial Communication Type		ACON-SE-20I①-N-0-0	Dedicated Serial Communication				_	
Program Control Type		ASEL-CS-1-20I①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P6

L1 L2

Weight (kg)

141

131

0.73

166

156

0.75

191

181

0.77

# RCA-RA3C

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

Model Specification Items

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

**C** € RoHS

RCA - RA3C -

— Encoder type — Motor type I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

20 20: 20W Servo

10: 10mm 5mm 2.5:2.5mm

Stroke 50: 50mm

200: 200mm (50mm pitch increments)

Applicable controller A1:ACON ASEL A3:AMEC

**ASEP** MSEP

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

Cable length

R□□: Robot Cable

Options

**Power-saving** 

See Options below.

For High Acceleration/Deceleration



Technical References



OIN 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)		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

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

(Unit: mm/s)

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

## **4** Options

N.	lo .: .	1 6	[c. ] ]
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	_

(\*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)	_
	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.

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	±1.0 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

## www.intelligentactuator.com

For Special Orders



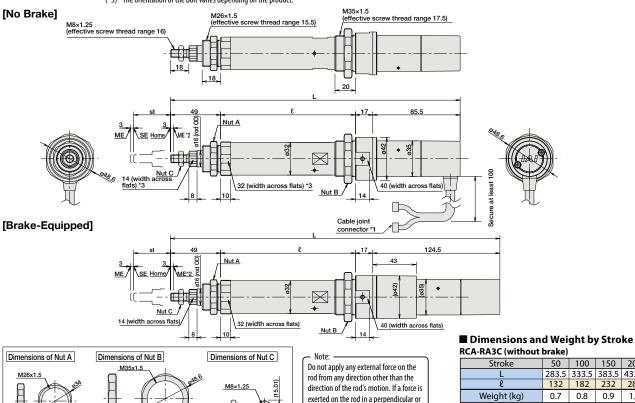




(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
(\*2) After homing, the slider moves to the ME, therefore, please watch

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

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



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

## RCA-RA3C (with brake)

	,			
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 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.

rotational direction, the detent may

become damaged.

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-20SI①-⑪-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
Solenoid 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 7503
Positioner type	I.	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 DC24V	·	5.1A max. (Power-saving)	_		
Pulse Train Input Type (Differential Line Driver)	Ó.	ACON-PL-20SI①-①-2-0	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)-(11)-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-1-20SI①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675

\*This is for the single-axis ASEL.
\* (1) indicates 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.

\* (1) indicates number of axes (1 to 8). (indicates field network specification symbol.

RCA-RA3C **222** 

 $\epsilon$ 

## RCA-RA4C

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

RCA - RA4C -Specification Items

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

(\*1) Except all 20W models and

30W 3mm lead models

RoHS

— Encoder type — Motor type 1:Incremental A: Absolute
\*The absolute models are
only compatible with ASEL.

20: 20W Servo motor

30:30W Servo

motor

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

Stroke 50: 50mm 300: 300mm

(50mm pitch increments)

A1:ACON ASEL A3:AMEC ASEP MSEP

Applicable controller — Cable length

P: 1m S: 3m M:5m X□□: Custom Length R□□: Robot Cable

Technical

References

N: None

**Power-saving** 

P.5

Options

See Options below.

For High Acceleration/Deceleration

Simple absolute encoders are considered incremental.

Notes on

electio

(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. Load Capacity  Horizontal (kg) 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

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

	Standard price					
	①Encoder Type					
<pre>②Stroke (mm)</pre>	Increr	nental	Abso	olute		
	Motor O	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	_
HA	→ A-50	_
HS	→ A-50	_
LA	→ A-52	_
NJ	→ A-53	_
NM	→ A-52	_
TRF	→ A-57	_
TRR	→ A-58	_
	B FT FL FLR HA HS LA NJ NM TRF	B → A-42 FT → A-49 FL → A-45 FLR → A-46 HA → A-50 HS → A-50 LA → A-52 NJ → A-53 NM → A-52 TRF → A-57

(\*1) 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)	_
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_
Ī	R16 (16m) ~ R20 (20m)	_

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

	Y
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)



Note:

www.intelligentactuator.com

For Special Orders





[No Brake]

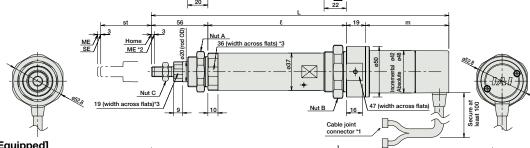


Dimensional Drawings

 (\*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. ME: Mechanical end

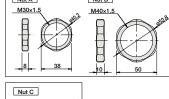
SE: Stroke end (\*3) The orientation of the bolt varies depending on the product.

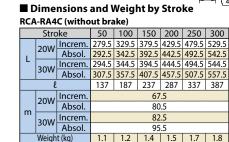
Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is M40×1.5 effective screw thread range 19.5) exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



M30×1.5 (effective screw thread range 17.5)

[Brake-Equipped] Nut A 36 (width across flats) Nut A Nut B 19 (width cross flats) M30×1.5 M40×1.5





RCA	RCA-RA4C (with brake)								
Stroke		50	100	150	200	250	300		
	20W	Increm.	322.5	372.5	422.5	472.5	522.5	572.5	
L 20W	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 Increm.		125.5							
	3000	Absol.	138.5						
	Weigh	t (kg)	1.3	1.4	1.6	1.7	1.9	2.0	

## ③ Applicable Controllers

M10x1.2

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		
Colonaid Valua Tuna	W.	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	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	1111	MSEP-C-(V)-~-(V)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points	DC24V	(Standard) 20W 1.3A rated	20W	_	7 2003	
Positioner type		ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	512 points		30	4.4A max. 30W 1.3A rated	_		
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points	312 points		4.4A max. (Power-saving)	_			
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I (  ) - (  ) - 2 - 0 ACON-PL-30I (  ) - (  ) - 2 - 0	-PL-30III)-III)-2-0 differential line driver support			20W 1.3A rated 2.5A max.	_	→ P631		
Pulse Train Input Type (Open Collector)	1	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-1-20①())-())-2-0 ASEL-CS-1-30①())-())-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675		
* This is for the single-axis ASE * indicates encoder type (I) incremental A: absolute) * Enter the code "HA" or "I A" in @ when the high-acceleration/deceleration										

\*This is for the single-axis ASEL. \* (i) indicates encoder type (l: incremental, A: absolute) \* Enter the code "HA" or "LA" in (ii) when the high-acceleration/deceleration option or the power-saving option is specified. \* (iii) indicates I/O type (NP/PN). \* (iii) indicates number of axes (1 to 8). \* (iv) indicates field network specification symbol.

RCA-RA4C **224** 

# RCA-RA3D

Robo Cylinder, Rod Type, ø32mm Diameter, 24V Servo Motor, Built-In (Direct-Coupled) Motor

Model Specification Items

C € RoHS

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

RCA - RA3D -Series — Type

— Encoder type — Motor type

\* The Simple absolute

considered type "I".

encoder is also

I: Incremental

20

20: 20W Servo

motor

Lead 10: 10mm 5mm 2.5:2.5mm

Stroke 50: 50mm

200: 200mm (50mm pitch increments)

Applicable controller A1:ACON ASEL A3:AMEC

ASEP MSEP

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

R□□: Robot Cable

Cable length

**Power-saving** 

— Options

See Options below.



(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. Load Horizontal (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

(Unit: mm/s)

Notes on

selection

## 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)	_
	<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.

## **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 Non-motor end models.

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

## CAD drawings can be downloaded www.intelligentactuator.com

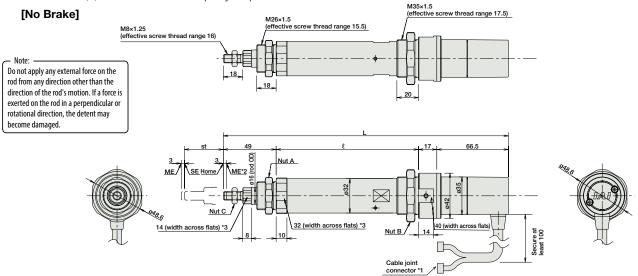
For Special Orders





 (\*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

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



## Dimensions of Nut A Dimensions of Nut B Dimensions of Nut C

## ■ Dimensions and Weight by Stroke

nca-naso (without brake)						
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.

<b>ΩΛ</b> •	pplical	alo C	ontro	llove
$\omega_{A}$	ગગા(લ્લા	ne c	ગામભ	ilers

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		AMEC-C-20SI①-⑪-2-1	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	Trans.	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					. 0563
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	DC24V 1	(Standard) 1.7A rated 5.1A max. (Power-saving)	_	→ P563
Positioner type		ACON-C-20SI①2-0	Positioning is possible for up to 512	512 into			_	
Safety-Compliant Positioner Type		ACON-CG-20SI①-①-2-0	points	512 points			_	
Pulse Train Input Type (Differential Line Driver)	Ó	ACON-PL-20SI (1)-(11)-2-0	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		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



Robo Cylinder, Rod Type, ø37mm Diameter, 24V Servo Motor, Built-In (Direct-Coupled) Motor

Model Specification Items

C € RoHS

RCA - RA4D -Series — Type

— Encoder type — Motor type 1: Incremental A: Absolute
\*The absolute models are
only compatible with ASEL.

Simple absolute encoders are considered incremental

20: 20W Servo motor 30:30W Servo

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

50: 50mm

300: 300mm (50mm pitch increments)

Stroke

Applicable controller — Cable length A1:ACON ASEL

A3:AMEC ASEP MSEP

N: None P: 1m S: 3m

R□□: Robot Cable

M:5m X□□: Custom Length

**Power-saving** 

See Options below.

Technical References



P.5

Notes or 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 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. Load Horizontal (kg)	Vertical (kg)	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

## ①Encoder Type/②Stroke

	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		ı	_			
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	_

<sup>\*</sup>The home sensor (HS) cannot be used on the Non-motor 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)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

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)

## CAD drawings can be downloaded www.intelligentactuator.com

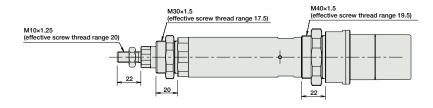
For Special Orders

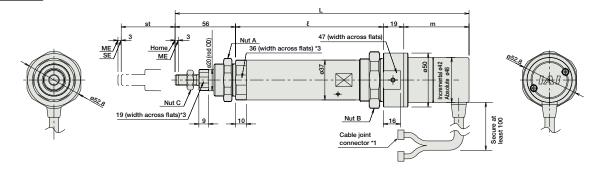


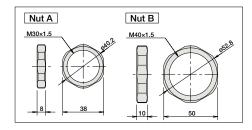


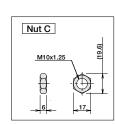
## [No Brake]

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.









## ■ Dimensions and Weight by Stroke RCA-RA4D (without brake)

· · · · · · · · · · · · · · · · · · ·									
	Stroke		50	100	150	200	250	300	
	20W	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	
_	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	
	ę			187	237	287	337	387	
	20W Increm.		45.5						
l	2000	Absol.	58.5						
m	30W	Increm.	60.5						
	3000	Absol.			73	.5			
	Weight (kg)			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.

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.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Colonaid Value Tura	No.	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	lune I	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. (Power-saving) 20W 1.3A rated 2.5A max. 30W 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	DC24V	30W		_	
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points			_			
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	(—)		_		→ 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	(—)		_			
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-1-20 ① ① - ① - 2-0 ASEL-CS-1-30 ① ① - ② - 2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points		_		→ P675	
*This is factor as a size of CEI ** in disease a conductor of the group and the conductor of the group and group and the group a									

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

\* ① indicates encoder type (I: incremental, A: absolute)
\* ② indicates number of axes (1 to 8).

# RCA-RA3R

Robo Cylinder, Rod Type, ø32mm Diameter, 24V Servo Motor, Side-Mounted Motor

Model Specification Items

C € RoHS

RCA - RA3R -Series — Type

20 — Encoder type — Motor type

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

20: 20W Servo

Stroke 10: 10mm

5mm

2.5:2.5mm

50: 50mm

200: 200mm (50mm pitch increments)

Applicable controller — Cable length A1:ACON ASEL A3:AMEC

ASEP

MSEP

N: None P: 1m S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

**Power-saving** 

Options

See Options below.



ROIN

Notes on

**Technical** References



(Unit: mm/s)

(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

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

## **4** Options

Ni	10.0	C	Crandon day
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	NJ	→ 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
.71-		
	<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.

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.

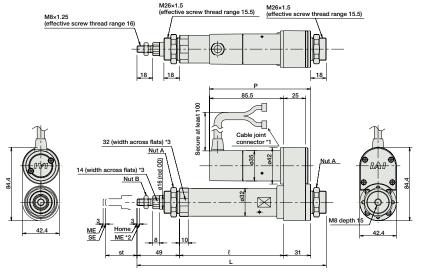
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

SE: Stroke end ME : Mechanical end

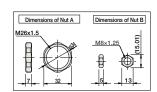
(\*3) The orientation of the bolt varies depending on the product.

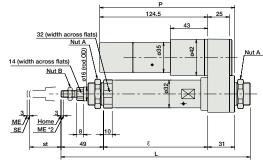
[No Brake]

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

NCA-NASN (WILIIOUL DIAKE)						
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)

NCA-NASN (WICH DIAKE)						
Stroke	50	100	150	200		
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		
Solonoid Volvo Tymo	No.	AMEC-C-20SI①-⑪-2-1	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	1000	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					. 0563		
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	E .	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	soints 512 points		DC24V	5.1A max. (Power-saving)	_			
Pulse Train Input Type (Differential Line Driver)	C)	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)	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-1-20SI①-⑪-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675		

RCA-RA3R 230

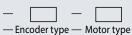
## RCA-RA4R

Robo Cylinder, Rod Type, ø37mm Diameter, 24V Servo Motor, Side-Mounted Motor

Specification Items

C € RoHS

RCA - RA4R -Series — Type



1: Incremental

1: 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

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

Stroke

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

A1:ACON **ASEL** 

A3:AMEC ASEP MSEP

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

R□□: Robot Cable

M:5m  $X\square\square$ : Custom Length

**Power-saving** 

Options

See Options below.

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 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

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RA4R-①-20-12-②-③-④-⑤		12	3.0	1.0	18.9	
RCA-RA4R-①-20-6-②-③-④-⑤	20	6	6.0	2.0	37.7	
RCA-RA4R-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	50~300
RCA-RA4R-①-30-12-②-③-④-⑤		12	4.0	1.5	28.3	(every 50mm)
RCA-RA4R-①-30-6-②-③-④-⑤	30	6	9.0	3.0	56.6	
RCA-RA4R-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)

#### ①Encoder Type/②Stroke

	Standard price					
	①Encoder Type					
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute			
	Motor Ou	utput (W)	Motor Ou	utput (W)		
	20W	30W	20W	30W		
50	_	_	_	_		
100	_	_	_	_		
150	_	_	_	_		
200	_			_		
250			I			
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	_
Home sensor	HS	→ A-50	_
Power-saving	LA	→ A-52	_
Knuckle joint	NJ	→ 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.

Lead	(every 50mm)
12	600
6	300
3	150

## 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

M10×1.25 (effective screw thread range 20

ME.

Nut B

19 (width across flats)\*

Nut B



[No Brake]

Nut A M30×1. 5



(\*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.

tive screw thread range 17.5)

cure at least 100

Nut A

36 (width

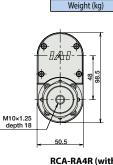
SE : Stroke end ME : Mechanical end

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

## ■ Dimensions and Weight by Stroke RCA-RA4R (without brake)

For Special Orders

Stroke		100	150	200	250	300	
, Increm.	234	284	334	384	434	484	
Absol.	234	284	334	384	434	484	
, Increm.	234	284	334	384	434	484	
Absol.	234	284	334	384	434	484	
l	125	175	225	275	325	375	
, Increm.	67.5						
Absol.	80.5						
, Increm.	82.5						
Absol.	95.5						
Increm.	100.5						
Absol.			11:	3.5			
Increm.	115.5						
Absol.	128.5						
ht (kg)	1.2	1.4	1.5	1.7	1.8	2.0	
	V Increm. Absol.  V Increm. Absol.  V Increm. Absol.  Increm. Absol.  V Increm. Absol.  V Increm. Absol.  Increm.	V Increm. 234 Absol. 234 V Increm. 234 Absol. 234 E 125 V Increm. Absol. V Absol.	V Increm. 234 284 Absol. 234 284 Increm. 234 284 V Increm. 234 284 ℓ 125 175 V Increm. Absol.	V         Increm.         234         284         334           Absol.         234         284         334           Increm.         234         284         334           Absol.         234         284         334           Increm.         67         Absol.         80           Increm.         82         Absol.         95           Increm.         100         Absol.         111           Increm.         112         Absol.         120	V         Increm.         234         284         334         384           Absol.         234         284         334         384           Increm.         234         284         334         384           & absol.         234         284         334         384           Increm.         67.5         80.5           Increm.         82.5         Absol.         95.5           Increm.         100.5         Absol.           Increm.         113.5           V         Absol.         128.5	V         Increm.         234         284         334         384         434           Absol.         234         284         334         384         434           Increm.         234         284         334         384         434           Absol.         234         284         334         384         434           €         125         175         225         275         325           V         Absol.         80.5           Increm.         82.5           Absol.         95.5           Increm.         100.5           Absol.         113.5           Increm.         115.5           Absol.         128.5	



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.

## RCA-RA4R (with brake)

	Stroke		50	100	150	200	250	300	
	2014/	Increm.	234	284	334	384	434	484	
١. ا	20W	Absol.	234	284	334	384	434	484	
L	30W	Increm.	234	284	334	384	434	484	
	SUVV	Absol.	234	284	334	384	434	484	
	l		125	175	225	275	325	375	
	20W Abs	Increm.	110.5						
		Absol.							
m	30W	Increm.	125.5						
		Absol.	138.5						
	20W	Increm.			14:	3.5			
Р		Absol.	156.5						
г	30W	Increm.	158.5						
	Absol.		171.5						
	Weigh	t (kg)	1.4	1.6	1.7	1.9	2.0	2.2	

# Nut A 19 (width across flats 36 (width across flats)

## ③Applicable Controllers

[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.

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
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	lune.	MSEP-C-(\(\varphi\)-~-(\(\pi\)-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-(\(\varphi\)-~-(\(\varphi\)-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 20W 1.3A rated	_	→ P503
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-201(  )-(  )-2-0 ACON-PL-301(  )-(  )-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-201 - N-0-0 ACON-SE-301 - 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.
\* (iii) indicates I/O type (NP/PN).

\*  $\bigcirc$  indicates encoder type (I: incremental, A: absolute) \*  $\bigcirc$  indicates number of axes (1 to 8).

\* Enter the code "LA" in (ii) when the power-saving specification is specified.
\* (iii) indicates field network specification symbol.

# RCA-SRA4R

Robo Cylinder, Rod Type, Actuator Width 45mm, Servo Motor, Short-Length Type

Model Specification Items

RCA - SRA4R -Series — Type

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

encoder is also

considered type "I".

Lead 5: 5mm 2.5:2.5mm 20: 20W Servo motor

Stroke 20: 20mm

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

Applicable controller -A1:ACON ASEL A3:AMEC ASEP

MSEP

Cable length N: None P: 1m

Options See Options below.

S: 3m M:5m X : Custom Length

CE RoHS

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



**Power-saving** 

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 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)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)	Stroke Lead	20~200 (every 10mm)
RCA-SRA4R-I-20-5-①-②-③-④	20	5	9 (Note1)	3	41	20~200	5	250
RCA-SRA4R-I-20-2.5-①-②-③-④	20	2.5	18 (Note1)	6.5	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.								

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 (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 barbaic available for starting of 70 and a second					

rior motor cha specimeation	
*The brake is available for strokes of 70mm or n	nore.

③ Cable Length

Туре	Cable symbol	Standard Price
Ctondond	<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	<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)

RCA ROBO Cylinder

Dimensional Drawings www.intelligentactuator.com For Special Orders 31.5 4.8 4.2 7.5 (width across flats) 2D CAD 22 Cable joint connector (\*1) M10×1.25

least 100 (210) width across flats (\*3) 0 0 E-M4 depth 10 (same with opposite side) 4-M6 depth 12 4-M6 depth 12 **(** ⊕) 15

 ${}^{\displaystyle *}$  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.

② Applicable Controllers

Program Control Type

_L	
E-M4 depth 10	Dimensions of the Supplied Nut
24 C Dx50 8	ST : Stroke SE : Stroke end

■ Dimensions and Weight 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)	0.78	0.84	0.9	0.96	1.03	1.09	1.15	1.21	1.27	1.59	19

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	THE STATE OF THE S	AMEC-C-20I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537								
Soleriold 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	day.	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-20I①-⑪-2-0	Positioning is possible for up to 512	E12 noints		(Standard) 1.3A rated	_									
Safety-Compliant Positioner Type		ACON-CG-20I()-(i)-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	support		( )	( )	( )	( )	( )	( )	( )		1.3A rated 2.5A max.	_	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-20I①-⑪-2-0	Pulse train input type with open collector support	(—)			_									
Serial Communication Type	Í	ACON-SE-20I①-N-0-0	Dedicated Serial Communication	64 points			_									

Programmed operation is possible.

Can operate up to 2 axes

1,500 points

\*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.

ASEL-CS-1-20I()-())-2-0

RCA-SRA4R **234** 

→ P675

ME: Mechanical end

# CA-RGS3C

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

Model Specification Items

RoHS

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

RCA -RGS3C-Series — Type

20 — Encoder type — Motor type

20: 20W Servo

motor

I: Incremental

encoder is also

\* The Simple absolute

considered type "I".

Lead

5mm

2.5:2.5mm

Stroke 10: 10mm

50: 50mm 200: 200mm

ASEP

Applicable controller A1:ACON ASEL A3:AMEC

MSEP

N: None P: 1m S: 3m

Cable length

R□□: Robot Cable

M:5m X□□: Custom Length

For High Acceleration/Deceleration

**Power-saving** 

P.5

Options

See Options below.

(excluding the 2.5mm-lead model)



- (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
- 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)		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

Technical

References

= 5ti oke and maximum speed								
Stroke Lead	50~200 (every 50mm)							
10	500							
5	250							
2.5	125							

Description

Single guide (guide rod diameter ø8mm, Ball bush type)

Ball screw, ø8mm, rolled C10

±0.02mm

ø16mm

±0.05 deg Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

0.1mm or less

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	_

### 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.

Actuator Specifications

Non-rotating accuracy of rod

Drive System Positioning Repeatability

Lost Motion

Guide Rod diameter

4 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.

RCA-RGS3C

## Dimensional Drawings

## CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders

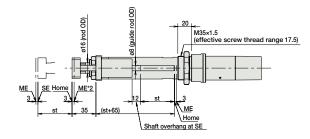


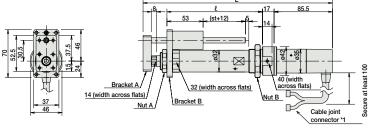


## [No Brake]

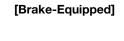
- (\*1) Connect the motor and encoder cables here.
   See page A-59 for details on cables.
   (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

ME: Mechanical end

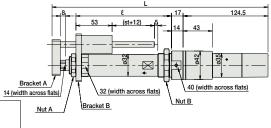


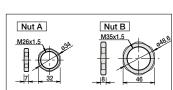






Bracket B





## ■ Dimensions and Weight by Stroke

nca-nasse (without blake)										
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						

## RCA-RGS3C (with brake)

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 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						
Calan aid Value Time	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	1	ASEP-C-20SI①-①-2-0	Simple controller operable with the same signal as a solenoid valve				_	→ 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					, DEC2						
Solenoid valve multi-axis type Network specification	iiii J	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected				_	→ P563						
Positioner type		ACON-C-20SI①-⑪-2-0	Positioning is possible for up to 512	E12 points		(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)	O.	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 point				_							
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.
\* (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).
\*⑩ indicates field network specification symbol.

RCA-RGS3C **236** 

## RCA-RGS4C

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

Model Specification Items RCA -RGS4C-

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

RoHS

— Encoder type -

I: Incremental A: Absolute Absolute encoder models can 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 type Lead 20: 20W Servo 12:12mm motor 6: 6mm 30:30W Servo

3: 3mm

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

Stroke Applicable controller A1:ACON

ASEL A3:AMEC ASEP MSEP

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

See Options below.

M:5m X□□: Custom Length R□□: Robot Cable

**Power-saving** 



(\*1) Except all 20W models and 30W 3mm lead models

**Technical** References



OIN Notes on selectio

- (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

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Vertical (kg)	Rated thrust (N)	Stroke (mm)
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

(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.

#### ① Stroke

	Standard price					
	①Encoder Type					
@Stroke (mm)	Increr	nental	Abso	olute		
	Motor O	utput (W)	Motor Output (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)	_
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	_
	R01 (1m) ~ R03 (3m)	_
	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
Robot Cable	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

Description

Single guide (guide rod diameter ø10mm, Ball bush type)

Ball screw, ø10mm, rolled C10

±0.02mm

±0.05 deg Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

0.1mm or less

Actuator Specifications

Non-rotating accuracy of rod

Drive System Positioning Repeatability

Lost Motion

Rod diameter

Guide

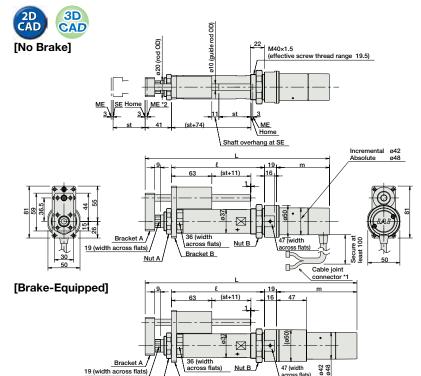
Options							
Name	Option code	See page	Standard price				
Brake	В	→ A-42	_				
Foot bracket	FT	→ A-49	_				
High-acceleration/deceleration (*1)	HA	→ A-50	_				
Home sensor (*2)	HS	→ A-50	_				
Power-saving (*3)	LA	→ A-52	_				
Non-motor end specification	NM	→ A-52	_				
Trunnion bracket (back)	TRR	→ A-58	_				

(\*1) The high-acceleration/deceleration option is not available for 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

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

## CAD drawings can be downloaded www.intelligentactuator.com



Bracket B

Nut A

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

#### ■ Dimensions and Weight by Stroke RCA-RGS4C (without brake)

	Stroke		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	
L	30W	Increm.	287.5	337.5	387.5	437.5	487.5	537.5	
3000	3000	Absol.	300.5	350.5	400.5	450.5	500.5	550.5	
	l		145	195	245	295	345	395	
	20W	Increm.		67.5					
m	2000	Absol.	80.5						
111	30W	Increm.	82.5						
	Absol.			95.5					
	Weigh	t (kg)	1.5	1.6	1.8	2.0	2.2	2.4	

### RCA-RGS4C (with brake)

		Stro	oke	50	100	150	200	250	300
		20W	Increm.	315.5	365.5	415.5	465.5	515.5	565.5
	L	2000	Absol.	328.5	378.5	428.5	478.5	528.5	578.5
	L	30W	Increm.	330.5	380.5	430.5	480.5	530.5	580.5
		3000	Absol.	343.5	393.5	443.5	493.5	543.5	593.5
	٤		145	195	245	295	345	395	
		20W Increm		110.5					
	m	2000	Absol.			12:	3.5		
	111	30W	Increm.	125.5					
		Absol.		138.5					
		Weigh	t (kg)	1.7	1.8	2.0	2.2	2.4	2.6

## ③ Applicable Controllers

Bracket A

19 (width across flats)

Bracket B

29 37

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 (width

Nut B

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colonald Value Tura	24	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					→ 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	_	→ P503
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 4.4A max. DC24V (Power-saving)	30W 1.3A rated 4.4A max. 24V (Power-saving)	_	
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points	312 points			-	
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.	_	→ 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 -N-0-0 ACON-SE-30I -N-0-0	Dedicated Serial Communication	64 points			_	
Program Control Type	-	ASEL-CS-1-20① (  )-(  )-2-0 ASEL-CS-1-30① (  )-(  )-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675
* This is fauth a single avis ACTI	* O to alte		LA. desde A. L	* [	H HLAH! C		1 /1	1

\*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.

# RCA-RGS3D

Robo Cylinder, Rod Type with Single Guide, ø32mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

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

C E RoHS

RCA -RGS3D-Series — Type

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

20 — Encoder type — Motor type 20: 20W Servo

motor

Lead 10: 10mm

5mm

2.5:2.5mm

Stroke 50: 50mm

(50mm pitch increments)

200: 200mm

Applicable controller A1:ACON ASEL A3:AMEC

ASEP

MSEP

N: None P: 1m S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

Cable length

**Power-saving** 

— Options

See Options below.

Notes on selection

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 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

Model number	Motor output (W)	Lead (mm)	Max. Loac 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	

■ 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	_

## 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)	_
	<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	
ltem	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

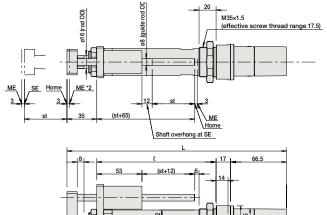


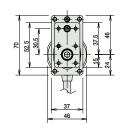


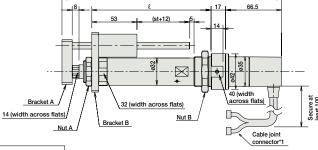
- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
   (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

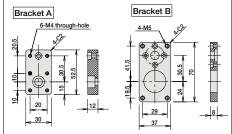
ME: Mechanical end SE: Stroke end

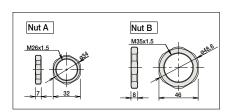
[No Brake]

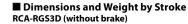












Stroke	50	100	150	200
L	258.5	308.5	358.5	408.5
l	140	190	240	290
Weight (kg)	0.9	1.1	1.2	1.3

RCA-RGS3D 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.

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-20SI①-⑪-2-1	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	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-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)	_	
Pulse Train Input Type (Differential Line Driver)	Ē.	ACON-PL-20SI①-⑪-2-0	Pulse train input type with differential line driver support	(—)		1.7A rated 3.4A max.	_	→ P631
Pulse Train Input Type (Open Collector)	ě	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.
\* (II) indicates I/O type (NP/PN).

\*Enter the code "LA" in ① when the power-saving specification is specified.
\*⑩ indicates number of axes (1 to 8).
\*⑫ indicates field network specification symbol.

# RCA-RGS4D

Robo Cylinder, Rod Type with Single Guide, ø37mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

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

RCA -RGS4D-— Type

— Encoder type -

\*Absolute encoder models can only use ASEL When the actuator is used with the simple absolute encoder, the model is considered an incremental model.

\*\*Mosorite\*\* motor\*\*

\*\*Total Control of the simple absolute encoder, the model is considered an incremental model.\*\*

I: Incremental

A: Absolute

Motor type Lead 20: 20W Servo

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

Notes on

Stroke

50: 50mm 300: 300mm (50mm pitch

increments)

ASEL A3:AMEC ASEP MSEP

Applicable controller Cable length A1:ACON N: None P: 1m

S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

> Technical References

**Power-saving** 

- Options

See Options below.



motor

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

### **Actuator Specifications**

#### ■ Leads and Payloads Motor output (W) Max. Load Capacity Lead Rated Model number Horizontal (kg) RCA-RGS4D-①-20-12-②-③-④-⑤ 12 3.0 0.5 18.9 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-①-30-12-②-③-④-⑤ 12 4.0 1.0 28.3 RCA-RGS4D-①-30-6-②-③-④-⑤ 6 9.0 2.5 56.6 RCA-RGS4D-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)

①Stroke

	Standard price						
<pre>②Stroke (mm)</pre>		①Encoder Type					
	Increr	nental	Abso	olute			
	Motor O	utput (W)	Motor Ou	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	<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.

⊚ 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.

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)

### Dimensional Drawings

## CAD drawings can be downloaded www.intelligentactuator.com

## For Special Orders

M40×1.5 (effective screw thread range 19.5)

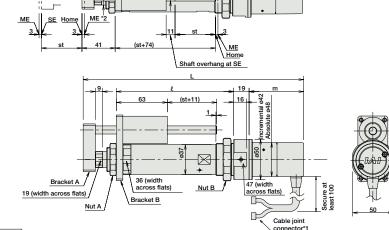


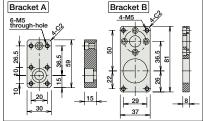


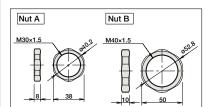
### [No Brake]

- (\*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







ø20 (rod OD)

## ■ Dimensions and Weight by Stroke

RCA-RGS4D (without brake)									
	Stroke			100	150	200	250	300	
	20W	Increm.	250.5	300.5	350.5	400.5	450.5	500.5	
L	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	
	3000	Absol.	278.5	328.5	378.5	428.5	478.5	528.5	
	l			195	245	295	345	395	
	20W	Increm.	45.5						
m	2000	Absol.	58.5						
30W Increm.			60.5						
	3000	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.

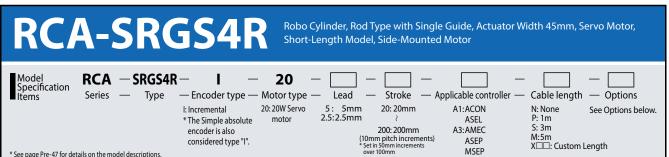
## ③ Applicable Controllers

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.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Solenoid Valve Type	W.	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		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-(Ŵ-~	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 20W 1.3A rated		→ P303	
Positioner type	H	ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	E12 points	512 points DC24V	4.4A max. 30W 1.3A rated	30W	_	
Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0	points	512 points		4.4A max. (Power-saving)	_		
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)		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.
\* (ii) indicates I/O type (NP/PN).

- \* ① 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.





**Power-saving** 

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.

MSEP

- (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 ■ Stroke and Maximum Speed (Note A) 50mm increments over 100mm. Motor Max. Load Capacity Rated Stroke Model number output (W thrust (N Horizontal (kg) Vertical (kg) RCA-SRGS4R-I-20-5-①-②-③-④ 5 9 (Note1) 2 41 20~200 5 250 (every 10mm) RCA-SRGS4R-I-20-2.5-①-②-③-④ (Note A) 2.5 18 (Note1) 5.5 81 2.5 125 (Unit: mm/s) Code explanation ① Stroke ② Applicable controller ③ Cable length ④ Options \*See page A-71 for details on push motion.

Notes on

selection

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

④ 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 FT4, GS4 and FT2 can be mounted. The foot bracket cannot be mounted in the GS3 direction.)

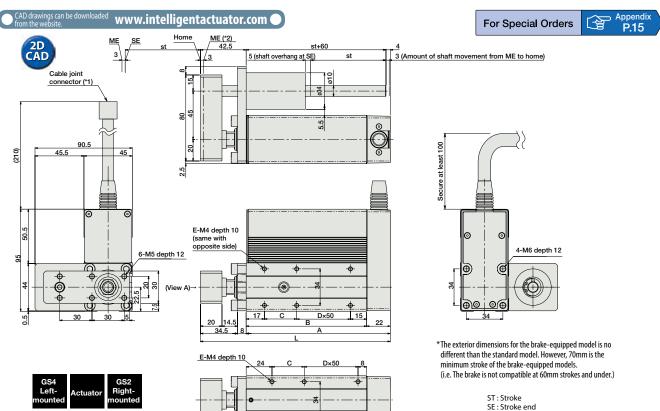
## ③ Cable Length

Туре	Cable symbol	Standard Price
Chambland	<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	<b>X11</b> (11m) ~ <b>X15</b> (15m)	_
	X16 (16m) ~ X20 (20m)	_

- \*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					
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



Guide mounting direction (as viewed from View A)

GS3

- (\*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.

<b>■</b> Dimensions and	Weight l	by Stroke	(Ad	d 0.2kg	for bra	ake equ	iipped)

ME: Mechanical end

Į	Stroke	20	30	40	50	60	70	80	90	100	150	200
ſ	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
ſ	В	62	72	82	92	102	112	122	132	142	192	242
ĺ	С	30	40	50	60	70	30	40	50	60	60	60
ı	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

## ②Applicable 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
Calamaid Valua Tima	- T	AMEC-C-20I①-⑪-2-1	①-①-2-1 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		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			_	→ F303
Positioner type		ACON-C-20I①-①-2-0	Positioning is possible for up to 512	512 points	DC24V		_	
Safety-Compliant Positioner Type		ACON-CG-20I①-①-2-0	points				_	
Pulse Train Input Type (Differential Line Driver)		ACON-PL-20I①-⑪-2-0	Pulse train input type with differential line driver support				_	→ 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

\*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).
\*® indicates number of axes (1 to 8). \*® indicates field network specification symbol.

RoHS

 $C \in$ 

# RCA-RGD3C

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

Model Specification Items RCA -RGD3C-

— Encoder type — Motor type I: Incremental

20 Lead 20: 20W Servo motor

Stroke

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

10: 10mm 5mm

2.5:2.5mm

50: 50mm 200: 200mm

Applicable controller A1:ACON ASEL

N: None P: 1m S: 3m A3:AMEC ASEP

M:5m X□□: Custom Length MSEP R□□: Robot Cable

Cable length

Options

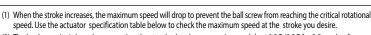
**Power-saving** 

See Options below.

For High Acceleration/Deceleration



Technical References



- (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

Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-RGD3C-I-20-10-①-②-③-④		10	4.0	1.2	36.2	
RCA-RGD3C-I-20-5-①-②-③-④	20	5	9.0	2.7	72.4	50~200 (every 50mm)
RCA-RGD3C-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				

Description

Single guide (guide rod diameter ø8mm, Ball bush type)

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

(Unit: mm/s)

P.5

0	
①Stroke (mm)	Standard price
50	_
100	_
150	_
200	_

## ③ 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)	_
	R04 (4m) ~ R05 (5m)	_
Robot Cable	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

Ball screw, ø8mm, rolled C10

±0.02mm

ø16mm

±0.05 deg Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

0.1mm or less

Actuator Specifications

Positioning Repeatability

Non-rotating accuracy of rod

Drive System

Lost Motion

Guide Rod diameter

(4) 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.

RCA-RGD3C

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

P.15

For Special Orders

## www.intelligentactuator.com

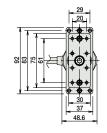


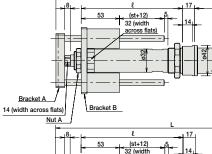
[No Brake]

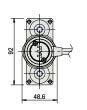
Dimensional Drawings

 (\*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.

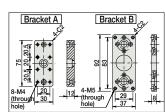
SE: Stroke end ME: Mechanical end ™35×1.5 (effective screw thread range 17.5) Nut B Cable joint connector \*1 Home Shaft overhang at SE 85.5







## [Brake-Equipped]



14	(width across flats)  Nut A	Bracket B
	Nut A	Nut B
	M26x1.5	M35x1.5 048.6

## ■ 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)							
Stroke	50	100					
	3165	366.5					

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.

, , , , , , , , , , , , , , , , , , , ,								
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calanaid Valua Tura	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	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	lune I	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 j	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 1.7A rated 5.1A max. C24V (Power-saving) 1.7A rated 3.4A max.		→ P563
Positioner type	E	ACON-C-20SI()-())-2-0	Positioning is possible for up to 512 points	512 points	512 points DC24V		_	
Safety-Compliant Positioner Type		ACON-CG-20SI①-①-2-0					_	
Pulse Train Input Type (Differential Line Driver)	C.	ACON-PL-20SI①	Pulse train input type with differential line driver support				_	→ 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-1-20SI①-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675
	N France			' '				→ P675

\*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.
\* ⑩ indicates number of axes (1 to 8).
\* ⑩ indicates field network specification symbol.

RoHS

# RCA-RGD4C

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

Model Specification Items RCA -RGD4C-

— Encoder type -I: Incremental

A: Absolute

\* Absolute encoder models can 30: 30W Servo 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 type Lead 20: 20W Servo 12:12mm motor 6: 6mm

3: 3mm

50: 50mm 300: 300mm increments)

Stroke

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

**Power-saving** 

- Options

See Options below.

For High Acceleration/Deceleration

(\*1) Except all 20W models and 30W 3mm 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 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.

Drive System

Guide Rod diameter

Positioning Repeatability Lost Motion

Non-rotating accuracy of rod

OIN

Notes on

## ①Encoder Type/②Stroke

	Standard price				
		①Encod	der Type		
<pre>②Stroke (mm)</pre>	Incren	nental	Abso	olute	
	Motor Ou	ıtput (W)	Motor Ou	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	R06 (6m) ~ R10 (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)

#### (5) 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 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.

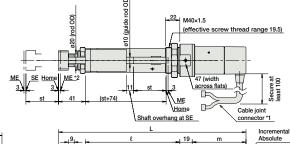
<sup>\*</sup> See page A-59 for cables for maintenance.

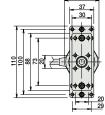
Dimensional Drawings

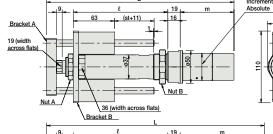
## CAD drawings can be downloaded www.intelligentactuator.com

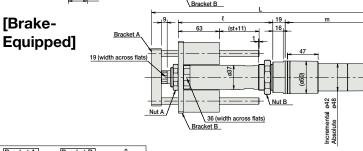


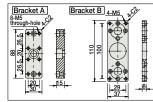
## [No Brake]

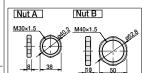












## For Special Orders



- (\*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

SE: Stroke end

#### ■ Dimensions and Weight by Stroke RCA-RGD4C (without brake)

[		Stroke		50	100	150	200	250	300
ſ		20W	Increm.	272.5	322.5	372.5	422.5	472.5	522.5
١	L	2000	Absol.	285.5	335.5	385.5	435.5	485.5	535.5
١	_	30W	Increm.		337.5				
١		3000	Absol.	300.5	350.5	400.5	450.5	500.5	550.5
		l		145	195	245	295	345	395
		20W Increm.		67.5					
١	m	2000	Absol.			80	).5		
١	1111	30W	Increm.			82	.5		
ı		3000	Absol.	95.5					
		Weigh	t (kg)	1.8	2.0	2.2	2.4	2.6	2.8

## RCA-RGD4C (with brake)

	Stroke		50	100	150	200	250	300	
	20W	Increm.	315.5	365.5	415.5	465.5	515.5	565.5	
L	2000	Absol.	328.5	378.5	428.5	478.5	528.5	578.5	
L	30W	Increm.	330.5	380.5	430.5	480.5	530.5	580.5	
	3000	Absol.	343.5	393.5	443.5	493.5	543.5	593.5	
	l		145	195	245	295	345	395	
	20W	Increm.	110.5						
m	2000	Absol.			12:	3.5			
1111	30W	Increm.	125.5						
	3000	Absol.	138.5						
	Weight (kg)			2.2	2.4	2.6	2.8	3.0	

## 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.

External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
The state of the s	AMEC-C-20I (  ) - (  ) - 2-1 AMEC-C-30I (  ) - (  ) - 2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537
	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points			_	→ P547
lune"	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected				→ P563	
iiii J	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P503
E I	ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512 points	512 points			_	
	ACON-CG-20(  )-(  )-2-0 ACON-CG-30(  )-(  )-2-0					_	
	ACON-PL-20I (  ) - (  ) - 2-0 ACON-PL-30I (  ) - (  ) - 2-0	Pulse train input type with differential line driver support	( )			_	→ P631
ė	ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support	(—)			_	
	ACON-SE-201  -N-0-0 ACON-SE-301  -N-0-0	Dedicated Serial Communication	64 points			_	
	ASEL-CS-1-20① (  )-(  )-2-0 ASEL-CS-1-30① (  )-(  )-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points			_	→ P675
		AMEC-C-20 ①-⑪-2-1   AMEC-C-30 ①-⑪-2-1   ASEP-C-30 ①-⑪-2-0   ASEP-C-30 ①-⑪-2-0   MSEP-C-⑩-~-⑪-2-0   MSEP-C-⑩-~-⑪-2-0   ACON-C-30 ①-⑪-2-0   ACON-C-30 ①-⑪-2-0   ACON-PL-20 ①-⑪-2-0   ACON-PL-30 ①-⑪-2-0   ACON-PD-30 ①-⑪-2-0   ACON-PC-30 ①-⑪-2-0   ACON-PC-30 ①-⑪-2-0   ACON-PC-30 ①-⑪-2-0   ACON-PC-30 ①-⑪-2-0   ACON-SE-20 ①-N-0-0   ACON-SE-30 ①-N-0-0	AMEC-C-20I①-①-2-1 AMEC-C-30I①-①-2-1 ASEP-C-20I①-①-2-0 ASEP-C-30I①-①-2-0 ASEP-C-30I①-①-2-0 ASEP-C-30I①-①-2-0 ASEP-C-30I①-①-2-0 ASEP-C-①-~-②-0-0  MSEP-C-②②-0-0  ACON-C-20I①-①-2-0 ACON-C-30I①-①-2-0 ACON-CG-30I①-①-2-0 ACON-PL-30I①-①-2-0 ACON-PD-30I①-②-0-2-0 ACON-PO-30I①-②-0-2-0 ACON-SE-30I①-N-0-0 ACON-SE-30I①-N-0-0 ACON-SE-30I①-N-0-0 ACON-SE-30I①-N-0-0 ASEL-CS-1-20①①-①-2-0 ASEL-CS-1-30①①-①-2-0 ASEL-CS-1-30①0-00-2-0	AMEC-C-201①-@-2-1 AMEC-C-301①-@-2-1 Basy-to-use controller, even for beginners  Simple controller operable with the same signal as a solenoid valve  MSEP-C-@@-2-0 MSEP-C-@@-2-0 Positioner type based on PIO control, allowing up to 8 axes to be connected  MSEP-C-@@-2-0 Field network-ready positioner type, allowing up to 8 axes to be connected  ACON-C-201①-@-2-0 ACON-C-301①-@-2-0 ACON-CG-301①-@-2-0 ACON-PL-201①-@-2-0 ACON-PL-301①-@-2-0 ACON-PO-301①-@-2-0 ACON-PO-301①-@-2-0 ACON-PO-301①-@-2-0 ACON-PO-301①-@-2-0 ACON-SE-301①-N-0-0 Dedicated Serial Communication  ASEL-CS-1-20①①-@-2-0 Programmed operation is possible.	AMEC-C-201①-@-2-1 AMEC-C-301①-@-2-1 Basy-to-use controller, even for beginners  ASEP-C-201①-@-2-0 ASEP-C-301①-@-2-0 ASEP-C-301①-@-2-0 ASEP-C-301①-@-2-0 ASEP-C-\(\text{\	AMEC-C-201①-@-2-1 AMEC-C-301①-@-2-1 Easy-to-use controller, even for beginners  ASEP-C-201①-@-2-0 ASEP-C-301①-@-2-0 ASEP-C-301①-@-2-0 ASEP-C-301①-@-2-0  MSEP-C-\(\text{@}\)	AMEC-C-201(  )-(  )-2-1

\*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). \*② indicates number of axes (1 to 8). \*② indicates field network specification symbol.

RCA2-RGD4C **248** 

# RCA-RGD3D

Robo Cylinder, Rod Type with Double Guide, ø32mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

[C E]

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

RCA -RGD3D-I: Incremental

20 — Encoder type — Motor type 20: 20W Servo

motor

\* The Simple absolute

considered type "I".

encoder is also

Lead

10: 10mm

2.5:2.5mm

5mm

Stroke 50: 50mm

200: 200mm

A1:ACON ASEL A3:AMEC (50mm pitch increments) ASEP

Applicable controller Cable length

MSEP

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

R□□: Robot Cable





Notes or

Technical References



— Options

See Options below.

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 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.

6.2

## Actuator Specifications ■ Leads and Payloads

Max. Load Capacity Motor Lead Rated Stroke Model number output (W) (mm) thrust (N) (mm) izontal (kg) Vertical (kg) RCA-RGD3D-I-20-10-①-②-③-④ 10 4 1.2 36.2 50~200 RCA-RGD3D-I-20-5-①-②-③-④ 5 9 20 2.7 72.4 (every 50mm) RCA-RGD3D-I-20-2.5-①-②-③-④ 2.5 18 144.8

■ 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	_

## 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.

#### **4** Options Standard price Option code See page Foot bracket → 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

Actuator specifications	
ltem	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)

<sup>\*</sup>The home sensor (HS) cannot be used on the non-motor end models

## CAD drawings can be downloaded www.intelligentactuator.com

For Special Orders

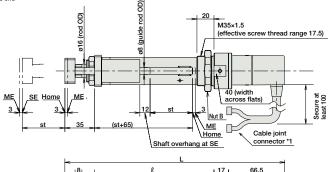


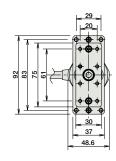


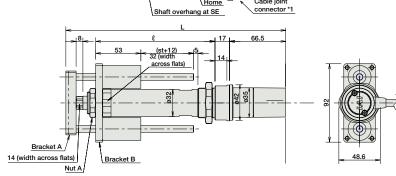
- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

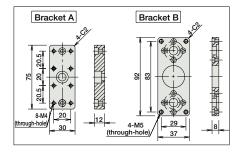
ME: Mechanical end SE: Stroke end

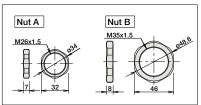
[No Brake]











### ■ Dimensions and Weight by Stroke RCA-RGD3D (without brake)

mert messe (miniment sinne)								
Stroke	50	100	150	200				
L	258.5	308.5	358.5	408.5				
l	140	190	240	290				
Weight (kg)	1.1	1.2	1.4	1.5				

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.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colon aid Value Tura	No.	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	True I	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				→ ₹563
Positioner type		ACON-C-20SI()-())-2-0	Positioning is possible for up to 512	E12 noints		(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)		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)	t	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 simple only ACT * Total the gods "I A" in O when the never spring and iffection is an eiffed * @ in disease (O type (ND/DN))								

\*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.

RCA-RGD3D **250** 

# RCA-RGD4D

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 24V Servo Motor, Built-In Model

Model Specification Items

CE RoHS

RCA -RGD4D-Series — Type

— Encoder type – Motor type

Absolute encoder models can only use ASEL. When the actuator is used with the simple absolute encoder, the model is considered an incremental model.

I: Incremental

A: Absolute \* Absolute encoder models can

Lead

. Notes or

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

Stroke 50: 50mm

300: 300mm (50mm pitch increments)

Applicable controller -A1:ACON ASEL

N: None P: 1m S: 3m A3:AMEC

Cable length

M:5m X□□: Custom Length ASEP MSEP R□□: Robot Cable

**Power-saving** 

Options

See Options below.



20: 20W Servo

motor

References

**Technical** 

- (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

	Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	Vertical (kg)	Rated thrust (N)	Stroke (mm)	Lead	
	RCA-RGD4D-①-20-12-②-③-④-⑤		12	3.0	0.5	18.9		12	
Ī	RCA-RGD4D-①-20-6-②-③-④-⑤	20	6	6.0	1.5	37.7		6	
ŀ	RCA-RGD4D-①-20-3-②-③-④-⑤		3	12.0	3.5	75.4	50~300	3	
Ì	RCA-RGD4D-①-30-12-②-③-④-⑤		12	4.0	1.0	28.3	(every 50mm)		
ĺ	RCA-RGD4D-①-30-6-②-③-④-⑤	30	6	9.0	2.5	56.6			
Ī	RCA-RGD4D-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)

## ①Encoder Type/②Stroke

	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	_	_	_	_			

#### (A) 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	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)	_				
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	_				
	R16 (16m) ~ R20 (20m)	_				

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

#### (5) Options

0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -			
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, 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)

## wings can be downloaded www.intelligentactuator.com

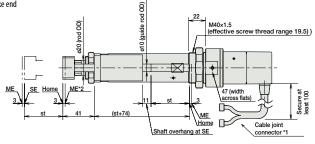
For Special Orders

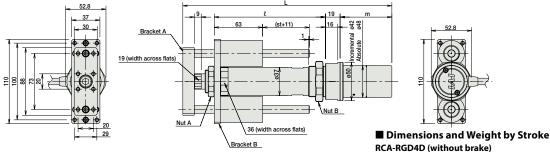


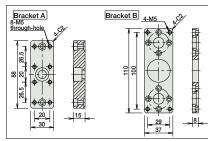


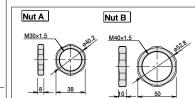
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

SE: Stroke end ME: Mechanical end [No Brake]









RCA	CA-RGD4D (without brake)							
	Stro	ke	50	100	150	200	250	300
L	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			195	245	295	345	395
	20W	Increm.	45.5					
m	2000	Absol.	58.5					
m	30W	Increm.	60.5					
		Absol.	73.5					
	Weight (kg)			1.8	2.1	2.3	2.5	2.7

RCA-RGD4D models are not equipped with a brake.

## 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.

	Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
	Solenoid Valve Type ——	W.	AMEC-C-20I (  ) - (  ) -2-1 AMEC-C-30I (  ) - (  ) -2-1	Easy-to-use controller, even for beginners	А	AC100V	2.4A rated	_	→ P537
		1	ASEP-C-20I(  )-(  )-2-0 ASEP-C-30I(  )-(  )-2-0	Simple controller operable with the same signal as a solenoid valve	3 points	3 points	(Standard) 20W 1.3A rated 4.4A max. 30W 1.3A rated 4.4A max. (Power-saving) 20W 1.3A rated 2.5A max. 30W 1.3A rated 2.2A max.	-	→ P547
So	lenoid valve multi-axis type PIO specification	mir	MSEP-C(\(\varphi\)-~(\(\mathbb{\pi}\)-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected				_	→ P563
So	enoid 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-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512 points	512 points			1	→ P631
	Safety-Compliant Positioner Type		ACON-CG-20I(  )-(  )-2-0 ACON-CG-30I(  )-(  )-2-0					-	
	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	(—)			1	
	Pulse Train Input Type (Open Collector)		ACON-PO-20I(  )-(  )-2-0 ACON-PO-30I(  )-(  )-2-0	Pulse train input type with open collector support				-	
S	erial Communication Type		ACON-SE-20I①-N-0-0 ACON-SE-30I①-N-0-0	Dedicated Serial Communication	64 points			_	
	Program Control Type		ASEL-CS-1-20①(  )-(  )-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).

\* ① 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.

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

# RCA-RGD3R

Robo Cylinder, Rod Type with Double Guide, ø32mm Diameter, 24V Servo Motor, Side-mounted Motor

Model Specification Items

CE

RCA -RGD3R-

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

20 — Encoder type — Motor type

20: 20W Servo

Lead 10: 10mm 5mm

2.5:2.5mm

Stroke 50: 50mm 200: 200mm

(50mm pitch increments)

Applicable controller A1:ACON ASEL

A3:AMEC ASEP MSEP

N: None P: 1m S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

Cable length

**Power-saving** 

Options

See Options below.



Technical References



- 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 Specifications

■ Leads and Payloads Motor Max. Load Capacity Rated Stroke Lead Model number output (W) Horizontal (kg) | Vertical (kg) RCA-RGD3R-I-20-10-10-2-3-4 10 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

■ Stroke and Maximum Speed					
Stroke Lead	50~200 (every 50mm)				
10	500				
5	250				
2.5	125				

2.5 

18.0

Notes on

01.2	
(Unit	:: mm/s

#### ①Stroke

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

#### ③ Cable Length

144.8

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.

#### 4 Options Actuator Specifications

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	_
Back-mounting plate	RP	→ A-54	_

<sup>\*</sup>The home sensor (HS) cannot be used on the non-motor end models.

Description Ball screw, ø8mm, rolled C10 Drive System Positioning Repeatability ±0.02mm Lost Motion 0.1mm or less Material: Aluminum, white alumite treated Base Non-rotating accuracy of rod ±0.05 deg Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

#### Dimensional Drawings

## ings can be downloaded www.intelligentactuator.com

## For Special Orders

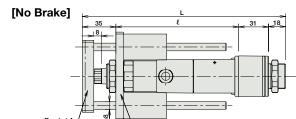


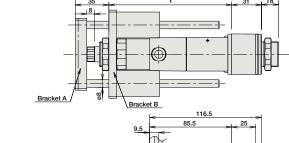


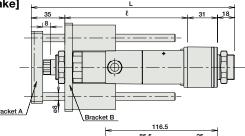


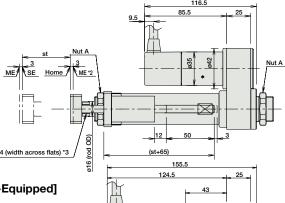


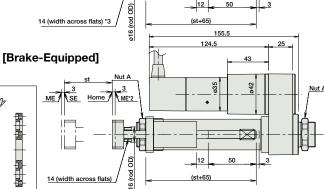
Bracket A









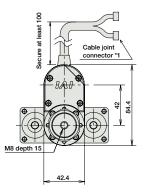


(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

(\*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



## ■ Dimensions and Weight by Stroke

- !	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 brake)						
Stroke	50	100	150	200		
L	212	262	312	362		
l	128	178	228	278		
Weiaht (ka)	1.4	1.5	1.7	1.8		

### ② Applicable Controllers

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.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Calamaid Value Time	No.	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 l	MSEP-C	Positioner type based on PIO control, allowing up to 8 axes to be connected					→ P563
Solenoid valve multi-axis type Network specification	HH .	MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points			_	→ P303
Positioner type		ACON-C-20SI①-⑪-2-0	Positioning is possible for up to 512	e for up to 512		(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)		ACON-PL-20SI①-⑪-2-0	Pulse train input type with differential line driver support	(—)		1.7A rated 3.4A max.	_	→ P631
Pulse Train Input Type (Open Collector)	ė	ACON-PO-20SI (_)-(_)-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).
\*⑩ indicates number of axes (1 to 8). \* ⑩ indicates field network specification symbol.

RCA-RGD3R **254** 

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

# **RCA-RGD4R**

Robo Cylinder, Rod Type with Double Guide, Actuator Width 37mm, 24V Servo Motor, Side-mounted Motor

Model Specification Items

RCA -RGD4R-Series — Type

Encoder type

I: Incremental

A: Absolute

\* Absolute encoder models can



20: 20W Servo

motor

30: 30W Servo

motor



12:12mm

6: 6mm

3: 3mm

Stroke 50: 50mm

300: 300mm

(50mm pitch increments)

Applicable controller A1:ACON

N: None ASEL A3:AMEC

Cable length Options See Options below.

**Power-saving** 

P: 1m S: 3m

M:5m X□□: Custom Length ASEP MSEP R□□: Robot Cable



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 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. Load 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)

①Encoder Type/②Stroke

	Standard price						
		①Encoder Type					
<pre>②Stroke (mm)</pre>	Incremental		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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

<b>Options</b>			
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	_
Back-mounting plate	RP	→ A-54	_

<sup>\*</sup>The home sensor (HS) cannot be used on the non-motor end models.

RCA-RGD4R

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)			

#### Dimensional Drawings

### www.intelligentactuator.com

ME

19 (width across flats)

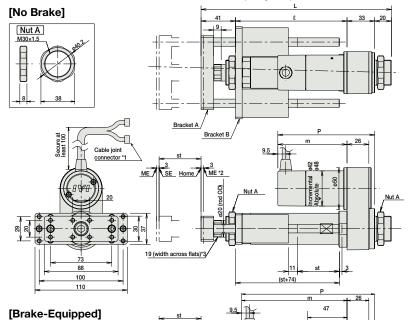




(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

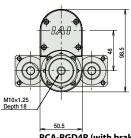
ME : Mechanical end SE: Stroke end

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





,										
	Stroke		50	100	150	200	250	300		
	20W	Increm.	227	277	327	377	427	477		
L	2000	Absol.	227	277	327	377	427	477		
L	2014/	Increm.	227	277	327	377	427	477		
	30W	Absol.	227	277	327	377	427	477		
	l		133	183	233	283	333	383		
	20W	Increm.			67	.5				
	2000	Absol.	80.5							
m	30W	Increm.	82.5							
	SUVV	Absol.	95.5							
	20W	Increm.			10	0.5				
Р	2000	Absol.			11:	3.5				
P	30W	Increm.			11:	5.5				
	3000	Absol.			12	8.5				
	Weigh	t (kg)	1.9	2.2	2.3	2.6	2.7	3.0		



#### RCA-RGD4R (with brake)

	Stroke		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		
	20W	Increm.	110.5							
	2000	Absol.	123.5							
m	30W	Increm.	125.5							
	3000	Absol.	138.5							
	20W	Increm.	143.5							
P	2000	Absol.			150	6.5				
-	30W	Increm.			15	8.5				
	3000	Absol.			17	1.5				
	Weigh	t (kg)	2.1	2.4	2.5	2.8	2.9	3.2		

### ③ Applicable Controllers

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.

(st+74

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Colone id Valva Tuno	1	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		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	dine"	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		MSEP-C	Field network-ready positioner type, allowing up to 8 axes to be connected	256 points		(Standard) 20W 1.3A rated 4.4A max. 30W 1.3A rated	_	7 7503
Positioner type		ACON-C-20I(  )-(  )-2-0 ACON-C-30I(  )-(  )-2-0	Positioning is possible for up to 512	512 int-			_	
Safety-Compliant Positioner Type	420	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. 30W 1.3A rated 2.2A max.	_	→ 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	(—)			_	
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-1-20①①-⑩-2-0 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.
\* (||) indicates I/O type (NP/PN).

\* ① indicates encoder type (I: incremental, A: absolute)
\* ② 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.

For Special Orders

# RCA-SRGD4R

I: Incremental

\* The Simple absolute

considered type "I".

encoder is also

Robo Cylinder, Rod Type with Double Guide, Actuator Width 45mm, Servo Motor, Short-Length Model

Model Specification Items

C E RoHS

RCA -SRGD4R-Series — Type

20 — Encoder type — Motor type

20: 20W Servo

motor

Lead

Stroke 5: 5mm 2.5:2.5mm 20: 20mm

— Applicable controller — A1:ACON ASEL 200: 200mm

A3:AMEC ASEP MSEP

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

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 2.5mm-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 (mm)	Max. Load Horizontal (kg)	d Capacity  Vertical (kg)	Rated thrust (N)	Stroke (mm)	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	20	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.								

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

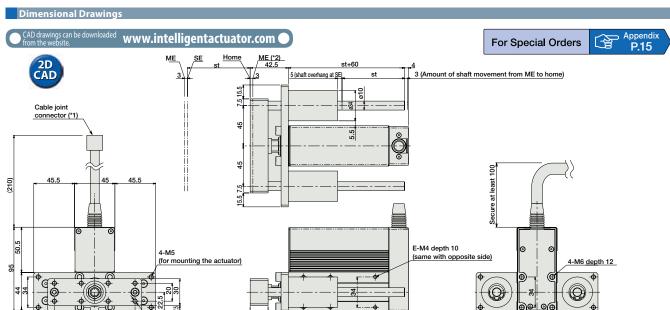
<b>4</b> Options			
Name	Option code	See page	Standard price
Brake	В	→ A-42	
Flange bracket (back)	FLR	→ A-46	_
Power-saving	LA	→ A-52	_
Non-motor end specification	NM	→ A-52	_

*The l	brake	is	avai	lable	for	strokes	of 70mm	or m	ore

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

<sup>\*</sup>The standard cable is the motor-encoder integrated 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	±0.05 deg						
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)						



Dx50

ST : Stroke

SE: Stroke end ME : Mechanical end

Stroke 20 30 40 50 60 70 80 90 100 150 200

E-M4 depth 10 ■ Dimensions and Weight by Stroke (Add 0.2kg for brake equipped)

34.5 8

\*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.)

② Applicable Controllers

(*1) C	onnect the motor-encode	r integrated	cable here. S	iee page A-591	or details on ca	ables.
--------	-------------------------	--------------	---------------	----------------	------------------	--------

8-M5 depth 12

(for mounting work piece)

(*2)	After homing, the slider moves to the ME, therefore, please watch for any interference
. ,	with surrounding objects.

e. The brake is not compatible at commissiones and under.)	24 C D×50 8	Stroke	20	30	40	50	60	70	80	90	100	150	200
	24 H O H DX30 101	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
Connect the motor-encoder integrated cable here. See page A-59 for details on cables.		В	62	72	82	92	102	112	122	132	142	192	242
After homing, the slider moves to the ME, therefore, please watch for any interference		С	30	40	50	60	70	30	40	50	60	60	60
with surrounding objects.		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)	1.42	1.49	1.56	1.64	1.71	1.79	1.86	1.94	2.01	2.38	2.75

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		
Solonoid Volva Tyma	Batter	AMEC-C-20I①-①-2-1	Easy-to-use controller, even for beginners		AC100V	2.4A rated	_	→ P537		
Solenoid Valve Type	ASEP-C-201①-①-2-0 Simple controller operable with the same signal as a solenoid valve 3 points				→ P547					
Solenoid valve multi-axis type PIO specification	l more	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-20I①-①-2-0	Positioning is possible for up to 512	E12 points		(Standard) 1.3A rated	_			
Safety-Compliant Positioner Type		ACON-CG-20I(]-( )-2-0	points	512 points	DC24V	4.4A max. (Power-saving)	1			
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)	· te	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). \* ① indicates number of axes (1 to 8). \* ② indicates field network specification symbol.



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 -Series — Type

60 — Encoder type — Motor type

60:60W Servo

motor

Notes or

electior

I:Incremental

specification

Lead

10: 10mm 5: 5mm

2.5:2.5mm

Stroke 50: 50mm 75: 75mm

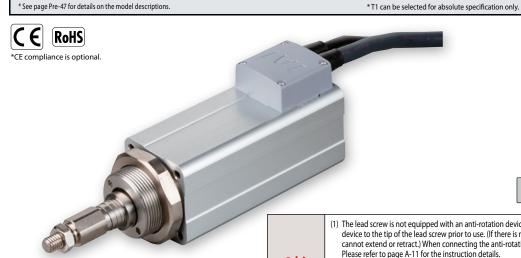
Applicable controller -T1\*: XSEL-J/K T2:SCON-CA

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

- Options See options below.

SSEL XSEL-P/Q

M:5m X□□: Custom Length R□□: Robot Cable



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

Technical References

- (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)		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
RCS2-RN5N-I-60-10-①-T2-②-③	60		10	5	1.5	89		
RCS2-RN5N-I-60-5-①-T2-②-③		Ball screw		5	10	3	178	±0.02
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

(Unit: mm/s)

### ① Stroke

U 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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

## ③ Options 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	_

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

For Special Orders

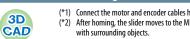
Note:

This product doesn't come with the screw stopper.

P.15





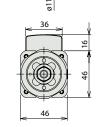


(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

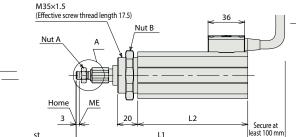
with surrounding objects. ME : Mechanical end SE: Stroke end

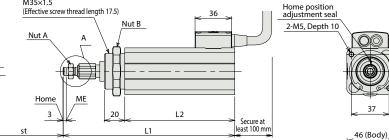
(\*3) The orientation of the nut varies depending on the product.

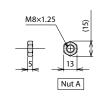
Please add a stopper before use. M8 (Effective screw thread length 12) (300)Cable joint connector (\*) Detailed view A

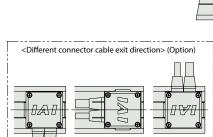


2D CAD









(With Brake size)

\* Brake-equipped models are heavier by 0.26kg.

45.6 (Brake)

position adjustment seal

■ Dimensions a	and Weight	by Stroke
Stroke	50	75
L1	168.5	193.5
L2	108	133
Weight (kg)	1.0	1.1

#### Applicable Controllers

Nut B

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															
Solenoid mode		SCON CA COLNID 2 ©	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC	218 VA max.	_	B. 10											
Network mode		Conta	Total Control		Company of the Compan			Constitution of the Consti	County of the Co	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	200 VAC 3-phase		200 VAC	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		XSEL-(I)-1-60I-N1-EEE-2-3	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695											

Model number: K3 (Exits from the right)

\*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). \*(ii) indicates the XSEL type (P/Q).

(Note) The incremental specification of this model can not be connected to XSEL-J/K, 5 and 6-axis types of XSEL-P/Q, XSEL-R/S, MSCON, and SCON-CAL/CGAL.

Type

Mini

Standard

Do

Controllers

Table/ Arm/ Flat Type

Mini

Gripper. Rotary

> Linear Servo Type

Cleanroom Type

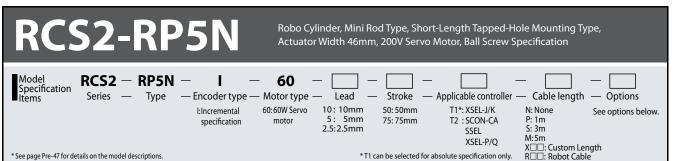
Splash Proo Type

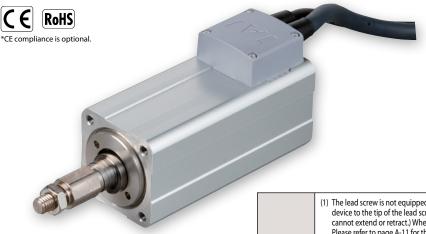
> Pulse Moto

Servo Moto (24V

Servo Motor (200V)

Linear Servo Motor





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

ı	Ecaus 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)
	RCS2-RP5N-I-60-10-10-T2-2-3	60		10	5	1.5	89				
	RCS2-RP5N-I-60-5-①-T2-②-③		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				

Notes on

election

■ Stroke and Maximum Speed

Technical References

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

\*The values enclosed in < > apply to (Unit: mm/s)

①Stroke	
Stroke (mm)	Standard price
50	_

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)	К3	→ A-51	_					

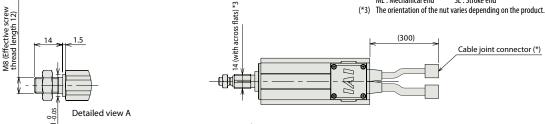
Actuator Specifications						
ltem	Description					
Drive System	Ball screw, ø8mm, rolled C10					
Lost Motion	0.1mm or less					
Frame	Material: Aluminum, white alumite treated					
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)					
Service life	5,000km or 50 million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

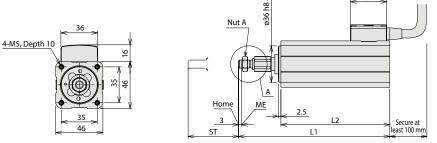
For Special Orders

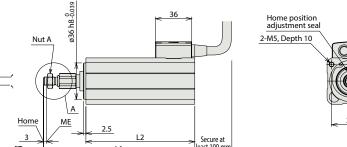
P.15

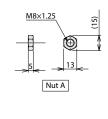


 (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. ME: Mechanical end SE: Stroke end

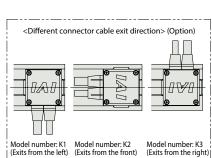


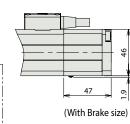






Dimensional Drawings







\* Brake-equipped models are heavier by 0.26kg.

46 (Body) 45.6 (Brake)

#### ■ Dimensions and Weight by Stroke

position adjustment seal

- Dillicinsions and Weight by Stroke						
Stroke	50	75				
L1	150	175				
L2	108	133				
Weight (kg)	0.85	1.0				

#### Applicable Controllers

RCS2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application.    Name								
Name	view	Model number	Features	positioning points	power	capacity	price	page
Positioner Type			Up to 512 positioning points are supported	512 points				
Solenoid mode	F	SCON CA COL NID 2 (C)	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC	218 VA max.	_	DC 10
Network mode	in the second	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	3-phase 200 VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes		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).

(Note) The incremental specification of this model can not be connected to XSEL-J/K, 5 and 6-axis types of XSEL-P/Q, XSEL-R/S, MSCON, and SCON-CAL/CGAL.

\*CE compliance is optional



IVIIII

Standard

Тур

Mir

Standar

Controllers Integrated

> Table/ Arm/ Flat Type

Mini

Gripper/ Rotary

> Linear Servo Type

Clean roon Type

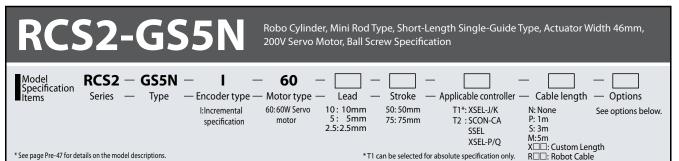
Splash Proo Type

> Pulse Moto

Servo Motor (24V

Servo Motor (200V)

Linear Servo Motor





(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-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

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-GS5N-I-60-10-①-T2-②-③			10	5	1.5	89		
RCS2-GS5N-I-60-5-①-T2-②-③	60	Ball screw	5	10	3	178	±0.02	50 75
RCS2-GS5N-I-60-2.5-①-T2-②-③			2.5	20	6	356		

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

### ■ Stroke and Maximum Speed

Technical References

P.5

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

\* The values enclosed in < > apply to (Unit: mm/s) vertical settings.

①Stroke	
Stroke (mm)	Standard price
50	I

#### 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	R06 (6m) ~ R10 (10m)	_
Ì	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

#### ③ Options See page | Standard price Option code 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) → A-51

#### 

ME : Mechanical end

For Special Orders

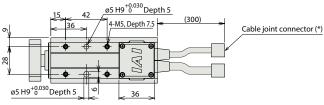


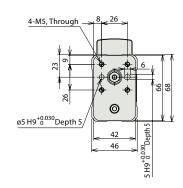


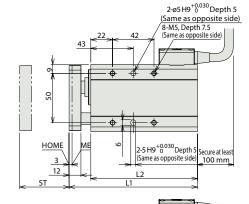


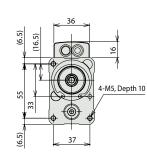
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

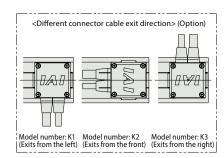
SE : Stroke end

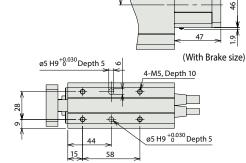




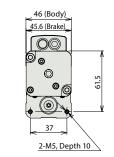








23



\* Brake-equipped models are heavier by 0.26kg.

## ■ Dimensions and Weight by Stroke

- Difficultions and Weight by Stroke						
Stroke	50	75				
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

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	F		Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC	218 VA max.  * Varies depending on the controller. Refer to the operation	_	B. 10
Network mode	Charle	SCON-CA-60I-NP-2-①	Can be moved by direct numerical specification	768 points	Single- phase 200 VAC			→ P643
Pulse-train input control mode			Can be controlled using pulse trains	(—)			_	
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		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). \*① indicates the XSEL type (P/Q).

(Note) The incremental specification of this model can not be connected to XSEL-J/K, 5 and 6-axis types of XSEL-P/Q, XSEL-R/S, MSCON, and SCON-CAL/CGAL.

RCS2-GS5N **264** 



Robo Cylinder, Mini Rod Type, Short-Length Double-Guide Type, Actuator Width 46mm, 200V Servo Motor, Ball Screw Specification

Model Specification Items

RCS2 - GD5N -Series — Type

— Encoder type — Motor type

60:60W Servo

motor

I:Incremental

specification

60 Lead

2.5:2.5mm

Stroke 10: 10mm 50: 50mm 5: 5mm

Applicable controller -75: 75mm

T1\*: XSEL-J/K T2:SCON-CA SSEL

N: None P: 1m S: 3m

Cable length

- Options

See options below.

M:5m X□□: Custom Length XSEL-P/Q \*T1 can be selected for absolute specification only. R□□: Robot Cable

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

 $C \in$ RoHS \*CE compliance is optional.



Technical References

. Notes on

- (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.
- $(3) \ \ \text{If the actuator is used vertically, pay attention to rod contact because the rod will come down}$ 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. Load Horizontal (kg)		Rated thrust (N)	Positioning Repeatability (mm)	Stroke (mm)
RCS2-GD5N-I-60-10-①-T2-②-③			10	5	1.5	89		
RCS2-GD5N-I-60-5-①-T2-②-③	60	Ball screw	5	10	3	178	±0.02	50 75
RCS2-GD5N-I-60-2.5-①-T2-②-③			2.5	20	6	356		

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 (Unit: mm/s)

#### ① Stroke

© 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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

## ③ Options Option code | See page | Standard price

- turre	populon code	l acc bage	pramaa a pme
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	_

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

For Special Orders

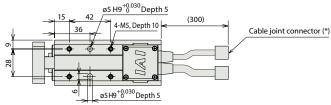


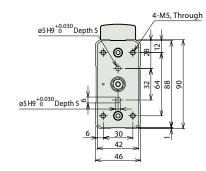


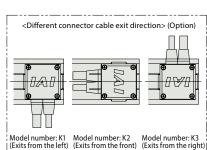


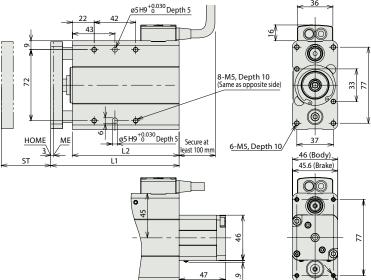
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

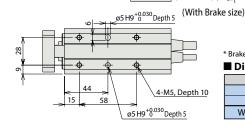
ME: Mechanical end SE: Stroke end











\* Brake-equipped models are heavier by 0.26kg.

#### ■ Dimensions and Weight by Stroke Stroke 155 133 130 108 Weight (kg) 1.6 1.9

4-M5, Depth 10

#### Applicable Controllers

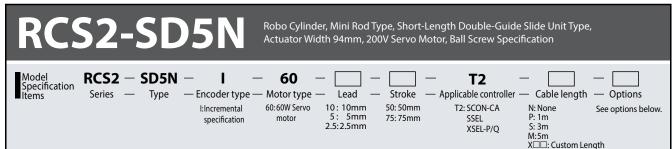
KLSZ series actuators can be operated with the controllers indicated below. Select the type according to your intended application.									
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page	
Positioner Type			Up to 512 positioning points are supported	512 points					
Solenoid mode		SCON CA COLAID 2 (2)	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC	218 VA max.	_	. 0440	
Network mode		Contract Con	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		XSEL-(II)-1-60I-N1-EEE-2-3	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695	

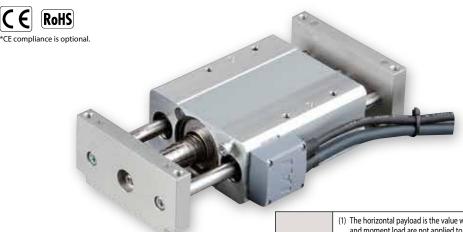
\*The values of SSEL and XSEL assume a 1-axis specification. \*() indicates the type of power-supply voltage (1: 100 V/2: Single-phase 200 V). \*() indicates the XSEL type (P/Q).

(Note) The incremental specification of this model can not be connected to XSEL-J/K, 5 and 6-axis types of XSEL-P/Q, XSEL-R/S, MSCON, and SCON-CAL/CGAL.

RCS2-GD5N **266** 

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





Technical References

R□□: Robot Cable



(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  $2.5 mm\text{-lead}) \ horizontally \ and \ 0.2 G \ vertically. The \ acceleration \ limit \ is \ the \ value \ indicated \ above.$
- (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. Loac 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 ① Stroke ② Cable length ③ Options \*See page A-71 for details on push motion.

Notes or

### ■ 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)

#### 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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	

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

## **3Options**

Option code	See page	Standard price
CE	→ A-42	_
K1	→ A-51	_
К3	→ A-51	_
	CE K1	<b>K1</b> → A-51

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

For Special Orders

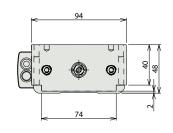


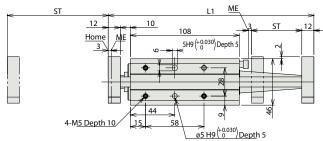


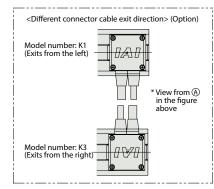


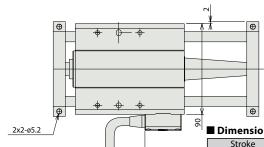
(\*1) Connect the motor-encoder integrated cable here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

8-M5 Depth 10 (Same as opposite side) ME: Mechanical end SE: Stroke end Cable joint connector \* 2-ø5 H9  $\binom{+0.030}{0}$  Depth 5 (Same as opposite side) 2 2-5 H9 (+0.030) Depth 5 (Same as opposite side) 2×2-ø5 H9 <sup>+0.030</sup> Depth 5 2×2-M6 Depth 12









Secure at least 100 mm

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

#### Applicable Controllers

RCS2 series actuators can be operated with the controllers indicated below. Select the type according to your intended application

NCS2 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	ning points are 512 points						
Solenoid mode	n i	SCON-CA-60I-NP-2-①	Can be operated with the same controls used for solenoid valves	7 points	Single- phase 100 VAC 218 V	phase 00 VAC * Varies depending on the controller. Refer to the operation manual for details.	_			
Network mode			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	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. \* ① 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/6-axis), XSEL-R/S type, or MSCON.

RCS2-SD5N **268** 

 $C \in$ 

# CS2-RA4C

Robo Cylinder, Rod Type, ø37mm Diameter, 200V Servo Motor, Coupled

Model Specification Items RCS2 - RA4C -

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

RoHS

\*CE compliance is optional.

Series — Type

— Encoder type -I:Incremental A: Absoulute

Motor type 20:20W Servo motor 30:30W Servo

motor

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

Stroke 50: 50mm

300: 300mm (50mm pitch increments)

Applicable controller -T1: XSEL-J/K T2·SCON

MSCON SSEL XSEL-P/O

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

M:5m X□□: Custom Length R□□: Robot Cable

For High Acceleration/Deceleration



(\*1) Except all 20W models and 30W 3mm lead models

Technical References



See options below.

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 you desire.
- (2) 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

	Standard price					
		①Encod	der Type			
<pre>②Stroke (mm)</pre>	Increr	nental	Abso	olute		
	Motor Output (W) Motor Output (\		utput (W)			
	20W	30W	20W	30W		
50	_	_	_	_		
100	_	_	_	_		
150	_	_	_	_		
200	_	_	_	_		
250	_	_	_	_		
300	_	_	_	_		

#### **⑤ Options**

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.							

#### **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.

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)

For Special Orders



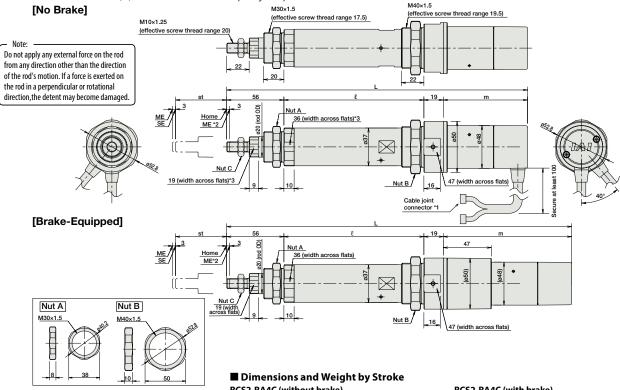




 (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
 (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

SE: Stroke end ME : Mechanical end

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



#### RCS2-RA4C (without brake)

	Stroke		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	137	187	237	287	337	487
	20W	80.5					
m	30W			95.5			
\	Weight (kg)	1.1	1.2	1.4	1.5	1.7	1.8

#### RCS2-RA4C (with brake)

nC3	NC32-NA4C (WILLI DIAKE)									
	Stroke	50	100	150	200	250	300			
	20W	335.5	385.5	435.5	485.5	535.5	585.5			
_	30W	350.5	400.5	450.5	500.5	550.5	600.5			
	l	137	187	237	287	337	487			
	20W			123	3.5					
m	30W			138	3.5					
V	Veight (kg)	1.3	1.5	1.6	1.7	1.9	2.0			

#### ③ Applicable Controllers

(19.6)

Nut C

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	H	SCON-CA-20①-NP-2-⑪	Actuators can be operated through the same control used for solenoid valves.	7 points			_	→ P643														
Field network type					SCON-CA-30D①-NP-2-①	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	126 VA max.  *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	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.	the instruction manual for	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				_	→ 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 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).

Standard

Controllers Integrated

> Roc Type

Mir

Standar

Controllers Integrated

> Table/ Arm/ Flat Type

Mini

Gripper/

Турс

Clean

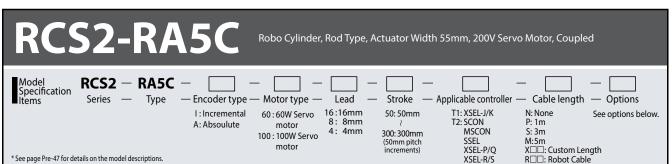
Splash Proo Type

> Puls Moto

Servo Motor (24V)

Servo Motor (200V)

Linear Servo Motor



\*CE compliance is optional.

(1) When the from real to check (2) The load and the (Even with the complete of t

For High Acceleration/Deceleration

(\*1)

(\*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 1 G (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	Speci	fications
--	--	----------	-------	-----------

Leads and Payloads						
Model number	Motor output (W)	Lead (mm)	Max. Loac 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 and Maximum Speed

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				
		①Encod	der Type		
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute		
	Motor Output (W)		Motor Output (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)	_
Robot Cable	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_
	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

#### Actuator Specific

0			
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	_

(\*1) The high-acceleration/deceleration option is not available for all 60W models and 100W model with 4mm lead.

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

P.15

## 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.

2D CAD

Note:

## www.intelligentactuator.com

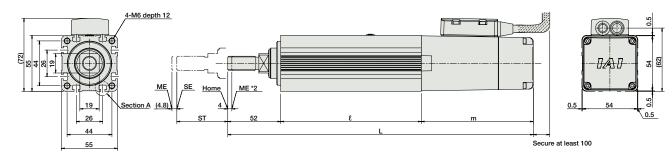
3D CAD

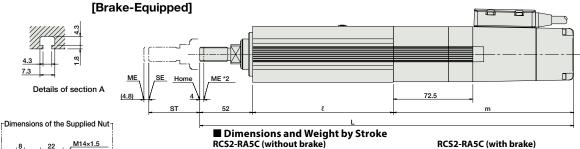
\*The RA5C is not available in non-motor end configuration, due to its construction.

- (\*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] (\*3) The orientation of the bolt varies depending on the product. Cable joint connector \*1 9.5 (width across flats) \*3 (300) M14×1.5





- 11	NC32-NA3C (WILIIOUL DIAKE)							
		Stroke	50	100	150	200	250	300
	, 60W		282	332	382	432	482	532
	_	100W	300	350	400	450	500	550
		l	138	188	238	288	338	388
Ι.		60W	92					
Ľ	m	100W	110					
	٧	Veight (kg)	1.9	2.2	2.5	2.8	3.1	3.4

0		Stroke		100	150	200	250	300
2		60W	354.5	404.5	454.5	504.5	554.5	604.5
)	-	100W	372.5	422.5	472.5	522.5	572.5	622.5
3	f		138	188	238	288	338	388
		60W			164	4.5		
	m	100W			182	2.5		
ŀ	Weight (kg)		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	1	SCON-CA-60(1)-NP-2-(11)	Actuators can be operated through the same control used for solenoid valves.	7 points		314 VA max.	_	DC 42
Field network type	IUE/	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	自持	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	_	→ 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			_	→ 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).

 $C \in$ 



Robo Cylinder, Rod Type, ø37mm Diameter, 200V Servo Motor, Built-in (Direct-Coupled) Motor

Model Specification Items RCS2 - RA4D -

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

RoHS \*CE compliance is optional.

Series — Type — Encoder type — Motor type

I:Incremental A: Absoulute

20:20W Servo 12:12mm motor 30:30W Servo

motor

6: 6mm 3: 3mm

Notes on selection

Stroke

50: 50mm 300:300mm (50mm pitch

increments)

Applicable controller — T1: XSEL-J/K T2: SCON MSCON

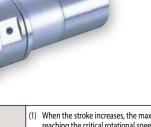
SSEL XSEL-P/Q

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

Options See options below.

M:5m X□□: Custom Length R□□: Robot Cable

> Technical References



(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

- 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.

maximum speed at the stroke you desire.

#### 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-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	6.0	2.0	37.7	
RCS2-RA4D-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	50~300
RCS2-RA4D-①-30-12-②-③-④-⑤		12	4.0	1.5	28.3	(every 50mm)
RCS2-RA4D-①-30-6-②-③-④-⑤	30	6	9.0	3.0	56.6	
RCS2-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.

#### ①Encoder Type/②Stroke

	Standard price							
	①Encoder Type							
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute					
	Motor Ou	itput (W)	Motor Ou	ıtput (W)				
	20W	30W	20W	30W				
50	_	_	_	_				
100	_	_	_	_				
150	_	_	_	_				
200	_	_	_	_				
250	_	_	_	_				
300	_	_	_	_				

#### **⑤ Options**

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	ИЛ	→ 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 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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

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)

For Special Orders





Note:

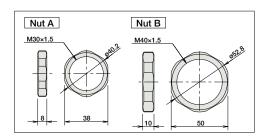
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

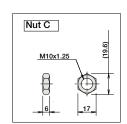
(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

ME: Mechanical end SE: Stroke end

(\*3) The orientation of the bolt varies depending on the product. [No Brake] M40×1.5 (effective screw thread range 19.5) (effective screw thread range 17.5) M10×1.25 (effective screw thread range 20) 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. 47 (width across flats) Nut A Home 36 (width across flats)\*3 937 Secure at least 100 Nut C 19 (width across flats) Nut B Cable joint





connector \*1

#### ■ Dimensions and Weight by Stroke RCS2-RA4D (without brake)

	CSZ NATO (Without bluke)						
Stroke		50	100	150	200	250	300
1	20W	270.5	320.5	370.5	420.5	470.5	520.5
_	30W	285.5	335.5	385.5	435.5	485.5	535.5
	l	137	187	237	287	337	487
20W		58.5					
m 30W				73	.5		
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

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-2-①	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will	_	7 1043
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		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 encoder type (l: 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.

RCS2-RA4D **274** 

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

# RCS2-SRA7BD

Robo Cylinder, Rod Type, Actuator Width 75mm, 200V Servo Motor, Short-Length Type

Model Specification Items

RCS2 - SRA7BD-Series — Type

— Encoder type — Motor type

I:Incremental

Lead

8: 8mm 4: 4mm

60:60W Servo 16:16mm

motor 100 : 100W Servo

motor 150 : 150W Servo

Motor

Stroke

increments)

 Applicable controller – 50: 50mm 300: 300mm (50mm pitch

T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q

Cable length — Options N: None P: 1m S: 3m

See options below.

M:5m X□□: Custom Length

R□□: Robot Cable

RoHS



Technical References



(2) 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.
- 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.
- (4) 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

■ Leads and Payloads

Model number	Motor	Lead	Rated	Load Capacity at Ra	ted Acceleration	Max	Load Capacity at N	Max. Acceleration	Rated	Stroke
Woder 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 and Maximum Speed

50~300 (every 50mm)
800
400
200

(Unit: mm/s)

Code explanation 🕦 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.

① Stroke

①Stroke (mm)	Standard price Motor Output (W)		
	60W	100W	150W
50	_	_	
100	_	_	_
150	_	_	
200	_	_	_
250	_	_	_
300	_	_	

③ Cable Length

Cable Leligtii					
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)	_			
	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
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	
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	ø35mm
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





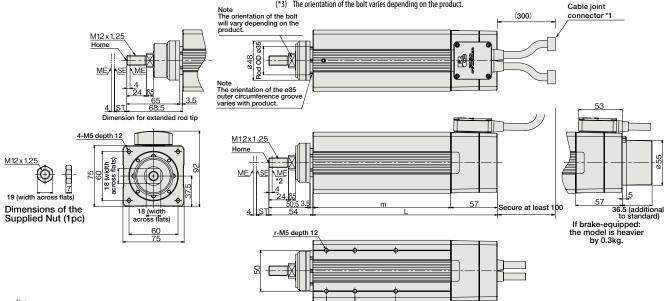
\*The SRA7BD is not available in non-motor end configuration, due to its construction.

- (\*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.



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.

Note:

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 may enter inside from the slit.

	= Difficilisions 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		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			

■ Dimensions and Weight by Stroke

	150W		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/=:=:l=±	60W		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
(kg)	150W	2.9	3.3	3.9	44	5	5.6

#### ② Applicable Controllers

NC32 series actuators carr be	operated w		below. Select the type according to y	our intended appli	Cation.				
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	SCON-CA-①I-NP-2-⑪	Actuators can be operated through the same control used for solenoid valves.	7 points	Single- phase 100VAC Single- phase	phase	se	_	D. 42
Field network type	18		Movement by numerical specification is supported.	768 points		on the controller. Refer to the operation		→ P643	
Pulse-train input control type			Dedicated pulse-train input type	(—)	200VAC 3-phase		_		
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).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis/6-axis), XSEL-R/S type, or MSCON.

\* ① Indicates the wattage (60/100/150).

\*  $\textcircled{\parallel}$  Indicates the XSEL type (J / K / P / Q ).

RCS2-SRA7BD **276** 

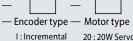
\* See page Pre-47 for details on the model descriptions

# CS2-RA4R

Robo Cylinder, Rod Type, ø37mm Diameter, 200V Servo Motor, Side-mounted Motor

Model Specification Items

RCS2 - RA4R -Series — Type



A: Absoulute

motor

motor

20:20W Servo 12:12mm 30:30W Servo

6: 6mm 3: 3mm

Stroke 50: 50mm

(50mm pitch

increments)

300: 300mm

Applicable controller — T1: XSEL-J/K T2: SCON MSCON

S: 3m SSEL XSEL-P/Q

M:5m X□□: Custom Length R□□: Robot Cable

Cable length

N: None P: 1m



Technical References



Options

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.
- 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

Model number	Motor output (W)	Lead (mm)	Max. Loac Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-RA4R-①-20-12-②-③-④-⑤		12	3.0	1.0	18.9	
RCS2-RA4R-①-20-6-②-③-④-⑤	20	6	6.0	2.0	37.7	
RCS2-RA4R-①-20-3-②-③-④-⑤		3	12.0	4.0	75.4	50~300
RCS2-RA4R-①-30-12-②-③-④-⑤		12	4.0	1.5	28.3	(every 50mm)
RCS2-RA4R-①-30-6-②-③-④-⑤	30	6	9.0	3.0	56.6	
RCS2-RA4R-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 🕦 Encoder 💿 Stroke ③ Applicable controller 倒 Cable length 质 Options \*See page A-71 for details on push motion.

#### ①Encoder Type/②Stroke

	Standard price						
②Stroke (mm)		①Encoder Type					
	Incren	nental	Abso	olute			
	Motor Ou	ıtput (W)	Motor Ou	ıtput (W)			
	20W 30W		20W	30W			
50	_	_	_	_			
100	_	_	_	_			
150	_	-	_	_			
200			_	_			
250			_	_			
300	_	_	_	_			

#### ⑤ Options

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-46	_
Home sensor	HS	→ A-50	_
Knuckle joint	NJ	→ 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.

### 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.

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)

P.15

## Dimensional Drawings

## www.intelligentactuator.com

ME / SE

Nut B

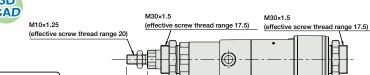
M10x1.25

Nut B

across flats) \*3







9

(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference

for details on cables.

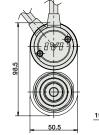
For Special Orders

with surrounding objects.
ME : Mechanical end SE : Stroke end

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

(\*1) Connect the motor and encoder cables here. See page A-59

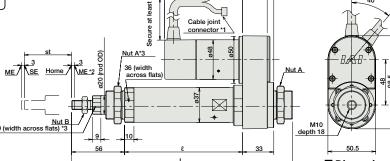
Note: Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



[Brake-Equipped]

Nut A

M30×1.5



47

26

#### ■ Dimensions and Weight by Stroke RCS2-RA4R (without brake) 26

	Stroke	50	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	3.5			
Р	30W	128.5						
٧	Weight (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	125	175	225	275	325	375
	20W	123.5					
m 30W 138.5							
Р	20W			156	5.5		
٢	30W		171.5				
١	Weight (kg)		1.6	1.7	1.9	2.0	2.2

#### **3 Applicable Controllers**

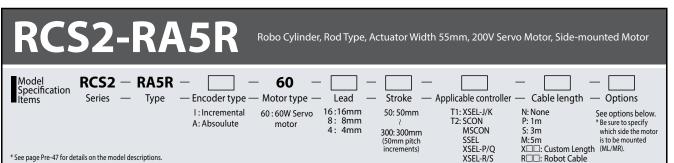
\36 (width across flats)

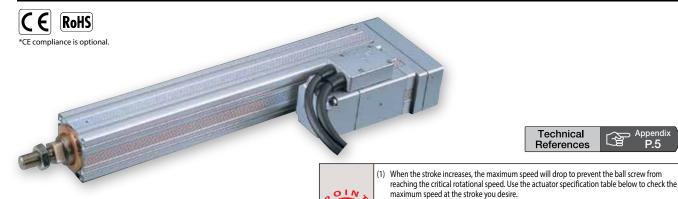
Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page		
Positioner mode			Up to 512 positioning points are supported.	512 points						
Solenoid valve mode	1	SCON-CA-20([)-NP-2-([])	Actuators can be operated through the same control used for solenoid valves.	7 points			*Power supply capacity will vary depending on the controller, so		→ P643	
Field network type	iue/	SCON-CA-30D①-NP-2-①	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	*Power supply capacity will vary depending on the		*Power supply capacity will vary depending on the controller, so	_	→ P643
Pulse-train input control type			Dedicated pulse-train input type	(—)	Single-phase 200VAC 3-phase				_	
Positioner multi-axis, network type	用数	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)		_	→ 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.	uetalis.	_	→ P685
Program control type, 1 to 8 axes	Pilled	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 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).
  - \*  $\bigcirc$  indicates the encoder type (l: Incremental / A: Absolute). \*  $\bigcirc$  indicates the XSEL type (J / K / P / Q / R / S). \*  $\bigcirc$  indicates field network specification symbol.





(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from

Technical References

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

Notes on

selection

■ Leads and Payloads						
Model number	Motor output (W)	Lead (mm)	Max. Loac 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 Lead	50~250 (every 50mm)	300 (mm)
16	800	755
8	400	377
4	200	188
		(Unit: mm/s)

■ Stroke and Maximum Speed

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 (mm)	Incremental	Absolute			
	I	Α			
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	_
Flange	FL	→ A-45	_
Foot bracket	FT	→ A-49	_
Left-mounted motor (standard)	ML	→ A-52	_
Right-mounted motor	MR	→ A-52	_

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



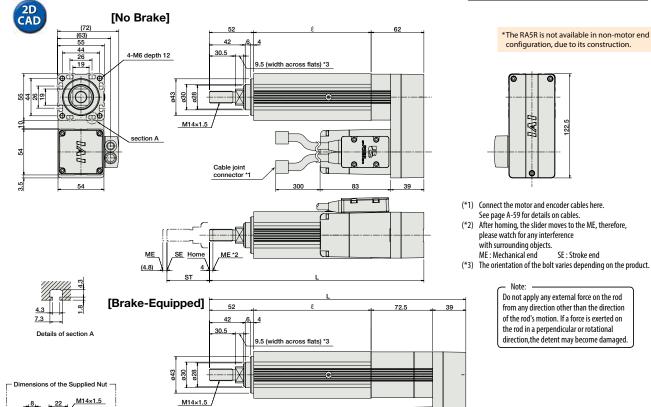
\*The RA5R is not available in non-motor end configuration, due to its construction.

50 | 100 | 150 | 200 | 250 | 300

301.5 351.5 401.5 451.5 501.5 551.5 138 188 238 288 338 388

3.2 3.5

3.8 4.1



## ③ Applicable Controllers

■ Dimensions and Weight by Stroke

2.3 2.6

RCS2-RA5R (without brake)

Stroke

Weight (kg)

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-60①-NP-2-⑩	Actuators can be operated through the same control used for solenoid valves.	7 points		210.VA	_	, DC 42
Field network type	iug/	SCON-CA-60([J-INP-2-(III)	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	218 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		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)	please refer to the instruction manual for details.	_	→ 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		uetaiis.	_	→ P685
Program control type, 1 to 8 axes	Pilita	XSEL	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P695

50 | 100 | 150 | 200 | 250 | 300

252 302 352 402 452 502 138 188 238 288 338 388

3.5 3.8

2.9 3.2

- \*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 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.

**6** 

RCS2-RA5R (with brake)

2.6

2.9

Stroke

Weight (kg)

CS2-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 — Encoder type — Motor type — Lead

motor

A: Absoulute

1: Incremental 750: 750W Servo 2.5: 2.5mm

Stroke 50: 50mm

200: 200mm

(50mm pitch

increments)

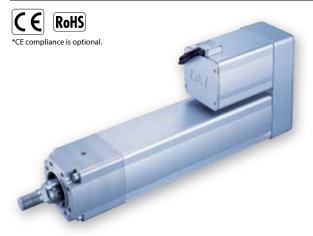
Applicable controller — Cable length — Options T2: SCON SSFI XSEL-P/Q XSEL-R/S

**T2** 

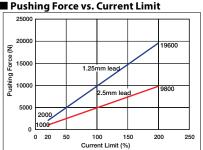
N: None P: 1m S: 3m M:5m X□□: Custom Length

See options below. \* Please be sure to specify one of the codes for the motor mounting directio and the cable exit direction.

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



■ Pushing Force vs. Current Limit



R□□: Robot Cable

- 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.

■ Stroke and Maximum Speed

120 85

50 100 150 200

\*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).

Stroke

#### Actuator Specifications

#### ■ Leads and Payloads

= 1caas and 1 dy.ouds									
Model number	Motor output (W)	Lead (mm)	Max Acceleration (G)	Max. Load Horizontal (kg)		Rated thrust (N)	Continuous Pushing Force (N)	Maximum Push Force (N)	Stroke (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	750	1.25	0.01	500	300	10211	7141	19600	(every 50mm)
Code explanation © Encoder ② Stroke ③ Cable Length ④ Options *The values for the horizontal load capacity reflect the use of									

1.25

(Unit: mm/s)

### ①Encoder Type/②Stroke

	Standard price				
②Stroke (mm)	①Encoder Type				
Stroke (IIIII)	Increi	mental	Abs	olute	
	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

#### ③ Cable Length

© cable fell		
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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

#### 4 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)	ICN	→ Δ-51	

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

an external guide.
\* See page A-71 for details on push motion.

Item	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.

For Special Orders

[Brake-Equipped]

200

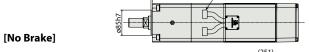
749.5

65

67.5

115

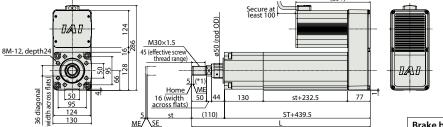
36

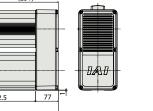


Cable joint connector \*1

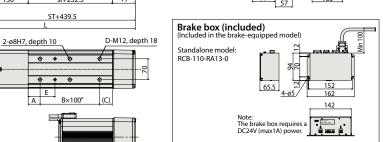
Secure at least 100

www.intelligentactuator.com





SE: Stroke end ME: Mechanical end



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

(ST+439.5)

The brake-equipped model (option code: "-B") always comes with a brake box. If you want to order just the brake-equipped actuator, specify the option code "-BN".

#### Motor-mounting direction / Cable exit direction (options)

[Load cell type]

### Note:

Please be sure to specify one of the codes for the motor mounting direction and the cable exit direction.

**Option Code** 

Dimensional Drawings



MT1

Top (standard)

Top (standard)



MT2

Top

Right



MT3

Top

Left



MR1

Right

Top



ML1

Left

Top



Right

RCS2-RA13R

Stroke

D

Weight (kg)



■ Dimensions and Weight by Stroke

\* Adding a brake will increase the actuator's overall length by 57mm, and its weight by 2.0kg. 50 100 150

40

42.5

90

33

599.5 649.5 699.5

65

67.5

115

34

40

42.5

8

90

35

Left

#### Applicable Controllers

Motor-mounting direction

Cable exit direction

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		(Standard) SCON-CA-750①-NP-2-2	Actuators can be operated through the same control used for solenoid valves.	7 points	Single-Phase 200VAC		_	→ P643
Field network type	14	(Load cell type) SCON-CA-750S①-NP-2-2	Movement by numerical specification is supported.	768 points	(SCON-CA/SSEL only)	1569VA max. * When		7 7043
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.	_	→ P685
Program control type 1 or 6 axes	emira	XSEL-@-1-750①-N1-EEE-2-®	Program operation is supported Up to eight axes can be operated	Varies depending on the number of axes connected			_	→ P695

- \* This is for the single-axis SSEL, and XSEL. \* (I) Indicates the XSEL type (P / Q / R / S).
- \*  $\bigcirc$  Indicates the encoder type (I: Incremental / A: Absolute). \*  $\bigcirc$  Indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200 V / 3: Three-phase 200 V).
- (Note:) The load cell type option can be operable only when the SCON-CA controller is used.

RCS2-RA13R **282** 

 $C \in$ 



Robo Cylinder, Rod Type with Single Guide, ø37mm Diameter, 200V Servo Motor,

Model Specification Items RCS2 - RGS4C

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

Type Encoder type

Motor type I:Incremental A: Absoulute motor

20:20W Servo 12: 12mm 6mm 3: 3mm 30 · 30W Servo

Stroke 50: 50mm

(50mm pitch

increments)

300: 300mm

Applicable controller T1: XSEL-J/K T2: SCON MSCON

N: None P: 1m S: 3m SSEL XSEL-P/O M:5m X□□: Custom Length

R□□: Robot Cable

Cable length

For High Acceleration/Deceleration

RoHS \*CE compliance is optional.

motor

(\*1) Except all 20W models and 30W 3mm lead models

**Technical** References



See options below.

. 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 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-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. Loac Horizontal (kg)	Capacity Vertical (kg)	Rated thrust (N)	Stroke (mm)
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 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					
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute				
	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 Options

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	_

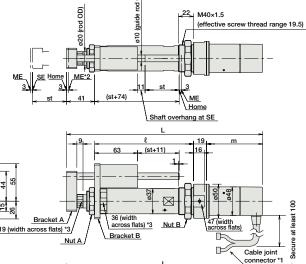
(\*1) The high-acceleration/deceleration option is not available for all 20W models and 30W model with 3mm lead.
(\*2) The home sensor (HS) cannot be used on the non-motor end models.

Actuator Specifications	
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℃, 85% RH or less (Non-condensing)

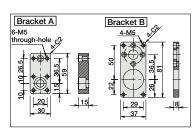


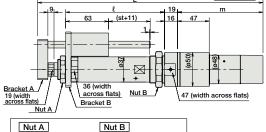
### [No Brake]

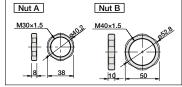




## [Brake-Equipped]



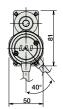




#### For Special Orders



- (\*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 and Weight by Stroke RCS2-RGS4C (without brake)

	ited it (intilidat braite)								
	Stroke		100	150	200	250	300		
	20W	285.5	335.5	385.5	435.5	485.5	535.5		
_	30W	300.5	350.5	400.5	450.5	500.5	550.5		
	l	145	195	245	295	345	395		
	20W	80.5							
111	m 30W		95.5						
	Weight (kg)	1.5	1.6	1.8	2.0	2.2	2.4		

#### RCS2-RGS4C (with brake)

	Stroke		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						
111	30W		138.5					
	Weight (kg)	1.7	1.8	2.0	2.2	2.4	2.6	

#### 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-2-① SCON-CA-300①-NP-2-①	Actuators can be operated through the same control used for solenoid valves.	7 points		136.VA		→ P643					
Field network type	iug/	SCON-CA-SOD(T)-NP-2-(II)	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	126 VA max.  *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		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 P (XSEL-P/Q/R/S th ONLY) m	200VAC (XSEL-P/Q/R/S	200VAC (XSEL-P/Q/R/S	200VAC (XSEL-P/Q/R/S	200VAC (XSEL-P/Q/R/S	(XSEL-P/Q/R/S the instruct	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-@-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).

\* 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).

RCS2-RGS4C **284** 

 $\epsilon$ 



Robo Cylinder, Rod Type with Single Guide, Actuator Width 55mm, 200V Servo Motor, Coupled

Model Specification Items RCS2 - RGS5C -

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

RoHS

\*CE compliance is optional.

Type — Encoder type -

Motor type I:Incremental 60:60W Servo A: Absoulute motor

For High Acceleration/Deceleration

motor

16:16mm 8: 8mm 4: 4mm 100 : 100W Servo

Stroke 50: 50mm

Applicable controller

300: 300mm (50mm pitch increments)

T1: XSEL-J/K T2·SCON MSCON

SSEL XSEL-P/O

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

M:5m X□□: Custom Length R□□: Robot Cable

(\*1) Except all 60W models and 100W 4mm lead models

Technical References



See options below.

. 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 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. Loac Horizontal (kg)	Capacity  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/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					
	Incren	nental	Absolute			
	Motor Output (W)		Motor Output (W)			
	60W	100W	60W	100W		
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)	_		
	<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.				

	D 1.1.
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	ø30mm
Non-rotating accuracy of rod	±0.1 deg
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

For Special Orders





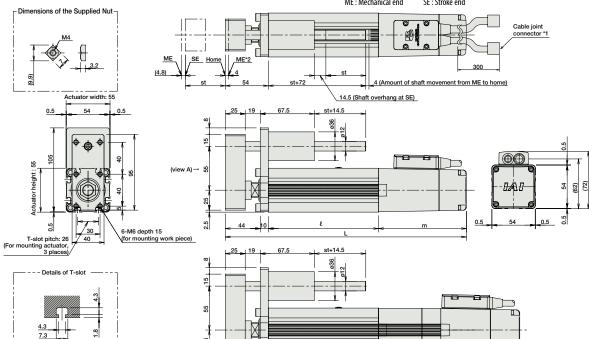


\*The RGS5C is not available in non-motor end configuration, due to its construction.

- (\*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.

ME: Mechanical end SE: Stroke end

72.5



■ Dimensions and Weight by Stroke

RCS2-RGS5C (without brake)

| Total | Tota Stroke 60W 100W 60W 92 m 100W 110 Weight (kg)

PCS2-PGS5C (with brake)

NC32-NG33C (With blake)							
Stroke		50	100	150	200	250	300
	60W	356.5	406.5	456	506.5	556.5	606.5
_	100W	374.5	424.5	474.5	524.5	574.5	624.5
l		138	188	238	288	338	388
60W		60W 164.5					
m	100W	100W 182.5					
Weight (kg)		2.8	3.1	3.5	3.9	4.2	4.6

#### **3 Applicable Controllers**

Guide mounting direction (as viewed from view A)

GS3 Bottom

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-60①-NP-2-①	Actuators can be operated through the same control used for solenoid valves.	7 points		2141/4	_	. 0643
Field network type	ius/	SCON-CA-100①-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	自然	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	_	→ 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).

- \*  $\bigcirc$  indicates the encoder type (l: Incremental / A: Absolute). \*  $\bigcirc$  indicates the XSEL type (J / K / P / Q / R / S). \*  $\bigcirc$  indicates field network specification symbol.

RCS2-RGS5C **286** 

IAI

 $C \in$ 

# CS2-RGS4D

Robo Cylinder, Rod Type with Single Guide, ø37mm Diameter, 200V Servo Motor, Built-In Model

Model Specification Items RCS2 -RGS4D-Series — Type

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

RoHS \*CE compliance is optional — Encoder type -I:Incremental

Motor type A: Absoulute motor

motor

20:20W Servo 12:12mm 6: 6mm 3: 3mm 30 · 30W Servo

Stroke 50: 50mm 300: 300mm (50mm pitch

Applicable controller -

increments)

T1: XSEL-J/K T2·SCON MSCON

SSEL XSEL-P/O XSEL-R/S

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

M:5m X□□: Custom Length R□□: Robot Cable

Technical References



See options below.

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.

- The load capacity is based on operating the standard and power-saving models at  $0.3 \, \text{G}$  ( $0.2 \, \text{G}$ 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 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	
	output (W)	output (W) (mm)  12  20 6  3  12  30 6	output (W) (mm) Horizontal (kg)  12 3.0  20 6 6.0  3 12.0  12 4.0  30 6 9.0	output (W)         (mm)         Horizontal (kg)         Vertical (kg)           12         3.0         0.5           20         6         6.0         1.5           3         12.0         3.5           12         4.0         1.0           30         6         9.0         2.5	output (W)         (mm)         Horizontal (kg)         Vertical (kg)         thrust (N)           12         3.0         0.5         18.9           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

#### ■ 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					
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute			
	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)	_
Robot Cable	R04 (4m) ~ R05 (5m)	_
	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		
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.

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)

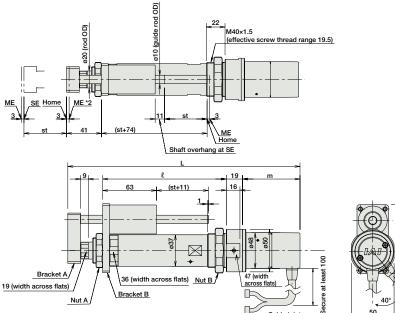
For Special Orders



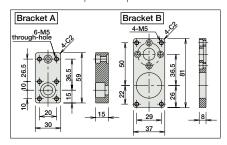


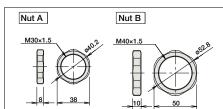
Connect the motor and encoder cables here. See page A-59 for details on cables.

(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. ME: Mechanical end SE: Stroke end



Cable joint





#### ■ Dimensions and Weight by Stroke RCS2-RGS4D (without brake)

	Stroke		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		195	245	295	345	395		
	20W	58.5							
m	30W	73.5							
	Weight (kg)		1.5	1.7	1.9	2.1	2.3		

RCS2-RGS4D 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	Single-phase 100VAC *Power su capacity vary dep 200VAC on the	*Power supply capacity will vary depending		- → P643
Field network type			Movement by numerical specification is supported.	768 points			7 1043	
Pulse-train input control type			Dedicated pulse-train input type	(—)			_	
Positioner multi-axis, network type	日本	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)		_	→ 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-@-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 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).

- \*  $\bigcirc$  indicates the encoder type (l: Incremental / A: Absolute). \*  $\bigcirc$  indicates the XSEL type (J / K / P / Q / R / S). \*  $\bigcirc$  indicates field network specification symbol.

RCS2-RGS4D **288** 

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

# RCS2-SRGS7BD

I:Incremental

Robo Cylinder, Rod Type with Single Guide, Actuator Width 75mm, 200V Servo Motor, Short-Length Model

Model Specification Items

RCS2 —SRGS7BD— Series — Type

— Encoder type — Motor type

motor 150 : 150W Servo

Motor

60:60W Servo 16:16mm

motor 8: 8mm 100:100W Servo 4: 4mm

Lead

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



Notes or selection

- (1) When operated at the rated acceleration, the maximum load capacity is the load capacity at the rated acceleration
- (2) 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 (G)	Load Capacity at Horizontal (kg)	Rated Acceleration	Max Acceleration (G)		Max. Acceleration	Rated thrust (N)	Stroke (mm)
	output (W)	16			Vertical (kg)		Horizontal (kg)	. 3.		(11111)
RCS2-SRGS7BD-I-60-16-10-2-3-4		10	0.25	5	1.5	0.35	2.5	0.5	63	
RCS2-SRGS7BD-I-60-8-①-②-③-④	60	8	0.15	10	4.5	0.25	5	2	127	
RCS2-SRGS7BD-I-60-4-11-2-3-4		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	3011111)
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)

### ① Stroke

	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)	_			
	X16 (16m) ~ X20 (20m)	_			
	R01 (1m) ~ R03 (3m)	_			
	<b>R04</b> (4m) ~ <b>R05</b> (5m)	_			
Robot Cable	<b>R06</b> (6m) ~ <b>R10</b> (10m)	_			
	R11 (11m) ~ R15 (15m)	_			
	R16 (16m) ~ R20 (20m)	_			
5 A 50 C 11 C 11					

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

### 4 Options

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

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)

6-M6 Dept 25

## 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.

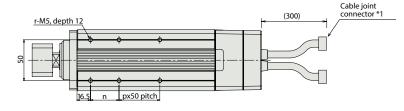
ST: Stroke SE : Stroke end ME : Mechanical end

(**\*** 2 0 (View A)

ST+8.1 8 (11) 15 (18) for 100W-50ST 27 (30) for 150W-50ST \*For brake-equipped model, see standard type (see P276) 21 Secure at least 100 m 55 (69.5) \* The value inside ( ) is the dimension for the extended rod tip model.

GS2 Bottor

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/=:=l=+	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 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	SCON CA OLNID 3 @	Actuators can be operated through the same control used for solenoid valves.	7 points	Single- phase 100VAC	408 VA max.	_	. 0.42
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	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	3-phase 200VAC (XSEL-P/ Q only)	manual for details.	_	→ P685
Program control type 1 or 6 axes	Pilita	XSEL1	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).

Please note that this model cannot be connected to the XSEL-P/Q type (5-axis/6-axis), XSEL-R/S type, or MSCON.

\*  $\bigcirc$  Indicates the wattage (60/100/150). \*  $\bigcirc$  Indicates the XSEL type (J / K / P / Q ).

CE

# CS2-RGD4C

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 200V Servo Motor, Coupled

Model Specification Items RCS2 -RGD4C-

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

Type

Encoder type I:Incremental A: Absoulute

Motor type 20:20W Servo 12:12mm motor 30 · 30W Servo

motor

6: 6mm 3: 3mm

50: 50mm

increments)

Stroke

300: 300mm (50mm pitch

Applicable controller -T1: XSEL-J/K T2·SCON MSCON

N: None P: 1m S: 3m SSEL XSEL-P/O

M:5m X□□: Custom Length R□□: Robot Cable

For High Acceleration/Deceleration

RoHS \*CE compliance is optional.

(\*1) Except all 20W models and 30W 3mm lead models

Technical References

Cable length



See options below.

. 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

	Standard price						
		①Encoder Type					
<pre>②Stroke (mm)</pre>	Incremental Absolute		Incremental Abso				
	Motor Ou	itput (W)	Motor Output (W)				
	20W	30W	20W	30W			
50	_	_	_	_			
100	_	_	_	_			
150	_	_	_	_			
200	_	_	_	_			
250	_		_	_			
300	_	_	_	_			

**4** Cable Length

© cable religion				
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)	_		

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

# (5) Options

© 0 ptions					
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	_		

Trunnion bracket (back)	TRR	→ A-58	_
(*1) The high-acceleration/deceleration option is not av (*2) The home sensor (HS) cannot be used on the non-r		nodels and 30W	model with 3mm lea

**Actuator Specifications** Description Item Ball screw, ø10mm, rolled C10 Drive System Positioning Repeatability ±0.02mm 0.1mm or less Lost Motion Double guide (guide rod diameter ø10mm, ball bush type) Guide Rod diameter ø20mm ±0.05 deg Non-rotating accuracy of rod Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

## www.intelligentactuator.com

For Special Orders



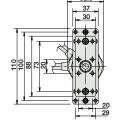


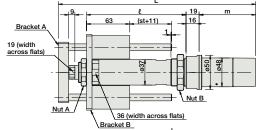


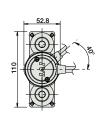
(\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.

(\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.

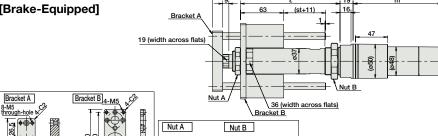
ME: Mechanical end SE: Stroke end [No Brake] rod OD) 0 <del>-22</del> | M40×1.5 (rod (effective screw thread range 19.5) 47 (width across flats) Cable joint connector \*1 Home Shaft overhang at SE







# [Brake-Equipped]



M30×1.5 

### ■ Dimensions and Weight by Stroke RCS2-RGD4C (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	80.5					
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	
	20W							
_ [	30W	343.5	393.5	443.5	493.5	543.5	593.5	
e e		145	195	245	295	345	395	
_ [	20W	123.5						
Weight (kg)				138	3.5			
		2.0	2.2	2.4	2.6	2.8	3.0	
	n	20W 30W l 20W 30W	20W 328.5 30W 343.5 \$\ell\$ 145 n 20W 30W	20W 328.5 378.5 30W 343.5 393.5 \$\lambda\$ 145 195 n 20W 30W	20W 328.5 378.5 428.5 30W 343.5 393.5 443.5 \$\ell\$ 145 195 245    20W 12: 30W 13: 30	20W 328.5 378.5 428.5 478.5 30W 343.5 393.5 443.5 493.5 \$\ell\$ 145 195 245 295 20W 123.5 30W 138.5	20W 328.5 378.5 428.5 478.5 528.5 30W 343.5 393.5 443.5 493.5 543.5 \$\ell\$ 145 195 245 295 345 20W 123.5 30W 138.5	

### **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-2-⑩_	Actuators can be operated through the same control used for solenoid valves.	7 points			_	→ P643
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	_	→ P043
Pulse-train input control type			Dedicated pulse-train input type	(—)	3-phase 200VAC 3-phase 200VAC (XSEL-P/Q/R/S ONLY)	vary depending on the controller, so	_	
Positioner multi-axis, network type	自称	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		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		uctans.	_	→ 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

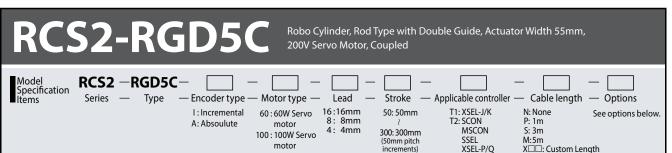
\*This is for the single-axis MSCON, SSEL, and XSEL.

\* ① indicates the 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).

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



Notes or

**C** € RoHS For High Acceleration/Deceleration \*CE compliance is optional. speed at the stroke you desire.

(\*1) Except all 60W models and 100W 4mm lead models

Technical References

R□□: Robot Cable

(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reachingthe critical rotational speed. Use the actuator specification table below to check the maximum

- (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						
Model number	Motor output (W)	Lead (mm)	Max. Load Horizontal (kg)	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 and Maximum Speed

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>	Incren	nental	Absolute			
	Motor Ou	itput (W)	Motor Ou	ıtput (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)	_			

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

(§) 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.				

(*1) The high-acceleration/deceleration of	ption is not av	ailable for all 60W m	odels and 100V	V 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	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

## www.intelligentactuator.com

For Special Orders





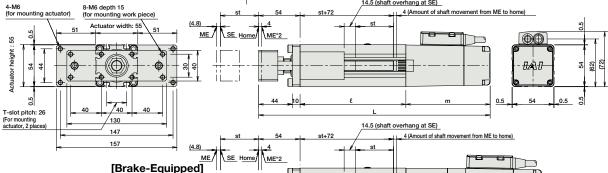


\*The RGD5C is not available in non-motor end configuration, due to its construction.

- (\*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

[No Brake] 936 Dimensions of the Supplied Nut Details of the T-slot Ĺ 14.5 (shaft overhang at SE)



■ Dimensions and Weight by Stroke

К	RCS2-RGD5C (without brake)									
Г		Stroke	50	100	150	200	250	300		
Г	_	60W	284	334	384	434	484	524		
	_	100W	302	352	402	452	502	552		
		l	138	188	238	288	338	388		
Γ.	m	60W	92							
	m	100W			11	0				
Г		Weight (kg)	2.7	3 0	3 /	2 0	12	5.5		

72.5

	KCS	RC32-RGD3C (With brake)									
1		Stroke	50	100	150	200	250	300			
1	, 60W		356.5	406.5	456.5	506.5	556.5	606.5			
	_	100W	374.5	424.5	474.5	524.5	574.5	624.5			
1		l	138	188	238	288	338	388			
	m	60W	164.5								
1	m	100W			18	2.5					
	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	_	→ P64.
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	自称	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.	_	→ P65
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		uctans.	_	→ P68
Program control type, 1 to 8 axes	Pilita	XSEL1-60	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			_	→ P69:

\*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).

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

RoHS CE compliance is optional



Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 200V Servo Motor, Built-In Model

Model Specification Items

 $C \in$ 

RCS2 -RGD4D-Type

Encoder type Motor type

20:20W Servo

motor

30 · 30W Servo

motor

I:Incremental

A: Absoulute

6: 6mm

3: 3mm

12:12mm

Stroke 50: 50mm

increments)

300: 300mm (50mm pitch

Applicable controller T1: XSEL-J/K T2: SCON MSCON

N: None P: 1m S: 3m SSEL XSEL-P/O

M:5m X□□: Custom Length R□□: Robot Cable

References

Cable length

See options below.

Technical



- (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.
- (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

### Motor Rated Stroke Lead Max. Load Capacity Model number output (W) thrust (N) (mm) (mm) Horizontal (kg) Vertical (kg) RCS2-RGD4D-①-20-12-②-③-④-⑤ 12 3.0 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 3 12.0 3.5 75.4 50~300 RCS2-RGD4D-①-30-12-②-③-④-⑤ 28.3 12 4.0 1.0

6

Code explanation ① Encoder ② Stroke ③ Applicable controller ④ Cable length ⑤ Options \*See page A-71 for details on push motion.

9.0

18.0

2.5

6.0

56.6

113.1

30

## ■ Stroke and Maximum Speed

Stroke Lead	50~300 (every 50mm)
12	600
6	300
3	150
	(Unit: mm/s)

①Encoder Type/②Stroke

RCS2-RGD4D-①-30-6-②-③-④-⑤

RCS2-RGD4D-①-30-3-②-③-④-⑤

		Standa	rd price							
		①Encoder Type								
<pre>②Stroke (mm)</pre>	Incren	nental	Absolute							
	Motor Ou	itput (W)	Motor Ou	ıtput (W)						
	20W	30W	20W	30W						
50	_	_	_	_						
100	_	_	_	_						
150	-	_	_							
200	_	_	_	_						
250		_	_	_						
300	_	_	_	_						

### 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
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					
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)				

# CAD drawings can be downloaded www.intelligentactuator.com

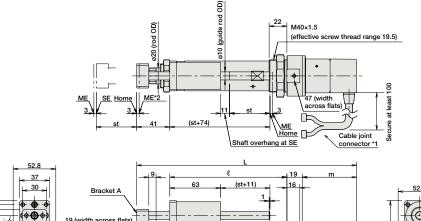
For Special Orders

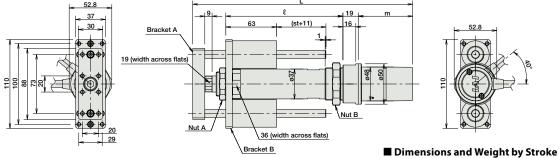


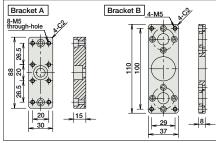


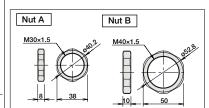
- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects. ME: Mechanical end SE: Stroke end

### [No Brake]









# RCS2-RGD4D (without brake)

	Stroke		50	100	150	200	250	300	
	1	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	
ı	m	20W	58.5						
	m 30W				73	.5			
ı		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**

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	ium/	SCON-CA-SUD()-INF-2-(II)	Movement by numerical specification is supported.	768 points	Single-phase 100VAC	ise	_	7 1043
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	日本	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	PITTA	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 power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).

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

# RCS2-SRGD7BD

I:Incremental

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 — Motor type

motor 150 : 150W Servo

motor

60:60W Servo 16:16mm

motor 8: 8mm 100:100W Servo 4: 4mm

50: 50mm

300: 300mm (50mm pitch

increments)

Stroke - Applicable controller

Cable length T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q

Options See options below.

N: None P: 1m S: 3m

M:5m X□□: Custom Length R□□: Robot Cable

RoHS



Technical References





- (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.
- 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	Lead		Load Capacity at R		Max	Load Capacity at		Rated	Stroke
	output (W)	(mm)	Acceleration (G)	Horizontal (kg)	Vertical (kg)	Acceleration (G)	Horizontal (kg)	Vertical (kg)	thrust (N)	(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 50mm)
RCS2-SRGD7BD-I-100-4-①-②-③-④		4	0.1	40	18.5	0.2	20	8	414	JUIIIII)
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
		(Unit: mm/s)

(Unit: mm/s)

### ① Stroke

0 0 11 0 11 0						
①Stroke (mm)		Standard price				
		Motor Output (W)				
	60W	100W	150W			
50	_	-	_			
100	_	_	_			
150	_		_			
200	_	_	_			
250	_	_	_			
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	R06 (6m) ~ R10 (10m)	_
	R11 (11m) ~ R15 (15m)	_
	R16 (16m) ~ R20 (20m)	_

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

⊕ options			
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	
Item	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)

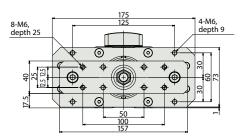
### www.intelligentactuator.com

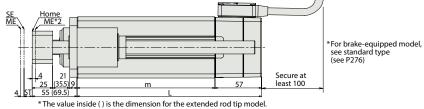
For Special Orders





\*The SRGD7BD is not available in non-motor end configuration, due to its construction.





Note:

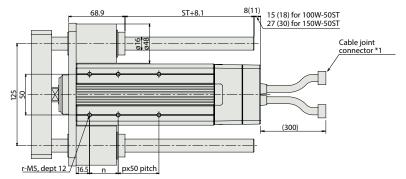
A slit is provided in the side of the actuator body to prevent  $% \left\{ \mathbf{r}^{\prime}\right\} =\left\{ \mathbf{r}^{\prime}\right\}$ pauses due to forward/backward operation.

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. ST: Stroke

SE: Stroke end ME: Mechanical end



### ■ 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/=:=:l=4	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			scoul st Olyp a O	Actuators can be operated through the same control used for solenoid valves.	7 points	Single- phase 100VAC	408 VA max.	_					
Field network type								SCON-CA-①I-NP-2-⑪	Movement by numerical specification is supported.	768 points	Single- phase	* Varies depending on the	
Pulse-train input control type			Dedicated pulse-train input type	(—)	200VAC	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	3-phase 200VAC (XSEL-P/ Q only)	manual for details.	_	→ P685					
Program control type 1 or 6 axes	emira	XSEL1	Program operation is supported Up to six axes can be operated	20,000 points			_	→ P695					

- \* This is for the single-axis SSEL, and XSEL.
- \*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).
- \*  $\bigcirc$  Indicates the wattage (60/100/150). \*  $\bigcirc$  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.

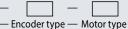
RCS2-SRGD7BD **298** 

CS2-RGD4R

Robo Cylinder, Rod Type with Double Guide, ø37mm Diameter, 200V Servo Motor, Side-mounted Motor

Model Specification Items

RCS2 -RGD4R-Series — Type



I:Incremental

A: Absoulute

Lead

12:12mm

6: 6mm

3: 3mm

20 : 20W Servo

motor

30 · 30W Servo

motor

Stroke

increments)

Applicable controller

Cable length - Options

50: 50mm T1: XSEL-J/K T2·SCON 300: 300mm (50mm pitch

N: None P: 1m MSCON S: 3m SSEL XSEL-P/O

M:5m X□□: Custom Length R□□: Robot Cable



Technical References



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.

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

18.9	
37.7	
75.4	50~300
28.3	(every 50mm)
56.6	
113.1	
	75.4 28.3 56.6

### ■ 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				
@Stroke (mm)	Incremental		Absolute			
	Motor Ou	itput (W)	Motor Output (W)			
	20W	30W	20W	30W		
50	_	_	_	_		
100	_	_	_	_		
150			_			
200	_	_	_	_		
250	_		_	_		
300	_	_	_	_		

### Cable Length

Cable Leng	,	
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)	_
	<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.

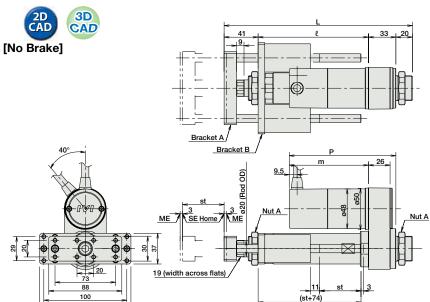
Options							
Name	Option code	See page	Standard price				
Brake	В	→ A-42	_				
CE compliance	CE	→ A-42	_				
Foot bracket	FT	→ A-49	_				
Flange bracket (back)	FLR	→ A-46	_				
Home sensor	HS	→ A-50	_				
Non-motor end specification	NM	→ A-52	_				
Clevis bracket	QR	→ A-53	_				
Back-mounting plate	RP	→ A-54	_				
eri i dich di la							

\*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 Material: Aluminum, white alumite treated Base Rod diameter ø20mm ±0.05 deg Non-rotating accuracy of rod Ambient operating temperature, humidity 0 to 40°C, 85% RH or less (Non-condensing)

RCS2-RGD4R

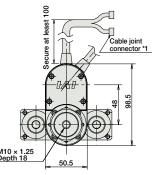
## ings can be downloaded www.intelligentactuator.com



### 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.
  - SE : Stroke end ME : Mechanical end
- $(\ensuremath{\mbox{*3}})$  The orientation of the bolt varies depending on the product.



# ■ Dimensions and Weight by Stroke

KCS	RCS2-RGD4R (without brake)							
	Stroke		100	150	200	250	300	
	20W	227	277	327	377	427	477	
_	30W	227	277	327	377	427	477	
	l		183	233	283	333	383	
m	20W	80.5						
m	30W	95.5						
Р	20W	113.5						
Р	30W	128.5						
Weight (kg)		1.9	2.2	2.3	2.6	2.7	3.0	

### RCS2-RGD4R (with brake)

	Stroke		50	100	150	200	250	300	
Г	_	20W	227	277	327	377	427	477	
	_	30W	227	277	327	377	427	477	
		l	133	183	233	283	333	383	
Γ.		20W	123.w5						
1'	m	30W			138	3.5			
	Р	20W	156.5						
	Г	30W	171.5						
	٦	Weight (kg)	2.1	2.4	2.5	2.8	2.9	3.2	
_									

# [Brake-Fauinned]

[Бгаке-Еquipped]	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
Bracket A Bracket B  8-M5 through-hole Ct. 4-M5	ME SE Home Me Nut A  19 (width across flats)

**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 SCON-CA-30D①-NP-2-①	Actuators can be operated through the same control used for solenoid valves.	7 points		126 VA max.		- → P643
Field network type	ium/		Movement by numerical specification is supported.	768 points	Single-phase 100VAC * Single-phase 200VAC	*Power supply capacity will vary depending on the controller, so	_	
Pulse-train input control type			Dedicated pulse-train input type	(—)			_	
Positioner multi-axis, network type	自称	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.	_	→ P65
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		uctans.	_	→ P68
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			_	→ P69

- \*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 (1: Incremental / A: Absolute).

  \* ② indicates the XSEL type (J / K / P / Q / R / S).

  \* ② indicates the power-supply voltage type (1: 100 V / 2: Single-phase 200V / 3: Three-phase 200V).