

Slider Type

RCP3

RCP2

RCA2

RCA

RCS2



RCP3 <i>series</i>	Coupling type	Aluminum base	32mm wide	RCP3-SA3C	21
			40mm wide	RCP3-SA4C	23
			50mm wide	RCP3-SA5C	25
			60mm wide	RCP3-SA6C	27

RCP2 <i>series</i>	Coupling type	Aluminum base	52mm wide	RCP2-SA5C	29
			58mm wide	RCP2-SA6C	31
			73mm wide	RCP2-SA7C	33
			60mm wide	RCP2-SS7C	35
			80mm wide	RCP2-SS8C	37
			80mm wide	RCP2-HS8C	39
	Reverse-mounted motor type	Aluminum base	52mm wide	RCP2-SA5R	41
			58mm wide	RCP2-SA6R	43
			73mm wide	RCP2-SA7R	45
			60mm wide	RCP2-SS7R	47
			80mm wide	RCP2-SS8R	49
			80mm wide	RCP2-HS8R	51
Belt type		58mm wide	RCP2-BA6/BA6U	53	
		68mm wide	RCP2-BA7/BA7U	55	

RCA2 <i>series</i> 24V Servo Motor Type	Coupling type	Aluminum base	32mm wide	RCA2-SA3C	57
			40mm wide	RCA2-SA4C	59
			50mm wide	RCA2-SA5C	61
			60mm wide	RCA2-SA6C	63

RCA <i>series</i> 24V Servo Motor Type	Coupling type	Aluminum base	40mm wide	RCA-SA4C	65
			52mm wide	RCA-SA5C	67
			58mm wide	RCA-SA6C	69
	Built-in type	Aluminum base	40mm wide	RCA-SA4D	71
			52mm wide	RCA-SA5D	73
			58mm wide	RCA-SA6D	75
			40mm wide	RCA-SS4D	77
			52mm wide	RCA-SS5D	79
			58mm wide	RCA-SS6D	81
	Reverse-mounted motor type	Aluminum base	40mm wide	RCA-SA4R	83
			52mm wide	RCA-SA5R	85
			58mm wide	RCA-SA6R	87

RCS2 <i>series</i> 200V Servo Motor Type	Coupling type	Aluminum base	40mm wide	RCS2-SA4C	89		
			52mm wide	RCS2-SA5C	91		
			58mm wide	RCS2-SA6C	93		
			73mm wide	RCS2-SA7C	95		
			60mm wide	RCS2-SS7C	97		
			80mm wide	RCS2-SS8C	99		
			Built-in type	Aluminum base	40mm wide	RCS2-SA4D	101
					52mm wide	RCS2-SA5D	103
					58mm wide	RCS2-SA6D	105
	40mm wide	RCS2-SA4R			107		
	52mm wide	RCS2-SA5R			109		
	58mm wide	RCS2-SA6R			111		
	Reverse-mounted motor type	Aluminum base	73mm wide	RCS2-SA7R	113		
			60mm wide	RCS2-SS7R	115		
			80mm wide	RCS2-SS8R	117		
Steel base				60mm wide	RCS2-SS7R	115	
				80mm wide	RCS2-SS8R	117	

Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller

C Coupling

D Built-In (Direct)

R Reversed-mounted

Pulse Motor 20P

Pulse Motor 28P

Pulse Motor 35P

Pulse Motor 42P

Pulse Motor 56P

Pulse Motor 86P

Servo Motor 10w

Servo Motor 20w

Servo Motor 30w

Servo Motor 60w

Servo Motor 100w

Servo Motor 150w

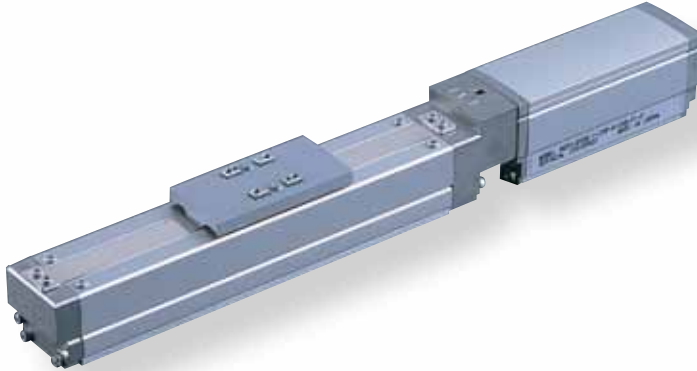
Servo Motor 750w

RCP3-SA3C

ROBO Cylinder, Slider Type, Actuator Dimensions 32mm, Pulse Motor, Coupling Specification

Model Description	RCP3 — SA3C — I — 28P — [] — [] — P1 — [] — []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	28P: Pulse motor 28□Size	6: 6mm 4: 4mm 2: 2mm	50:50mm ~ 300:300mm (Setpitch every 50mm)	P1: PCON PSEL	N : None P : 1m S : 3m M : 5m X□□ : Length designation	B: Brake-equipped NCO: No cover specification NM: Reverse-home specification

See preceding section for model descriptions.



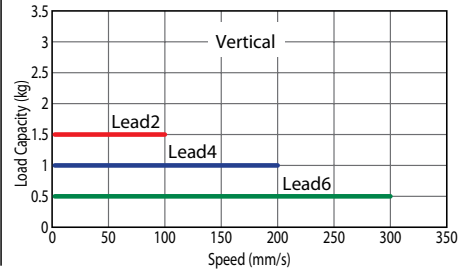
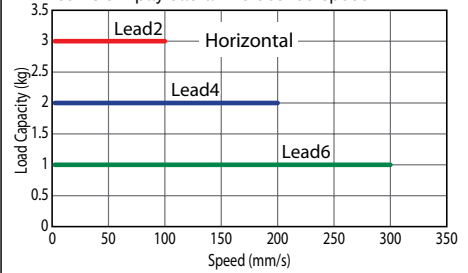
Technical Reference P.451



- (1) Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- (2) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 2). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

Model	Lead (mm)	Maximum payload		Maximum pushing force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-SA3C-I-28P-6-①-P1-②-③	6	1	0.5	15	50 to 300 (every 50mm)
RCP3-SA3C-I-28P-4-①-P1-②-③	4	2	1	22	
RCP3-SA3C-I-28P-2-①-P1-②-③	2	3	1.5	44	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 300 (every 50mm)
	6
4	200
2	100

(Unit = mm/s)

① Price List by Stroke (Standard Price)

① Stroke (mm)	Type code	
	SA3C	
	Encoder type	
	Incremental	
	Actuator Cover	
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

③ Option Price List (Standard Price)

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
No cover	NCO	P22	—
Reversed-home specification	NM	P442	—

② Cable Length Price List (Standard Price)

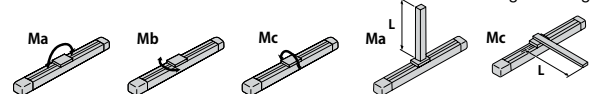
Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—
		—

The standard cable for this actuator is a robot cable that has both the motor and encoder cable integrated. See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw φ6mm rolled C10
Positioning Repeatability	±0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 1.96N·m Mb: 2.84N·m Mc: 3.14N·m
Overhang load length	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment



Dimensional Drawings

CAD drawings can be downloaded from the website.

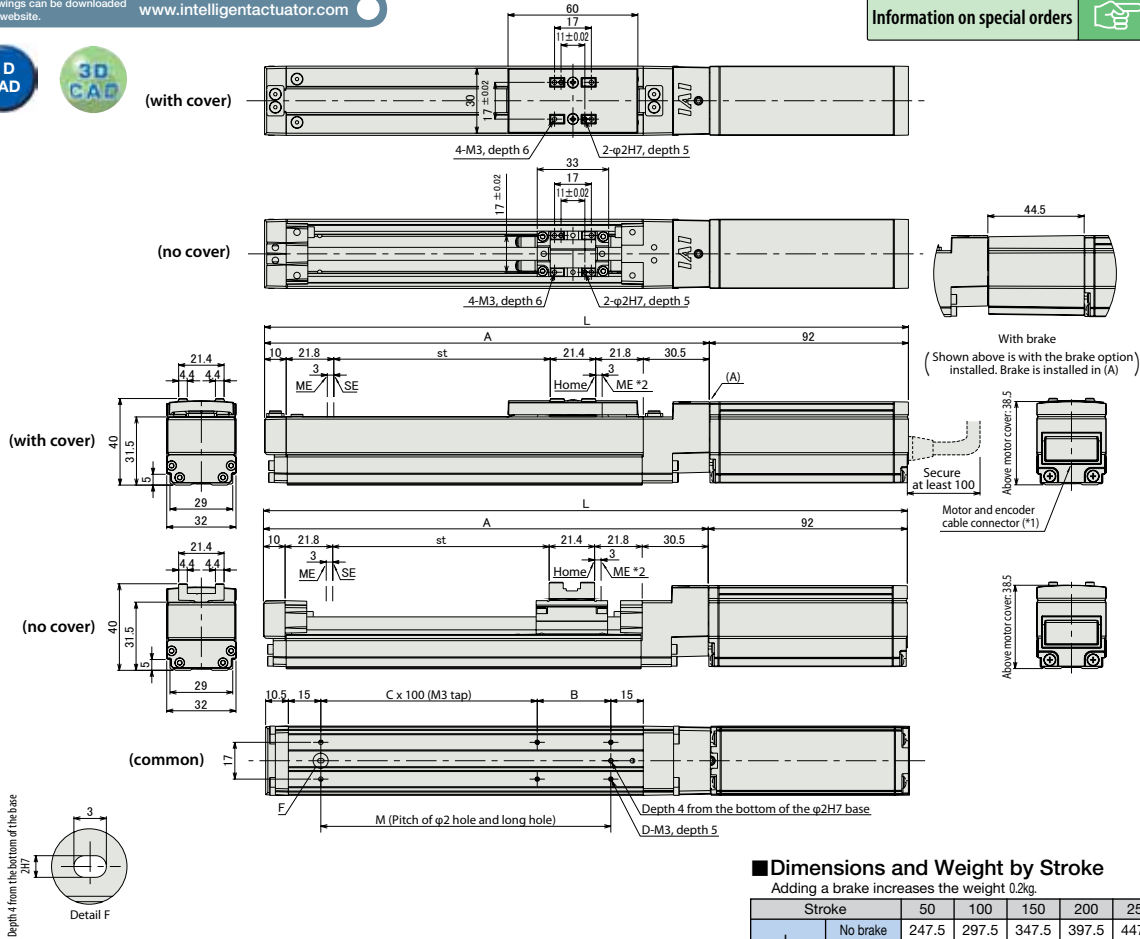
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2D CAD

3D CAD

Information on special orders

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Dimensions and Weight by Stroke

Adding a brake increases the weight 0.2kg.

Stroke	Adding a brake increases the weight 0.2kg.						
	50	100	150	200	250	300	
L	No brake	247.5	297.5	347.5	397.5	447.5	497.5
	Brake-equipped	292	342	392	442	492	542
A	155.5	205.5	255.5	305.5	355.5	405.5	
B	84	34	84	34	84	34	
C	0	1	1	2	2	3	
D	4	6	6	8	8	10	
M	84	134	184	234	284	334	
Weight (kg)	With cover	0.7	0.7	0.8	0.9	0.9	1
	No cover	0.6	0.7	0.7	0.8	0.8	0.9

(*) Connect the motor-encoder cable (integrated). (See P374 for cable details)
 (*) Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
 ME: mechanical end
 SE: stroke end

Compatible Controllers

The RCP3 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page	
Positioner Type		PCON-C-28PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365	
Safety category compatible Positioner type		PCON-CG-28PI-NP-2-0							
Solenoid valve type		PCON-CY-28PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points			-		
Pulse series input type (Differential line driver specification)		PCON-PL-28PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)			-		
		PCON-PO-28PI-NP-2-0	Open collector compatible Pulse series input type				-		
Serial communication type		PCON-SE-28PI-N-0-0	Serial communications Special Type	64 points			-		
Field network type		RPCON-28P	Field network Dedicated type	768 points			-		P343
Program control type		PSEL-C-1-28PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points			-		P395

*PSEL is for single axis specification.

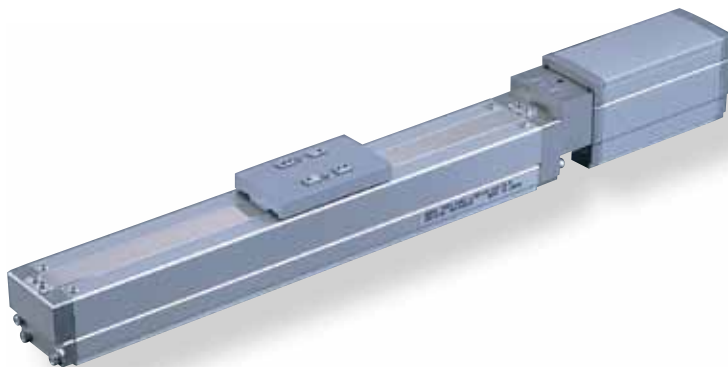
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Build-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCP3-SA4C

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, Pulse Motor, Coupling Specification

Model Description	RCP3 — SA4C — I — 35P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	35P: Pulse motor 35□Size	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm ~ 400:400mm (Set pitch every 50mm)	P1: PCON PSEL	N : None P : 1m S : 3m M : 5m X□□ : Length designation	B: Brake-equipped NCO: No cover specification NM: Reverse-home specification		

See preceding section for model descriptions.



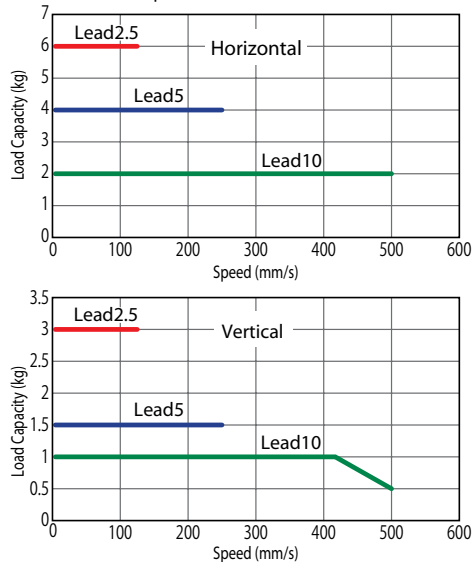
Technical Reference P.451

POINT
Notes on selection

- (1) Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- (2) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

Model	Lead (mm)	Maximum payload		Maximum pushing force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-SA4C-I-35P-10-①-P1-②-③	10	2	Up to 1	34	50 to 400 (every 50mm)
RCP3-SA4C-I-35P-5-①-P1-②-③	5	4	1.5	68	
RCP3-SA4C-I-35P-2.5-①-P1-②-③	2.5	6	3	136	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 400 (every 50mm)	
	10	500
5	250	
2.5	125	

(Unit = mm/s)

① Price List by Stroke (Standard Price)

① Stroke (mm)	Type code	
	SA4C	
	Encoder type	
	Incremental	
	Actuator Cover	
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—

③ Option Price List (Standard Price)

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
No cover	NCO	P24	—
Reversed-home specification	NM	P442	—

② Cable Length Price List (Standard Price)

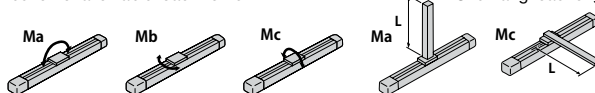
Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—

*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 8mm rolled C10
Positioning Repeatability	± 0.05 mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 3.04N·m Mb: 4.31N·m Mc: 5.00N·m
Overhang load length	120mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment

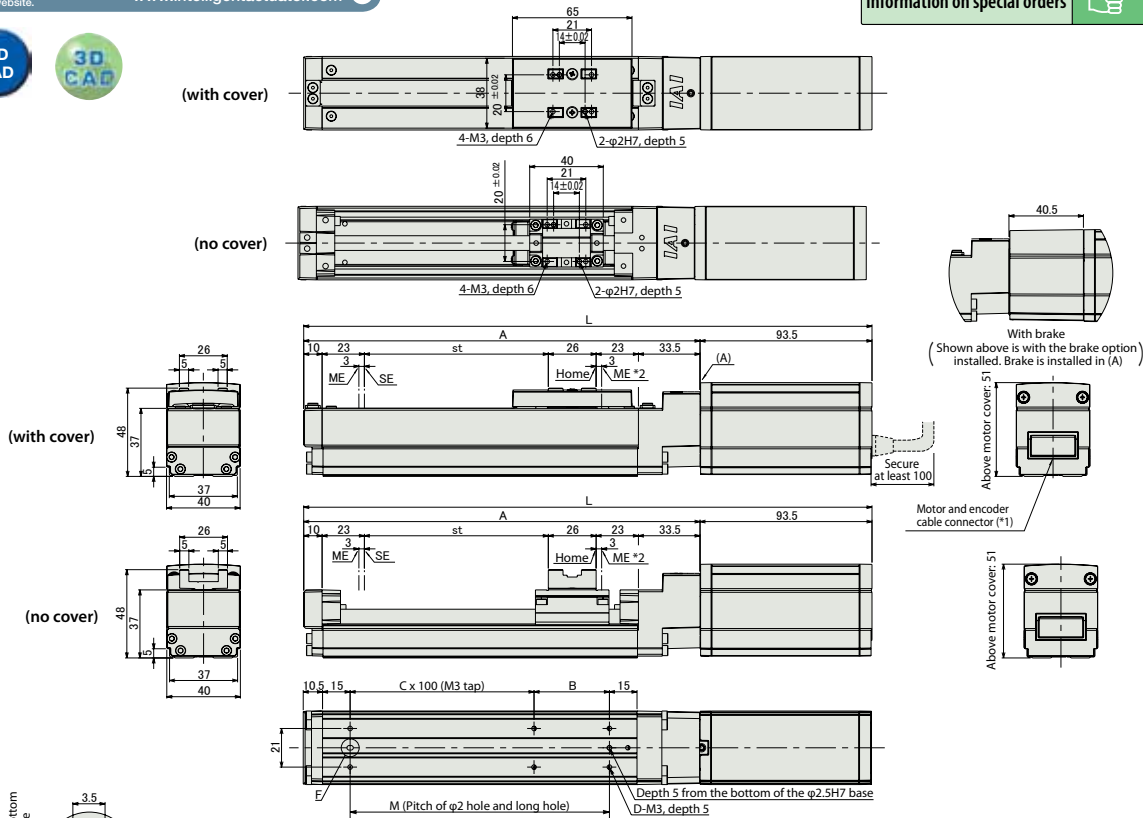


Dimensional Drawings

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



Information on special orders P.454



■ Dimensions and Weight by Stroke

Adding a brake increases the weight 0.2kg.

Stroke	Adding a brake increases the weight 0.2kg.								
	50	100	150	200	250	300	350	400	
L	No brake	259	309	359	409	459	509	559	609
	Brake-equipped	299.5	349.5	399.5	449.5	499.5	549.5	599.5	649.5
A	165.5	215.5	265.5	315.5	365.5	415.5	465.5	515.5	
B	91	41	91	41	91	41	91	41	
C	0	1	1	2	2	3	3	4	
D	4	6	6	8	8	10	10	12	
M	91	141	191	241	291	341	391	441	
Weight (kg)	With cover	0.9	1	1.1	1.2	1.3	1.4	1.5	1.6
	No cover	0.9	0.9	1	1.1	1.2	1.2	1.3	1.4

(*) Connect the motor-encoder cable (integrated).

(See P374 for cable details)

(*)2 Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.

ME: mechanical end

SE: stroke end

Compatible Controllers

The RCP3 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page	
Positioner Type		PCON-C-35PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-		
Safety category compatible Positioner type		PCON-CG-35PI-NP-2-0							
Solenoid valve type		PCON-CY-35PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points					
Pulse series input type (Differential line driver specification)		PCON-PL-35PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)					P365
Pulse series input type (Open collector specification)		PCON-PO-35PI-NP-2-0	Open collector compatible Pulse series input type						
Serial communication type		PCON-SE-35PI-N-0-0	Serial communications Special type	64 points					
Field network type		RPCON-35P	field network Dedicated type	768 points					P343
Program control type		PSEL-C-1-35PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					P395

*PSEL is for single axis specification.

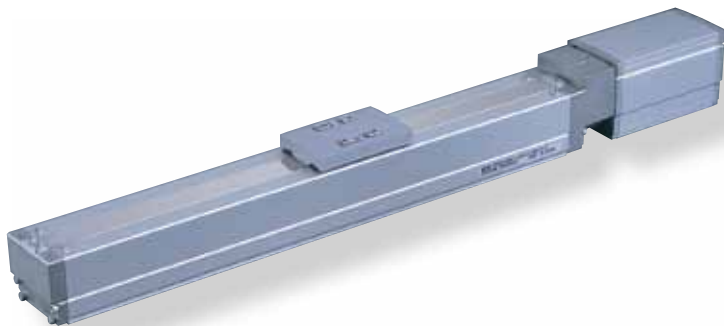
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCP3-SA5C

ROBO Cylinder, Slider Type, Actuator Dimensions 50mm, Pulse Motor, Coupling Specification

Model Description	RCP3 - SA5C - I - 42P - [] - [] - P1 - [] - []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	42P: Pulse motor 42□Size	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 500:500mm (Set pitch every 50mm)	P1: PCON PSEL	N : None P : 1m S : 3m M : 5m X□□ : Length designation	B: Brake-equipped NCO: No cover specification NM: Reverse-home specification		

See preceding section for model descriptions.



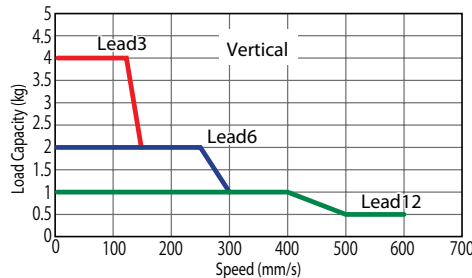
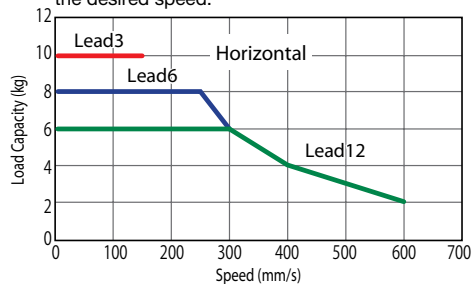
Technical Reference P.451

POINT
Notes on selection

- (1) Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- (2) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

Model	Lead (mm)	Maximum payload		Maximum pushing force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-SA5C-I-42P-12-①-P1-②-③	12	Up to 6	Up to 1	47	50 to 500 (every 50mm)
RCP3-SA5C-I-42P-6-①-P1-②-③	6	Up to 8	Up to 2	95	
RCP3-SA5C-I-42P-3-①-P1-②-③	3	10	Up to 4	189	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 500 (every 50mm)	
	Stroke	Maximum Speed
12	600	
6	300	
3	150	

(Unit = mm/s)

① Price List by Stroke (Standard Price)

① Stroke (mm)	Type code	
	SA5C	
	Encoder type	
	Incremental	
	Actuator Cover	
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—

③ Option Price List (Standard Price)

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
No cover	NCO	P26	—
Reversed-home specification	NM	P442	—

② Cable Length Price List (Standard Price)

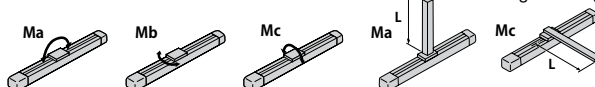
Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—

*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw φ10mm rolled C10
Positioning Repeatability	±0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 3.92N·m Mb: 5.58N·m Mc: 8.53N·m
Overhang load length	130mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment

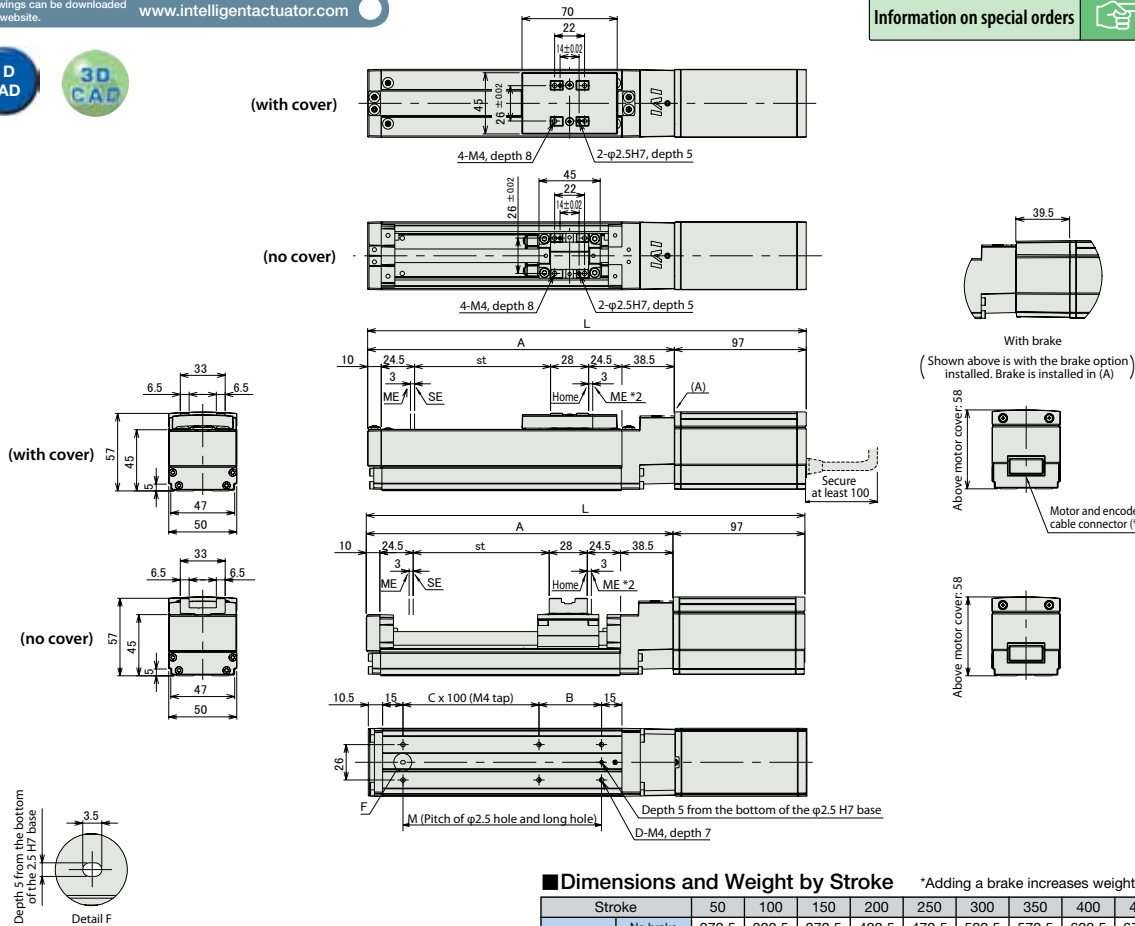


Dimensional Drawings

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



Information on special orders P.454



■ Dimensions and Weight by Stroke

*Adding a brake increases weight by 0.4kg.

Stroke	L	Stroke									
		50	100	150	200	250	300	350	400	450	500
L	No brake	272.5	322.5	372.5	422.5	472.5	522.5	572.5	622.5	672.5	722.5
	Brake-equipped	312	362	412	462	512	562	612	662	712	762
A		175.5	225.5	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5
B		96	46	96	46	96	46	96	46	96	46
C		0	1	1	2	2	3	3	4	4	5
D		4	6	6	8	8	10	10	12	12	14
M		96	146	196	246	296	346	396	446	496	546
Weight (kg)	With cover	1.4	1.5	1.6	1.8	1.9	2	2.2	2.3	2.5	2.6
	No cover	1.3	1.4	1.5	1.6	1.7	1.8	2	2.1	2.2	2.3

- (*1) Connect the motor-encoder cable (integrated). (See P374 for cable details)
 - (*2) Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
- ME: mechanical end
SE: stroke end

Compatible Controllers

The RCP3 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page				
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365				
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0										
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points								
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)								
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type									
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points								
Field network type		RPCON-42P	field network Dedicated type	768 points							P343	
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points								P395

*PSEL is for single axis specification.

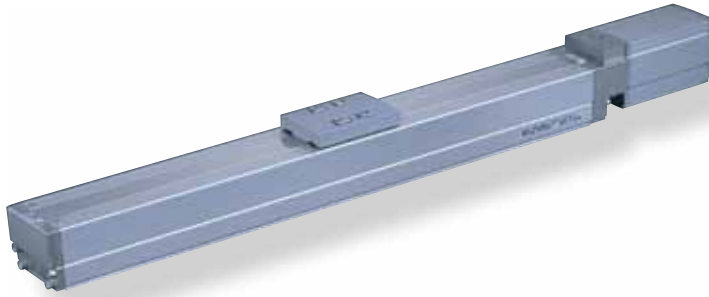
- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Build-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCP3-SA6C

ROBO Cylinder, Slider Type, Actuator Dimensions 60mm, Pulse Motor, Coupling Specification

Model Description	RCP3 — SA6C — I — 42P — [] — [] — P1 — [] — []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	42P: Pulse motor 42□Size	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 600:600mm (Set pitch every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□: Length designation	B: Brake-equipped NCO: No cover specification NM: Reverse-home specification

See preceding section for model descriptions.

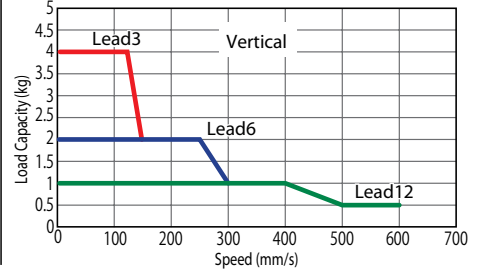
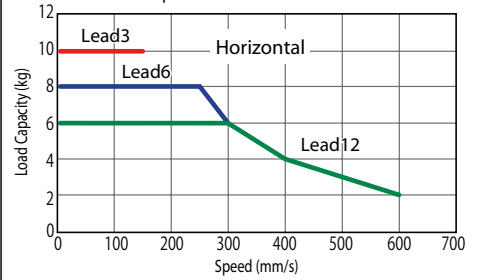


Technical Reference P.451

- POINT** Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desirable maximum speed in the Actuator Specification Table below.
 - (2) Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - (3) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

Model	Lead (mm)	Maximum payload		Maximum pushing force (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP3-SA6C-I-42P-12-①-P1-②-③	12	Up to 6	Up to 1	47	50 to 600 (every 50mm)
RCP3-SA6C-I-42P-6-①-P1-②-③	6	Up to 8	Up to 2	95	
RCP3-SA6C-I-42P-3-①-P1-②-③	3	10	Up to 4	189	

Stroke and Maximum Speed

Stroke / Lead	50 to 550 (every 50mm)	600 (mm)
	12	600
6	300	270
3	150	135

(Unit = mm/s)

Legend ① Stroke ② Cable Length ③ Option

① Price List by Stroke (Standard Price)

① Stroke (mm)	Type code SA6C	
	Encoder type Incremental	
	Actuator Cover	
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

③ Option Price List (Standard Price)

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
No cover	NCO	P28	—
Reversed-home specification	NM	P442	—

② Cable Length Price List (Standard Price)

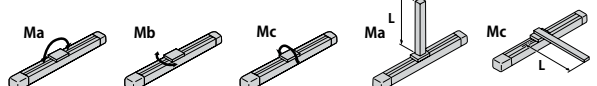
Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—

*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw φ10mm rolled C10
Positioning Repeatability	±0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Mb: Special alumite treatment
Allowable load moment	Ma: 4.31N·m Mb: 6.17N·m Mc: 10.98N·m
Overhang load length	150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment



Dimensional Drawings

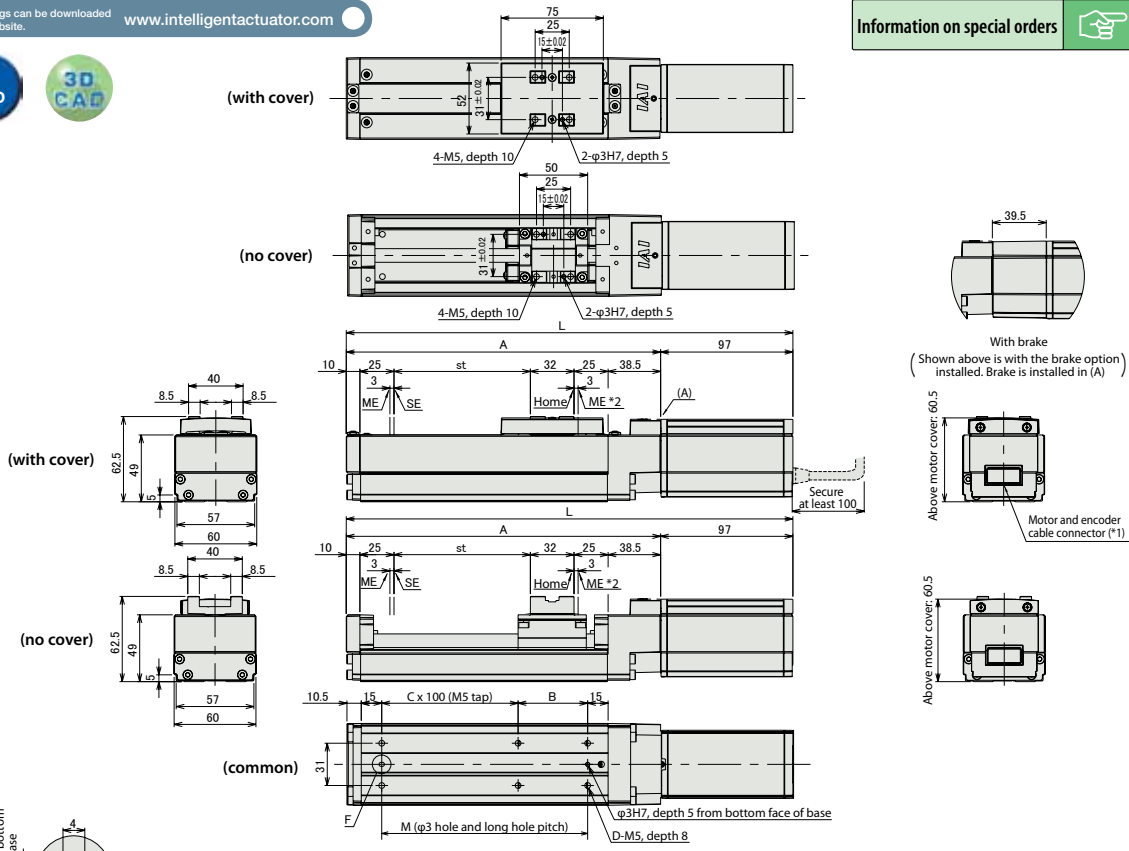
CAD drawings can be downloaded from the website.

www.intelligentactuator.com

2D CAD

3D CAD

Information on special orders P.454



■ Dimensions and Weight by Stroke *Adding a brake increases weight by 0.4kg.

Stroke	Stroke												
	50	100	150	200	250	300	350	400	450	500	550	600	
L	No brake	277.5	327.5	377.5	427.5	477.5	527.5	577.5	627.5	677.5	727.5	777.5	827.5
	Brake-equipped	317	367	417	467	517	567	617	667	717	767	817	867
A	180.5	230.5	280.5	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	
B	101	51	101	51	101	51	101	51	101	51	101	51	
C	0	1	1	2	2	3	3	4	4	5	5	6	
D	4	6	6	8	8	10	10	12	12	14	14	16	
M	101	151	201	251	301	351	401	451	501	551	601	651	
Weight (kg)	With cover	1.6	1.8	2	2.1	2.3	2.5	2.7	2.8	3	3.2	3.3	3.5
	No cover	1.5	1.7	1.8	2	2.1	2.3	2.4	2.6	2.7	2.8	3	3.1

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

(See P374 for cable details)

(*2) Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.

ME: mechanical end

SE: stroke end

Compatible Controllers

The RCP3 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page	
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365	
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0							
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points					
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)					
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type						
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points					
Field network type		RPCON-42P	field network Dedicated type	768 points					P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					P395

*PSEL is for single axis specification.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCP2-SA5C

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, Pulse Motor, Straight Type

Model Description	RCP2 — SA5C — I — 42P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	42P: Pulse motor 42□Size	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 500:500mm (Set pitch to every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable	BE: Brake (Cable exiting the end) BL: Brake (Cable exiting the left) BR: Brake (Cable exiting the right) NM: Reverse-home Specification SR: Slider roller specification

See preceding section for model descriptions.

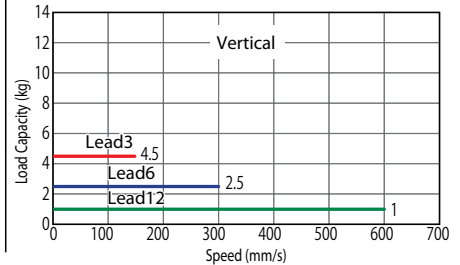
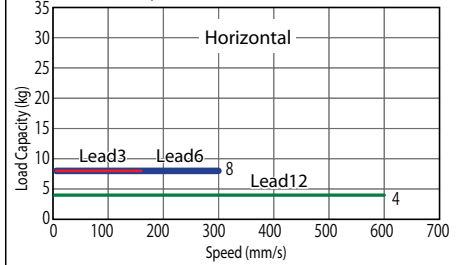


Technical Reference P.451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Stroke and Maximum Speed

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SA5C-I-42P-12-①-P1-②-③	12	4	1	50 to 500 (every 50mm)
RCP2-SA5C-I-42P-6-①-P1-②-③	6	8	2.5	
RCP2-SA5C-I-42P-3-①-P1-②-③	3	8	4.5	

Stroke / Lead	50 to 500 (every 50mm)
	12
6	300
3	150

Legend ① Stroke ② Cable Length ③ Option

(Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code
	SA5C
	Encoder type Incremental
50	—
100	—
150	—
200	—
250	—
300	—
350	—
400	—
450	—
500	—

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (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)	—

*See P374 about maintenance cables.

③ Option Price List

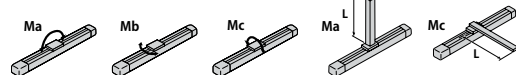
Title	Option code	See page	Standard price
Brake (Cable exiting the end)	BE	P437	—
Brake (Cable exiting the left)	BL	P437	—
Brake (Cable exiting the right)	BR	P437	—
Reverse-home specification	NM	P442	—
Slider roller specification	SR	P445	—

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction 150mm or less Mb-Mc direction 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

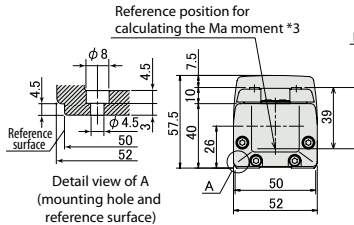
Information on special order **P.454**

2D CAD

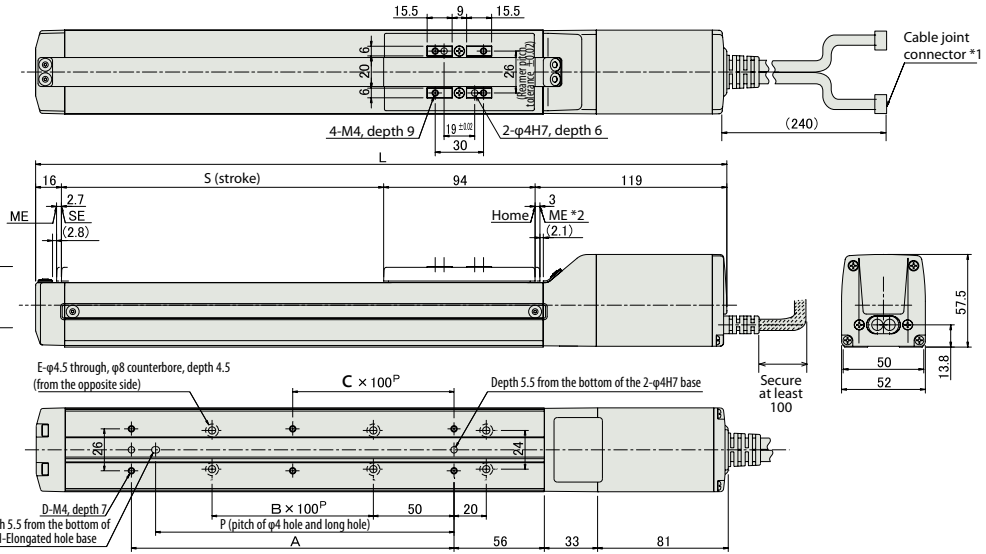
3D CAD

For this specification, the dimension on the motor side (distance to home) is reversed with the dimension on the side opposite the motor.

*3. Ma This is the reference position for calculating the moment offset.

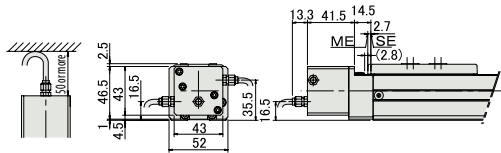
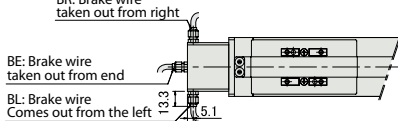


1. Connect the motor-encoder cable. See P374 for cable details.
 2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
- ME: mechanical end
SE: stroke end
Dimensions in () are for reference.



Brake area dimensions

Details of long hole area



* 40 Adding a brake increases overall length by 40mm (53.3mm with the cable exiting the end) and weight by 0.4kg.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	279	329	379	429	479	529	579	629	679	729
A	73	100	100	200	200	300	300	400	400	500
B	0	0	0	1	1	2	2	3	3	4
C	0	0	1	1	2	2	3	3	4	4
D	4	4	4	6	6	8	8	10	10	12
E	4	4	6	6	8	8	10	10	12	12
H	0	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485
Weight (kg)	1.5	1.6	1.7	1.8	1.9	2.1	2.2	2.3	2.4	2.5

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-42P	field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10w
- Servo Motor 20w
- Servo Motor 30w
- Servo Motor 60w
- Servo Motor 100w
- Servo Motor 150w
- Servo Motor 750w

RCP2-SA6C

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, Pulse Motor, Straight Type

Model Description	RCP2 — SA6C — I — 42P — [] — [] — P1 — [] — []
Series	Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option
	I: Incremental specification 42P: Pulse motor 42□Size 12: 12mm 6: 6mm 3: 3mm 50:50mm ~ 600:600mm (Set pitch to every 50mm) P1: PCON PSEL N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable BE: Brake (Cable exiting the end) BL: Brake (Cable exiting the left) BR: Brake (Cable exiting the right) NM: Reverse-home Specification SR: Slider roller specification

See preceding section for model descriptions.

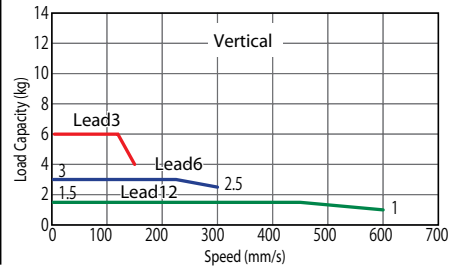
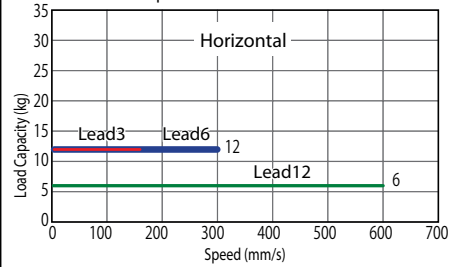


Technical Reference P.451

- POINT** Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SA6C-I-42P-12-①-P1-②-③	12	6	Up to 1.5	50 to 600 (every 50mm)
RCP2-SA6C-I-42P-6-①-P1-②-③	6	12	Up to 3	
RCP2-SA6C-I-42P-3-①-P1-②-③	3	12	Up to 6	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 550 (every 50mm)	600 (mm)
		12	600
6	300	270	
3	150	135	

(Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code	
	SA6C	Encoder type
50	—	Incremental
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

③ Option Price List

Title	Option code	See page	Standard price
Brake (Cable exiting the end)	BE	P437	—
Brake (Cable exiting the left)	BL	P437	—
Brake (Cable exiting the right)	BR	P437	—
Reverse-home specification	NM	P442	—
Slider roller specification	SR	P445	—

② Cable Length Price List

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

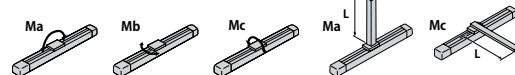
*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction 220mm or less Mb-Mc direction 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

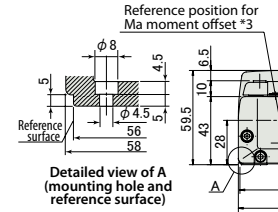
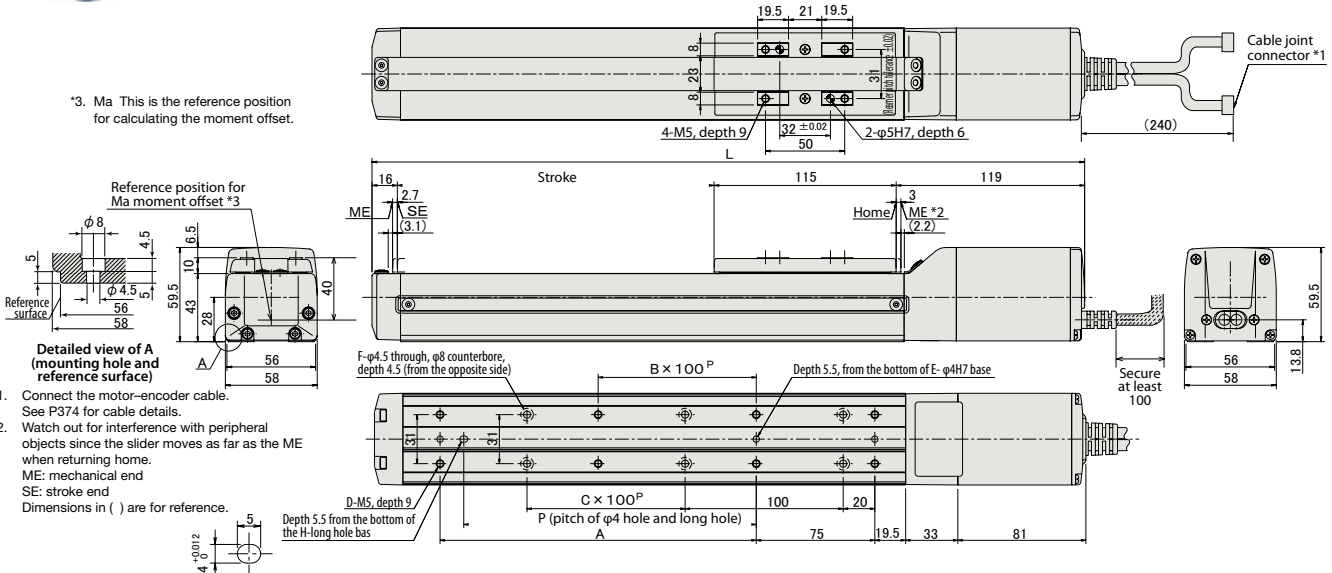
2D CAD

3D CAD

For this specification, the dimension on the motor side (distance to home) is reversed with the dimension on the side opposite the motor.

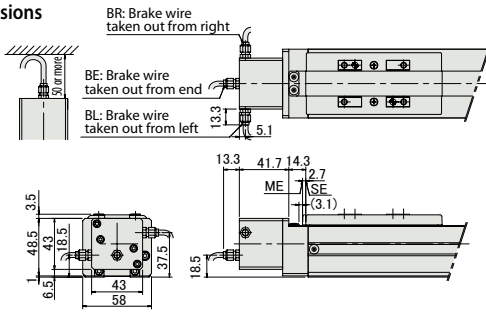
Information on special orders P.454

*3. Ma This is the reference position for calculating the moment offset.



1. Connect the motor-encoder cable. See P374 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
ME: mechanical end
SE: stroke end
Dimensions in () are for reference.

Details of long hole area



■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	300	350	400	450	500	550	600	650	700	750	800	850
A	0	100	100	200	200	300	300	400	400	500	500	600
B	0	0	0	1	1	2	2	3	3	4	4	5
C	0	0	1	1	2	2	3	3	4	4	5	5
D	4	6	6	8	8	10	10	12	12	14	14	16
E	2	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14
H	0	1	1	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485	485	585
Weight (kg)	1.8	2.0	2.1	2.2	2.4	2.5	2.7	2.8	2.9	3.1	3.2	3.4

* 40 Adding a brake increases overall length by 40mm (53.3mm with the cable exiting the end) and weight by 0.4kg.

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-42P	field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCP2-SA7C

ROBO Cylinder, Slider Type, Actuator Dimensions 73mm, Pulse Motor, Straight Type

Model Description	RCP2 — SA7C — I — 56P — [] — [] — P1 — [] — []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	56P: Pulse motor 56□Size	16: 16mm 8: 8mm 4: 4mm	50:50mm ~ 800:800mm (Set pitch every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable	BE: Brake (Cable exiting the end) BL: Brake (Cable exiting the left) BR: Brake (Cable exiting the right) NM: Reverse-home Specification SR: Slider roller specification

See preceding section for model descriptions.

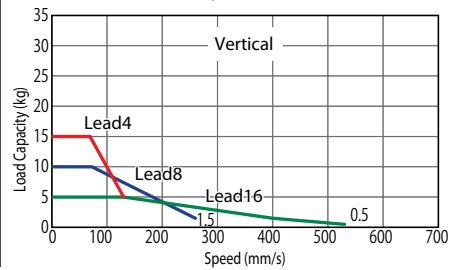
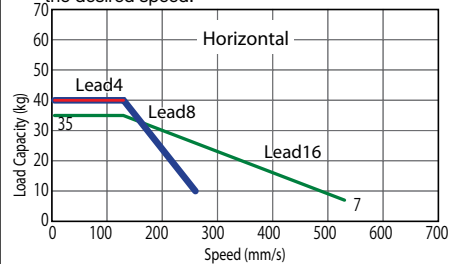


Technical Reference P.451

- POINT** Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 4). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SA7C-I-56P-16-①-P1-②-③	16	Up to 35	Up to 5	50 to 800 (every 50mm)
RCP2-SA7C-I-56P-8-①-P1-②-③	8	Up to 40	Up to 10	
RCP2-SA7C-I-56P-4-①-P1-②-③	4	40	Up to 15	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 700 (every 50mm)	Up to 800 (mm)
	16	533
8	266	240
4	133	120

(Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code	
	SA7C	Encoder type
	Incremental	
50/100	—	
150/200	—	
250/300	—	
350/400	—	
450/500	—	
550/600	—	
650/700	—	
750/800	—	

② Cable Length Price List

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

*See P374 about maintenance cables.

③ Option Price List

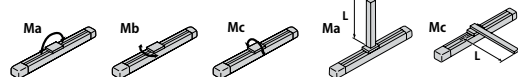
Title	Option code	See page	Standard price
Brake (Cable exiting the end)	BE	P437	—
Brake (Cable exiting the left)	BL	P437	—
Brake (Cable exiting the right)	BR	P437	—
Reverse-home specification	NM	P442	—
Slider roller specification	SR	P445	—

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 12mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 13.9N·m Mb: 19.9N·m Mc: 38.3N·m
Overhang load length	Ma direction 230mm or less Mb-Mc direction 230mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

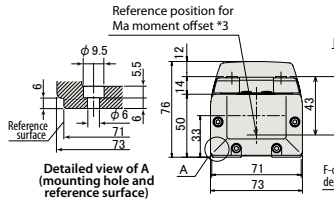
Information on special orders P.454

2D CAD

3D CAD

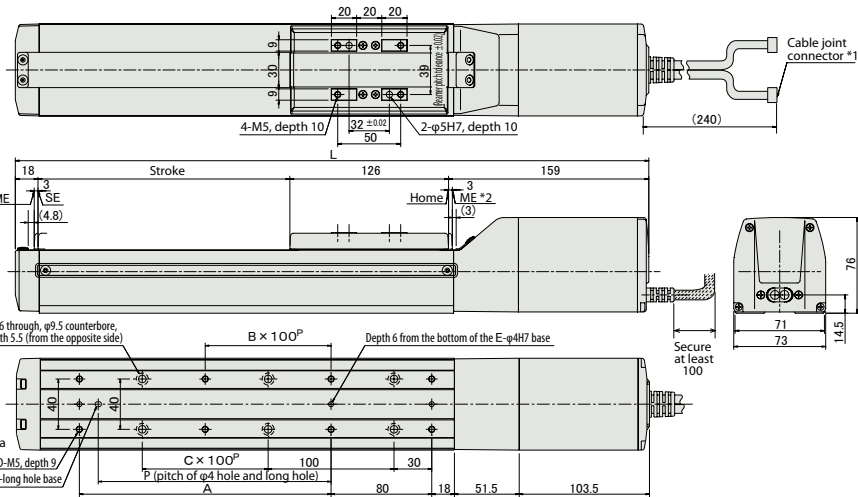
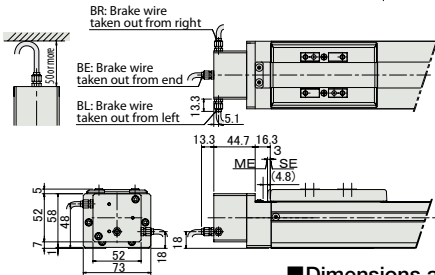
For this specification, the dimension on the motor side (distance to home) is reversed with the dimension on the side opposite the motor.

*3. Ma This is the reference position for calculating the moment offset.



Brake area dimensions

* Adding a brake increases overall length by 43mm (56.3mm with the cable exiting the end) and weight by 0.6kg.



- *1. Connect the motor-encoder cable. See P374 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
ME: mechanical end
SE: stroke end
Dimensions in () are for reference.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	353	403	453	503	553	603	653	703	753	803	853	903	953	1003	1053	1103
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
B	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
C	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
H	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight(kg)	3.1	3.3	3.6	3.8	4.0	4.2	4.5	4.7	4.9	5.1	5.4	5.6	5.8	6.0	6.3	6.5

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-56PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-56PI-NP-2-0								
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-56PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-56PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-56PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-56P	field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-56PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

Controller- Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/ Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

RCP2-SS7C

ROBO Cylinder, Slider Type, Actuator Dimensions 60mm, Pulse Motor, Straight Type, Steel Base Type

Model Description **RCP2** — **SS7C** — **I** — **42P** — — — **P1** — —

Series — Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option

I: Incremental specification 42P: Pulse motor 42□Size
 12: 12mm 50:50mm ~ P1:PCON N: None B: Brake
 6: 6mm 600:600mm PSEL P: 1m NM: Reverse-home specification
 3: 3mm (Set pitch every 50mm) M: 5m S: 3m SR: Slider roller specification
 X□□: Length designation R□□: Robot cable

See preceding section for model descriptions.



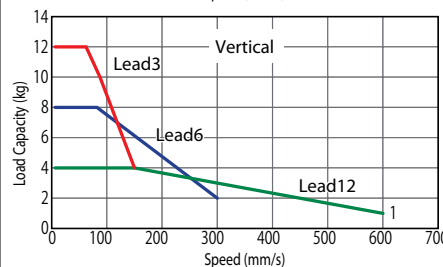
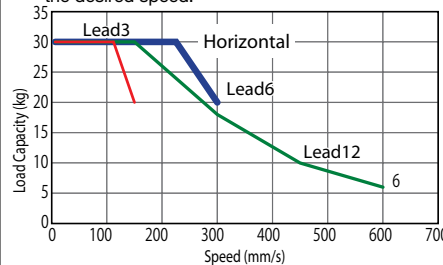
Technical Reference P.451



- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
- (2) Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- (3) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SS7C-I-42P-12-①-P1-②-③	12	Up to 30	Up to 4	50 to 600 (every 50mm)
RCP2-SS7C-I-42P-6-①-P1-②-③	6	Up to 30	Up to 8	
RCP2-SS7C-I-42P-3-①-P1-②-③	3	Up to 30	Up to 12	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	Maximum Speed	
	50 to 500 (every 50mm)	Up to 600 (mm)
12	600	470
6	300	230
3	150	115

(Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code
	SS7C
Encoder type	
Incremental	
50/100	—
150/200	—
250/300	—
350/400	—
450/500	—
550/600	—

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) – X10 (10m)	—
	X11 (11m) – X15 (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)	—
	—	—

*See P374 about maintenance cables.

③ Option Price List

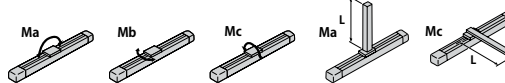
Title	Option code	See page	Standard price
Brake	B	P437	—
Reverse-home specification	NM	P442	—
Slider roller specification	SR	P445	—

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 14.7N·m Mb: 14.7N·m Mc: 33.3N·m
Overhang load length	Ma direction 300mm or less Mb-Mc direction 300mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

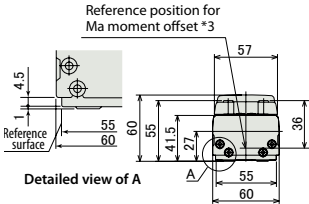
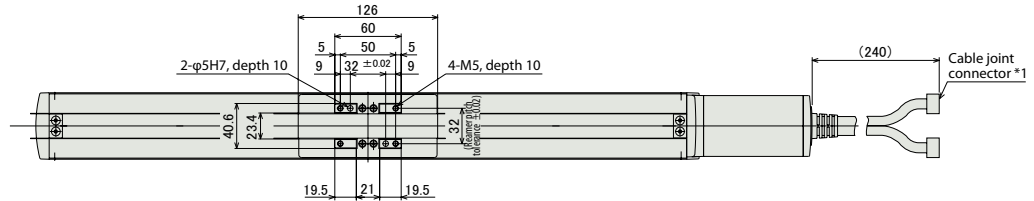
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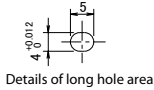
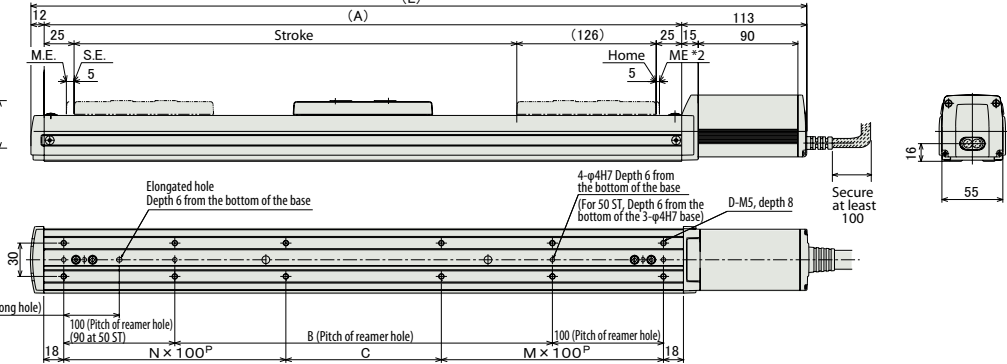
For this specification, the dimension on the motor side (distance to home) is reversed with the dimension on the side opposite the motor.

Information on special orders P.454

*3. Ma This is the reference position for calculating the moment offset.

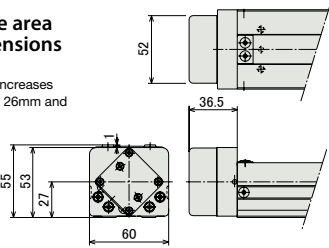


- 1 Connect the motor-encoder cable. See pP374 for cable details.
- 2 Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
ME: mechanical end
SE: stroke end
Dimensions within () are for reference.



Brake area dimensions

*Adding a brake increases overall length by 26mm and weight by 0.5kg.



* Brake wiring is passed through the actuator body and connected to the motor cable.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	351	401	451	501	551	601	651	701	751	801	851	901
A	226	276	326	376	426	476	526	576	626	676	726	776
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
Weight(kg)	3.1	3.4	3.7	4.0	4.3	4.7	5.0	5.4	5.7	6.1	6.4	6.7

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-42P	field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

RCP2-SS8C

ROBO Cylinder, Slider Type, Actuator Dimensions 80mm, Pulse Motor, Straight Type, Steel Base Type

Model Description	RCP2 — SS8C — I — 56P — <input type="checkbox"/> — <input type="checkbox"/> — P1 — <input type="checkbox"/> — <input type="checkbox"/>							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	56P: Pulse motor 56□Size	20: 20mm 10: 10mm 5: 5mm	50:50mm 1000:1000mm (set in 50mm steps)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable	B: Brake NM: Reverse-home specification SR: Slider roller specification

See preceding section for model descriptions.

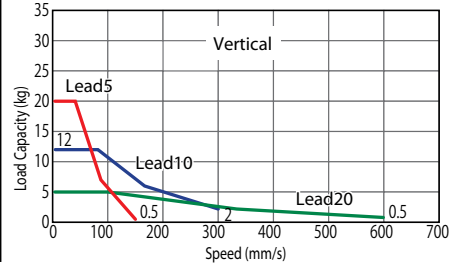
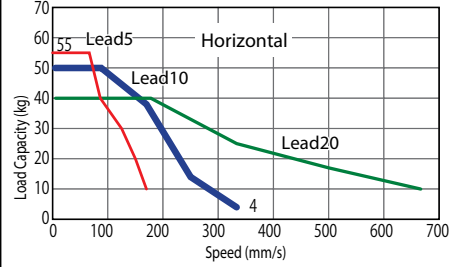


Technical Reference P.451

- POINT** Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - (3) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 5). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SS8C-I-56P-20-①-P1-②-③	20	Up to 40	Up to 5	50 to 1000 (every 50mm)
RCP2-SS8C-I-56P-10-①-P1-②-③	10	Up to 50	Up to 12	
RCP2-SS8C-I-56P-5-①-P1-②-③	5	Up to 55	Up to 20	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke Lead	50 to 800 (every 50mm)	Up to 900 (mm)	Up to 1000 (mm)
	20	666 <600>	625 <600>
10	333 <300>	310 <300>	255
5	165 <150>	155 <150>	125

* < > indicate vertical service. (Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code
	SS8C
	Encoder type
	Incremental
50/100	—
150/200	—
250/300	—
350/400	—
450/500	—
550/600	—
650/700	—
750/800	—
850/900	—
950/1000	—

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Reverse-home specification	NM	P442	—
Slider roller specification	SR	P445	—

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (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)	—

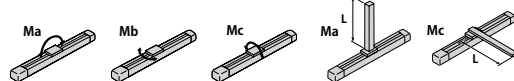
*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 16mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m
Overhang load length	Ma 450mm Mb-Mc 450mm
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

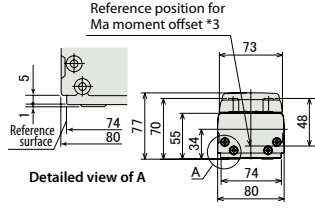
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Information on special orders P.454



*With the reversed-home specification, the dimension on the motor side (distance to the home) and that on the counter-motor side are reversed.

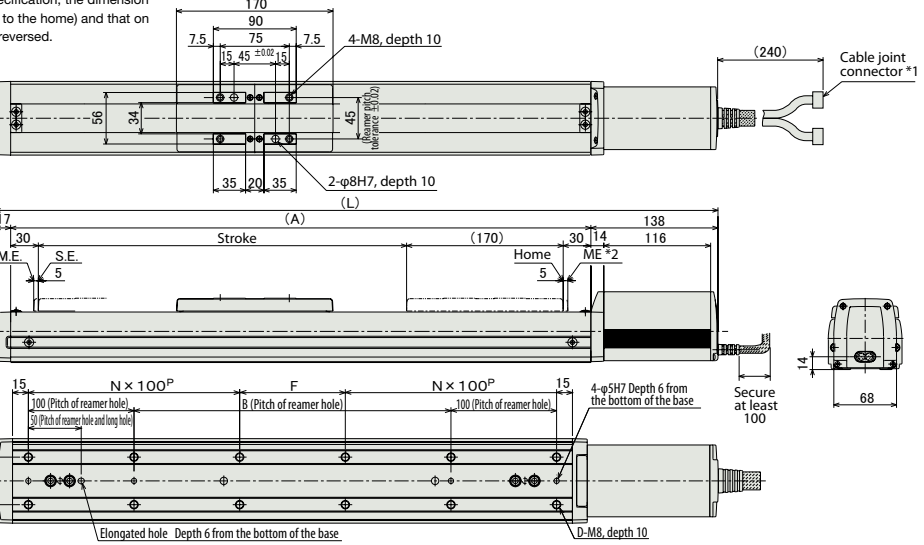
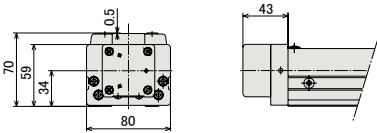
*3. Ma This is the reference position for calculating the moment offset.



- *1 Connect the motor-encoder cable. See p. 374 for cable details.
- *2 Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end Dimensions within () are for reference.

Brake area dimensions

* Adding a brake increases overall length by 26mm and weight by 0.5kg.



■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385
A	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight(kg)	6.6	7.1	7.6	8.1	8.6	9.2	9.7	10.2	10.7	11.3	11.7	12.3	12.8	13.4	13.9	14.5	15.0	15.5	16.1	16.6

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-56PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-56PI-NP-2-0								
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-56PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-56PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-56PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-56P	field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-56PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

RCP2-HS8C

ROBO Cylinder High-speed, Slider Type, Actuator Dimensions 80mm, Pulse Motor, Straight Type, Steel Base Type

Model Description	RCP2 - HS8C - I - 86P - [] - [] - P2 - [] - []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	86P: Pulse motor 86□Size	30: 30mm	50:50mm ~ 1000:1000mm (Set pitch every 50mm)	P2: PCON-CF RCP2-CF	N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable	B: Brake NM: Reverse-home specification SR: Slider roller specification

See preceding section for model descriptions.

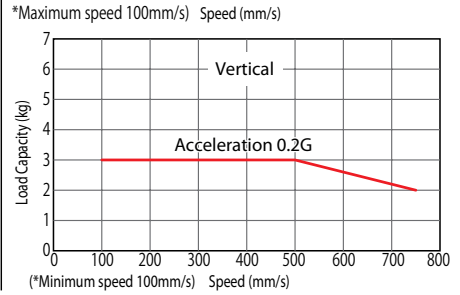
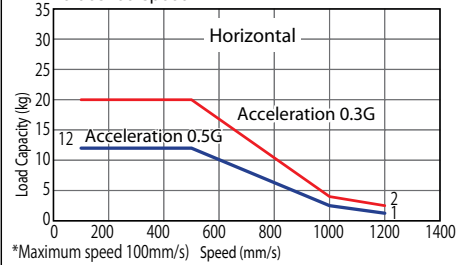


Technical Reference P.451

- POINT**
Notes on selection
- Due to the large lead in high-speed actuators, there are cases where operating at low speeds will cause vibration and noise. Therefore, use at speeds over 100mm/s.
 - As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - Since the RCP3 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation). Acceleration limits are 0.5G horizontal, 0.2G vertical.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Model	Lead (mm)	Maximum payload		Stroke (mm)	Stroke and Maximum Speed			
		Horizontal (kg)	Vertical (kg)		Stroke Lead	50 to 800 (every 50mm)	Up to 900 (mm)	Up to 1000 (mm)
RCP2-HS8C-I-86P-30-①-P2-②-③	30	Up to 20	Up to 3	50 to 1000 (every 50mm)	30	1200 <750>	1000 <750>	800 <750>

Legend ① Stroke ② Cable Length ③ Option

* < > indicate vertical service. (Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code	
	HS8C	
	Encoder type	
	Incremental	
50/100	-	
150/200	-	
250/300	-	
350/400	-	
450/500	-	
550/600	-	
650/700	-	
750/800	-	
850/900	-	
950/1000	-	

② Cable Length Price List

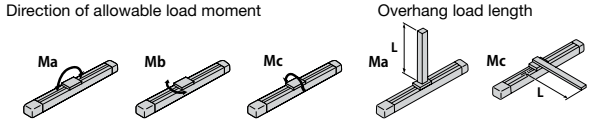
Type	Cable symbol	Standard price	
Standard type	P (1m)	-	
	S (3m)	-	
	M (5m)	-	
Special length	X06 (6m) - X10 (10m)	-	
	X11 (11m) - X15 (15m)	-	
	X16 (16m) - X20 (20m)	-	
	R01 (1m) - R03 (3m)	-	
Robot cable	R04 (4m) - R05 (5m)	-	
	R06 (6m) - R10 (10m)	-	
	R11 (11m) - R15 (15m)	-	
	R16 (16m) - R20 (20m)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

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	-
Reverse-home specification	NM	P442	-
Slider roller specification	SR	P445	-

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 16mm rolled C10
Positioning Repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m
Overhang load length	Ma 450mm Mb-Mc 450mm
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

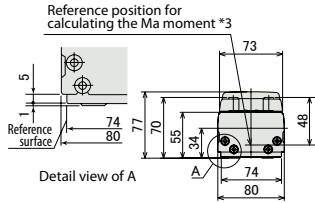
Information on special orders P.454

2D CAD

3D CAD

*With the reversed-home specification, the dimension on the motor side (distance to the home) and that on the counter-motor side are reversed.

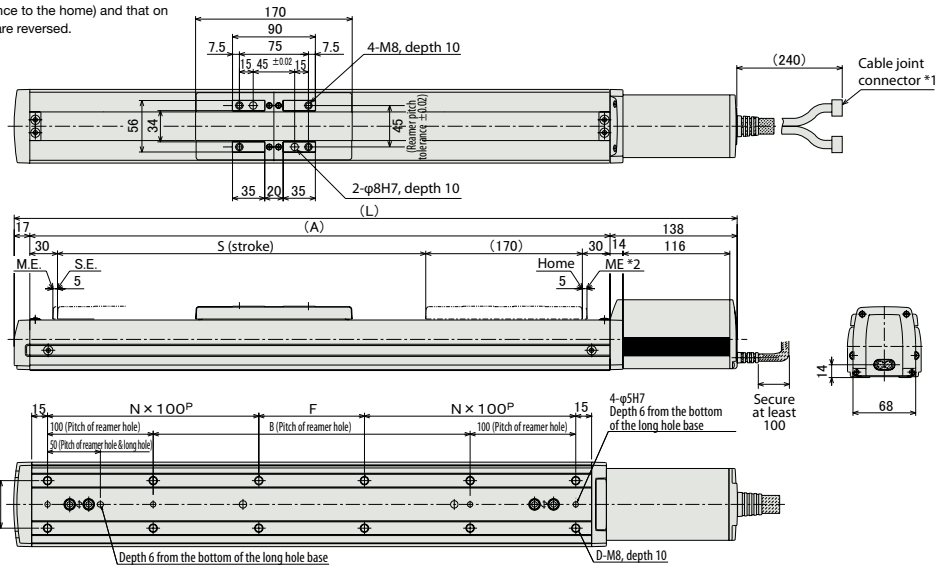
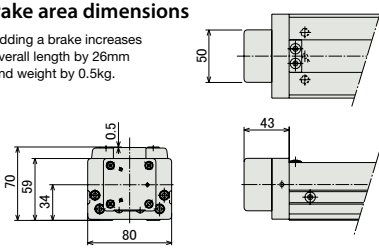
*3. Ma This is the reference position for calculating the moment offset.



- *1 Connect the motor-encoder cable. See p. 374 for cable details.
- *2 Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end Dimensions within () are for reference.

Brake area dimensions

* Adding a brake increases overall length by 26mm and weight by 0.5kg.



* Brake wiring is passed through the actuator body and connected to the motor cable.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
L	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	
A	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	
Weight(kg)	6.6	7.1	7.6	8.1	8.6	9.2	9.7	10.2	10.7	11.3	11.7	12.3	12.8	13.4	13.9	14.5	15.0	15.5	16.1	16.6	

Compatible Controllers

The RCP2-HS8C type actuator uses the special controller listed below.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner Type		PCON-CF-86PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 6A	—	P365

Caution Please note that a different CF type dedicated encoder cable is used than with the PCON-C/CG/CY/PL/PO/SE controllers.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in Direct
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- 10w Servo Motor
- 20w Servo Motor
- 30w Servo Motor
- 60w Servo Motor
- 100w Servo Motor
- 150w Servo Motor
- 750w Servo Motor

RCP2-SA5R

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, Pulse Motor, Reverse-mounted Motor

Model Description	RCP2	-	SA5R	-	I	-	42P	-	<input type="checkbox"/>	-	<input type="checkbox"/>	-	P1	-	<input type="checkbox"/>	-	<input type="checkbox"/>
	Series		Type		Encoder type		Motor type		Lead		Stroke		Compatible Controllers		Cable length		Option
					I: Incremental specification		42P: Pulse motor 42□Size		12: 12mm 6: 6mm 3: 3mm		50:50mm ~ 500:500mm (Set pitch to every 50mm)		P1: PCON PSEL		N: None P: 1m S: 3m M: 5m X□: Length designation R□: Robot cable		B: Brake NM: Reverse-home specification ML: Left reverse-mounted motor specification (Standard) MR: Right reverse-mounted motor specification SR: Slider roller specification

See preceding section for model descriptions.

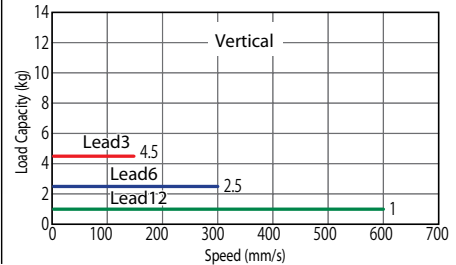
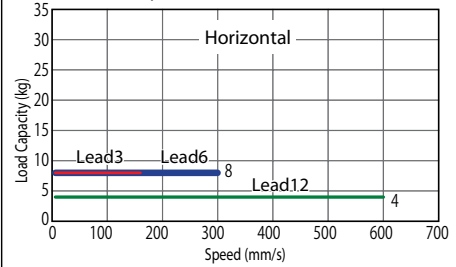


Technical Reference P.451

- POINT** Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - (3) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Stroke and Maximum Speed

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SA5R-I-42P-12-①-P1-②-③	12	4	1	50 to 500 (every 50mm)
RCP2-SA5R-I-42P-6-①-P1-②-③	6	8	2.5	
RCP2-SA5R-I-42P-3-①-P1-②-③	3	8	4.5	

Stroke / Lead	50 to 500 (every 50mm)	
	12	600
6	300	
3	150	

(Unit = mm/s)

Legend ① Stroke ② Cable Length ③ Option

① Price List by Stroke

① Stroke (mm)	Type code	
	SA5R	
	Encoder type	
	Incremental	
50	-	
100	-	
150	-	
200	-	
250	-	
300	-	
350	-	
400	-	
450	-	
500	-	

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	-
	S (3m)	-
	M (5m)	-
Special length	X06 (6m) - X10 (10m)	-
	X11 (11m) - X15 (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)	-

*See P374 about maintenance cables.

③ Option Price List

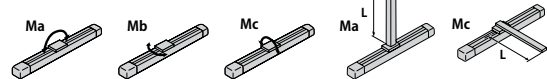
Title	Option code	See page	Standard price
Brake	B	P437	-
Reverse-home specification	NM	P442	-
Left reverse-mounted motor specification (Standard)	ML	P444	-
Right reverse-mounted motor specification	MR	P444	-
Slider roller specification	SR	P445	-

Actuator Specification

Item	Description
Drive System	Ball screw φ10mm rolled C10
Positioning Repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction 150mm or less Mb-Mc direction 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

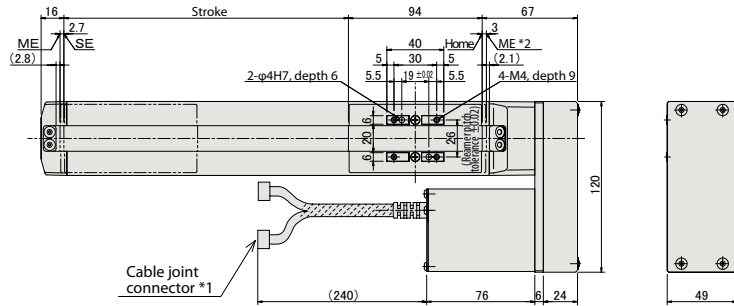
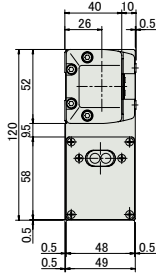
CAD drawings can be downloaded from the website.

www.intelligentactuator.com

Information on special orders P.454



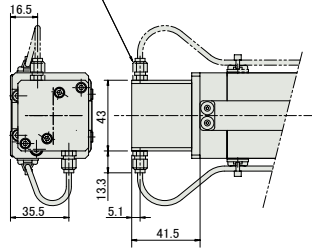
- *1. Connect the motor-encoder cable. See P374 for cable details.
- *2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end Dimensions in () are for reference.



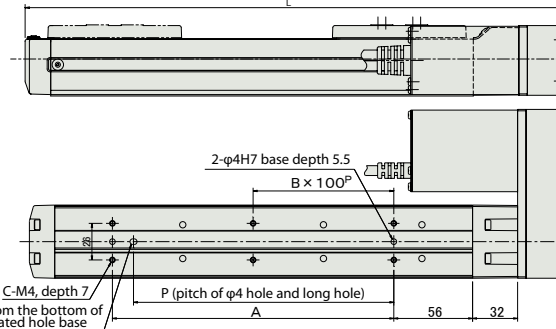
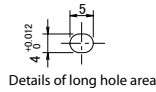
Brake area dimensions

Reverse direction: Opposite side

*Adding a brake increases overall length by 43mm and weight by 0.6kg.



*The brake wire must exit from the same side the motor resides.



■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	227	277	327	377	427	477	527	577	627	677
A	73	100	100	200	200	300	300	400	400	500
B	0	0	0	1	1	2	2	3	3	4
C	4	4	4	6	6	8	8	10	10	12
H	0	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485
Weight(kg)	2.0	2.1	2.2	2.3	2.4	2.6	2.7	2.8	2.9	3.0

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365			
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0									
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)							
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type								
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points							
Field network type		RPCON-42P	Field network Dedicated type	768 points							P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points							

RCP2-SA6R

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, Pulse Motor, Reverse-mounted motor

Model Description	RCP2 - SA6R - I - 42P - [] - [] - P1 - [] - []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	42P: Pulse motor 42□Size	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 600:600mm (Set pitch to every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable	B: Brake NM: Reverse-home specification ML: Left reverse-mounted motor specification (Standard) MR: Right reverse-mounted motor specification SR: Slider roller specification

See preceding section for model descriptions.

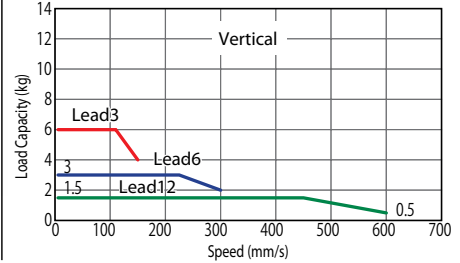
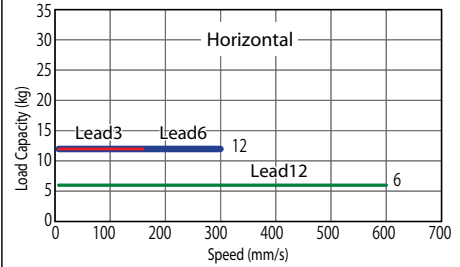


Technical Reference P.451

- POINT** Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SA6R-I-42P-12-①-P1-②-③	12	6	Up to 1.5	50 to 600 (every 50mm)
RCP2-SA6R-I-42P-6-①-P1-②-③	6	12	Up to 3	
RCP2-SA6R-I-42P-3-①-P1-②-③	3	12	Up to 6	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 550 (every 50mm)	600 (mm)
	12	600
6	300	270
3	150	135

(Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code
	SA6R
	Encoder type Incremental
50	—
100	—
150	—
200	—
250	—
300	—
350	—
400	—
450	—
500	—
550	—
600	—

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Reverse-home specification	NM	P442	—
Left reverse-mounted motor specification (Standard)	ML	P444	—
Right reverse-mounted motor specification	MR	P444	—
Slider roller specification	SR	P445	—

② Cable Length Price List

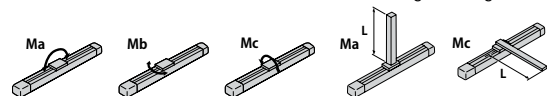
Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
	R01 (1m) - R03 (3m)	—
Robot cable	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction 220mm or less Mb-Mc direction 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

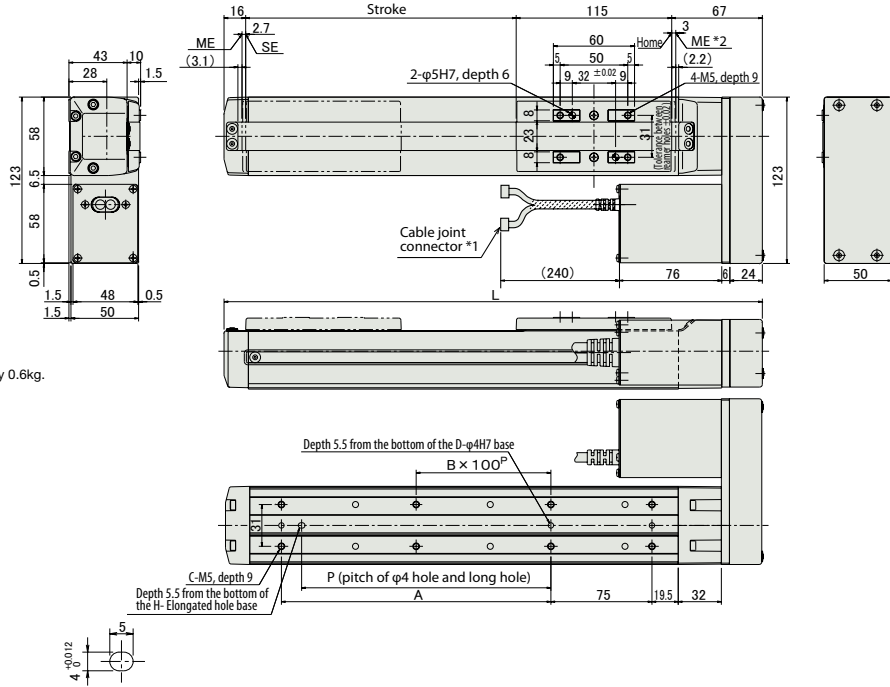
www.intelligentactuator.com



Information on special orders

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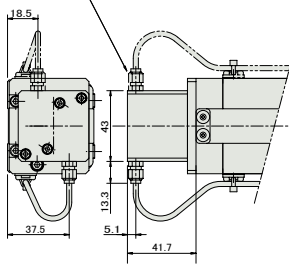
1. Connect the motor-encoder cable. See P374 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
ME: mechanical end
SE: stroke end
Dimensions in () are for reference.



Brake area dimensions

* Adding a brake increases overall length by 43mm and weight by 0.6kg.

Reverse direction:
Opposite side



*The brake wire must exit from the same side the motor resides.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	248	298	348	398	448	498	548	598	648	698	748	798
A	0	100	100	200	200	300	300	400	400	500	500	600
B	0	0	0	1	1	2	2	3	3	4	4	5
C	4	6	6	8	8	10	10	12	12	14	14	16
D	2	3	3	3	3	3	3	3	3	3	3	3
H	0	1	1	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485	485	585
Weight(kg)	2.3	2.5	2.6	2.7	2.9	3.0	3.2	3.3	3.4	3.6	3.7	3.9

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-42P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

RCP2-SA7R

ROBO Cylinder, Slider Type, Actuator Dimensions 73mm, Pulse Motor, Reverse-mounted Motor

Model Description	RCP2 — SA7R — I — 56P — — — P1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	56P: Pulse motor 56□Size	16: 16mm 8: 8mm 4: 4mm	50:50mm ~ 800:800mm (Set pitch every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable	B: Brake NM: Reverse-home specification ML: Left reverse-mounted motor specification (Standard) MR: Right reverse-mounted motor specification SR: Slider roller specification		

See preceding section for model descriptions.



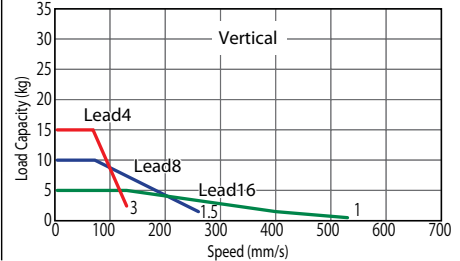
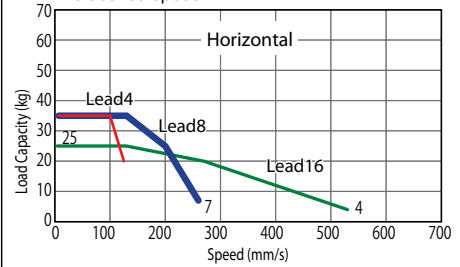
Technical Reference P.451



- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
- Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
- The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 4). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SA7R-I-56P-16-①-P1-②-③	16	Up to 25	Up to 5	50 to 800 (every 50mm)
RCP2-SA7R-I-56P-8-①-P1-②-③	8	Up to 30	Up to 10	
RCP2-SA7R-I-56P-4-①-P1-②-③	4	Up to 30	Up to 15	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 700 (every 50mm)	Up to 800 (mm)
	16	533 <400>
8	266	240
4	133	120

*< > indicate vertical service. (Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code
	SA7R
	Encoder type Incremental
50/100	—
150/200	—
250/300	—
350/400	—
450/500	—
550/600	—
650/700	—
750/800	—

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (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)	—

*See P374 about maintenance cables.

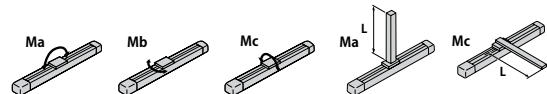
③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Reverse-home specification	NM	P442	—
Left reverse-mounted motor specification (Standard)	ML	P444	—
Right reverse-mounted motor specification	MR	P444	—
Slider roller specification	SR	P445	—

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 12mm rolled C10
Positioning Repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Aluminum, white alumite treated
Allowable load moment	Ma: 13.9N·m Mb: 19.9N·m Mc: 38.3N·m
Overhang load length	Ma direction 230mm or less Mb-Mc direction 230mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less without condensation

Direction of allowable load moment Overhang load length



Dimensional Drawings

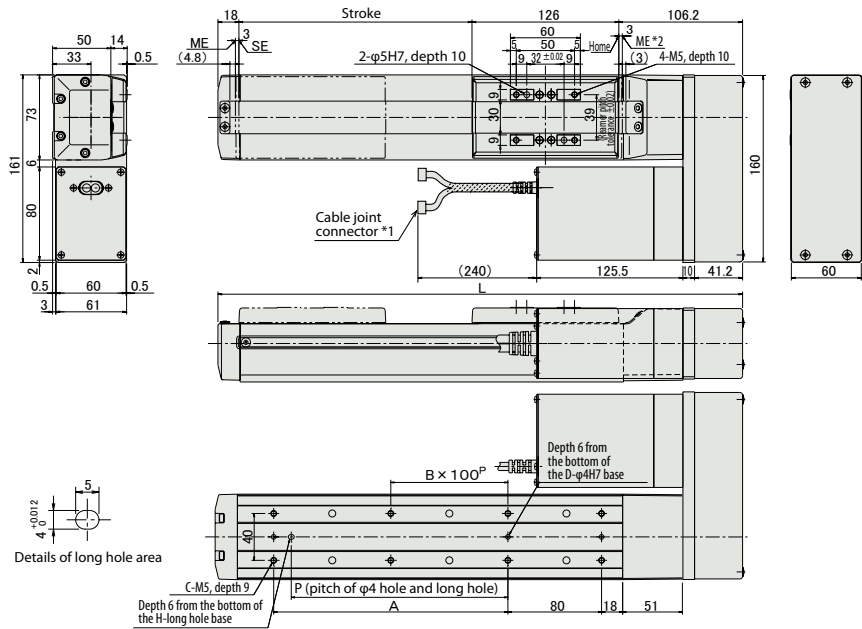
CAD drawings can be downloaded from the website.

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Information on special orders P.454

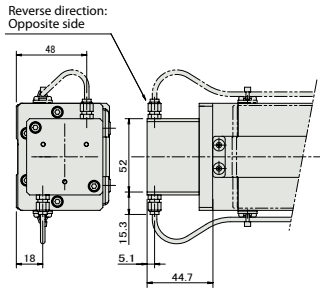


1. Connect the motor-encoder cable. See P374 for cable details.
2. Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end Dimensions in () are for reference.



Brake area dimensions

*Adding a brake increases overall length by 43mm and weight by 0.6kg.



*The brake wire must exit from the same side the motor resides.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	300.2	350.2	400.2	450.2	500.2	550.2	600.2	650.2	700.2	750.2	800.2	850.2	900.2	950.2	1000.2	1050.2
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
B	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
H	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight(kg)	4.5	4.7	5.0	5.2	5.4	5.6	5.9	6.1	6.3	6.5	6.8	7.0	7.2	7.4	7.7	7.9

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page			
Positioner Type		PCON-C-56PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365			
Safety category compatible Positioner type		PCON-CG-56PI-NP-2-0									
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Pulse series input type (Differential line driver specification)		PCON-PL-56PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)							
Pulse series input type (Open collector specification)		PCON-PO-56PI-NP-2-0	Open collector compatible Pulse series input type								
Serial communication type		PCON-SE-56PI-N-0-0	Serial communications Special Type	64 points							
Field network type		RPCON-56P	Field network Dedicated type	768 points							P343
Program control type		PSEL-C-1-56PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points							

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- 100W
- Servo Motor 150W
- Servo Motor 750W

RCP2-SS7R

ROBO Cylinder, Slider Type, Actuator Dimensions 60mm, Pulse Motor, Reverse-mounted, Motor Steel Base Type

Model Description	RCP2 - SS7R - I - 42P - [] - [] - P1 - [] - []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	42P: Pulse motor 42□Size	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 600:600mm (Set pitch every 50mm)	P1: PCON PSEL	N: None P: 1m S: 3m M: 5m X□: Length designation R□: Robot cable	B: Brake NM: Reverse-home specification ML: Left reverse-mounted motor specification (Standard) MR: Right reverse-mounted motor specification SR: Slider roller specification

See preceding section for model descriptions.

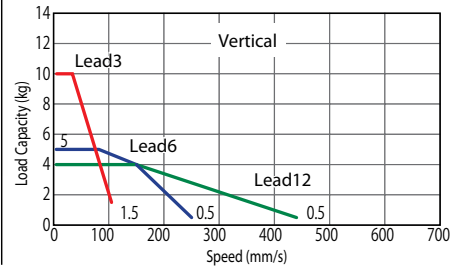
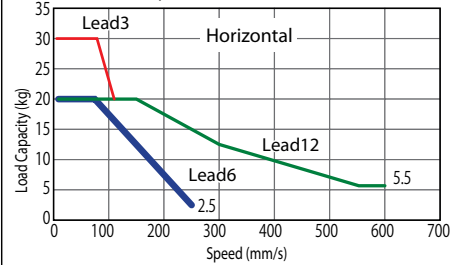


Technical Reference P.451

- POINT** Notes on selection
- (1) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (2) Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - (3) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Stroke and Maximum Speed

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SS7R-I-42P-12-①-P1-②-③	12	Up to 20	Up to 4	50 to 600 (every 50mm)
RCP2-SS7R-I-42P-6-①-P1-②-③	6	Up to 20	Up to 5	
RCP2-SS7R-I-42P-3-①-P1-②-③	3	Up to 30	Up to 10	

Lead	Stroke	
	50 to 500 (every 50mm)	Up to 600 (mm)
12	600 <440>	470 <440>
6	250	230
3	105	105

Legend ① Stroke ② Cable Length ③ Option

* < > indicate vertical service. (Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code	
	SS7R	
	Encoder type	
	Incremental	
50/100	-	
150/200	-	
250/300	-	
350/400	-	
450/500	-	
550/600	-	

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	-
	S (3m)	-
	M (5m)	-
Special length	X06 (6m) - X10 (10m)	-
	X11 (11m) - X15 (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)	-

*See P374 about maintenance cables.

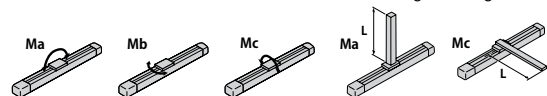
③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	-
Reverse-home specification	NM	P442	-
Left reverse-mounted motor specification (Standard)	ML	P444	-
Right reverse-mounted motor specification	MR	P444	-
Slider roller specification	SR	P445	-

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm rolled C10
Positioning Repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma:14.7N·m Mb: 14.7N·m Mc: 33.3N·m
Overhang load length	Ma direction 300mm or less Mb-Mc direction 300mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

Information on special orders

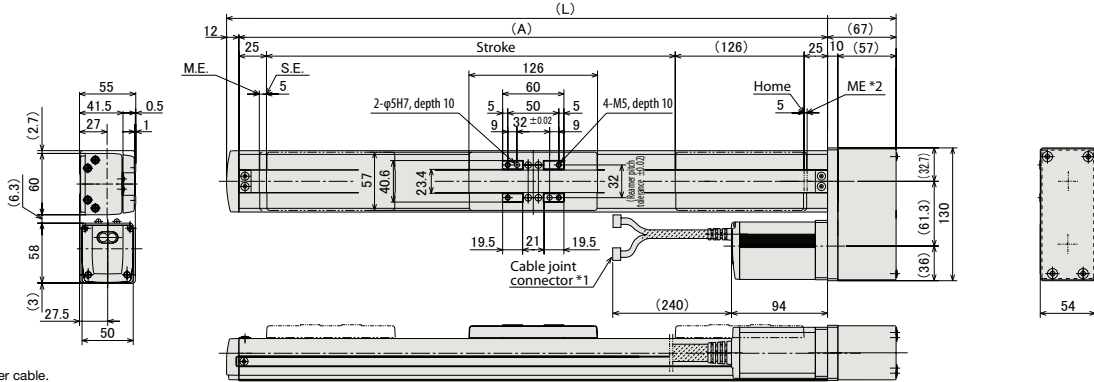
P.454

2D CAD

* For this specification, the dimension on the motor side (distance to home) is reversed with the dimension on the side opposite the motor.

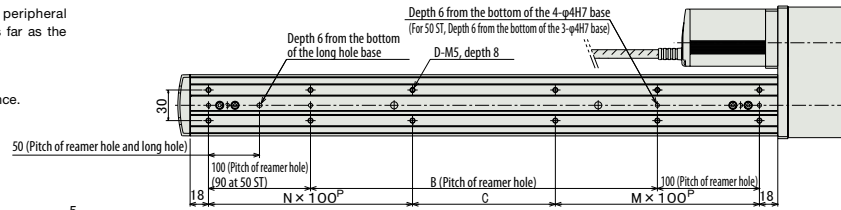
* The reference surface is the same as for the SS7C type. (See P36)

* Ma The moment offset reference position is the same as for the SS7C type. (See P36)



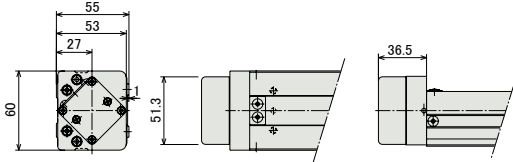
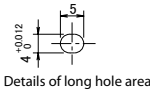
- *1 Connect the motor-encoder cable. See pP374 for cable details.
- *2 Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end Dimensions within () are for reference.

* The cable bending radius R is the same as for other models.



Brake area dimensions

* Adding a brake increases overall length by 24.5mm and weight by 0.3kg.



* Brake wiring is passed through the actuator body and connected to the motor cable.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	305	355	405	455	505	555	605	655	705	755	805	855
A	226	276	326	376	426	476	526	576	626	676	726	776
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
Weight(kg)	3.8	4.1	4.4	4.7	5.1	5.4	5.8	6.1	6.4	6.7	7.1	7.4

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-42P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCP2-SS8R

Robot Cylinder, Slider Type, Actuator Dimensions 80mm, Pulse Motor, Reverse-mounted motor, Steel Base Type

Model Description **RCP2** - **SS8R** - **I** - **56P** - [] - [] - **P1** - [] - []

Series — Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option

I: Incremental specification 56P: Pulse motor 56□Size 20: 20mm 10: 10mm 5: 5mm 100:100mm ~ 1000:1000mm (Set pitch to every 100mm)

P1: PCON PSEL N: None P: 1m S: 3m M: 5m X: Length designation R: Robot cable B: Brake NM: Reverse-home specification ML: Left reverse-mounted motor specification (Standard) MR: Right reverse-mounted motor specification SR: Slider roller specification

See preceding section for model descriptions.

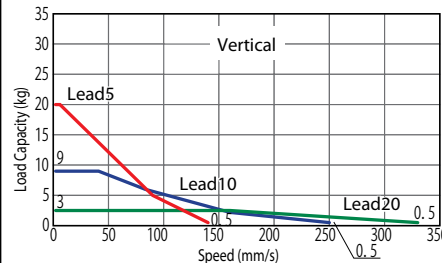
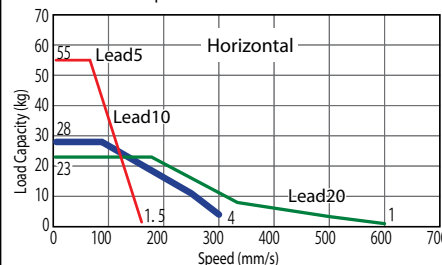


Technical Reference P.451

- POINT** Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 5). The above values are maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SS8R-I-56P-20-①-P1-②-③	20	Up to 23	Up to 3	100 to 1000 (Every 100mm)
RCP2-SS8R-I-56P-10-①-P1-②-③	10	Up to 28	Up to 9	
RCP2-SS8R-I-56P-5-①-P1-②-③	5	Up to 55	Up to 20	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 800 (every 50mm)	Up to 900 (mm)	Up to 1000 (mm)
	20	600	600
10	300	300	255
5	160	155	125

* < > indicate vertical service. (Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code	
	SS8R	Encoder type
50/100	—	Incremental
150/200	—	—
250/300	—	—
350/400	—	—
450/500	—	—
550/600	—	—
650/700	—	—
750/800	—	—
850/900	—	—
950/1000	—	—

③ Option Price List

Title	Option code	See page	Standard price
Brake	B	P437	—
Reverse-home specification	NM	P442	—
Left reverse-mounted motor specification (Standard)	ML	P444	—
Right reverse-mounted motor specification	MR	P444	—
Slider roller specification	SR	P445	—

② Cable Length Price List

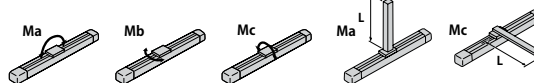
Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 16mm rolled C10
Positioning Repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m
Overhang load length	Ma 450mm Mb-Mc 450mm
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

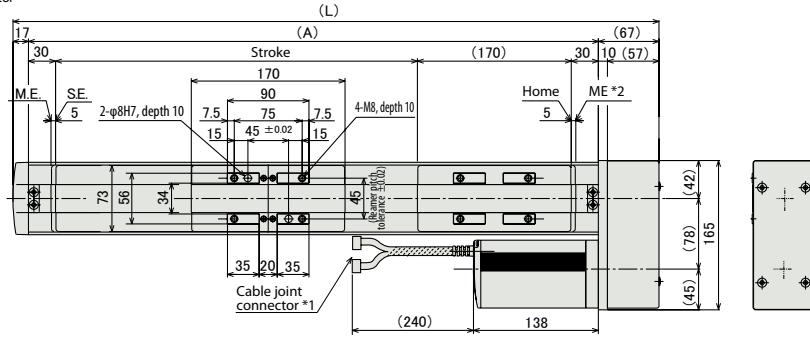
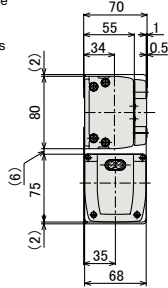
Information on special orders P.454

2D CAD

* For this specification, the dimension on the motor side (distance to home) is reversed with the dimension on the side opposite the motor.

* The reference surface is the same as for the SS8C type. (See P38)

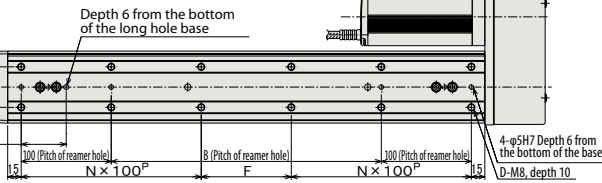
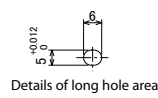
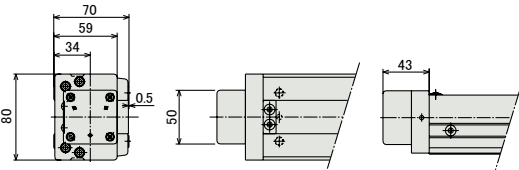
* Ma The moment offset reference position is the same as for the SS8C type. (See P38)



- *1 Connect the motor-encoder cable. See pP374 for cable details.
- *2 Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
ME: mechanical end
SE: stroke end
Dimensions within () are for reference.

*The length of the brake is 26mm and increases the weight by 0.5kg.

Brake area dimensions



* Brake wiring is passed through the actuator body and connected to the motor cable.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214	1264	1314
A	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight(kg)	7.4	7.9	8.5	9.0	9.5	10	10.5	11.1	11.6	12.1	12.7	13.2	13.7	14.3	14.8	15.3	15.8	16.4	16.9	17.4

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-56PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-56PI-NP-2-0								
Solenoid valve type		PCON-CY-56PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-56PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-56PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-56PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-56P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-56PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- 100W
- Servo Motor 150W
- Servo Motor 750W

RCP2-HS8R

ROBO Cylinder High-speed, Slider Type, Actuator Dimensions 80mm, Pulse Motor, Reverse-mounted motor, Steel Base Type

Model Description **RCP2** - **HS8R** - **I** - **86P** - - - **P2** - -

Series — Type — Encoder type — Motor type — Lead — Stroke — Compatible Controllers — Cable length — Option

I: Incremental specification 86P: Pulse motor 86□Size 30: 30mm 50:50mm ~ 1000:1000mm (Set pitch to every 50mm) P2: PCON-CF RCP2-CF N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable B: Brake NM: Reverse-home specification ML: Left reverse-mounted motor specification (Standard) MR: Right reverse-mounted motor specification SR: Slider roller specification

See preceding section for model descriptions.

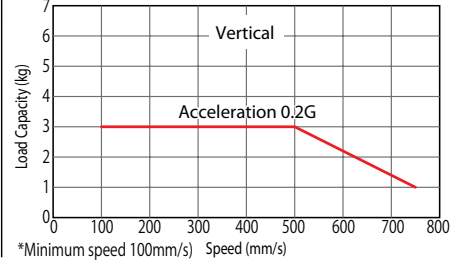
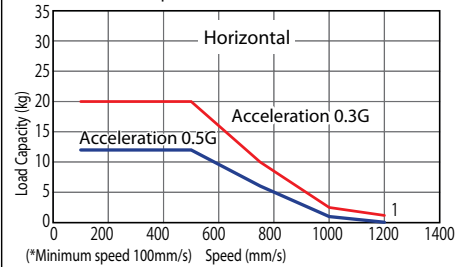


Technical Reference P.451

- POINT** Notes on selection
- (1) Due to the large lead in high-speed actuators, there are cases where operating at low speeds will cause vibration and noise. Therefore, use at speeds over 100mm/s.
 - (2) As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the maximum desired stroke speed in the Actuator Spec Table below.
 - (3) Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - (4) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation). Acceleration limits are 0.5G horizontal, 0.2G vertical.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



Actuator Specification Table

Leads and Payloads

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

Stroke and Maximum Speed

Model	Lead (mm)	Maximum payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-HS8R-I-86P-30-①-P2-②-③	30	Up to 20	Up to 3	50 to 1000 (every 50mm)

Stroke / Lead	50 to 800 (every 50mm)	Up to 900 (mm)	Up to 1000 (mm)
	30	1200 <750>	1000 <750>

Legend ① Stroke ② Cable Length ③ Option

< > indicate vertical service.

(Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code
	HS8R
	Encoder type
	Incremental
50/100	—
150/200	—
250/300	—
350/400	—
450/500	—
550/600	—
650/700	—
750/800	—
850/900	—
950/1000	—

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—

*See P374 about maintenance cables.

③ Option Price List

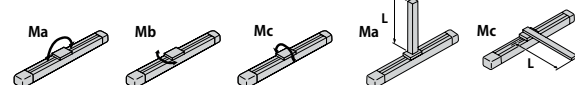
Title	Option code	See page	Standard price
Brake	B	P437	—
Reverse-home specification	NM	P442	—
Left reverse-mounted motor specification (Standard)	ML	P444	—
Right reverse-mounted motor specification	MR	P444	—
Slider roller specification	SR	P445	—

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 16mm rolled C10
Positioning Repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m
Overhang load length	Ma 450mm Mb-Mc 450mm
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

Information on special orders

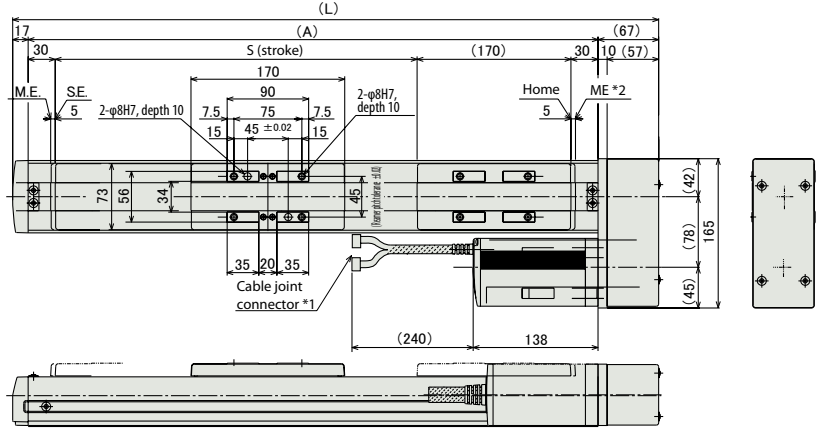
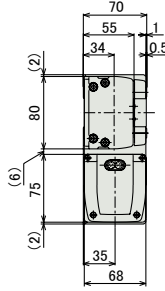
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2D CAD

* For this specification, the dimension on the motor side (distance to home) is reversed with the dimension on the side opposite the motor.

* The reference plane is the same in the HS8C type. (See P40)

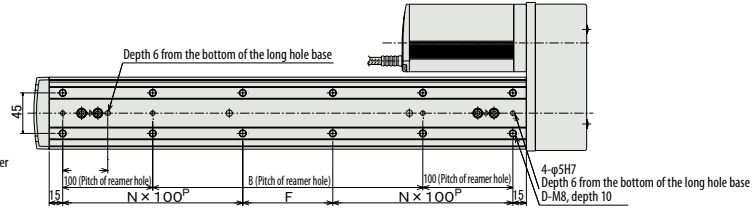
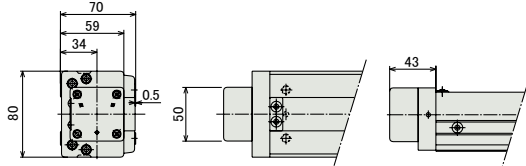
* Ma The moment offset reference position is the same as for the HS8C type. (See P40)



- *1 Connect the motor-encoder cable. See pP374 for cable details.
- *2 Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home. ME: mechanical end SE: stroke end Dimensions within () are for reference.

Brake area dimensions

*The length of the brake is 26mm and increases the weight by 0.5kg.



* Brake wiring is passed through the actuator body and connected to the motor cable.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214	1264	1314
A	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	18	20	20	20	22	24	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight(kg)	7.4	7.9	8.5	9.0	9.5	10	10.5	11.1	11.6	12.1	12.7	13.2	13.7	14.3	14.8	15.3	15.8	16.4	16.9	17.4

Compatible Controllers

The RCP2-HS8R type actuator uses the following special controller.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page
Positioner Type		PCON-CF-86PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 6A	—	P365

Caution Please note that a different CF type dedicated encoder cable is used than with the PCON-C/CG/CY/PL/PO/SE controllers.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10w
- Servo Motor 20w
- Servo Motor 30w
- Servo Motor 60w
- Servo Motor 100w
- Servo Motor 150w
- Servo Motor 750w

RCP2-BA6/BA6U

ROBO Cylinder, Belt Type, Actuator Dimensions 58mm, Pulse Motor, Top-mount motor / Bottom-mount motor

Model Description	RCP2	I	42P	54		P1		
Series	BA6: Belt type	I: Incremental specification	42P: Pulse motor 42□Size	54: 54mm Equivalent	Stroke	P1: PCON PSEL	Cable length	Option
Type	BA6: Belt type Top-mounted motor				500:500mm ~ 1000:1000mm (Set pitch to every 50mm)		N: None P: 1m S: 3m M: 5m X□□: Length designation R□□: Robot cable	NM: Reverse-home specification
Table Arm/Flat	BA6U: Belt type Bottom-mounted motor							

See preceding section for model descriptions.

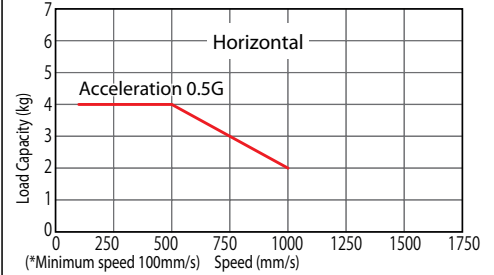


Technical Reference P.451

- POINT** Notes on selection
- (1) Use at movement speeds under 100mm/s.
 - (2) Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Confirm the payload at the desired speed in the Speed vs. Payload graph at right.
 - (3) This is the value when operated at 0.5G acceleration. 0.5G is the maximum acceleration.

Speed vs. Payload Graph

Since the RCP2 Series uses a pulse motor, the payload decreases at high speeds. Use the table below to confirm that there is sufficient payload at the desired speed.



(Vertical operation not possible)

Actuator Specification Table

Leads and Payloads

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

Model	Motor mount direction	Lead (mm)	Maximum payload		Stroke (mm)
			Horizontal (kg)	Vertical (kg)	
RCP2-BA6-I-42P-54-①-P1-②-③	Top-mounted	54 equivalent	Up to 4	Disabled	500 to 1000 (every 50mm)
RCP2-BA6U-I-42P-54-①-P1-②-③	Bottom-mounted				

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Stroke	500 to 1000 (every 50mm)
54 Equivalent	1000

(Unit = mm/s)

① Price List by Stroke

① Stroke (mm)	Type code
	BA6/BA6U Encoder type Incremental
500	—
550	—
600	—
650	—
700	—
750	—
800	—
850	—
900	—
950	—
1000	—

③ Option Price List

Title	Option code	See page	Standard price
Reversed-home specification	NM	P442	—

② Cable Length Price List

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—

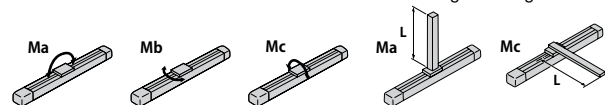
*See P374 about maintenance cables.

Actuator Specification

Item	Description
Drive System	Timing belt
Positioning Repeatability	±0.1mm
Backlash	0.1mm or less
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction 150mm or less Mb-Mc direction 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

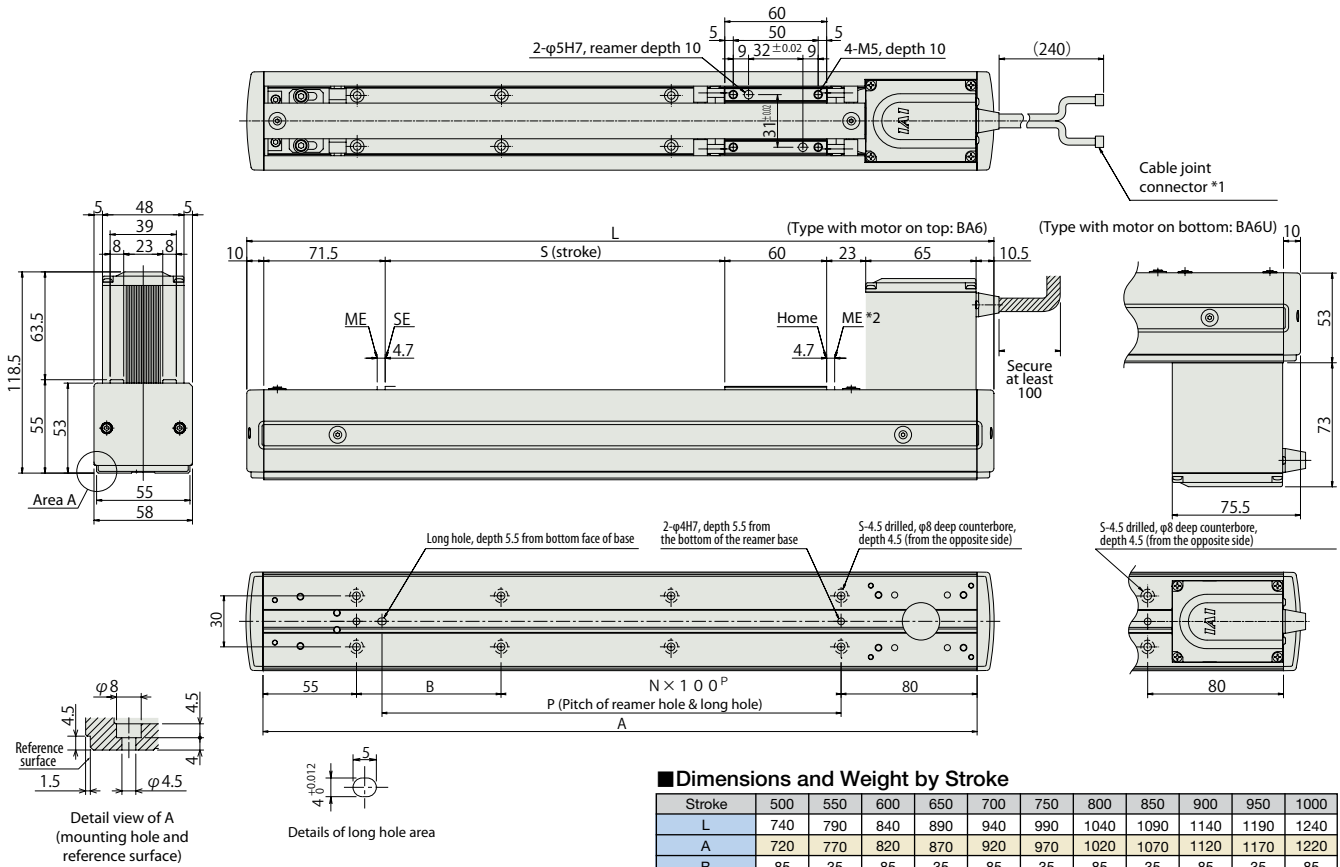
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2D CAD

3D CAD

Information on special orders

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■ Dimensions and Weight by Stroke

Stroke	500	550	600	650	700	750	800	850	900	950	1000
L	740	790	840	890	940	990	1040	1090	1140	1190	1240
A	720	770	820	870	920	970	1020	1070	1120	1170	1220
B	85	35	85	35	85	35	85	35	85	35	85
N	5	6	6	7	7	8	8	9	9	10	10
P	570	620	670	720	770	820	870	920	970	1020	1070
S	14	16	16	18	18	20	20	22	22	24	24
Weight(kg)	2.8	2.9	3.0	3.2	3.3	3.4	3.5	3.7	3.8	3.9	4.1

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type		PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-42P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

Dimensional Drawings

CAD drawings can be downloaded from the website.

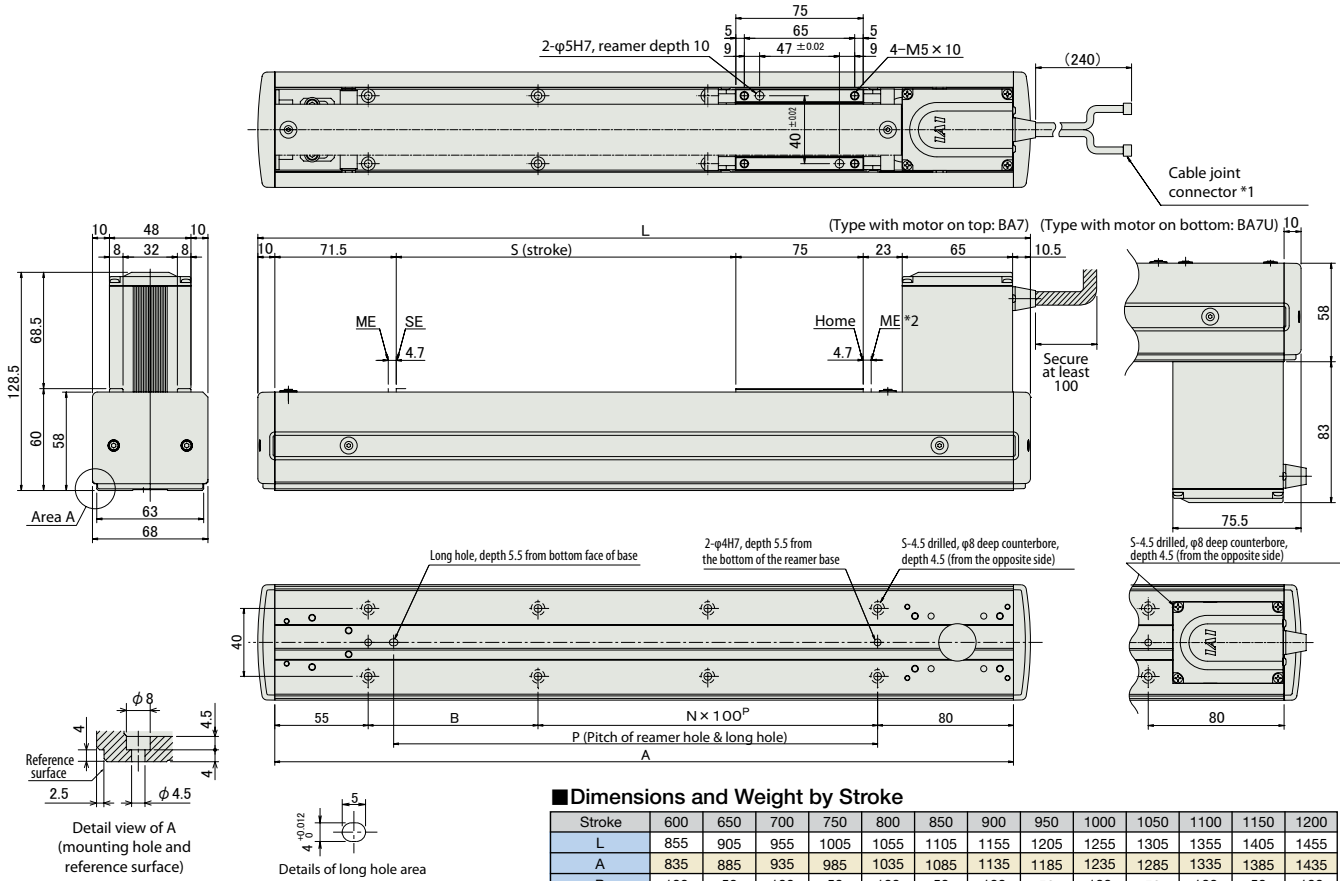
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Information on special orders

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2D CAD

3D CAD



■ Dimensions and Weight by Stroke

Stroke	600	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
L	855	905	955	1005	1055	1105	1155	1205	1255	1305	1355	1405	1455
A	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385	1435
B	100	50	100	50	100	50	100	50	100	50	100	50	100
N	6	7	7	8	8	9	9	10	10	11	11	12	12
P	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285
S	16	18	18	20	20	22	22	24	24	26	26	28	28
Weight(kg)	3.6	3.7	3.9	4.0	4.2	4.3	4.4	4.6	4.7	4.9	5.0	5.2	5.3

Compatible Controllers

The RCP2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		PCON-C-42PI-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 2A	-	P365		
Safety category compatible Positioner type		PCON-CG-42PI-NP-2-0								
Solenoid valve type	PCON-CY-42PI-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Pulse series input type (Differential line driver specification)		PCON-PL-42PI-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		PCON-PO-42PI-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		PCON-SE-42PI-N-0-0	Serial communications Special Type	64 points						
Field network type		RPCON-42P	Field network Dedicated type	768 points					-	P343
Program control type		PSEL-C-1-42PI-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P395

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

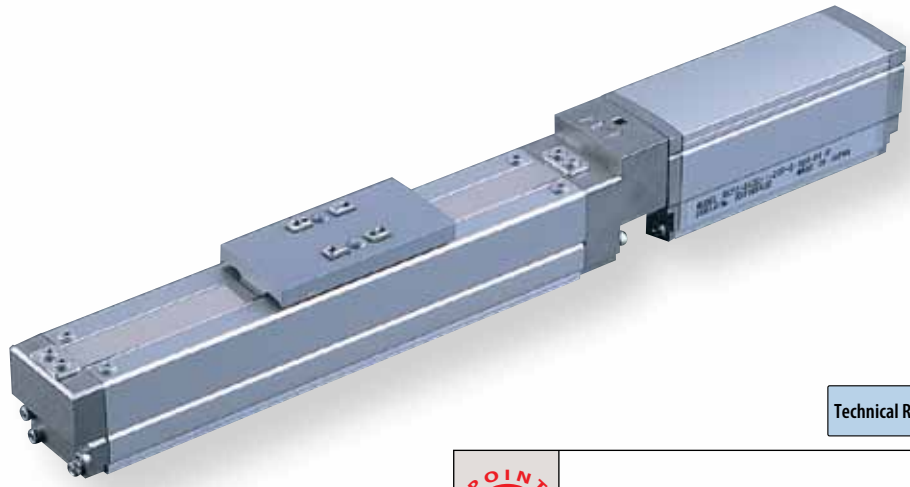
RCA2-SA3C

ROBO Cylinder, Slider Type, Actuator Dimensions 32mm, Servo Motor, Coupling Specification

Model Description	RCA2 — SA3C — I — 10 — [] — [] — A1 — [] — []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	10: Servo Motor 10W	6: 6mm 4: 4mm 2: 2mm	50:50mm ~ 300:300mm (Set pitch every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X□: Length designation	B: Brake-equipped LA: For low-power applications NCO: No cover specification NM: Reverse-home specification

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

POINT
Notes on selection

(1) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 2). The above value is the maximum acceleration.

Actuator Specification Table

Leads and Payloads						Stroke and Maximum Speed		
Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)	Stroke	
			Horizontal (kg)	Vertical (kg)			Lead	50 to 300 (every 50mm)
RCA2-SA3C-I-10-6-①-A1-②-③	10	6	1	0.5	28	50 to 300 (Every 50mm)	6	300
RCA2-SA3C-I-10-4-①-A1-②-③		4	2	1	43		4	200
RCA2-SA3C-I-10-2-①-A1-②-③		2	3	1.5	85		2	100

Legend ① Stroke ② Cable Length ③ Option (Unit = mm/s)

① Price List by Encoder Type/Stroke

① Stroke (mm)	Type code	
	SA3C	
	Encoder type	
	Incremental	
	Actuator Cover	
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

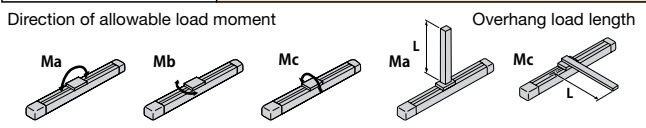
③ Cable Length Price List

Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—

*The standard cable for the RCA2 is the robot cable.
*See P384 for maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 6mm rolled C10
Positioning Repeatability	\pm 0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 1.96N·m Mb: 2.84N·m Mc: 3.14N·m
Overhang load length	100mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km



④ Option Price List

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
For low power applications	LA	P442	—
No cover	NCO	P58	—
Reversed-home specification	NM	P442	—

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

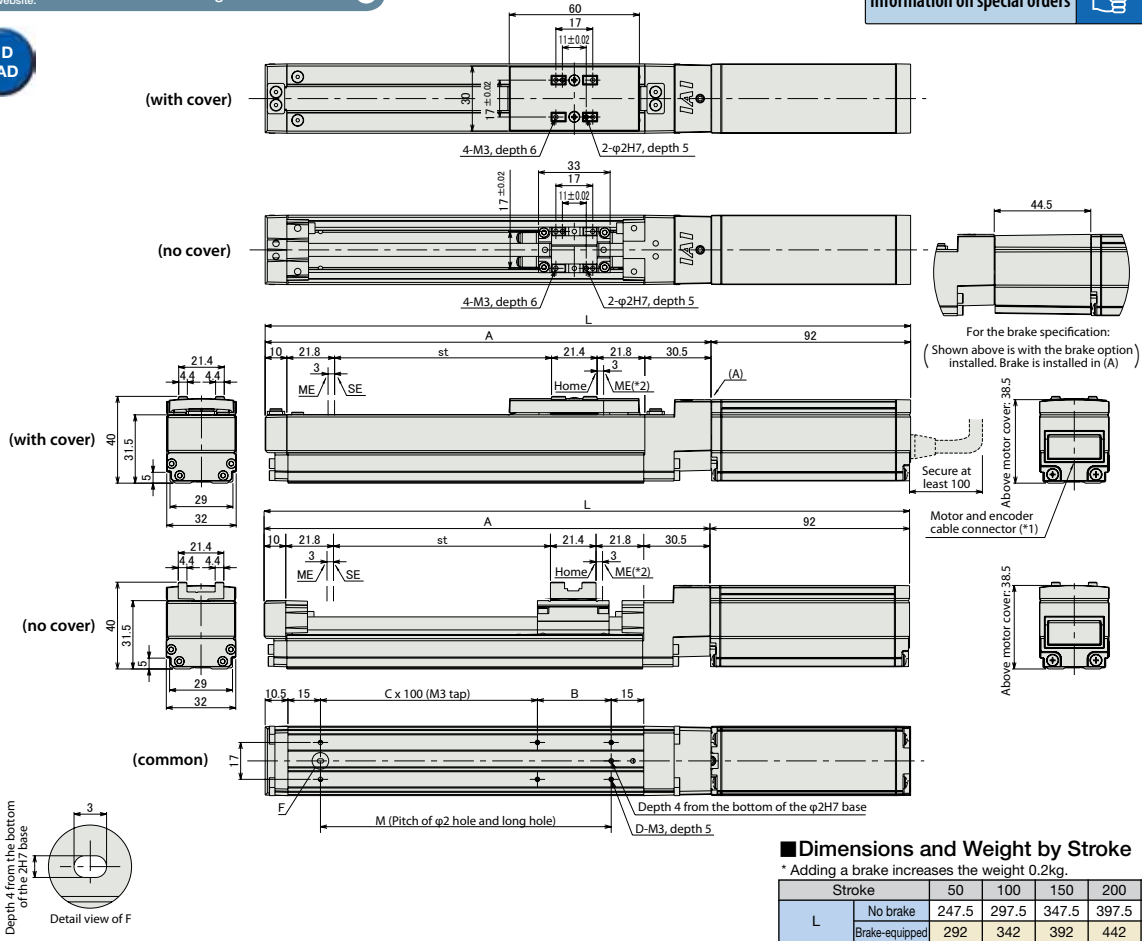
Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

Information on special orders P.454

2D CAD



Dimensions and Weight by Stroke

* Adding a brake increases the weight 0.2kg.

Stroke	Stroke						
	50	100	150	200	250	300	
L	No brake	247.5	297.5	347.5	397.5	447.5	497.5
	Brake-equipped	292	342	392	442	492	542
A	155.5	205.5	255.5	305.5	355.5	405.5	
B	84	34	84	34	84	34	
C	0	1	1	2	2	3	
D	4	6	6	8	8	10	
M	84	134	184	234	284	334	
Weight (kg)	With cover	0.6	0.6	0.7	0.8	0.8	0.9
	No cover	0.5	0.6	0.6	0.7	0.7	0.8

(*) Connect the motor-encoder cable (integrated). (See P384 for cable details)
 (*2) Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
 ME: mechanical end
 SE: stroke end

Compatible Controllers

The RCA2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points.	Input power	Power-supply capacity	Standard price	See page			
Positioner Type		ACON-C-10I①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 5.1A (depending on the actuator)	-	P375			
Safety category compatible Positioner type		ACON-CG-10I①-NP-2-0									
Solenoid valve type		ACON-CY-10I①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points							
Pulse series input type (Differential line driver specification)		ACON-PL-10I①-NP-2-0	Differential line driver compatible Pulse series input type	(-)							
Pulse series input type (Open collector specification)		ACON-PO-10I①-NP-2-0	Open collector compatible Pulse series input type								
Serial communication type		ACON-SE-10I①-N-0-0	Serial communications Special Type	64 points							
Field network type		RACON-10①	Field network Dedicated type	768 points							P343
Program control type		ASEL-C-1-10I①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points							P405

*ASEL is for single axis specification.
 *(1) is entered as the code (LA) when designating for low-power applications.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Clearroom
- Splash-resistant
- Controller
- Coupling
- Built-in Direct
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10w
- Servo Motor 20w
- Servo Motor 30w
- Servo Motor 60w
- Servo Motor 100w
- Servo Motor 150w
- Servo Motor 750w

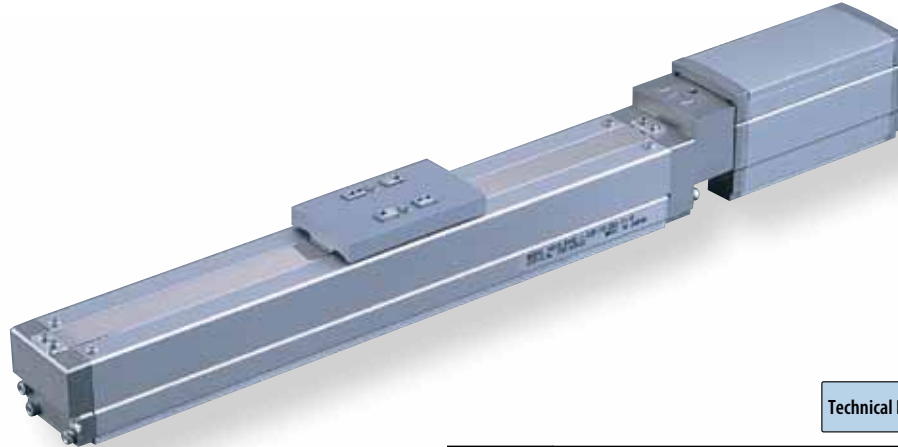
RCA2-SA4C

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, 24V Servo Motor, Coupling Specification

Model Description	RCA2 — SA4C — I — 20 — [] — [] — A1 — [] — []							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	20: Servo Motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm ~ 400:400mm (Set pitch to every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X□□: Length designation	B: Brake-equipped LA: For low-power applications NCO: No cover specification NM: Reverse-home specification

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

POINT Notes on selection

(1) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 2.5). The above value is the maximum acceleration.

Actuator Specification Table

Leads and Payloads

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA2-SA4C-I-20-10-①-A1-②-③	20	10	2	1	34	50 to 400 (Every 50mm)
RCA2-SA4C-I-20-5-①-A1-②-③		5	4	1.5	68	
RCA2-SA4C-I-20-2.5-①-A1-②-③		2.5	6	3	136	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 400 (every 50mm)
	10	500
5	250	250
2.5	125	125

(Unit = mm/s)

① Price List by Encoder Type/Stroke

① Stroke (mm)	Type code	
	SA4C	
	Encoder type	
	Incremental	
	Actuator Cover	
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—

③ Cable Length Price List

Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—

*The standard cable for the RCA2 is the robot cable.

*See P384 for maintenance cables.

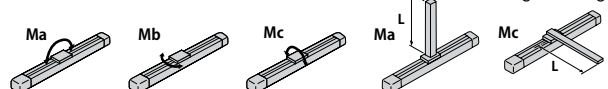
④ Option Price List

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
For low power applications	LA	P442	—
No cover	NCO	P60	—
Reversed-home specification	NM	P442	—

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 8mm rolled C10
Positioning Repeatability	\pm 0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 3.04N·m Mb: 4.31N·m Mc: 5.00N·m
Overhang load length	120mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment

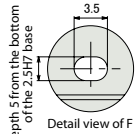
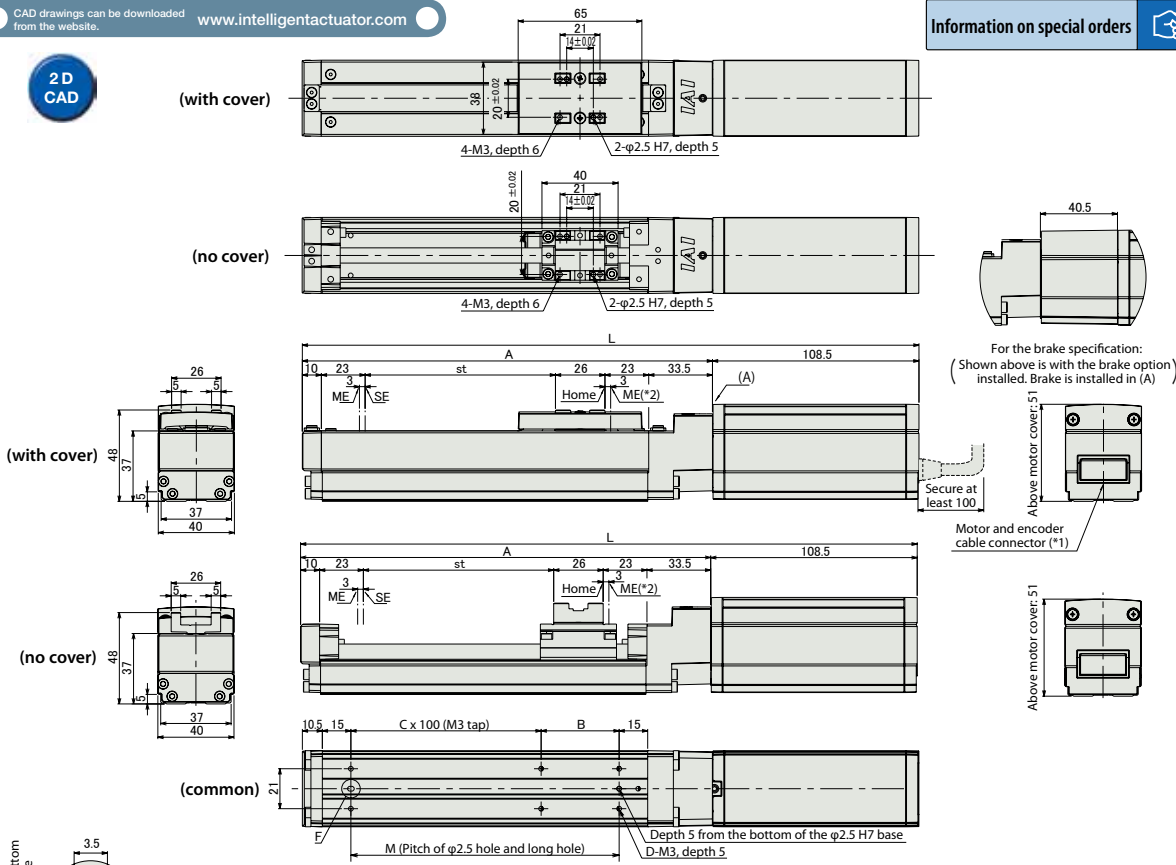


Dimensional Drawings

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

2D CAD

Information on special orders P.454



(*) Connect the motor-encoder cable (integrated). (See P384 for cable details)
 (*2) Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
 ME: mechanical end
 SE: stroke end

■ Dimensions and Weight by Stroke * Adding a brake increases the weight 0.3kg.

Stroke	L								
	50	100	150	200	250	300	350	400	
L	No brake	274	324	374	424	474	524	574	624
	Brake-equipped	314.5	364.5	414.5	464.5	514.5	564.5	614.5	664.5
A	165.5	215.5	265.5	315.5	365.5	415.5	465.5	515.5	
B	91	41	91	41	91	41	91	41	
C	0	1	1	2	2	3	3	4	
D	4	6	6	8	8	10	10	12	
M	91	141	191	241	291	341	391	441	
Weight (kg)	With cover	0.9	1	1.1	1.1	1.2	1.3	1.4	1.5
	No cover	0.8	0.9	1	1	1.1	1.2	1.3	1.3

Compatible Controllers

The RCA2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points.	Input power	Power-supply capacity	Standard price	See page
Positioner Type		ACON-C-20SI①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 5.1A (depending on the actuator)	-	P375
Safety category compatible Positioner type		ACON-CG-20SI①-NP-2-0						
Solenoid valve type		ACON-CY-20SI①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points				
Pulse series input type (Differential line driver specification)		ACON-PL-20SI①-NP-2-0	Differential line driver compatible Pulse series input type	(-)				
Pulse series input type (Open collector specification)		ACON-PO-20SI①-NP-2-0	Open collector compatible Pulse series input type					
Serial communication type		ACON-SE-20SI①-N-0-0	Serial communications Special Type	64 points				
Field network type		RACON-20S①	Field network Dedicated type	768 points				
Program control type		ASEL-C-1-20SI①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points				

*ASEL is for single axis specification.
 *(1) is entered as the code (LA) when designating for low-power applications.

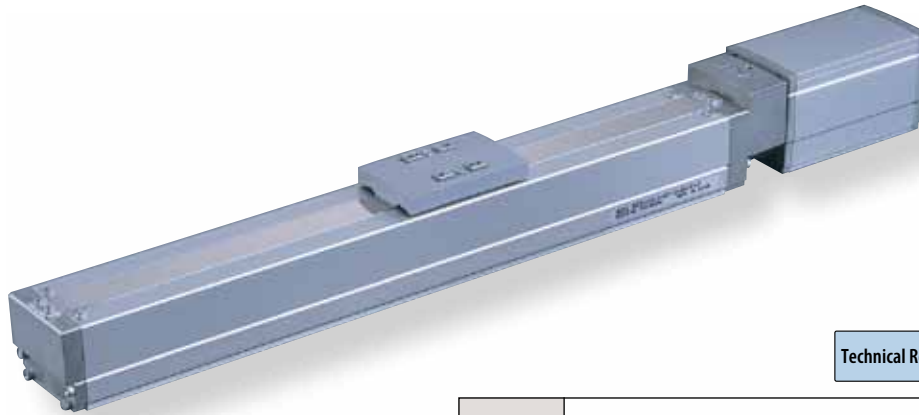
RCA2-SA5C

Robo Cylinder, Slider Type, Actuator Dimensions 50mm, 24V Servo Motor, Coupling Specification

Model Description	RCA2 — SA5C — I — 20 — — — A1 — — 							
Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
		I: Incremental specification	20: Servo Motor 20W	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 500:500mm (Set pitch to every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X□□: Length designation	B: Brake-equipped LA: For low-power applications NCO: No cover specification NM: Reverse-home specification

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

POINT
Notes on selection

(1) The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation with lead 3). The above value is the maximum acceleration.

Actuator Specification Table

Leads and Payloads

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA2-SA5C-I-20-12-①-A1-②-③	20	12	3	1	17	50 to 500 (Every 50mm)
RCA2-SA5C-I-20-6-①-A1-②-③		6	6	1.5	34	
RCA2-SA5C-I-20-3-①-A1-②-③		3	9	3	68	

Legend ① Stroke ② Cable Length ③ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 500 (every 50mm)
	12	600
6	300	300
3	150	150

(Unit = mm/s)

① Price List by Encoder Type/Stroke

① Stroke (mm)	Type code	
	SA5C	
	Encoder type	
	Incremental	
Actuator Cover		
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—

④ Option Price List

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
For low power applications	LA	P442	—
No cover	NCO	P62	—
Reversed-home specification	NM	P442	—

③ Cable Length Price List

Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—

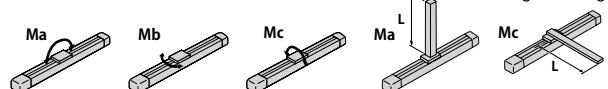
*The standard cable for the RCA2 is the robot cable.

*See P384 for maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm rolled C10
Positioning Repeatability	\pm 0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 3.92N·m Mb: 5.58N·m Mc: 8.53N·m
Overhang load length	130mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km

Direction of allowable load moment

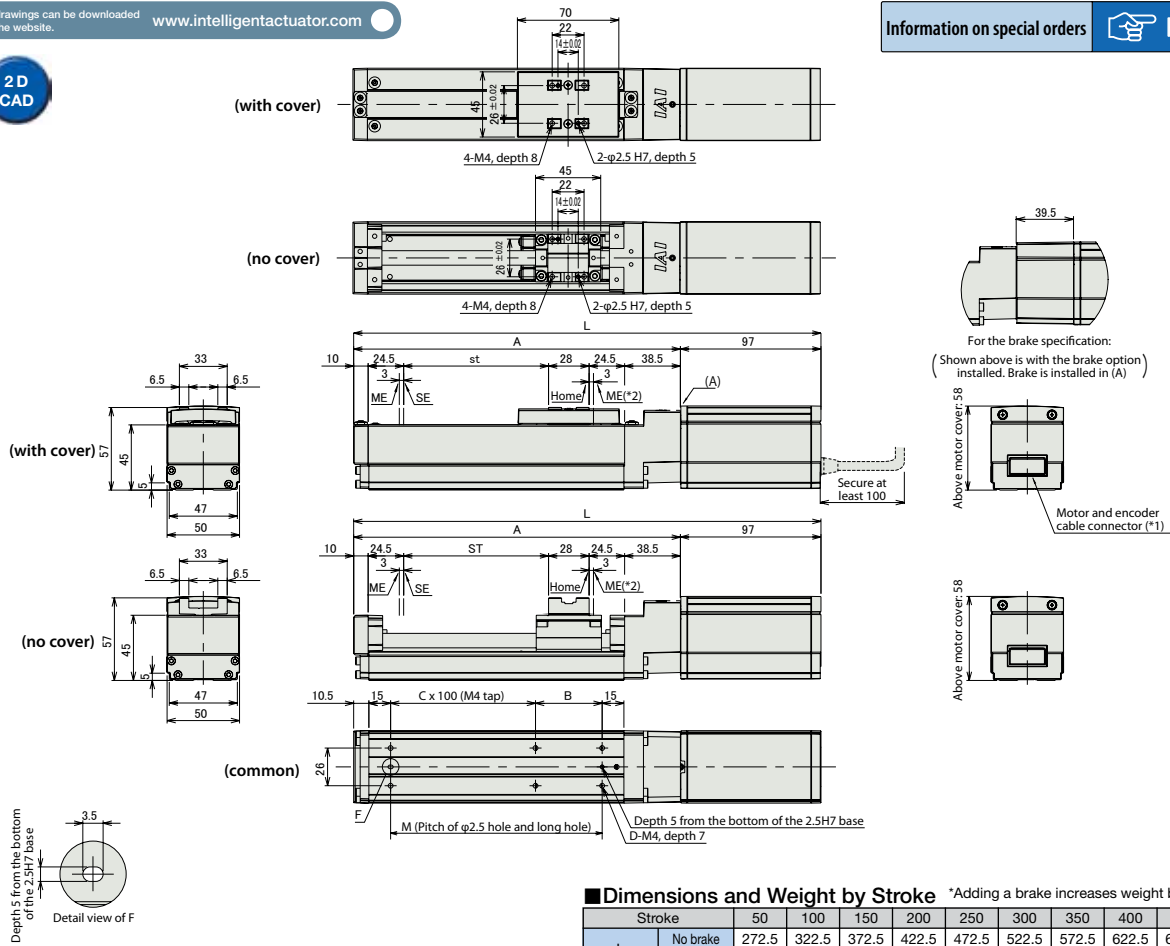


Dimensional Drawings

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

2D CAD

Information on special orders P.454



(*) Connect the motor-encoder cable (integrated). (See P384 for cable details)
 (*2) Watch out for interference with peripheral objects since the slider moves as far as the ME when returning home.
 ME: mechanical end
 SE: stroke end

■ Dimensions and Weight by Stroke *Adding a brake increases weight by 0.4kg.

Stroke	Stroke										
	50	100	150	200	250	300	350	400	450	500	
L	No brake	272.5	322.5	372.5	422.5	472.5	522.5	572.5	622.5	672.5	722.5
	Brake-equipped	312	362	412	462	512	562	612	662	712	762
A		175.5	225.5	275.5	325.5	375.5	425.5	475.5	525.5	575.5	625.5
B		96	46	96	46	96	46	96	46	96	46
C		0	1	1	2	2	3	3	4	4	5
D		4	6	6	8	8	10	10	12	12	14
M		96	146	196	246	296	346	396	446	496	546
Weight (kg)	With cover	1.2	1.4	1.5	1.6	1.8	1.9	2	2.2	2.3	2.4
	No cover	1.1	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1

Compatible Controllers

The RCA2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		ACON-C-20I①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 5.1A (depending on the actuator)	—	P375		
Safety category compatible Positioner type		ACON-CG-20I①-NP-2-0								
Solenoid valve type		ACON-CY-20I①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		ACON-PL-20I①-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		ACON-PO-20I①-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		ACON-SE-20I①-N-0-0	Serial communications Special Type	64 points						
Field network type		RACON-20I①	Field network Dedicated type	768 points					—	P343
Program control type		ASEL-C-1-20I①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					—	P405

*ASEL is for single axis specification.
 *(1) is entered as the code (LA) when designating for low-power applications.

- Control-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10w
- Servo Motor 20w
- Servo Motor 30w
- Servo Motor 60w
- Servo Motor 100w
- Servo Motor 150w
- Servo Motor 750w

RCA2-SA6C

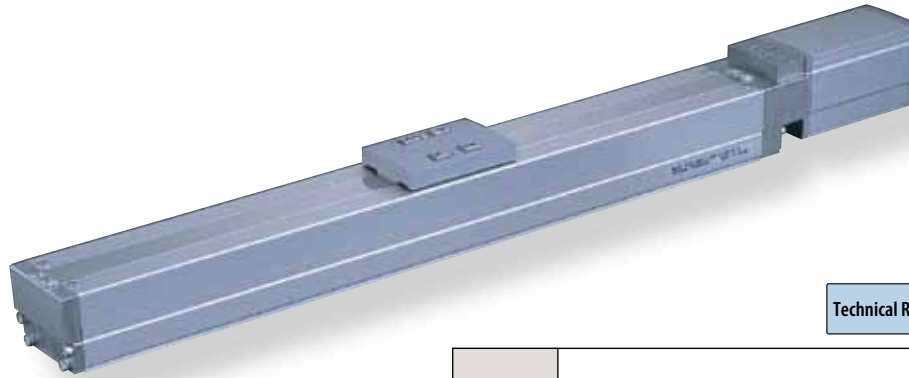
ROBO Cylinder, Slider Type, Actuator Dimensions 60mm, 24V Servo Motor, Coupling Specification

Model Description **RCA2 – SA6C – I – 30 –** – – **A1** – –

Series	Type	Encoder type	Motor type	Lead	Stroke	Compatible Controllers	Cable length	Option
I: Incremental specification	30: Servo Motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm ~ 600:600mm (Set pitch to every 50mm)	A1: ACON ASEL	N: None P: 1m S: 3m M: 5m X□□: Length designation	B: Brake-equipped LA: For low-power applications NCO: No cover specification NM: Reverse-home specification		

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT**
Notes on selection
- As the stroke length increases, the maximum speed decreases due to hazardous ball screw RPMs. Confirm the desired maximum stroke speed in the Actuator Spec Table below.
 - The payload is the value when operated at 0.3G acceleration (0.2G acceleration in vertical operation at lead 3). The above value is the maximum acceleration.

Actuator Specification Table

Leads and Payloads							Stroke and Maximum Speed		
Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)	Stroke		
			Horizontal (kg)	Vertical (kg)			Lead	50 to 550 (every 50mm)	600 (mm)
RCA2-SA6C-I-30-12-①-A1-②-③	30	12	4	1.5	26	50 to 600 (Every 50mm)	12	600	540
RCA2-SA6C-I-30-6-①-A1-②-③		6	7	2	53		6	300	270
RCA2-SA6C-I-30-3-①-A1-②-③		3	10	4	105		3	150	135

Legend ① Stroke ② Cable Length ③ Option (Unit = mm/s)

① Price List by Encoder Type/Stroke

① Stroke (mm)	Type code	
	SA6C	
	Encoder type	
	Incremental	
Actuator Cover		
	With cover (Standard)	No cover (Option)
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

④ Option Price List

Title	Option code	See page	Standard price
Brake-equipped	B	P437	—
For low power applications	LA	P442	—
No cover	NCO	P64	—
Reversed-home specification	NM	P442	—

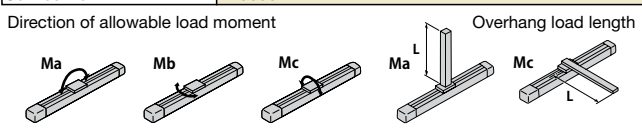
③ Cable Length Price List

Type	Cable symbol	Standard price
Standard type (Robot cable)	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	X06 (6m) – X10 (10m)	—
	X11 (11m) – X15 (15m)	—
	X16 (16m) – X20 (20m)	—

*The standard cable for the RCA2 is the robot cable.
*See P384 for maintenance cables.

Actuator Specification

Item	Description
Drive System	Ball screw ϕ 10mm rolled C10
Positioning Repeatability	\pm 0.05mm
Backlash	0.1mm or less
Base	Material: Aluminum Special alumite treatment
Allowable load moment	Ma: 4.31N·m Mb: 6.17N·m Mc: 10.98N·m
Overhang load length	150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (non-condensing)
Service life	5000km



Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

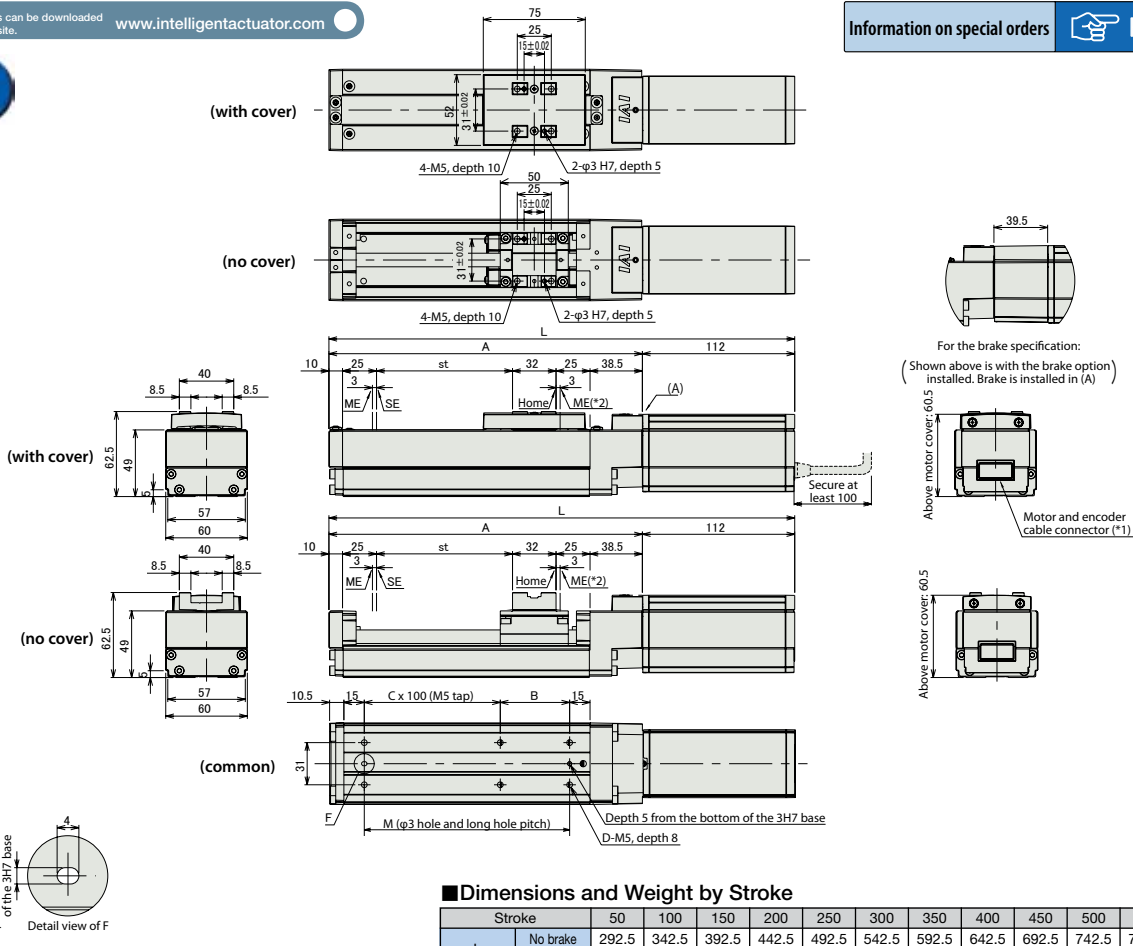
Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

2D CAD

Information on special orders P.454



Dimensions and Weight by Stroke

Stroke	Stroke												
	50	100	150	200	250	300	350	400	450	500	550	600	
L	No brake	292.5	342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5
	Brake-equipped	332	382	432	482	532	582	632	682	732	782	832	882
A	180.5	230.5	280.5	330.5	380.5	430.5	480.5	530.5	580.5	630.5	680.5	730.5	
B	101	51	101	51	101	51	101	51	101	51	101	51	
C	0	1	1	2	2	3	3	4	4	5	5	6	
D	4	6	6	8	8	10	10	12	12	14	14	16	
M	101	151	201	251	301	351	401	451	501	551	601	651	
Weight (kg)	With cover	1.6	1.7	1.9	2.1	2.3	2.4	2.6	2.8	2.9	3.1	3.3	3.5
	No cover	1.5	1.6	1.8	1.9	2.1	2.2	2.3	2.5	2.6	2.8	2.9	3.1

- (*) Connect the motor-encoder cable (integrated). (See P384 for cable details)
- (*2) During home return, the slider moves to the mechanical end and then reverses. Pay attention to prevent contact between the slider and surrounding parts
ME: mechanical end
SE: stroke end

Compatible Controllers

The RCA2 Series actuators can be operated with the following controllers. Select the type that is compatible with your application.

Title	External View	Model	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	See page		
Positioner Type		ACON-C-30①-NP-2-0	Up to 512-point positioning possible	512 points	DC24V	Maximum 5.1A (depending on the actuator)	—	P375		
Safety category compatible Positioner type		ACON-CG-30①-NP-2-0								
Solenoid valve type		ACON-CY-30①-NP-2-0	Same as solenoid valve Controlled operation enabled	3 points						
Pulse series input type (Differential line driver specification)		ACON-PL-30①-NP-2-0	Differential line driver compatible Pulse series input type	(-)						
Pulse series input type (Open collector specification)		ACON-PO-30①-NP-2-0	Open collector compatible Pulse series input type							
Serial communication type		ACON-SE-30①-N-0-0	Serial communications Special Type	64 points						
Field network type		RACON-30①	Field network Dedicated type	768 points					—	P343
Program control type		ASEL-C-1-30①-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					—	P405

*ASEL is for single axis specification.
*(1) is entered as the code (LA) when designating for low-power applications.

RCA-SA4C

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, 24V Servo Motor, Coupling Specification

Model Description **RCA2** - **SA4C** - [] - **20** - [] - [] - **A1** - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50:50mm to 400:400mm (Every 50mm pitch setting)

A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

Compatible with rapid acceleration and deceleration

For low power applications

(except for 2.5mm lead)



Technical Reference P.451

POINT
Notes on selection

- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- The load capacity specification/energy-saving is 0.3 G (or 0.2 G if the lead is 2.5). The maximum acceleration/deceleration is 1G (except for 2.5mm lead). (When acceleration/deceleration is dropped, the maximum payload values are shown in the table below.)

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA4C-①-20-10-②-A1-③-④	20	10	4	1	19.6	50 to 400 (each 50mm)
RCA-SA4C-①-20-5-②-A1-③-④		5	6	2.5	39.2	
RCA-SA4C-①-20-2.5-②-A1-③-④		2.5	8	4.5	78.4	

Stroke and Maximum Speed

Lead	Stroke	50 to 400 (each 50mm)
	10	665
5	330	
2.5	165	

(Unit: mm/s)

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

① Encoder Type and ② Stroke Price Table

Stroke (mm)	Type symbol SA4C	
	① Encoder Type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—

③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—
	—	—

*See P384 for information on maintenance cable.

④ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	—	—
Foot bracket	FT	—	—
High acceleration/deceleration	HA	—	—
Home check sensor	HS	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—
Specification for Slider Roller	SR	—	—
Slider Spacer	SS	—	—

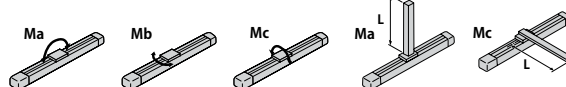
* High acceleration, deceleration capability cannot be used with roller specifications for slider part.
* Lead 2.5 is not capable of high acceleration/deceleration.
* High acceleration, deceleration capability cannot be used with electrical energy-saving capability.

Actuator Specifications

Item	
Drive method	Ball screw ϕ 8mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m, Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb Mc direction: 120 mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

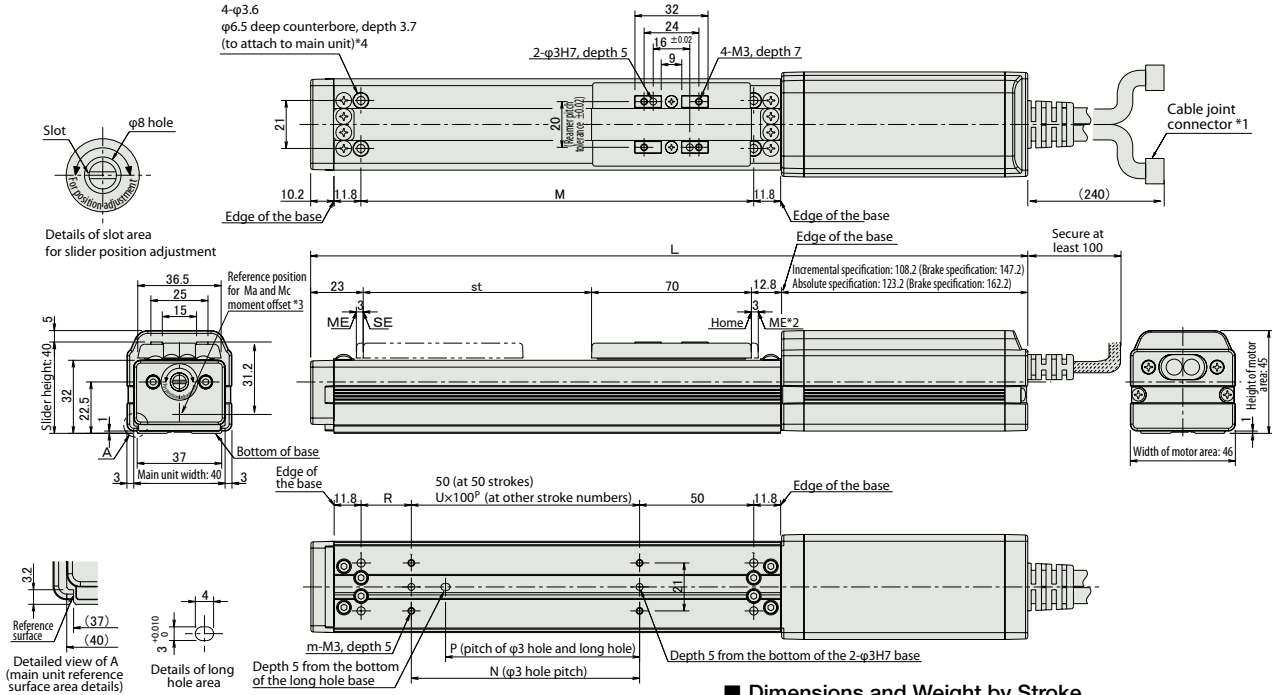
Information on special orders

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- 1 Connect motor encoder cable. See P384 for details on cables.
- 2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less



■ Dimensions and Weight by Stroke

Stroke	Stroke									
	50	100	150	200	250	300	350	400		
L	Incremental	Without brake	264	314	364	414	464	514	564	614
		With brake	303	353	403	453	503	553	603	653
	Absolute	Without brake	279	329	379	429	479	529	579	629
		With brake	318	368	418	468	518	568	618	668
M	122	172	222	272	322	372	422	472		
N	50	100	100	200	200	300	300	400		
P	35	85	85	185	185	285	285	385		
R	22	22	72	22	72	22	72	22		
U	-	1	1	2	2	3	3	4		
m	4	4	4	6	6	8	8	10		
Weight (kg)	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4		

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-20I②-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-20I②-NP-2-0								
Solenoid valve Type		ACON-CY-20I②-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I②-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-20I②-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-20I②-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-20②	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-20I①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P405

* The ASEL model name is based on a 1-axis specification.

* (1) Indicates the encoder type (I: Incremental / A: Absolute) is needed.

* (2) The mark (HA/LA) is entered when high acceleration/deceleration, energy saving capability is designated).

- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/ Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SA5C

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, 24V Servo Motor, Coupling Specification

Model Description **RCA** - **SA5C** - - **20** - - - **A1** - -

Series - Type - Encoder category - Motor category - Lead - Stroke - Applicable controller - Cable length - Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50-50mm to 500-500mm (Every 50mm pitch setting)

A1:ACON
ASEL

N: None
P: 1m
S: 3m
M: 5m
X : Specified length
R : Robot cable

Following options Refer to price table

See preceding section for model descriptions.

Compatible with rapid acceleration and deceleration (except for 3mm lead)

For low power applications



Technical Reference P.451

POINT
Notes on selection

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) The load capacity specification/energy-saving is 0.3 G (or 0.2 G if the lead is 3.0 G). The maximum acceleration is 0.8G (with Lead 3 left out). (When acceleration/deceleration is dropped, the maximum payload values are shown in the table below.)

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)		Maximum payload		Rated thrust (N)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)	Horizontal (kg)	Vertical (kg)		
RCA-SA5C-①-20-12-②-A1-③-④-	20	12	4	1	16.7	50 to 500 (each 50mm)	
RCA-SA5C-①-20-6-②-A1-③-④		6	8	2	33.3		
RCA-SA5C-①-20-3-②-A1-③-④		3	12	4	65.7		

Stroke and Maximum Speed

Lead	Stroke	50 to 450 (each 50mm)	
		500 (mm)	500 (mm)
12		800	760
6		400	380
3		200	190

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

① Encoder Type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA5C	
	① Encoder Type	
	Incremental	Absolute
50	I	A
100	-	-
150	-	-
200	-	-
250	-	-
300	-	-
350	-	-
400	-	-
450	-	-
500	-	-

③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	-
	S (3m)	-
	M (5m)	-
Specified length	X06 (6m) - X10 (10m)	-
	X11 (11m) - X15 (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)	-

*See P384 for information on maintenance cable.

④ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	-	-
Foot bracket	FT	-	-
High acceleration/deceleration	HA	-	-
Home check sensor	HS	-	-
Saves electric power	LA	-	-
Reversed-home specification	NM	-	-
Specification for Slider Roller	SR	-	-

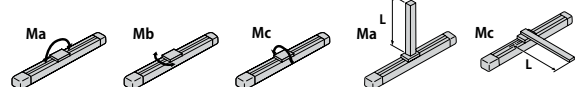
* High acceleration, deceleration capability cannot be used with roller specifications for slider part.
* Lead 3 cannot be used for high acceleration, deceleration.
* High acceleration, deceleration capability cannot be used with electrical energy-saving capability.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

CAD drawings can be downloaded from the website.

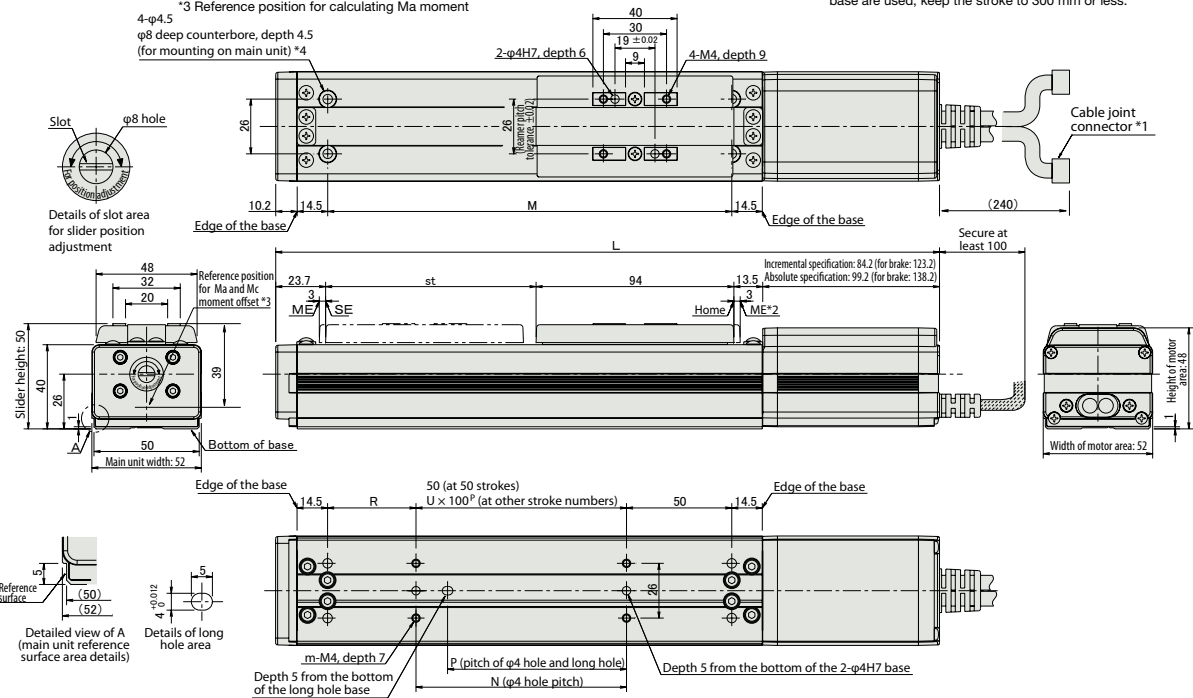
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Information on special orders P.454



- 1 Connect motor encoder cable. See P384 for details on cables.
- 2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- 3 Reference position for calculating Ma moment

- 4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider generating noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.



Dimensions and Weight by Stroke brake weight increased by 0.3kg.

Stroke		50	100	150	200	250	300	350	400	450	500	
L	Incremental	Without brake	265.4	315.4	365.4	415.4	465.4	515.4	565.4	615.4	665.4	715.4
		With brake	304.4	354.4	404.4	454.4	504.4	554.4	604.4	654.4	704.4	754.4
	Absolute	Without brake	280.4	330.4	380.4	430.4	480.4	530.4	580.4	630.4	680.4	730.4
		With brake	319.4	369.4	419.4	469.4	519.4	569.4	619.4	669.4	719.4	769.4
M		142	192	242	292	342	392	442	492	542	592	
N		50	100	100	200	200	300	300	400	400	500	
P		35	85	85	185	185	285	285	385	385	485	
R		42	42	92	42	92	42	92	42	92	42	
U		-	1	1	2	2	3	3	4	4	5	
m		4	4	4	6	6	8	8	10	10	12	
Weight (kg)		1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-20I(2)-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-20I(2)-NP-2-0								
Solenoid valve Type		ACON-CY-20I(2)-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-20I(2)-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-20I(2)-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-20(2)	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-20I(2)-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P405

* The ASEL model name is based on a 1-axis specification.
 *(1) Indicates the encoder type (I: Incremental / A: Absolute) is needed.
 *(2) The mark (HA/LA) is entered when high acceleration/deceleration, energy saving capability is designated).

- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/ Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SA6C

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, 24V Servo Motor, Coupling Specification

Model Description	RCA	SA6C		30			A1		
	Series	Type	Encoder category	Motor category	Lead	Stroke	Applicable controller	Cable length	Option
			I: Incremental specifications A: Absolute Specifications	30: Servo Motor 30W	12: 12mm 6: 6mm 3: 3mm	50:50mm to 600:600mm (Every 50mm pitch setting)	A1:ACON ASEL	N: None P: 1m S: 3m M: 5m X□□ : Specified length R□□ : Robot cable	Following options Refer to price table

See preceding section for model descriptions.

Compatible with rapid acceleration and deceleration (except for 3mm lead)

For low power applications



Technical Reference P.451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - The standard specification/energy savings for a load is 0.3G (with Lead 3 at 0.2G) and the maximum high acceleration/deceleration is 1G (with Lead 3 left out) as shown in the below table. (When acceleration/deceleration is dropped, the maximum payload values are shown in the table below.)

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA6C-①-30-12-②-A1-③-④	30	12	6	1.5	24.2	50 to 600 (each 50mm)
RCA-SA6C-①-30-6-②-A1-③-④		6	12	3	48.4	
RCA-SA6C-①-30-3-②-A1-③-④		3	18	6	96.8	

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 450 (each 50mm)	500 (mm)	550 (mm)	600 (mm)
	12	800	760	640
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

① Encoder Type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA6C	
	① Encoder Type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

④ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	—	—
Foot bracket	FT	—	—
High acceleration/deceleration	HA	—	—
Home check sensor	HS	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—
Specification for Slider Roller	SR	—	—

* High acceleration, deceleration capability cannot be used with roller specifications for slider part.
* Lead 3 cannot be used for high acceleration, deceleration.
* High acceleration, deceleration capability cannot be used with electrical energy-saving capability.

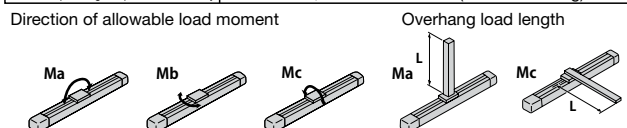
③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) – X10 (10m)	—
	X11 (11m) – X15 (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)	—

*See P384 for information on maintenance cable.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)



Dimensional Drawings

CAD drawings can be downloaded from the website.

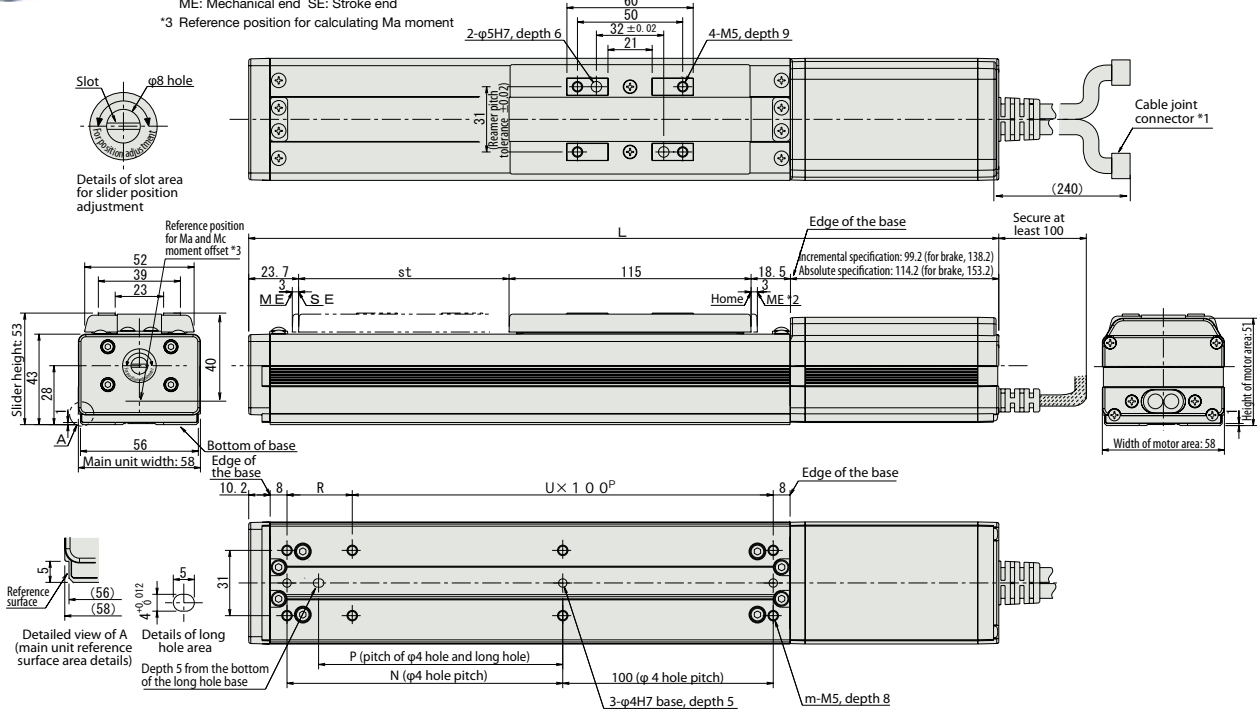
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Information on special orders

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- *1 Connect motor encoder cable. See P384 for details on cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
- *3 Reference position for calculating Ma moment



■ Dimensions and Weight by Stroke

Stroke		50	100	150	200	250	300	350	400	450	500	550	600	
L	Incremental	Without brake	306.4	356.4	406.4	456.4	506.4	556.4	606.4	656.4	706.4	756.4	806.4	856.4
		With brake	345.4	395.4	445.4	495.4	545.4	595.4	645.4	695.4	745.4	795.4	845.4	895.4
	Absolute	Without brake	321.4	371.4	421.4	471.4	521.4	571.4	621.4	671.4	721.4	771.4	821.4	871.4
		With brake	360.4	410.4	460.4	510.4	560.4	610.4	660.4	710.4	760.4	810.4	860.4	910.4
N		81	131	181	231	281	331	381	431	481	531	581	631	
P		66	116	166	216	266	316	366	416	466	516	566	616	
R		81	31	81	31	81	31	81	31	81	31	81	31	
U		1	2	2	3	3	4	4	5	5	6	6	7	
m		6	8	8	10	10	12	12	14	14	16	16	18	
Weight (kg)		1.4	1.6	1.8	2	2.2	2.4	2.6	2.8	3	3.2	3.4	3.6	

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-30I(2)-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-30I(2)-NP-2-0								
Solenoid valve Type		ACON-CY-30I-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-30I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-30I(2)-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-30I-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-30(2)	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-30I(2)-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P405

* The ASEL model name is based on a 1-axis specification.
 * (1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 * (2) The mark (HA/LA) is entered when high acceleration/deceleration, energy saving capability is designated).

- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/ Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SA4D

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, 24V Servo Motor, Built in (direct coupling) Specification

Model Description **RCA** - **SA4D** - [] - **20** - [] - [] - **A1** - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50:50mm to 300:300mm (Every 50mm pitch setting)

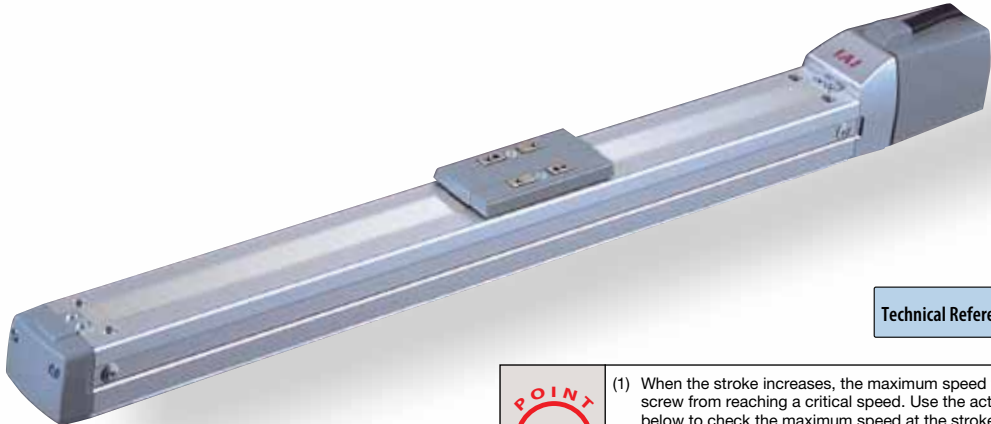
A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA4D-①-20-10-②-A1-③-④	20	10	4	1	19.6	50 to 300 (each 50mm)
RCA-SA4D-①-20-5-②-A1-③-④		5	6	2.5	39.2	
RCA-SA4D-①-20-2.5-②-A1-③-④		2.5	8	4.5	78.4	

Stroke and Maximum Speed

Stroke / Lead	50 to 300 (each 50mm)	
	Stroke	50 to 300 (each 50mm)
10		665
5		330
2.5		165

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

(Unit: mm/s)

① Encoder Type and ② Stroke Price Table

Stroke (mm)	Type symbol	
	SA4D	
	① Encoder Type	
	Incremental	Absolute
	I	A
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—

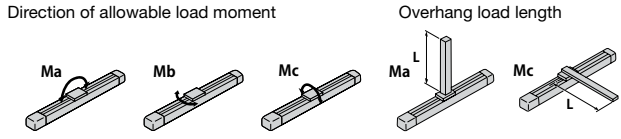
*See P384 for information on maintenance cable.

④ Option Price Table

Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	—	—
Brake (wire taken out from end)	BL	—	—
Brake (wire taken out from end)	BR	—	—
Foot bracket	FT	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw φ8mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m, Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb Mc direction: 120 mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below(noncondensing)



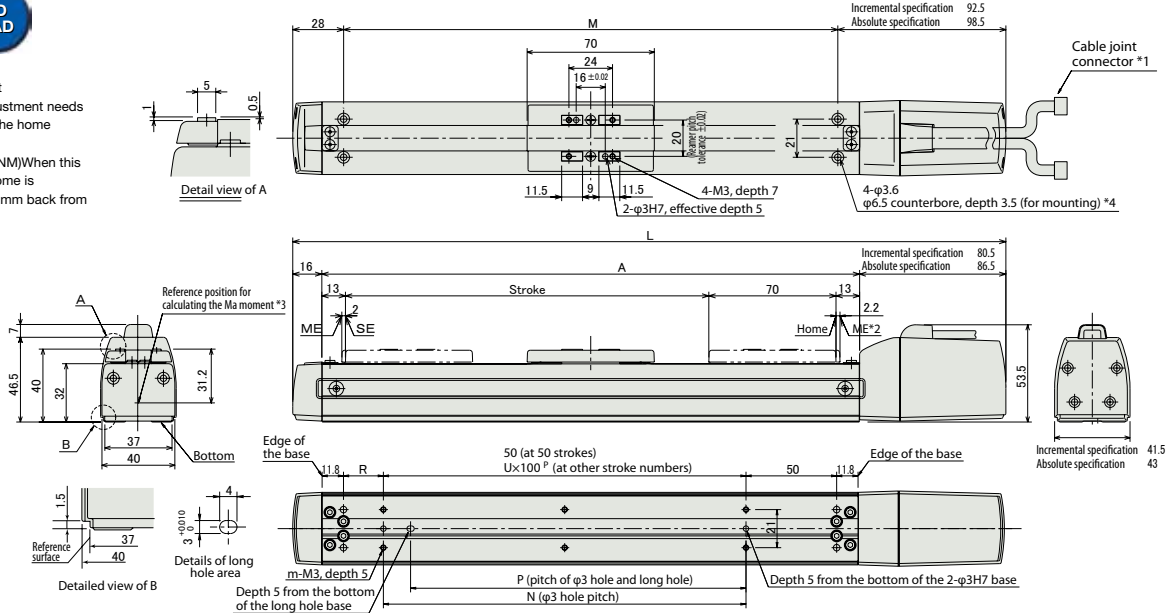
Dimensional Drawings

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

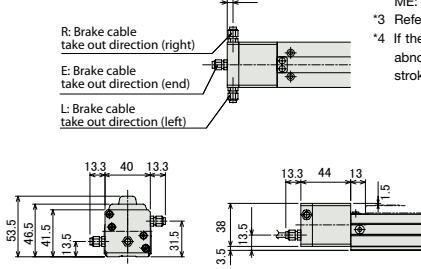
Information on special orders P.454

2D CAD

- * Take note that the return adjustment needs to change to the home direction.
- * Specification(NM)When this is the case, home is positioned 2.2mm back from the ME.



Brake area dimensions



- *1 Connect motor encoder cable. See P384 for details on cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	
L	Incremental	242.5	292.5	342.5	392.5	442.5	492.5
	Absolute	248.5	298.5	348.5	398.5	448.5	498.5
A	146	196	246	296	346	396	
M	122	172	222	272	322	372	
N	50	100	100	200	200	300	
P	35	85	85	185	185	285	
R	22	22	72	22	72	22	
U	-	1	1	2	2	3	
m	4	4	4	6	6	8	
Weight (kg)	0.6	0.7	0.8	0.9	1.0	1.1	

* The brake specification has an overall length (L) that is 28mm (wire end, 41.3mm), weight increases 0.2kg.

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-20I②-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-20I②-NP-2-0								
Solenoid valve Type		ACON-CY-20I②-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-20I②-NP-2-0							Open collector specification Pulse train input type	
Serial Communications Type		ACON-SE-20I②-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-20②	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-20①②-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					-	P405

- * The ASEL model name is based on a 1-axis specification.
- * (1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
- * (2) When electrical energy-saving type is designated, the (LA) mark is needed.

- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Flat Type
- Gripper/ Rotary Type
- Cleanroom Resistant
- Slush-Resistant Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SA5D

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, 24V Servo Motor, Built in (direct coupling) Specification

Model Description **RCA** - **SA5D** - [] - **20** - [] - [] - **A1** - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50:50mm to 500:500mm (Every 50mm pitch setting)

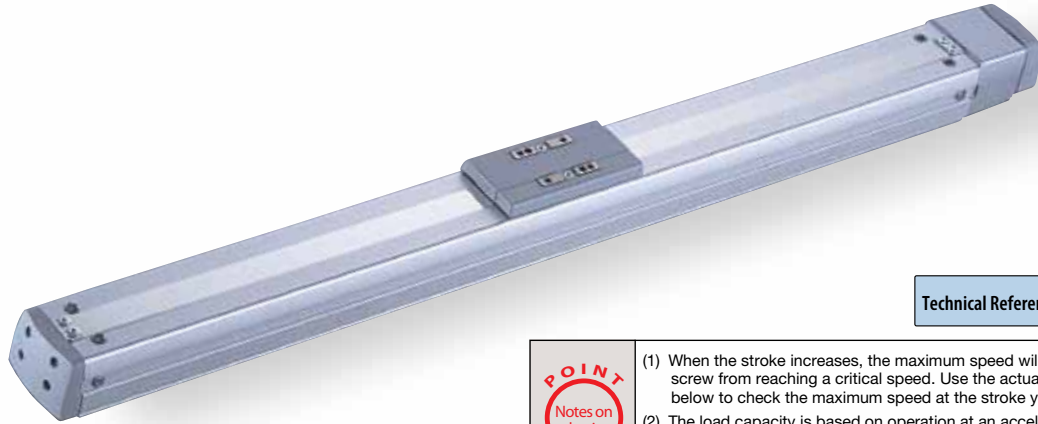
A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload Horizontal (kg) Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-SA5D-①-20-12-②-A1-③-④	20	12	4 1	16.7	50 to 500 (each 50mm)
RCA-SA5D-①-20-6-②-A1-③-④		6	8 2	33.3	
RCA-SA5D-①-20-3-②-A1-③-④		3	12 4	65.7	

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

Stroke and Maximum Speed

Stroke Lead	50 to 450 (each 50mm)	500 (mm)
	12	800
6	400	380
3	200	190

(Unit: mm/s)

① Encoder Type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA5D	
	① Encoder Type	
	Incremental	Absolute
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—

③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P384 for information on maintenance cable.

Option Price Table

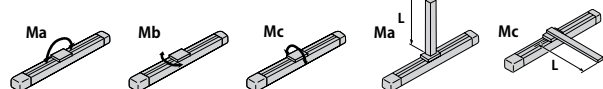
Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	—	—
Brake (wire taken out from left)	BL	—	—
Brake (wire taken out from right)	BR	—	—
Foot bracket	FT	—	—
For electrical energy saving	LA	—	—
Reversed-home specification	NM	—	—
Specification for Slider Roller	SR	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw φ10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0 to 40C, 85%RH or below (noncondensing)

Direction of allowable load moment

Overhang load length



Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller mounted
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

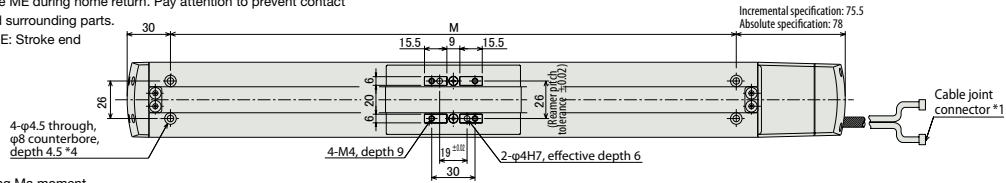
Information on special orders

P.454

2D CAD

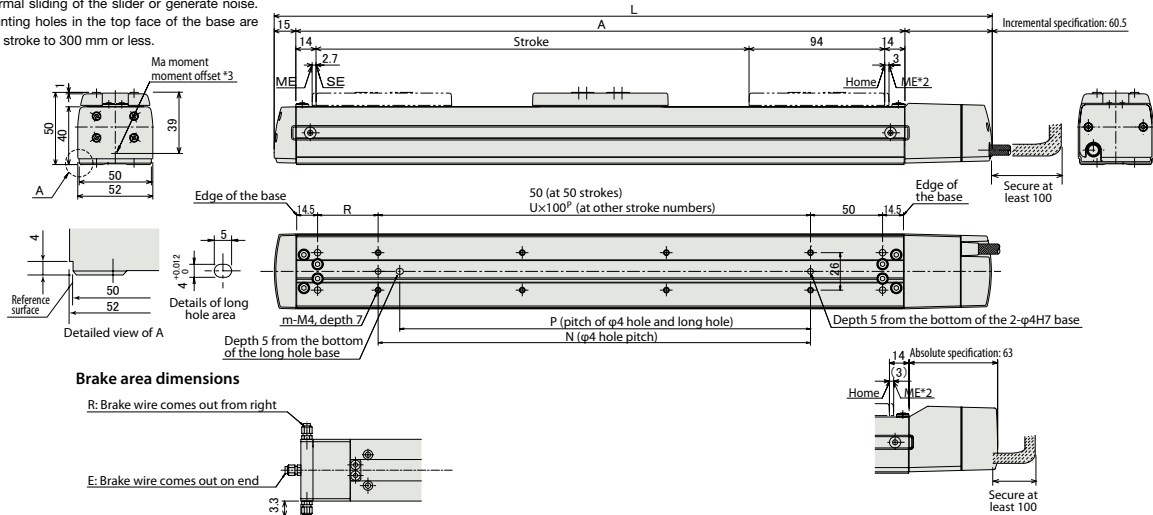
- *1 Connect motor encoder cable. See P384 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.

ME: Mechanical end SE: Stroke end



*3 This is standard position when calculating Ma moment.

*4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.



■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L Incremental	247.5	297.5	347.5	397.5	447.5	497.5	547.5	597.5	647.5	697.5
Absolute	250	300	350	400	450	500	550	600	650	700
A	172	222	272	322	372	422	472	522	572	622
M	142	192	242	292	342	392	442	492	542	592
N	50	100	100	200	200	300	300	400	400	500
P	35	85	85	185	185	285	285	385	385	485
R	42	42	92	42	92	42	92	42	92	42
U	-	1	1	2	2	3	3	4	4	5
m	4	4	4	6	6	8	8	10	10	12
Weight (kg)	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page	
Positioner Type		ACON-C-20I-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375	
For Safe Category Positioner Type		ACON-CG-20I(2)-NP-2-0							
Solenoid valve Type		ACON-CY-20I(2)-NP-2-0	Same as solenoid valve Operation possible with controller	3 points					
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)					
Pulse Train Input Type (Open collector specification)		ACON-PO-20I-NP-2-0	Open collector specification Pulse train input type						
Serial Communications Type		ACON-SE-20I(2)-N-0-0	Serial communications Dedicated-use type	64 points					
Field Network Type		RACON-20(2)	Field network Dedicated-use type	768 points					P343
Program Control Type		ASEL-C-1-20I(2)-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points					P405

* The ASEL model name is based on a 1-axis specification.
 * (1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 * (2) When electrical energy-saving type is designated, the (LA) mark is needed.

- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/ Rotary Type
- Chamroom
- Splash-resistant
- Controller
- C Coupling
- D Built-in (Direct)
- R Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SA6D

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, 24-V Servo Motor, Built in (direct coupling) Specification

Model Description **RCA** - **SA6D** - - **30** - - - **A1** - -

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

30: Servo Motor 30W

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

50:50mm to 600:600mm (Every 50mm pitch setting)

A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload Horizontal (kg) Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCA-SA6D-①-30-12-②-A1-③-④	30	12	6 1.5	24.2	50 to 600 (each 50mm)
RCA-SA6D-①-30-6-②-A1-③-④		6	12 3	48.4	
RCA-SA6D-①-30-3-②-A1-③-④		3	18 6	96.8	

Stroke and Maximum Speed

Stroke / Lead	50 to 450 (each 50mm)	500 (mm)	550 (mm)	600 (mm)
12	800	760	640	540
6	400	380	320	270
3	200	190	160	135

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

(Unit: mm/s)

① Encoder Type and ② Stroke Price Table

② Stroke (mm)	Type symbol SA6D	
	① Encoder Type	
	Incremental I	Absolute A
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—
	—	—

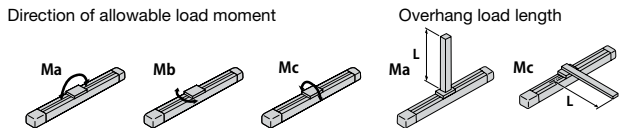
*See P384 for information on maintenance cable.

④ Option Price Table

Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	—	—
Brake(wire taken out from left side)	BL	—	—
Brake (wire taken out from right)	BR	—	—
Foot bracket	FT	—	—
For electrical energy saving	LA	—	—
Reversed-home specification	NM	—	—
Specification for Slider Roller	SR	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw φ 10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)



Controller-Integrated Slider Type Rod Type Table Arm/Flat Gripper/ Rotary Type Cleanroom Splash-resistant Controller Coupling Built-in (Direct) Reversed-mounted Pulse Motor 20P Pulse Motor 28P Pulse Motor 35P Pulse Motor 42P Pulse Motor 56P Pulse Motor 86P Servo Motor 10W Servo Motor 20W Servo Motor 30W Servo Motor 60W Servo Motor 100W Servo Motor 150W Servo Motor 750W

Dimensional Drawings

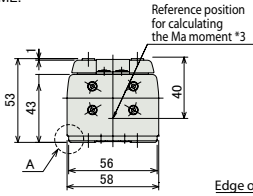
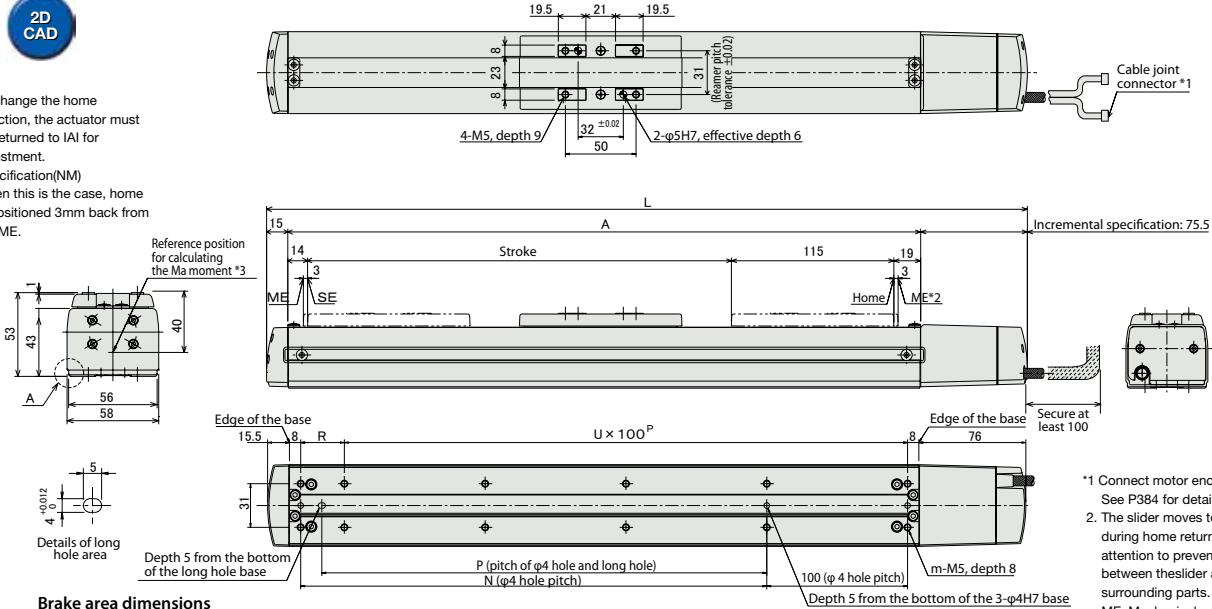
CAD drawings can be downloaded from the website.

www.intelligentactuator.com

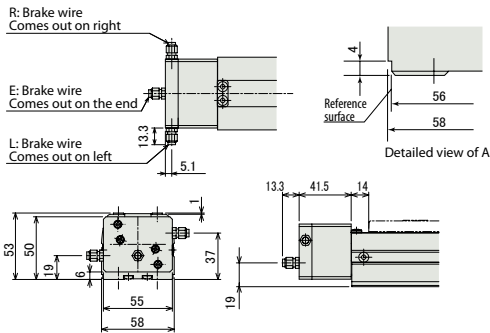
Information on special orders P.454

2D CAD

- * To change the home direction, the actuator must be returned to IA1 for adjustment.
- * Specification(NM) When this is the case, home is positioned 3mm back from the ME.



Brake area dimensions



* Overall length (L) of brake: 26.5mm (39.8 with wire taken out of end), and the weight increases by 0.3kg.

- 1 Connect motor encoder cable. See P384 for details on cables.
- 2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- *3 This is standard position when calculating Ma moment.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	
L	Incremental	288.5	338.5	388.5	438.5	488.5	538.5	588.5	638.5	688.5	738.5	788.5	838.5
	Absolute	292.5	342.5	392.5	442.5	492.5	542.5	592.5	642.5	692.5	742.5	792.5	842.5
A	198	248	298	348	398	448	498	548	598	648	698	748	
N	81	131	181	231	281	331	381	431	481	531	581	631	
P	66	116	166	216	266	316	366	416	466	516	566	616	
R	81	31	81	31	81	31	81	31	81	31	81	31	
U	1	2	2	3	3	4	4	5	5	6	6	7	
m	6	8	8	10	10	12	12	14	14	16	16	18	
Weight (kg)	1.3	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-30I(2)-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	—	P375		
For Safe Category Positioner Type		ACON-CG-30I(2)-NP-2-0								
Solenoid valve Type		ACON-CY-30I(2)-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-30I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-30I(2)-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-30I-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-30(2)	Field network Dedicated-use type	768 points					—	P343
Program Control Type		ASEL-C-1-30I(2)-NP-2-0	Programmable type capable of operating up to 2 axes	1500 points						

* The ASEL model name is based on a 1-axis specification.
 * (1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 * (2) When electrical energy-saving type is designated, the (LA) mark is needed.

- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/ Rotary Type
- Cleanroom
- Splash-Resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

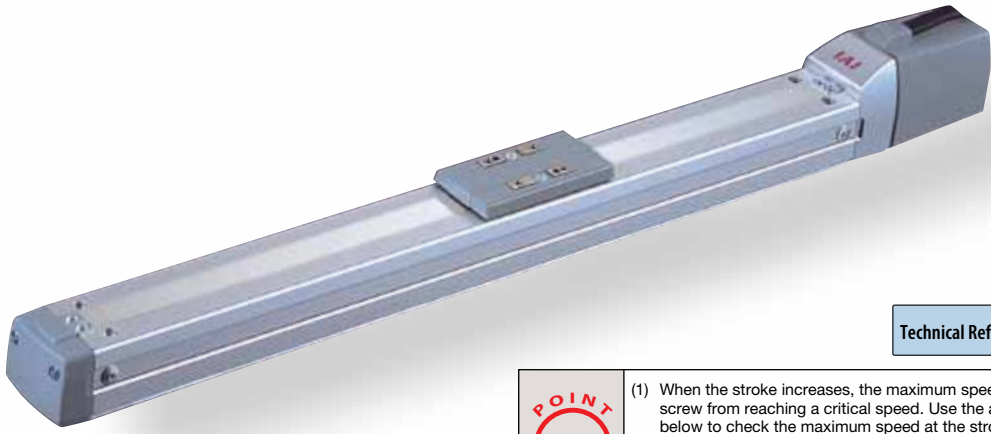
RCA-SS4D

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, 24V Servo Motor, Built in (direct coupling) Specification, Iron Base Type

Model Description	RCA	SS4D	I	20			A1		
	Series	Type	Encoder category	Motor category	Lead	Stroke	Applicable controller	Cable length	Option
			I: Incremental specifications A: Absolute Specifications	20: Servo Motor 20W	10: 10mm 5: 5mm 2.5: 2.5mm	50:50mm to 300:300mm (Every 50mm pitch setting)	A1:ACON ASEL	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SS4D-I-20-10-①-A1-②-③	20	10	4	1	19.6	50 to 300 (each 50mm)
RCA-SS4D-I-20-5-①-A1-②-③		5	6	2.5	39.2	
RCA-SS4D-I-20-2.5-①-A1-②-③		2.5	8	4.5	78.4	

Stroke and Maximum Speed

Stroke Lead	50 to 300 (each 50mm)	
	10	665
5	330	
2.5	165	

(Unit: mm/s)

Legend ① Stroke ② Cable length ③ Option

① Encoder Type and ② Stroke Price Table

① Stroke (mm)	Type symbol	
	SS4D	
	Encoder category	
	Incremental	
	I	
50	—	
100	—	
150	—	
200	—	
250	—	
300	—	

② Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

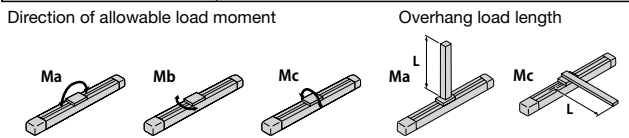
*See P384 for information on maintenance cable.

③ Option Price Table

Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	—	—
Brake (wire taken out from end)	BL	—	—
Brake (wire taken out from end)	BR	—	—
For electrical energy saving	LA	—	—
Reversed-home specification	NM	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 8mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m, Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb Mc direction: 120 mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)



Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

Dimensional Drawings

CAD drawings can be downloaded from the website.

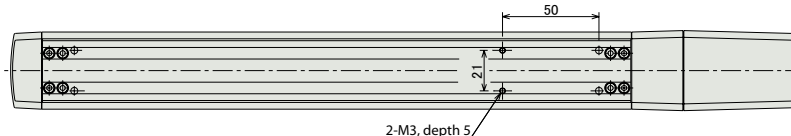
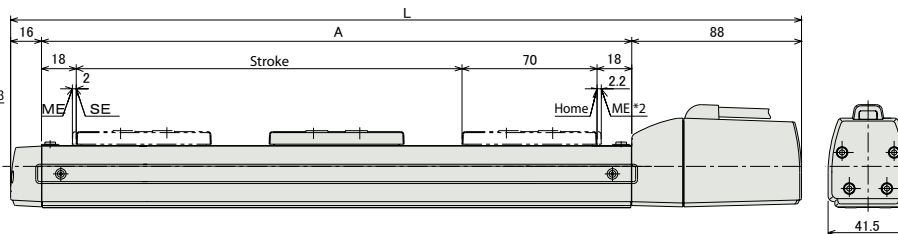
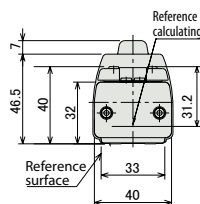
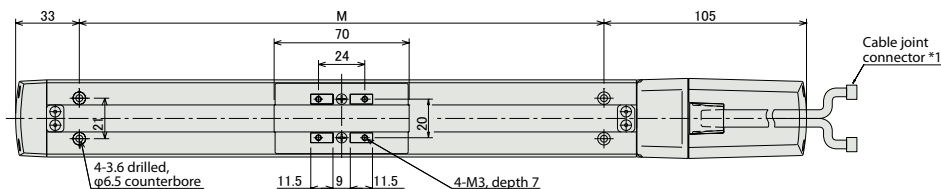
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Information on special orders

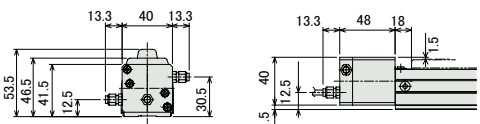
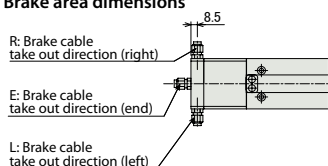
P.454

2D CAD

* Take note that the return adjustment needs to change to the home direction.
* Specification(NM)
When this is the case, home is positioned 2.2mm back from the ME.



Brake area dimensions



- *1 Connect motor encoder cable. See P384 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

* Overall length (L) with brake is 32mm (wire taken out on end, 45.3mm), and weight increases by 0.2kg.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
L	260	310	360	410	460	510
A	156	206	256	306	356	406
M	122	172	222	272	322	372
Weight (kg)	1.1	1.2	1.3	1.4	1.5	1.6

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page
Positioner Type		ACON-C-20I(2)-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375
For Safe Category Positioner Type		ACON-CG-20I(2)-NP-2-0						
Solenoid valve Type		ACON-CY-20I-NP-2-0	Same as solenoid valve Operation possible with controller	3 points				
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)				
Pulse Train Input Type (Open collector specification)		ACON-PO-20I(2)-NP-2-0	Open collector specification Pulse train input type					
Serial Communications Type		ACON-SE-20I(2)-N-0-0	Serial communications Dedicated-use type	64 points				
Field Network Type		RACON-20	Field network Dedicated-use type	768 points				
Program Control Type		ASEL-C-1-20I(2)-NP-2-0	Programmable type Capable of operating up to 2-axis	1500 points	-	P405		

* The ASEL model name is based on a 1-axis specification.
* (2) When electrical energy-saving type is designated, the (LA) mark is needed.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-Resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SS5D

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, 24-V Servo Motor, Built in (direct coupling) Specification, Iron Base Type

Model Description **RCA** - **SS5D** - **I** - **20** - - - **A1** - -

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50:50mm to 500:500mm (Every 50mm pitch setting)

A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SS5D-I-20-12-①-A1-②-③	20	12	4	1	16.7	50 to 500 (each 50mm)
RCA-SS5D-I-20-6-①-A1-②-③		6	8	2	33.3	
RCA-SS5D-I-20-3-①-A1-②-③		3	12	4	65.7	

Legend ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Lead	Stroke	
	50 to 450 (each 50mm)	500 (mm)
12	800	760
6	400	380
3	200	190

(Unit: mm/s)

Encoder Type and Stroke Price Table

① Stroke (mm)	Type symbol	
	SS5D	
	Encoder category	
	Incremental	
	I	
50	—	
100	—	
150	—	
200	—	
250	—	
300	—	
350	—	
400	—	
450	—	
500	—	

② Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—
	—	—

*See P384 for information on maintenance cable.

③ Option Price Table

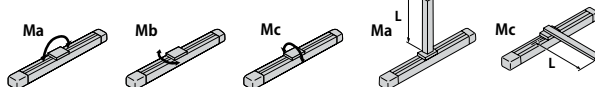
Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	—	—
Brake(wire take out from left side)	BL	—	—
Brake (wire taken out from right)	BR	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—
Specification for Slider Roller	SR	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw φ 10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)

Direction of allowable load moment

Overhang load length



Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

Information on special orders

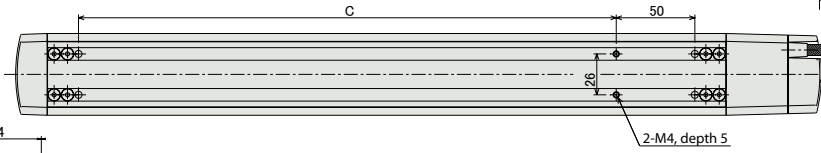
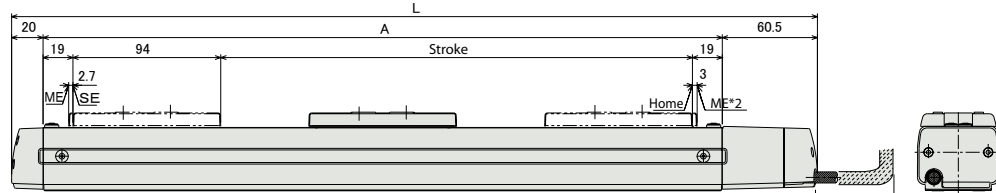
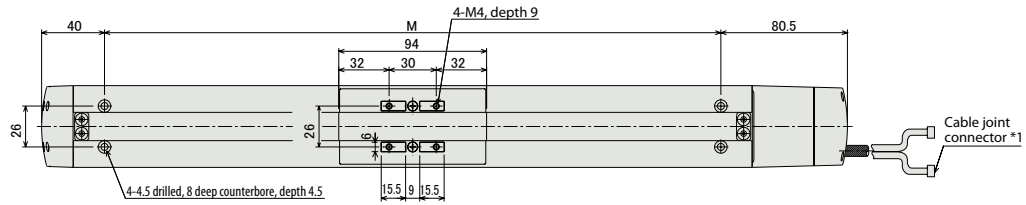
P.454

2D CAD

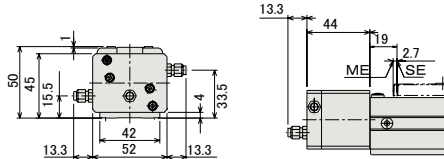
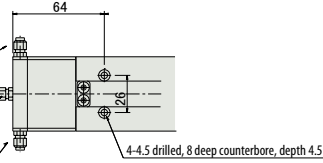
Reference surface



Reference position for calculating the Ma moment*3



R: Brake cable Comes out on right
E: Brake cable Comes out on end
L: Brake cable Comes out on left



* Full length with brake(L) 24mm (37.3mm can be taken out from wiring end) The weight increases by 0.3kg.

*1 Connect motor encoder cable. See P384 for details on cables.

2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.

ME: Mechanical end SE: Stroke end

*3 Reference position for calculating Ma moment

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	262.5	312.5	362.5	412.5	462.5	512.5	562.5	612.5	662.5	712.5
A	182	232	282	332	382	432	482	532	582	632
M	142	192	242	292	342	392	442	492	542	592
C	92	142	192	242	292	342	392	442	492	542
Weight (kg)	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-20I(2)-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-20I(2)-NP-2-0								
Solenoid valve Type		ACON-CY-20I(2)-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-20I-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-20I(2)-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-20(2)	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-20I(2)-NP-2-0	Programmable type Capable of operating up to 2-axis	1500 points					-	P405

* The ASEL model name is based on a 1-axis specification.

* (2) When electrical energy-saving type is designated, the (LA) mark is needed.

Controller- Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/ Rotary Type
Cleanroom Resistant
Splash-Resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

RCA-SS6D

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, 24-V Servo Motor, Built in (direct coupling) Specification, Iron Base Type

Model Description	RCA - SS6D - I - 30 - <input type="checkbox"/> - <input type="checkbox"/> - A1 - <input type="checkbox"/> - <input type="checkbox"/>							
Series	Type	Encoder category	Motor category	Lead	Stroke	Applicable controller	Cable length	Option
I: Incremental specifications	30: Servo Motor 30W	A: Absolute Specifications	12: 12mm 6: 6mm 3: 3mm	50:50mm to 600:600mm (Every 50mm pitch setting)	A1:ACON ASEL	N: None P: 1m S: 3m M: 5m X□ : Specified length R□ : Robot cable	Following options Refer to price table	

See preceding section for model descriptions.

For low power applications



Technical Reference P.451



- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SS6D-I-30-12-①-A1-②-③	30	12	6	1.5	24.2	50 to 600 (each 50mm)
RCA-SS6D-I-30-6-①-A1-②-③		6	12	3	48.4	
RCA-SS6D-I-30-3-①-A1-②-③		3	18	6	96.8	

Legend ① Stroke ② Cable length ③ Option

Stroke and Maximum Speed

Stroke / Lead	Stroke and Maximum Speed			
	50 to 450 (each 50mm)	500 (mm)	550 (mm)	600 (mm)
12	800	760	640	540
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

① Encoder Type and ② Stroke Price Table

① Stroke (mm)	Type symbol	
	SS6D	
	Encoder category	
	Incremental	
	I	
50	—	
100	—	
150	—	
200	—	
250	—	
300	—	
350	—	
400	—	
450	—	
500	—	
550	—	
600	—	

② Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—
	R16 (16m) - R20 (20m)	—

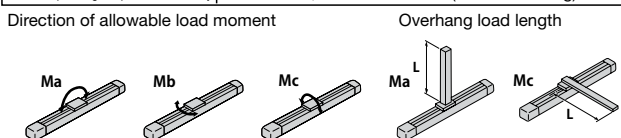
*See P384 for information on maintenance cable.

③ Option Price Table

Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	—	—
Brake (wire taken out from left)	BL	—	—
Brake (wire taken out from right)	BR	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—
Specification for Slider Roller	SR	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw φ 10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below(noncondensing)

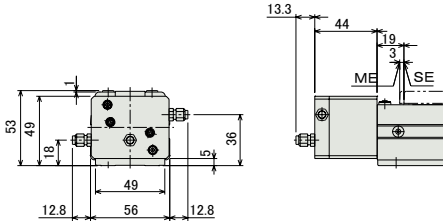
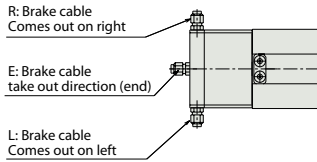
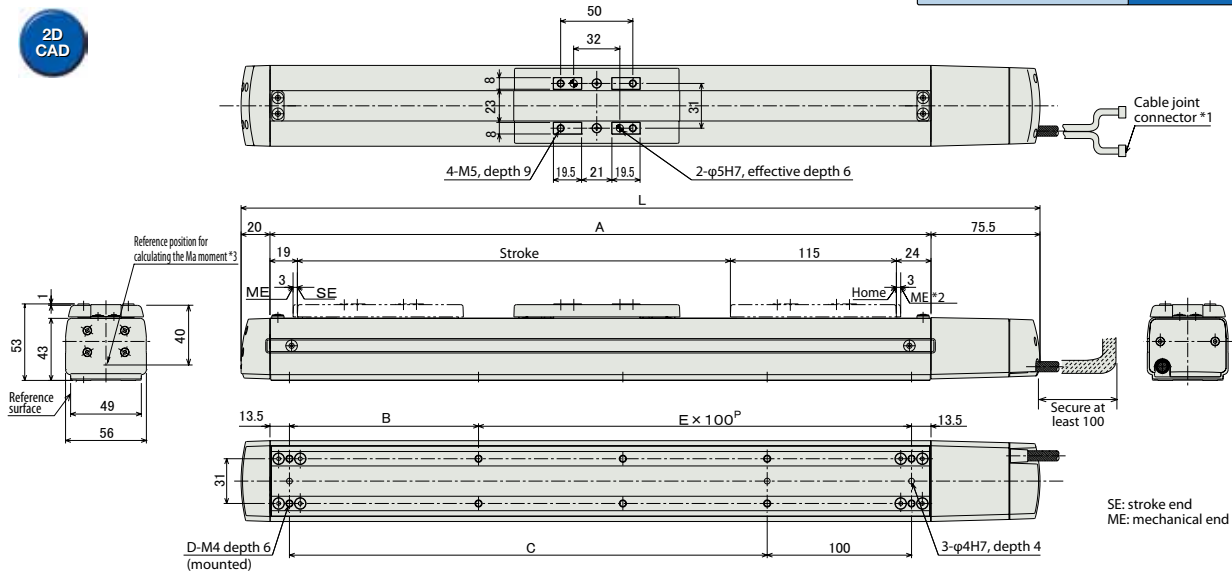


Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

Dimensional Drawings

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

Information on special orders P.454



* Full length with brake(L) 24mm (37.3mm can be taken out from wiring end) The weight increases by 0.3kg.

- *1 Connect motor encoder cable. See P384 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
- ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	303.5	353.5	403.5	453.5	503.5	553.5	603.5	653.5	703.5	753.5	803.5	853.5
A	208	258	308	358	408	458	508	558	608	658	708	758
B	81	131	81	131	81	131	81	131	81	131	81	131
C	81	131	181	231	281	331	381	431	481	531	581	631
D	6	6	8	8	10	10	12	12	14	14	16	16
E	1	1	2	2	3	3	4	4	5	5	6	6
Weight (kg)	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.7

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-30I②-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-30I②-NP-2-0								
Solenoid valve Type		ACON-CY-30I②-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-30I②-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-30I②-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-30I②-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-30②	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-30I②-NP-2-0	Programmable type Capable of operating up to 2-axis	1500 points						

* The ASEL model name is based on a 1-axis specification.
* (2) When electrical energy-saving type is designated, the (LA) mark is needed.

Controller- Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/ Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct) mounted
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

RCA-SA4R

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, 24-V Servo Motor, Reversing Specification

Model Description **RCA** - **SA4R** - - **20** - - - **A1** - -

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

10: 15mm
5: 5mm
2.5: 2.5mm

50:50mm to 400:400mm (Every 50mm pitch setting)

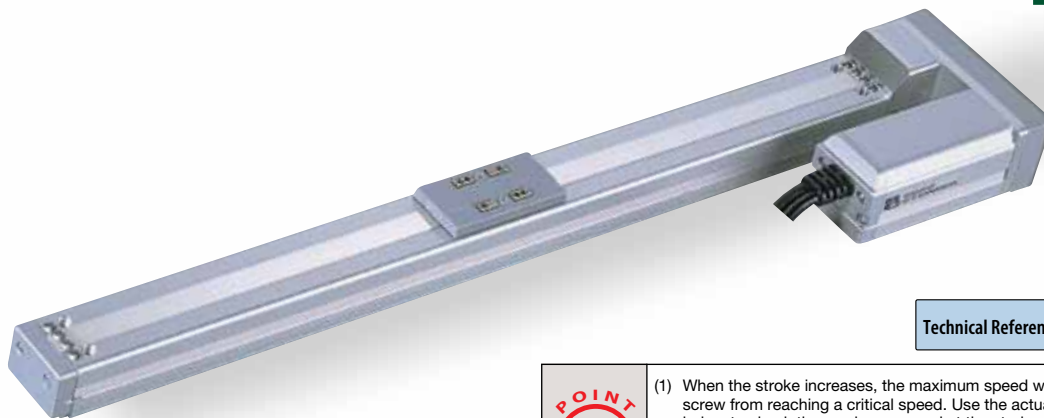
A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA4R-①-20-10-②-A1-③-④	20	10	4	1	19.6	50 to 400 (each 50mm)
RCA-SA4R-①-20-5-②-A1-③-④		5	6	2.5	39.2	
RCA-SA4R-①-20-2.5-②-A1-③-④		2.5	8	4.5	78.4	

Stroke and Maximum Speed

Stroke Lead	50 to 400 (each 50mm)	
	Stroke	Maximum Speed
10	665	
5	330	
2.5	165	

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

(Unit: mm/s)

① Encoder Type and ② Stroke Price Table

② Stroke (mm)	Type symbol SA4R	
	① Encoder Type	
	Incremental	Absolute
50	I	A
100	I	A
150	I	A
200	I	A
250	I	A
300	I	A
350	I	A
400	I	A

③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P384 for information on maintenance cable.

④ Option Price Table

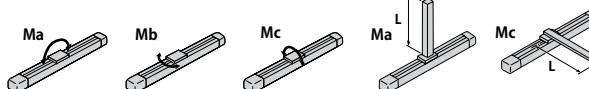
Name	Option mark	Reference page	Standard price
Brake	B	—	—
Home check sensor	HS	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—
Motor reversing on left (arm) specification (standard)	ML	—	—
Motor reversing on right (arm) specification	MR	—	—
Slider roller specification	SR	—	—
Slider Spacer	SS	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 8mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m, Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb Mc direction: 120 mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)

Direction of allowable load moment

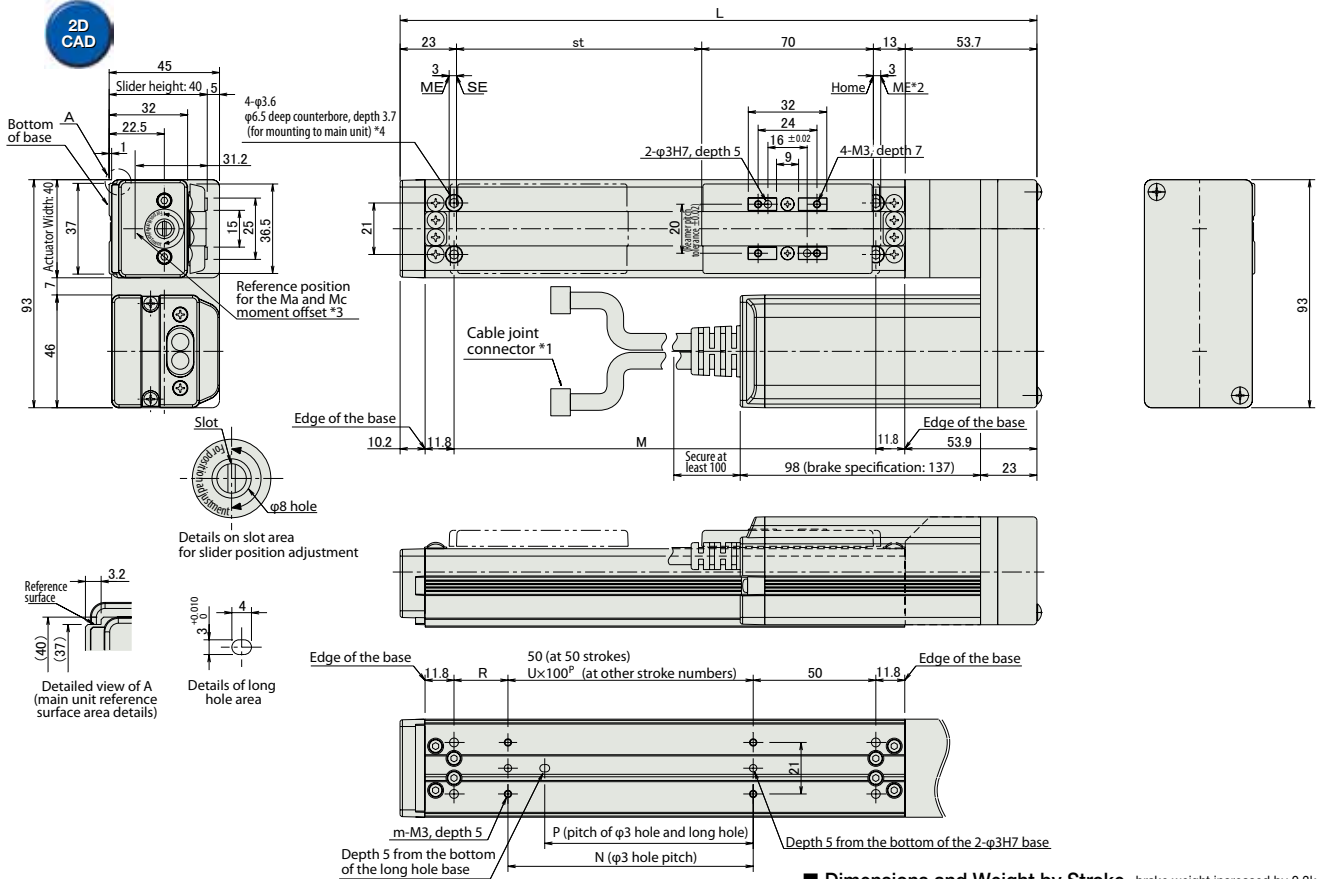
Overhang load length



Dimensional Drawings

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

Information on special orders P.454



- *1 Connect motor encoder cable. See P384 for details on cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less.

■ Dimensions and Weight by Stroke brake weight increased by 0.3kg.

Stroke	50	100	150	200	250	300	350	400
L	209.7	259.7	309.7	359.7	409.7	459.7	509.7	559.7
M	122	172	222	272	322	372	422	472
N	50	100	100	200	200	300	300	400
P	35	85	85	185	185	285	285	385
R	22	22	72	22	72	22	72	22
U	-	1	1	2	2	3	3	4
m	4	4	4	6	6	8	8	10
Weight (kg)	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-20I(2)-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-20I(2)-NP-2-0								
Solenoid valve Type		ACON-CY-20I(2)-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-20I-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-20I(2)-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-20(2)	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-20I(2)-NP-2-0	Programmable type Capable of operating up to 2-axis	1500 points					-	P405

* The ASEL model name is based on a 1-axis specification.
 * (1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 * (2) When electrical energy-saving type is designated, the (LA) mark is needed.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-Resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SA5R

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, 24-V Servo Motor, Reversing Specification

Model Description **RCA** - **SA5R** - - **20** - - - **A1** - -

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50:50mm to 500:500mm (Every 50mm pitch setting)

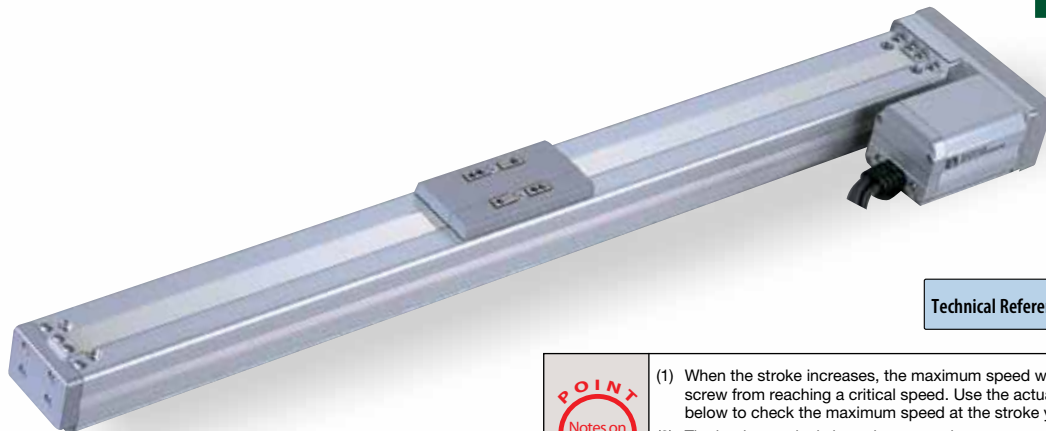
A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA5R-①-20-12-②-A1-③-④	20	12	4	1	16.7	50 to 500 (each 50mm)
RCA-SA5R-①-20-6-②-A1-③-④		6	8	2	33.3	
RCA-SA5R-①-20-3-②-A1-③-④		3	12	4	65.7	

Stroke and Maximum Speed

Stroke / Lead	50 to 450 (each 50mm)	500 (mm)
	12	800
6	400	380
3	200	190

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option (Unit: mm/s)

Encoder Type and Stroke Price Table

② Stroke (mm)	Type symbol SA5R	
	① Encoder Type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—

③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—
	—	—

*See P384 for information on maintenance cable.

④ Option Price Table

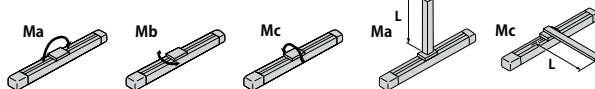
Name	Option mark	Reference page	Standard price
Brake	B	—	—
Home check sensor	HS	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—
Motor reversing on left (arm) specification (standard)	ML	—	—
Motor reversing on right (arm) specification	MR	—	—
Slider roller specification	SR	—	—

Actuator Specifications

Item	Details
Drive method	Ball screw φ 10mm, rolled C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)

Direction of allowable load moment

Overhang load length

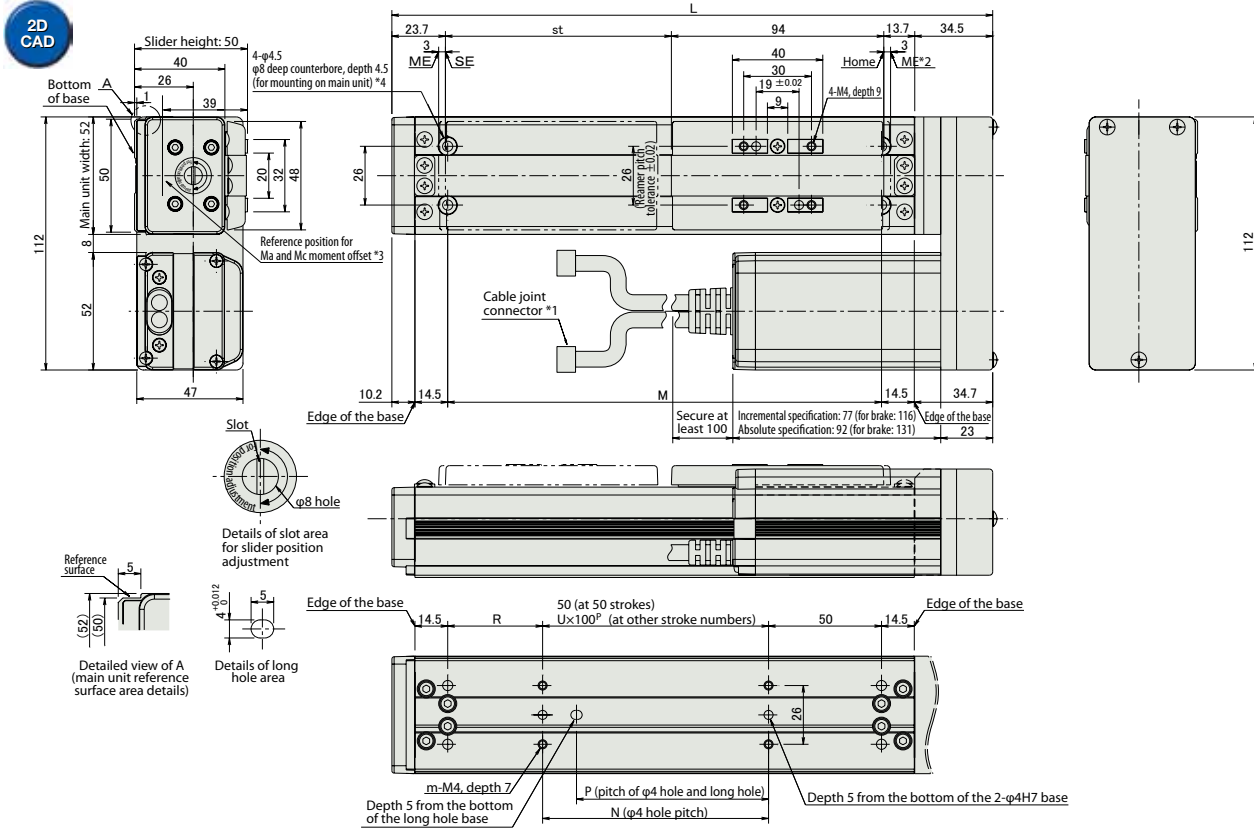


Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

Dimensional Drawings

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

Information on special orders P.454



- *1 Connect motor encoder cable. See P384 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.

■ Dimensions and Weight by Stroke brake weight increased by 0.3kg

Stroke	50	100	150	200	250	300	350	400	450	500
L	215.9	265.9	315.9	365.9	415.9	465.9	515.9	565.9	615.9	665.9
M	142	192	242	292	342	392	442	492	542	592
N	50	100	100	200	200	300	300	400	400	500
P	35	85	85	185	185	285	285	385	385	485
R	42	42	92	42	92	42	92	42	92	42
U	-	1	1	2	2	3	3	4	4	5
m	4	4	4	6	6	8	8	10	10	12
Weight (kg)	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3	2.4

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-20I(2)-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	-	P375		
For Safe Category Positioner Type		ACON-CG-20I(2)-NP-2-0								
Solenoid valve Type		ACON-CY-20I(2)-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-20I(2)-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-20I-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-20I(2)-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-20(2)	Field network Dedicated-use type	768 points					-	P343
Program Control Type		ASEL-C-1-20I(2)-NP-2-0	Programmable type Capable of operating up to 2-axis	1500 points					-	P405

* The ASEL model name is based on a 1-axis specification.
 * (1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 * (2) When electrical energy-saving type is designated, the (LA) mark is needed.

- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Rotary/ Rotary Type
- Cleanroom
- Splash-Resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCA-SA6R

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, 24-V Servo Motor, Reversing Specification

Model Description **RCA** - **SA6R** - - **30** - - - **A1** - -

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

30: Servo Motor 30W

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

50:50mm to 600:600mm (Every 50mm pitch setting)

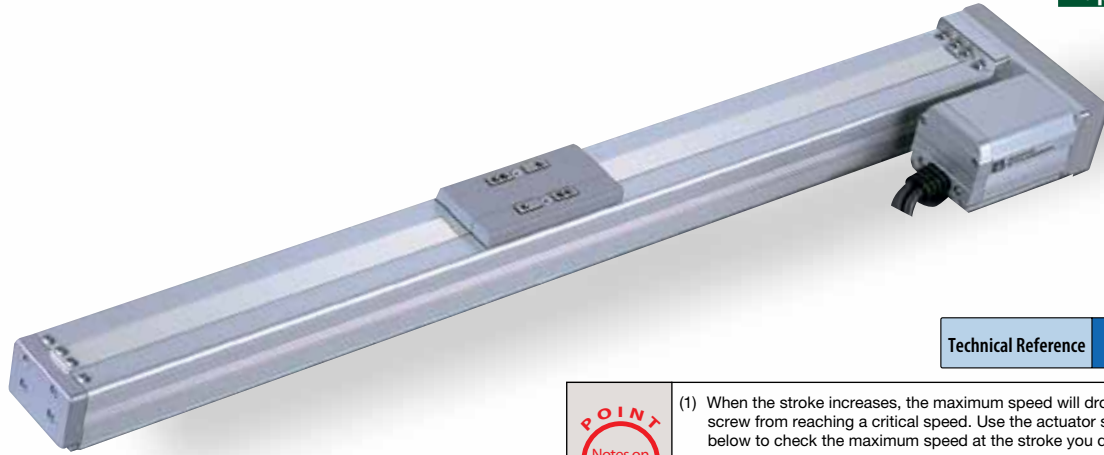
A1:ACON
ASEL

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

Following options Refer to price table

See preceding section for model descriptions.

For low power applications



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCA-SA6R-①-30-12-②-A1-③-④	30	12	6	1.5	24.2	50 to 600 (each 50mm)
RCA-SA6R-①-30-6-②-A1-③-④		6	12	3	48.4	
RCA-SA6R-①-30-3-②-A1-③-④		3	18	6	96.8	

Legend ① Encoder Type ② Stroke ③ Cable Length ④ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 450 (each 50mm)	500 (mm)	550 (mm)	600 (mm)
	12	800	760	640
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

① Encoder Type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA6R	
	① Encoder Type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

④ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	—	—
Home check sensor	HS	—	—
Saves electric power	LA	—	—
Reversed-home specification	NM	—	—
Motor reversing on left (arm) specification (standard)	ML	—	—
Motor reversing on right (arm) specification	MR	—	—
Slider roller specification	SR	—	—

③ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—

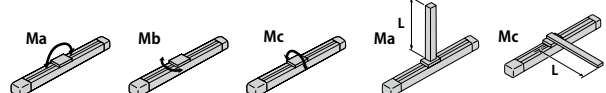
*See P384 for information on maintenance cable.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (noncondensing)

Direction of allowable load moment

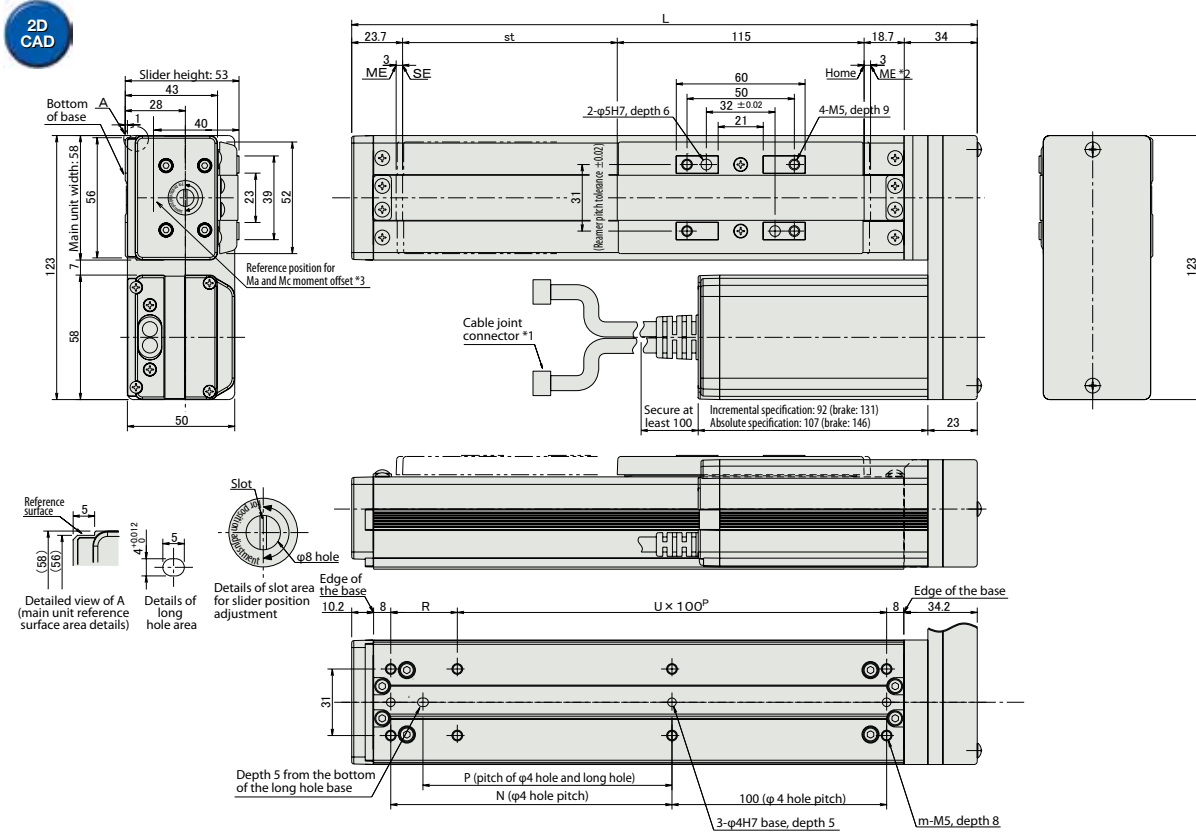
Overhang load length



Dimensional Drawings

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

Information on special orders P.454



■ Dimensions and Weight by Stroke brake weight increased by 0.3kg.

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	241.4	291.4	341.4	391.4	441.4	491.4	541.4	591.4	641.4	691.4	741.4	791.4
N	81	131	181	231	281	331	381	431	481	531	581	631
P	66	116	166	216	266	316	366	416	466	516	566	616
R	81	31	81	31	81	31	81	31	81	31	81	31
U	1	2	2	3	3	4	4	5	5	6	6	7
m	6	8	8	10	10	12	12	14	14	16	16	18
Weight (kg)	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7	3.9

- *1 Connect motor encoder cable. See P384 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

Compatible Controllers

The RCA series of actuators can operate with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power-supply capacity	Standard price	Reference page		
Positioner Type		ACON-C-30I②-NP-2-0	Maximum number of positioning points Positioning is possible.	512 points	DC24V	Rated 1.3A Peak 5.1A	—	P375		
For Safe Category Positioner Type		ACON-CG-30I②-NP-2-0								
Solenoid valve Type		ACON-CY-30I②-NP-2-0	Same as solenoid valve Operation possible with controller	3 points						
Pulse Train Input Type (Differential line driver specification)		ACON-PL-30I②-NP-2-0	Differential line driver specification Pulse train input type	(-)						
Pulse Train Input Type (Open collector specification)		ACON-PO-30I-NP-2-0	Open collector specification Pulse train input type							
Serial Communications Type		ACON-SE-30I②-N-0-0	Serial communications Dedicated-use type	64 points						
Field Network Type		RACON-30②	Field network Dedicated-use type	768 points					—	P343
Program Control Type		ASEL-C-1-30①②-NP-2-0	Programmable type Capable of operating up to 2-axis	1500 points						

* The ASEL model name is based on a 1-axis specification.
 * (1) Indicates the encoder type (I: Incremental / A: Absolute) is needed.
 * (2) When electrical energy-saving type is designated, the (LA) mark is needed.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Slash-Resistant
- Controller
- Coupling
- Built-in (Direct)
- Reversed-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- 10w Servo Motor
- 20w Servo Motor
- 30w Servo Motor
- 60w Servo Motor
- 100w Servo Motor
- 150w Servo Motor
- 750w Servo Motor

RCS2-SA4C

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, Servo Motor, Coupling Specification

Model Description **RCS2** - **SA4C** - [] - **20** - [] - [] - [] - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50:50mm to 400:400mm (Every 50mm pitch setting)

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

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

Following options Refer to price table

See preceding section for model descriptions.

Compatible with rapid acceleration and deceleration (Except for 2.5mm lead)



Technical Reference P.451

POINT
Notes on selection

- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration (except for lead 2.5). (When acceleration/deceleration is dropped, the maximum payload values are shown in the table below.)

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA4C-①-20-10-②-③-④-⑤	20	10	4	1	19.6	50 to 400 (each 50mm)
RCS2-SA4C-①-20-5-②-③-④-⑤		5	6	2.5	39.2	
RCS2-SA4C-①-20-2.5-②-③-④-⑤		2.5	8	4.5	78.4	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 400 (each 50mm)	
	Stroke	50 to 400
10	665	
5	330	
2.5	165	

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA4C	
	Encoder type	
	Incremental	Absolute
50	I	A
100	I	A
150	I	A
200	I	A
250	I	A
300	I	A
350	I	A
400	I	A

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High acceleration/deceleration	HA	P442	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—
Slider Spacer	SS	P445	—

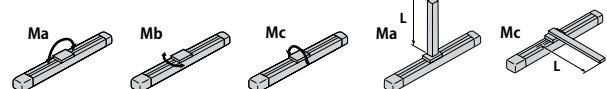
* High acceleration, deceleration capability cannot be used with roller specifications for slider part.
* Lead 2.5 is not capable of high acceleration/deceleration.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 8mm, rolled C10
Positioning repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 2.7N·m Mb: 3.9N·m, Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb Mc direction: 120 mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



Dimensional Drawings

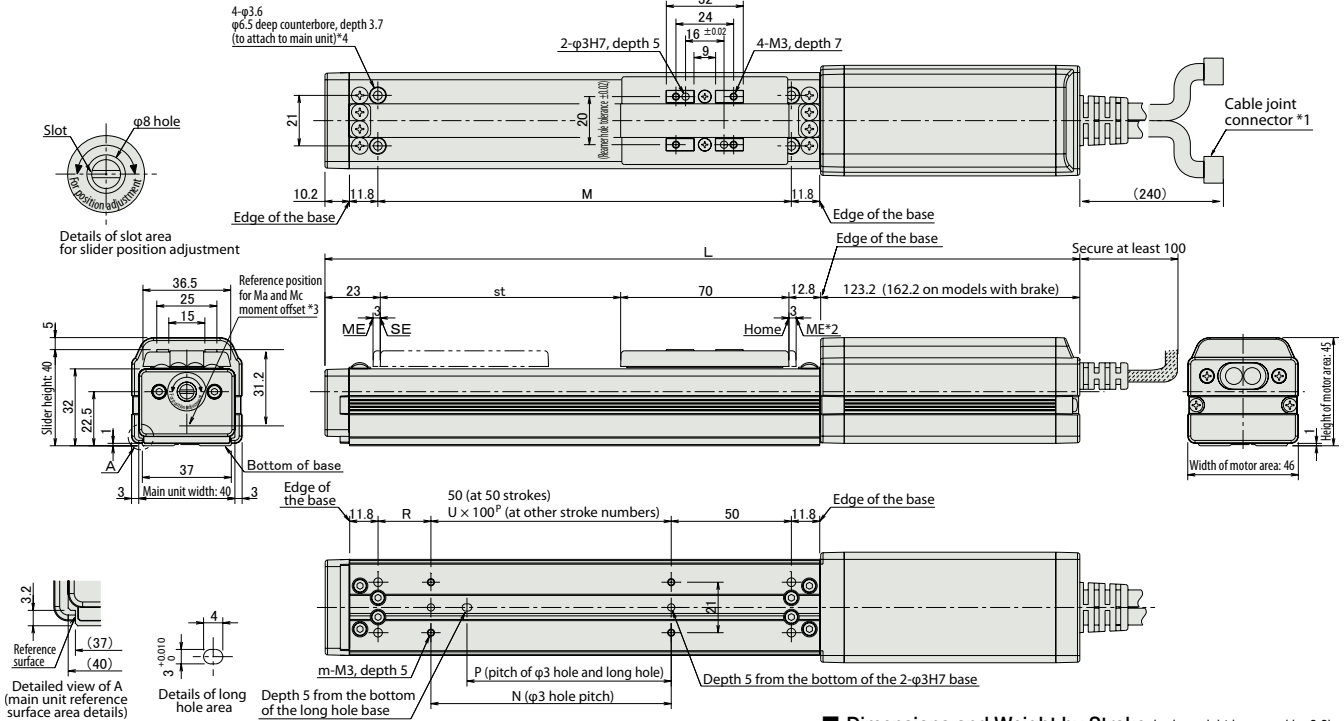
CAD drawings can be downloaded from the website. www.intelligentactuator.com

Information on special orders P.454



- *1 Connect motor encoder cable. See P394 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less



■ Dimensions and Weight by Stroke brake weight increased by 0.3kg.

Stroke	50	100	150	200	250	300	350	400	
L	Without brake	279	329	379	429	479	529	579	629
	With brake	318	368	418	468	518	568	618	668
M	122	172	222	272	322	372	422	472	
N	50	100	100	200	200	300	300	400	
P	35	85	85	185	185	285	285	385	
R	22	22	72	22	72	22	72	22	
U	-	1	1	2	2	3	3	4	
m	4	4	4	6	6	8	8	10	
Weight (kg)	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-20①②-NP-2-③	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	-	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulse train input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type		SSEL-C-1-20①②-NP-2-③	Programmable type Capable of operating up to 2-axis	20000 points			-	P415
Program control 1-6 axis type		XSEL-④-1-20①②-N1-EEE-2-⑤	Programmable type Maximum of 6-axis operation possible	4000 points			-	P425

*SSEL, XSEL is for 1-axis specification.
 *① Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 *② The mark (HA) is needed to designate high acceleration/deceleration.
 *③ Power source voltage (1:100V/2:single-phase 200V) is needed.
 *④ XSEL type Name (J/K/P/Q) is needed.
 *⑤ Power source voltage type (1: 100V / 2: Single-Phase 200V / 3: 3-Phase 200V) is needed.

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Fat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCS2-SA5C

ROBO Cylinder Slider Type, Actuator Dimensions 52mm, Servo Motor, Coupling Specification

Model Description **RCS2** - **SA5C** - [] - **20** - [] - [] - [] - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50:50mm to 500:500mm (Every 50mm pitch setting)

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

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

Following options Refer to price table

See preceding section for model descriptions.

Compatible with rapid acceleration and deceleration (Except for 3mm lead)



Technical Reference P.451

- POINT** Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration (except for lead 3). (When acceleration/deceleration is dropped, the maximum payload values are shown in the table below.)

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA5C-①-20-12-②-③-④-⑤	20	12	4	1	16.7	50 to 500 (each 50mm)
RCS2-SA5C-①-20-6-②-③-④-⑤		6	8	2	33.3	
RCS2-SA5C-①-20-3-②-③-④-⑤		3	12	4	65.7	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 450 (each 50mm)	500 (mm)
	12	800
6	400	380
3	200	190

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA5C	
	Encoder type	
	Incremental	Absolute
50	I	A
100	I	A
150	I	A
200	I	A
250	I	A
300	I	A
350	I	A
400	I	A
450	I	A
500	I	A

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P394 for details on maintenance cable.

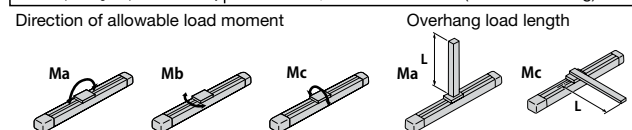
⑤ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High acceleration/deceleration	HA	P442	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—

* High acceleration, deceleration capability cannot be used with roller specifications for slider part.
* Lead 3 cannot be used for high acceleration, deceleration.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)



Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

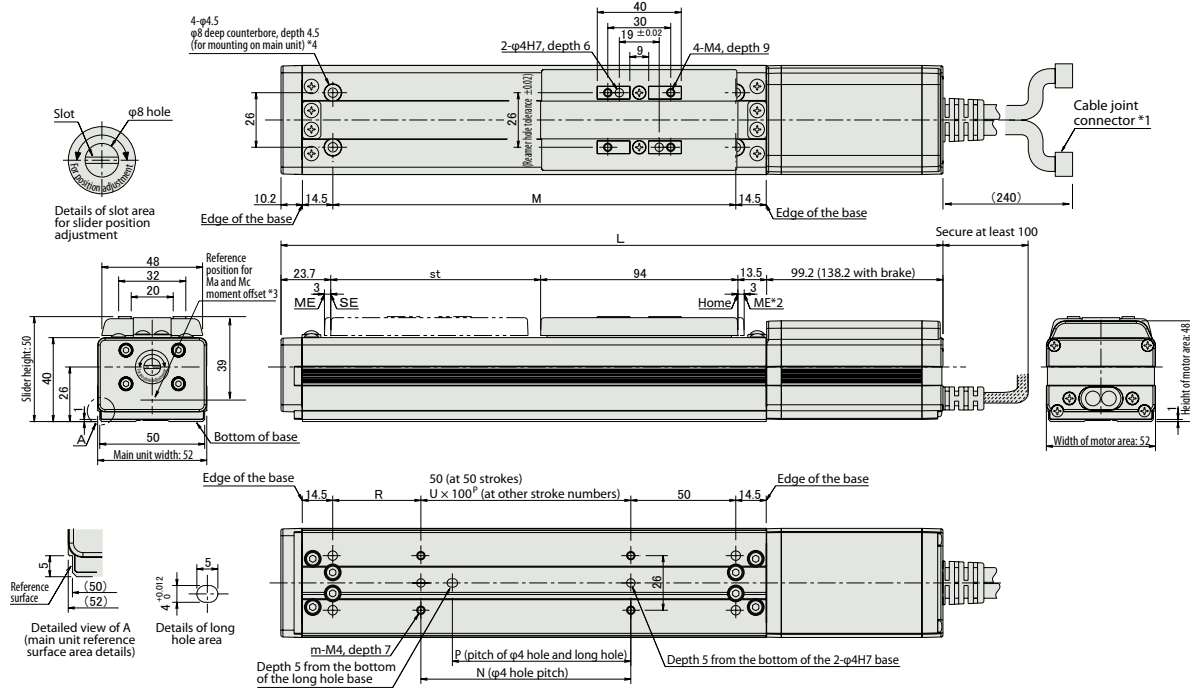
Information on special orders

P.454



- *1 Connect motor encoder cable. See P394 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider generating noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.



Dimensions and Weight by Stroke

brake weight increased by 0.3kg.

Stroke	50	100	150	200	250	300	350	400	450	500	
L	Without brake	280.4	330.4	380.4	430.4	480.4	530.4	580.4	630.4	680.4	730.4
	With brake	319.4	369.4	419.4	469.4	519.4	569.4	619.4	669.4	719.4	769.4
M	142	192	242	292	342	392	442	492	542	592	
N	50	100	100	200	200	300	300	400	400	500	
P	35	85	85	185	185	285	285	385	385	485	
R	42	42	92	42	92	42	92	42	92	42	
U	-	1	1	2	2	3	3	4	4	5	
m	4	4	4	6	6	8	8	10	10	12	
Weight (kg)	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-20①②-NP-2-③	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	-	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulsetrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type		SSEL-C-1-20①②-NP-2-③	Programmable type Capable of operating up to 2-axis	20000 points			-	P415
Program control 1-6 axis type		XSEL-④-1-20①②-N1-EEE-2-⑤	Programmable type Maximum of 6-axis operation possible	4000 points			-	P425

*SSEL, XSEL is for 1-axis specification.
 *(1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 *(2) The mark (HA) is needed to designate high acceleration/deceleration.
 *(3) Power source voltage (1:100V/2:single-phase 200V) is needed.
 *(4) XSEL type Name (J/K/P/Q) is needed.
 *(5) Power source voltage type (1: 100V / 2: Single-Phase 200V / 3: 3-Phase 200V) is needed.

Controller-Integrated Type
Slider Type
Rod Type
Table Arm/Fat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller

C Coupling

D Built-in (Direct)

R Reverse-mounted

Pulse Motor

20P

Pulse Motor

28P

Pulse Motor

35P

Pulse Motor

42P

Pulse Motor

56P

Pulse Motor

86P

Servo Motor

10w

Servo Motor

20w

Servo Motor

30w

Servo Motor

60w

Servo Motor

100w

Servo Motor

150w

Servo Motor

150w

Servo Motor

750w

RCS2-SA6C

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, Servo Motor, Coupling Specification

Model Description **RCS2 - SA6C** - [] - **30** - [] - [] - [] - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

30: Servo Motor 30W

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

50:50mm to 600:600mm (Every 50mm pitch setting)

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

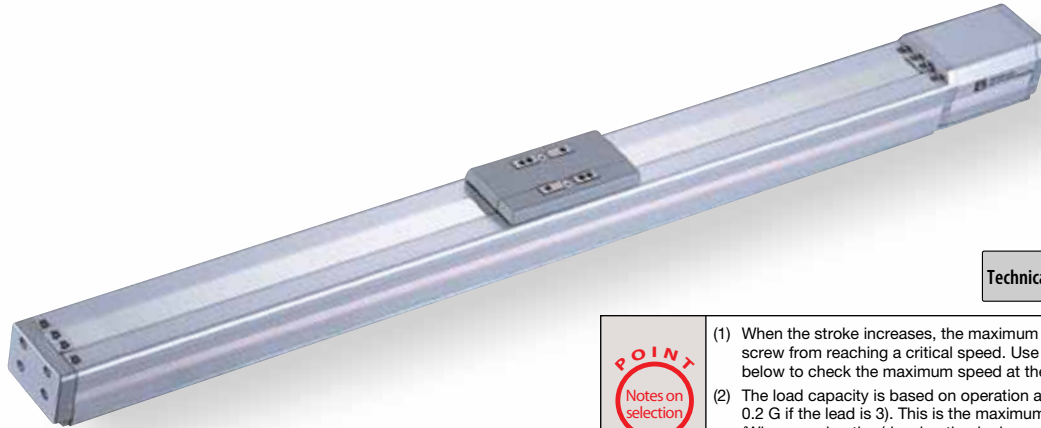
N: None
P: 1m
S: 3m
M: 5m

X□□ : Specified length
R□□ : Robot cable

Following options Refer to price table

See preceding section for model descriptions.

Compatible with rapid acceleration and deceleration (Except for 3mm lead)



Technical Reference P.451

- POINT** Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration (except for lead 3). (When acceleration/deceleration is dropped, the maximum payload values are shown in the table below.)

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity Horizontal (kg) Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS2-SA6C-①-30-12-②-③-④-⑤	30	12	6 1.5	24.2	50 to 600 (each 50mm)
RCS2-SA6C-①-30-6-②-③-④-⑤		6	12 3	48.4	
RCS2-SA6C-①-30-3-②-③-④-⑤		3	18 6	96.8	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 450 (each 50mm)	500 (mm)	550 (mm)	600 (mm)
	12	800	760	640
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA6C	
	Encoder type	
	Incremental	Absolute
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

⑤ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Foot bracket	FT	P440	—
High acceleration/deceleration	HA	P442	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—

* High acceleration, deceleration capability cannot be used with roller specifications for slider part.
* Lead 3 cannot be used for high acceleration, deceleration.

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

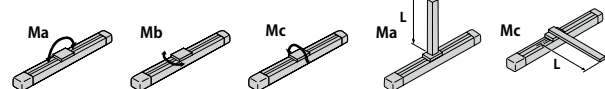
*See P394 for details on maintenance cable.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



RCS2-SA7C

ROBO Cylinder, Slider Type, Actuator Dimensions 73mm, 200V Servo Motor, Coupling Specification

Model Description **RCS2** - **SA7C** - [] - **60** - [] - [] - [] - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

60: Servo Motor 60W

16:16mm
8: 8mm
4: 4mm

50:50mm to 800:800mm (Every 50mm pitch setting)

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

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

Following options Refer to price table

See preceding section for model descriptions.

Compatible with rapid acceleration and deceleration (Except for 4mm lead)



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 4). This is the maximum acceleration (excluding lead 4). (When acceleration/deceleration is dropped, the maximum payload values are shown in the table below.)

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA7C-①-60-16-②-③-④-⑤	60	16	12	3	63.8	50 800 (every 50mm)
RCS2-SA7C-①-60-8-②-③-④-⑤		8	25	6	127.5	
RCS2-SA7C-①-60-4-②-③-④-⑤		4	40	12	255.0	

Stroke and Maximum Speed

Stroke Lead	50 to 600 (each 50mm)	~700 (mm)	~800 (mm)
	16	800	640
8	400	320	240
4	200	160	120

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA7C	
	Encoder type	
	Incremental	Absolute
50/100	I	A
150/200	—	—
250/300	—	—
350/400	—	—
450/500	—	—
550/600	—	—
650/700	—	—
750/800	—	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	P437	—
Brake (wire taken out from left side)	BL	P437	—
Brake (wire taken out from right)	BR	P437	—
High acceleration/deceleration	HA	P442	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—

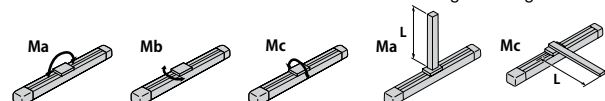
* High acceleration, deceleration capability cannot be used with roller specifications for slider part.
* Lead 4 cannot provide high acceleration/deceleration.

Actuator Specifications

Item	Details
Drive method	Ball screw 12mm Roller process C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 13.9N·m Mb: 19.9N·m Mc: 38.3N·m
Overhang load length	Ma direction 230mm or less Mb, Mc direction 230mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



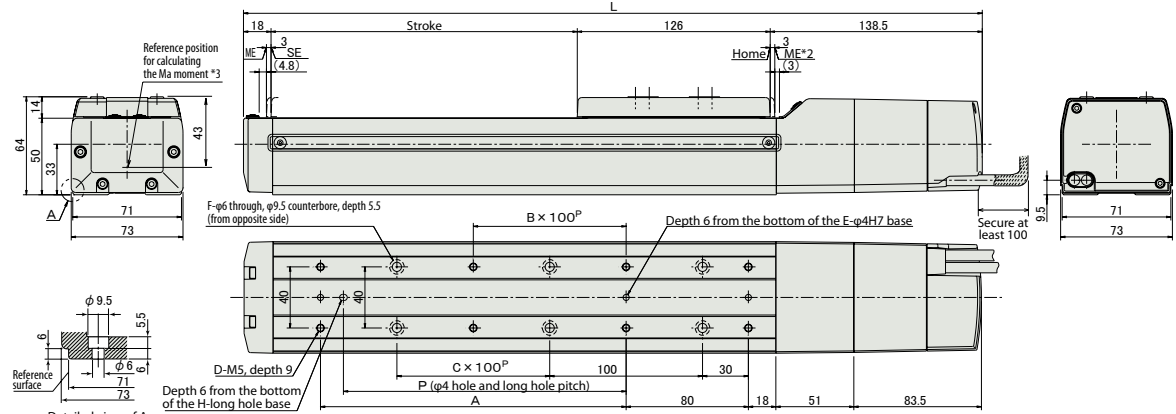
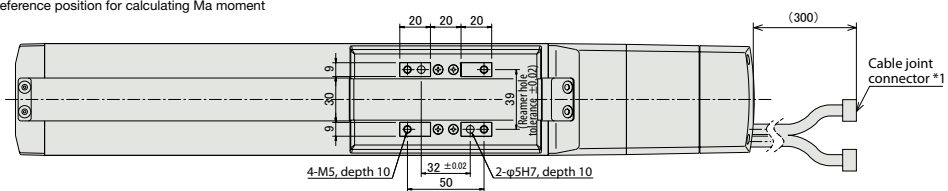
Dimensional Drawings

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

Information on special orders P.454



- *1 Connect motor encoder cable. See P394 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

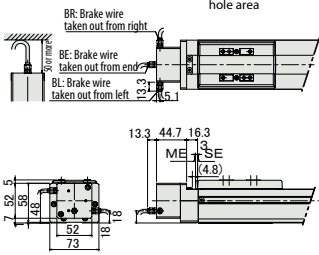


Brake area dimensions

*With brake increase total length by 43mm (wire extraction from end 56.3mm and weight by 0.6kg.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
L	332.5	382.5	432.5	482.5	532.5	582.5	632.5	682.5	732.5	782.5	832.5	882.5	932.5	982.5	1032.5	1082.5
A	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
B	0	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7
C	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
D	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	4	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18
H	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
Weight (kg)	2.4	2.6	2.8	3.0	3.3	3.5	3.7	3.9	4.2	4.4	4.6	4.8	5.1	5.3	5.5	5.7



- Controller- Integrated
- Slider Type
- Rod Type
- Table Arm/Fat
- Gripper/ Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10w
- Servo Motor 20w
- Servo Motor 30w
- Servo Motor 60w
- Servo Motor 100w
- Servo Motor 150w
- Servo Motor 750w

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-60①②-NP-2-③	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	-	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulstrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type		SSEL-C-1-60①②-NP-2-③	Programmable type Capable of operating up to 2-axis	20000 points			-	P415
Program control 1-6 axis type		XSEL-④-1-60①②-N1-EEE-2-⑤	Programmable type Maximum of 6-axis operation possible	4000 points			-	P425

*SSEL, XSEL is for 1-axis specification.
 *(1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 *(2) The mark (HA) is needed to designate high acceleration/deceleration .
 *(3) Power source voltage (1:100V/2:single-phase 200V) is needed.
 *(4) XSEL type Name (J/K/P/Q) is needed.
 *(5) Power source voltage type (1: 100V / 2: Single-Phase 200V / 3: 3-Phase 200V) is needed.

RCS2-SS7C

ROBO Cylinder, Slider Type, Actuator Dimensions 60mm, 200V Servo Motor, Coupling Specification, Steel Base Type

Model Description	RCS2	SS7C	60						
	Series	Type	Encoder category	Motor category	Lead	Stroke	Applicable controller	Cable length	Option
			I: Incremental specifications A: Absolute Specifications	60: Servo Motor 60W	12:12mm 6: 6mm	50:50mm to 600:600mm (Every 50mm pitch setting)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	N: None P: 1m S: 3m M: 5m X□□ : Specified length R□□ : Robot cable	B: Brake NM: Reversed-home specification SR: Slider part Roller specification

See preceding section for model descriptions.



Technical Reference P.451

POINT
Notes on selection

- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- (2) Value when operated at payload acceleration of 0.3G. This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SS7C-①-60-12-②-③-④-⑤	60	12	15	4	85	50 to 600 (each 50mm)
RCS2-SS7C-①-60-6-②-③-④-⑤		6	30	8		

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 500 (each 50mm)	~600 (mm)
	12	600
6	300	230

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SS7C	
	Encoder type	
	Incremental	Absolute
50/100	I	A
150/200	I	A
250/300	I	A
350/400	I	A
450/500	I	A
550/600	I	A

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) – X10 (10m)	—
	X11 (11m) – X15 (15m)	—
	X16 (16m) – X20 (20m)	—
Robot Cable	R01 (1m) – R03 (3m)	—
	R04 (4m) – R05 (5m)	—
	R06 (6m) – R10 (10m)	—
	R11 (11m) – R15 (15m)	—
	R16 (16m) – R20 (20m)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

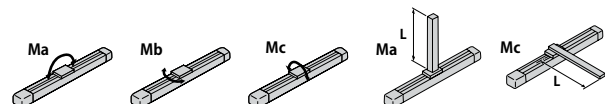
Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 14.7N·m Mb: 14.7N·m Mc: 33.3N·m
Overhang load length	Ma direction 300mm or less Mb, Mc direction 300mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



Controlled-Integrated Slider Type Rod Type Table Arm/Flat Gripper/Rotary Type Cleanroom Splash-resistant Controller Coupling Built-in Reversed-mounted Pulse Motor 20P Pulse Motor 28P Pulse Motor 35P Pulse Motor 42P Pulse Motor 56P Pulse Motor 86P Servo Motor 10W Servo Motor 20W Servo Motor 30W Servo Motor 60W Servo Motor 100W Servo Motor 150W Servo Motor 750W

Dimensional Drawings

CAD drawings can be downloaded from the website.

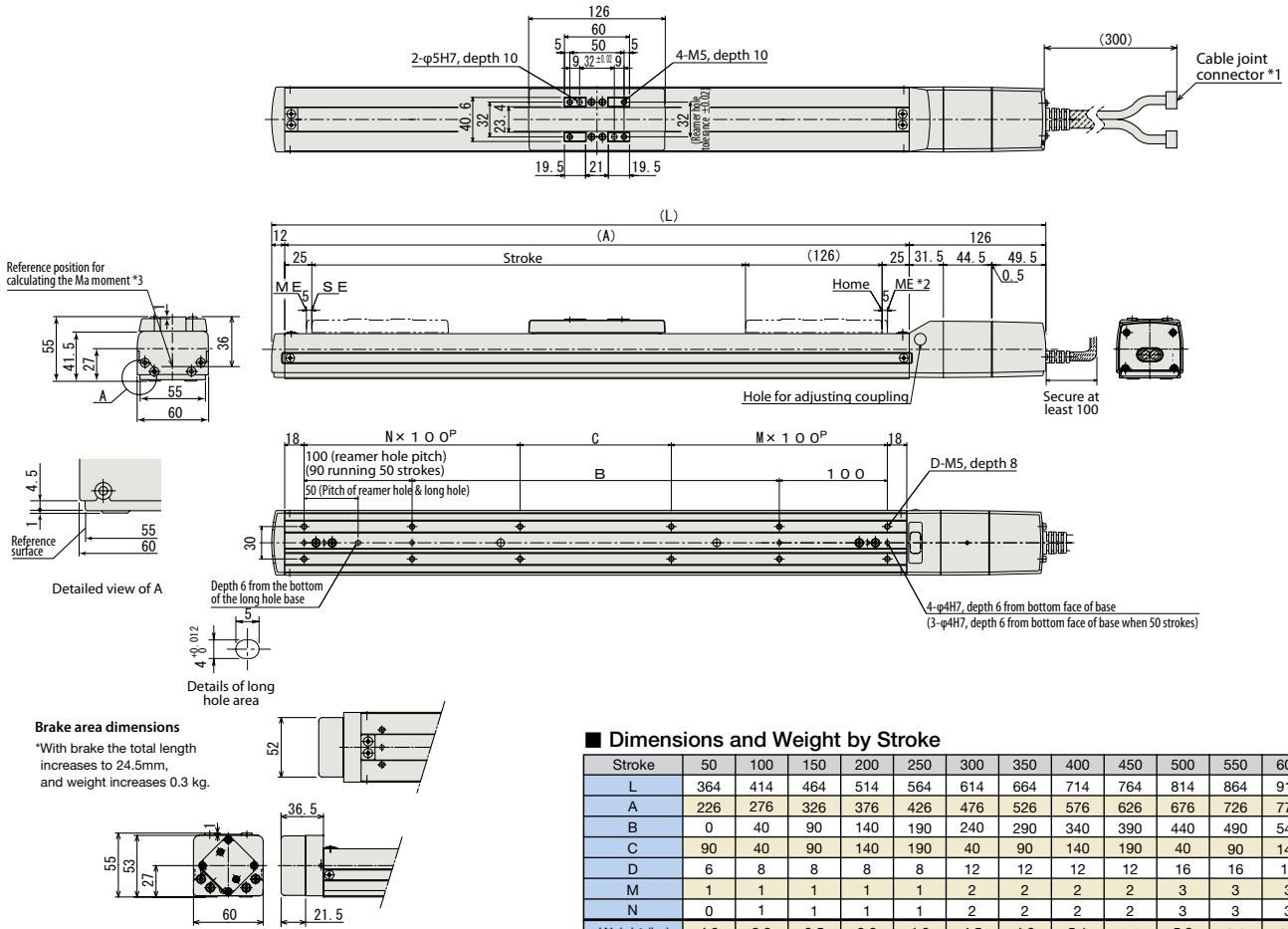
www.intelligentactuator.com



- *1 Connect motor encoder cable. See P394 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

Information on special orders

P.454



■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	364	414	464	514	564	614	664	714	764	814	864	914
A	226	276	326	376	426	476	526	576	626	676	726	776
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
Weight (kg)	4.9	3.2	3.5	3.8	4.2	4.5	4.8	5.1	5.5	5.8	6.1	6.4

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-60①②-NP-2-③	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	-	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulstrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type		SSEL-C-1-60①②-NP-2-③	Programmable type Capable of operating up to 2-axis	20000 points			-	P415
Program control 1-6 axis type		XSEL-③-1-60①①-N1-EEE-2-④	Programmable type Maximum of 6-axis operation possible	4000 points			-	P425

*SSEL, XSEL is for 1-axis specification.
 *① Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 *② Power source voltage type needed is (1:100V/2:Single-phase 2-00V).
 *③ XSEL typenames (J/K/P/Q) needed.
 *④ Power source voltage type needed is (1:100V/2:Single-phase 200V/3:3-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Fat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10w
- Servo Motor 20w
- Servo Motor 30w
- Servo Motor 60w
- Servo Motor 100w
- Servo Motor 150w
- Servo Motor 750w

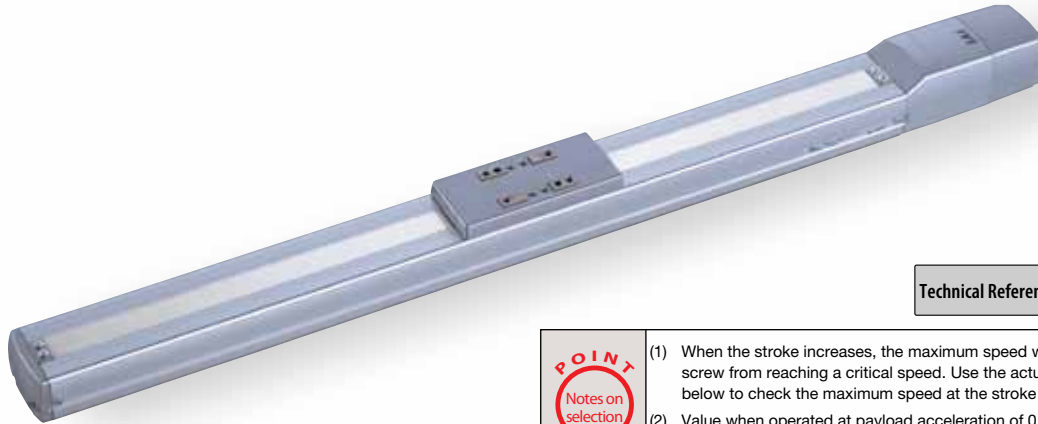
RCS2-SS8C

ROBO Cylinder, Slider Type, Actuator Dimensions 80mm, 200V Servo Motor, Coupling Specification, Steel Base Type

Model Description **RCS2 - SS8C**

Series	Type	Encoder category	Motor category	Lead	Stroke	Applicable controller	Cable length	Option
I: Incremental specifications A: Absolute Specifications	100: Servo Motor 100W 150: Servo Motor 150W	20: 20mm 10: 10mm	50: 50mm to 1000: 1000mm (Every 50mm pitch setting)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	N: None P: 1m S: 3m M: 5m X□□ : Specified length R□□ : Robot cable	B: Brake NM: Reversed-home specification SR: Slider part Roller specification		

See preceding section for model descriptions.



Technical Reference P.451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - Value when operated at payload acceleration of 0.3G. This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SS8C-①-100-20-②-③-④-⑤	100	20	20	4	84.9	50 to 1000 (each 50mm)
RCS2-SS8C-①-100-10-②-③-④-⑤		10	40	8		
RCS2-SS8C-①-150-20-②-③-④-⑤	150	20	30	6	128	
RCS2-SS8C-①-150-10-②-③-④-⑤		10	60	12		

Stroke and Maximum Speed

Stroke Lead	50 to 600 (each 50mm)	~700 (mm)	~800 (mm)	~900 (mm)	~1000 (mm)
20	1000	960	765	625	515
10	500	480	380	310	255

(Unit: mm/s)

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol			
	SS8C			
	Encoder type			
	Incremental		Absolute	
	Motor W number		Motor W number	
	100W	150W	100W	150W
50/100	—	—	—	—
150/200	—	—	—	—
250/300	—	—	—	—
350/400	—	—	—	—
450/500	—	—	—	—
550/600	—	—	—	—
650/700	—	—	—	—
750/800	—	—	—	—
850/900	—	—	—	—
950/1000	—	—	—	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (15m)	—
	X16 (16m) - X20 (20m)	—
Robot Cable	R01 (1m) - R03 (3m)	—
	R04 (4m) - R05 (5m)	—
	R06 (6m) - R10 (10m)	—
	R11 (11m) - R15 (15m)	—
	R16 (16m) - R20 (20m)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

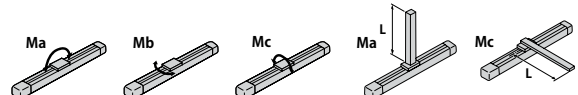
Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—

Actuator Specifications

Item	Details
Drive method	Ball Screw ϕ 16mm Roller process C10
Positioning repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material Special Steel Alloy
Allowable load moment	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m
Overhang load length	Ma direction 450mm or less Mb, Mc direction 450mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



RCS2-SA4D

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, 200V Servo Motor, Built-in (Direct Coupling) Specification

Model Description **RCS2** - **SA4D** - [] - **20** - [] - [] - [] - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

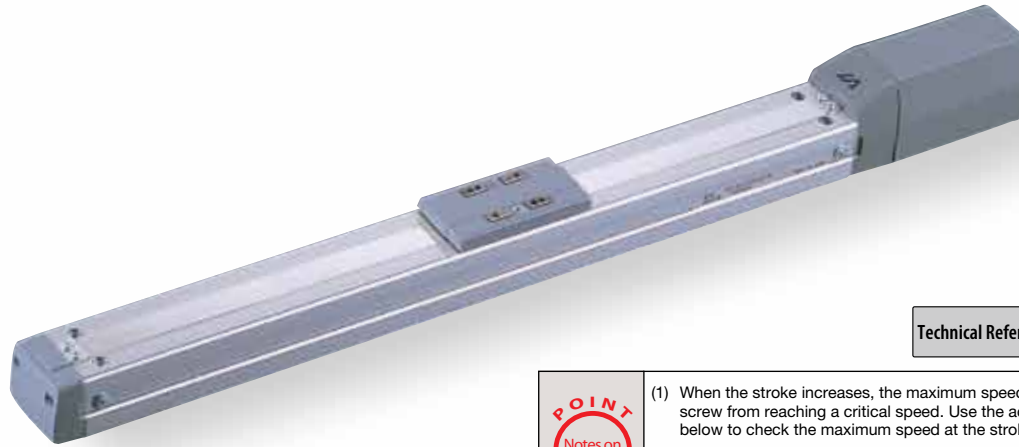
50:50mm to 300:300mm (Every 50mm pitch setting)

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

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

BE: Brake (wire taken out from end)
BL: Brake (wire taken out from left)
BR: Brake (wire taken out from right)
NM: Reversed Home specification

See preceding section for model descriptions.



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA4D-①-20-10-②-③-④-⑤	20	10	4	1	19.6	50 to 300 (every 50mm)
RCS2-SA4D-①-20-5-②-③-④-⑤		5	6	2.5	39.2	
RCS2-SA4D-①-20-2.5-②-③-④-⑤		2.5	8	4.5	78.4	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 300 (each 50mm)	
	10	665
5	330	
2.5	165	

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA4D	
	Encoder type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—
	—	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

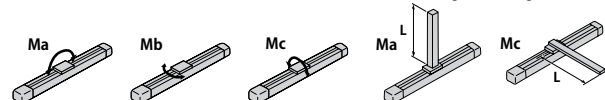
Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	P437	—
Brake (wire taken out from end)	BL	P437	—
Brake (wire taken out from end)	BR	P437	—
Reversed-Home specification	NM	P442	—

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 8mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 2.7N·m, Mb: 3.9N·m, Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb Mc direction: 120 mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



- Controler-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- C Coupling
- D Built-in (Direct)
- R Reversed-mounted
- 20P Pulse Motor
- 28P Pulse Motor
- 35P Pulse Motor
- 42P Pulse Motor
- 56P Pulse Motor
- 86P Pulse Motor
- 10W Servo Motor
- 20W Servo Motor
- 30W Servo Motor
- 60W Servo Motor
- 100W Servo Motor
- 150W Servo Motor
- 750W Servo Motor

Dimensional Drawings

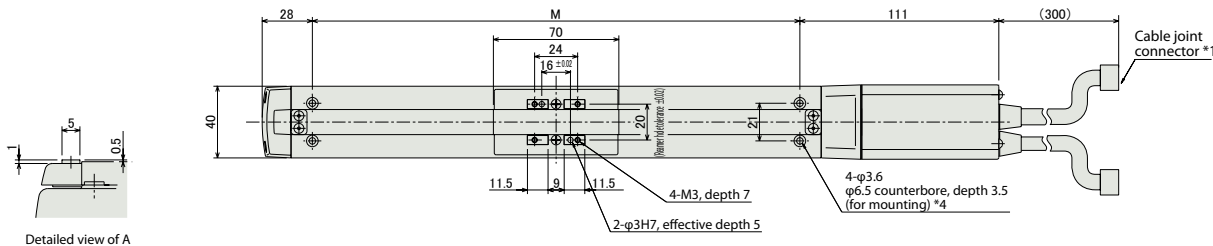
CAD drawings can be downloaded from the website. www.intelligentactuator.com

Information on special orders P.454

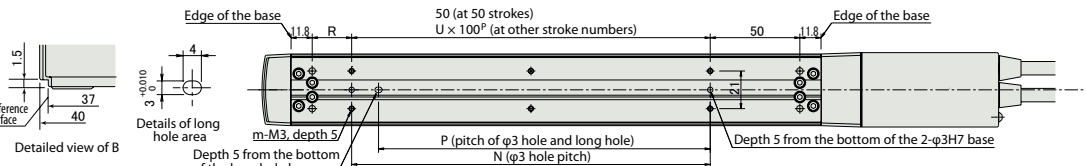
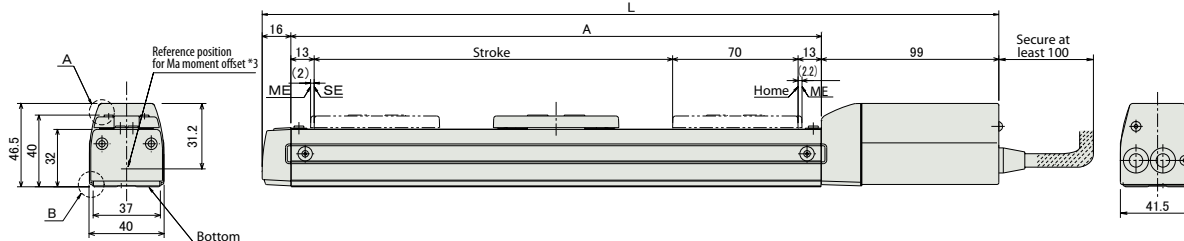
2D CAD

- *1 Connect motor encoder cable. See P394 for details on cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

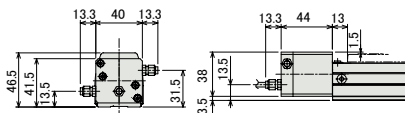
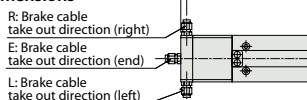
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less



Detailed view of A



Brake area dimensions



*Models with brake have their overall length (L) extended by 28 mm (or 41.3 mm if the wire is taken out from the end) and weight increased by 0.2 kg.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300
L	261	311	361	411	461	511
A	146	196	246	296	346	396
M	122	172	222	272	322	372
N	50	100	100	200	200	300
P	35	85	85	185	185	285
R	22	22	72	22	72	22
U	-	1	1	2	2	3
m	4	4	4	6	6	8
Weight (kg)	0.8	0.9	1.0	1.1	1.2	1.3

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-20①-NP-2-②	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	-	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulstrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-②	Programmable type Capable of operating up to 2-axis	20000 points			-	P415
Program control 1-6 axis type		XSEL-③-1-20①-N1-EEE-2-④	Programmable type Maximum of 6-axis operation possible	4000 points			-	P425

*SSEL, XSEL is for 1-axis specification.
 *(1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 *(2) Power source voltage type needed is (1:100V/2:Single-phase 200V).
 *(3) XSEL typenames (J/K/P/Q) needed.
 *(4) Power source voltage type needed is (1:100V/2:Single-phase 200V/3:3-phase 200V).

Controller-Integrated
 Slider Type
 Rod Type
 Table Arm/Fat Type
 Gripper/Rotary Type
 Cleanroom
 Splash-resistant
 Controller
 Coupling
 Built-in (Direct)
 Reverse-mounted
 Pulse Motor 20P
 Pulse Motor 28P
 Pulse Motor 35P
 Pulse Motor 42P
 Pulse Motor 56P
 Pulse Motor 86P
 Servo Motor 10W
 Servo Motor 20W
 Servo Motor 30W
 Servo Motor 60W
 Servo Motor 100W
 Servo Motor 150W
 Servo Motor 750W

RCS2-SA5D

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, 200V Servo Motor, Built-in (Direct Coupling) Specification

Model Description **RCS2** - **SA5D** - [] - **20** - [] - [] - [] - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

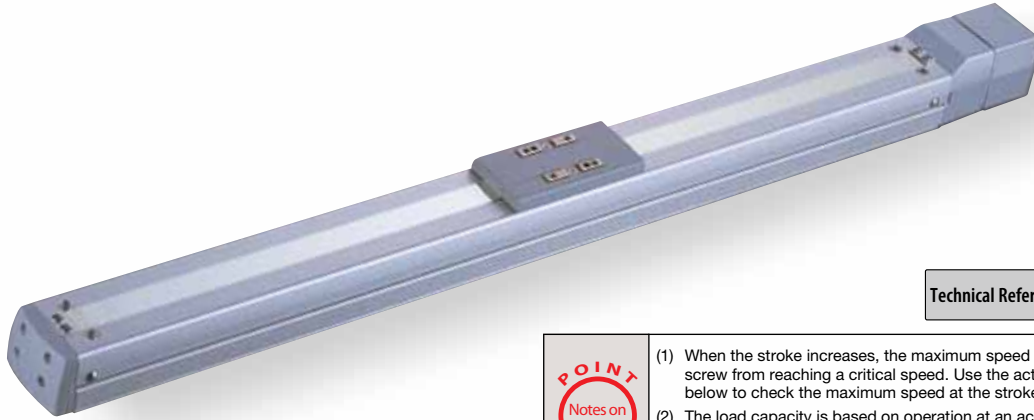
50:50mm to 500:500mm (Every 50mm pitch setting)

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

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

BE: Brake(wire taken out from end)
BL: Brake (wire taken out from left)
BR: Brake (wire taken out from right)
NM: Reversed-Home specification
SR: Slider part Roller specification

See preceding section for model descriptions.



Technical Reference P.451

- POINT**
Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA5D-①-20-12-②-③-④-⑤	20	12	4	1	16.7	50 to 500 (each 50mm)
RCS2-SA5D-①-20-6-②-③-④-⑤		6	8	2	33.3	
RCS2-SA5D-①-20-3-②-③-④-⑤		3	12	4	65.7	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Lead	Stroke	50 to 450 (each 50mm)	500 (mm)
	12	800	760
6	400	380	
3	200	190	

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA5D	
	Encoder type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—

⑤ Option Price Table

Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	P437	—
Brake (wire taken out from left)	BL	P437	—
Brake (wire taken out from right)	BR	P437	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—
	—	—

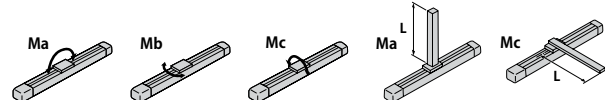
*See P394 for details on maintenance cable.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

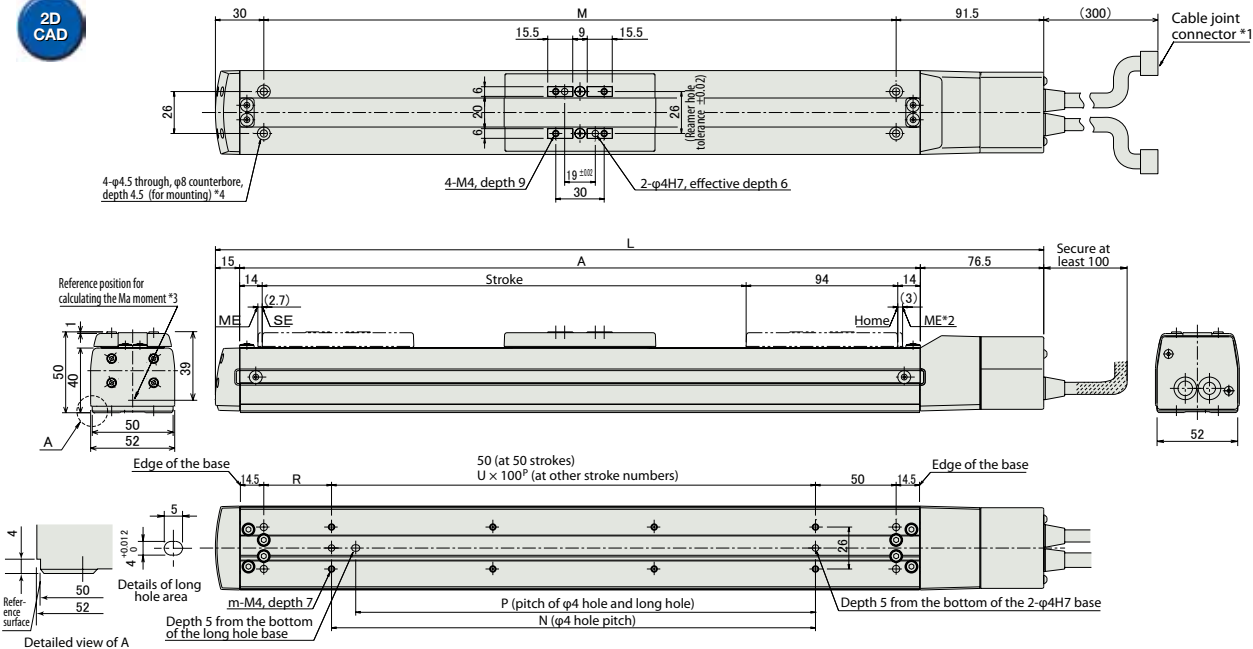
Overhang load length



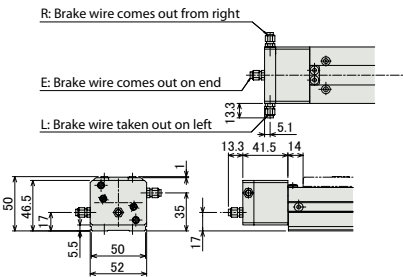
Dimensional Drawings

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

Information on special orders P.454



Brake area dimensions



* Models with brake have their overall length (L) extended by 26.5 mm (or 39.8 mm if the wire is taken out from the end) and weight increased by 0.3 kg.

- *1 Connect motor encoder cable. See P394 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 300 mm or less.

Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500
L	263.5	313.5	363.5	413.5	463.5	513.5	563.5	613.5	663.5	713.5
A	172	222	272	322	372	422	472	522	572	622
M	142	192	242	292	342	392	442	492	542	592
N	50	100	100	200	200	300	300	400	400	500
P	35	85	85	185	185	285	285	385	385	485
R	42	42	92	42	92	42	92	42	92	42
U	-	1	1	2	2	3	3	4	4	5
m	4	4	4	6	6	8	8	10	10	12
Weight (kg)	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-20①-NP-2-②	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	-	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulsetrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type				SSEL-C-1-20①-NP-2-②				
Program control 1-6 axis type		XSEL-C-3-1-20①-N1-EEE-2-④			Programmable type Maximum of 6-axis operation possible	4000 points	-	P425

*SSEL, XSEL is for 1-axis specification.
 *① Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 *② Power source voltage type needed is (1:100V/2:Single-phase 200V).
 *③ XSEL typenames (J/K/P/Q) needed.
 *④ Power source voltage type needed is (1:100V/2:Single-phase 200V/3:3-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- C Coupling
- D Built-in (Direct)
- R Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCS2-SA6D

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, 200V Servo Motor, Built-in (Direct Coupling) Specification

Model Description **RCS2** - **SA6D** - - **30** - - - - - -

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

30: Servo Motor 30W

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

50:50mm to 600:600mm (Every 50mm pitch setting)

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

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

BE: Brake(wire taken out from end)
BL: Brake (wire taken out from left)
BR: Brake (wire taken out from right)
NM: Reversed-Home specification
SR: Slider part Roller specification

See preceding section for model descriptions.



Technical Reference P.451

POINT
Notes on selection

- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA6D-①-30-12-②-③-④-⑤	30	12	6	1.5	24.2	50 to 600 (each 50mm)
RCS2-SA6D-①-30-6-②-③-④-⑤		6	12	3	48.4	
RCS2-SA6D-①-30-3-②-③-④-⑤		3	18	6	96.8	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke / Lead	50 to 450 (each 50mm)	500 (mm)	550 (mm)	600 (mm)
	12	800	760	640
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA6D	
	Encoder type	
	Incremental	Absolute
50	I	A
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—
450	—	—
500	—	—
550	—	—
600	—	—

⑤ Option Price Table

Name	Option mark	Reference page	Standard price
Brake (wire taken out from end)	BE	P437	—
Brake (wire taken out from left)	BL	P437	—
Brake (wire taken out from right)	BR	P437	—
Reversed-home specification	NM	P442	—
Specification for Slider Roller	SR	P445	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—

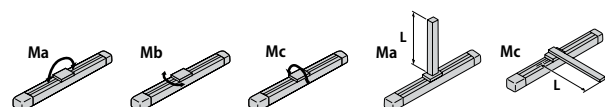
*See P394 for details on maintenance cable.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



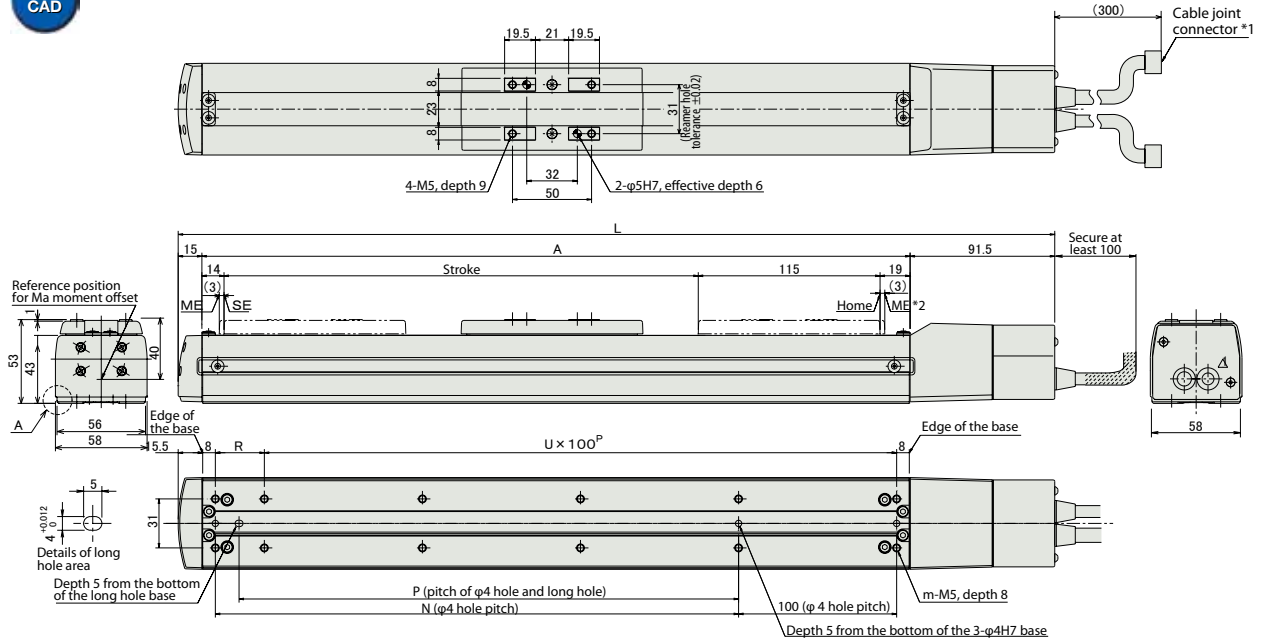
Controlled-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

Dimensional Drawings

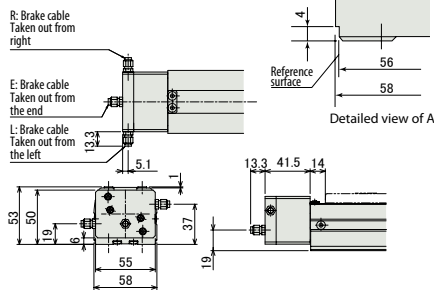
CAD drawings can be downloaded from the website. www.intelligentactuator.com

Information on special orders P.454

2D CAD



Brake area dimensions



* Models with brake have their overall length (L) extended by 26.5 mm (or 39.8 mm if the wire is taken out from the end) and weight increased by 0.3 kg.

- *1 Connect motor encoder cable. See P394 for details on cables.
- *2 The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts. ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	304.5	354.5	404.5	454.5	504.5	554.5	604.5	654.5	704.5	754.5	804.5	854.5
A	198	248	298	348	398	448	498	548	598	648	698	748
N	81	131	181	231	281	331	381	431	481	531	581	631
P	66	116	166	216	266	316	366	416	466	516	566	616
R	81	31	81	31	81	31	81	31	81	31	81	31
U	1	2	2	3	3	4	4	5	5	6	6	7
m	6	8	8	10	10	12	12	14	14	16	16	18
Weight (kg)	1.3	1.5	1.7	1.9	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-30D①-NP-2-②	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	—	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulsetrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type			SSEL-C-1-30D①-NP-2-②	Programmable type Capable of operating up to 2-axis				
Program control 1-6 axis type	XSEL-③-1-30D①-N1-EEE-2-④	Programmable type Maximum of 6-axis operation possible	4000 points	—	P425			

*SSEL, XSEL is for 1-axis specification.
 *① Indicates the encoder type (I: Incremental /A: Absolute)is needed.
 *② Power source voltage type needed is (1:100V/2:Single-phase 200V).
 *③ XSEL typenames (J/K/P/Q)needed.
 *④ Power source voltage type needed is (1:100V/2:Single-phase 200V/3:3-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Fat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- C Coupling
- D Built-in (Direct)
- R Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCS2-SA4R

ROBO Cylinder, Slider Type, Actuator Dimensions 40mm, 200V Servo Motor, Reversing Specification

■ Model Description **RCS2 - SA4R** - [] - **20** - [] - [] - [] - [] - []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

20: Servo Motor 20W

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

50-50mm to 400-400mm (Every 50mm pitch setting)

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

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

B: Brake
HS: Home check sensor
NM: Reversed-home specification
ML: Motor reversing on left (standard)
MR: Motor reversing on right (arm)
SR: Slider part roller specification
SS: Slider Spacer

See preceding section for model descriptions.



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 2.5). This is the maximum acceleration.

Actuator Specifications Table

■ Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA4R-①-20-10-②-③-④-⑤	20	10	4	1	19.6	50 to 400 (each 50mm)
RCS2-SA4R-①-20-5-②-③-④-⑤		5	6	2.5	39.2	
RCS2-SA4R-①-20-2.5-②-③-④-⑤		2.5	8	4.5	78.4	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

■ Stroke and Maximum Speed

Lead	Stroke	50 to 400 (each 50mm)
	10	665
5	330	330
2.5	165	165

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA4R	
	Encoder type	
	Incremental	Absolute
50	—	—
100	—	—
150	—	—
200	—	—
250	—	—
300	—	—
350	—	—
400	—	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) - X10 (10m)	—
	X11 (11m) - X15 (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)	—
	—	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

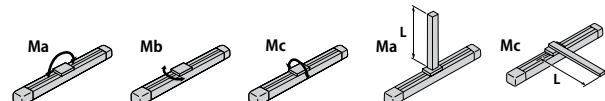
Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Motor reversing on left (arm) specification (standard)	ML	P444	—
Motor reversing on right (arm) specification	MR	P444	—
Slider roller specification	SR	P445	—
Slider Spacer	SS	P445	—

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 8mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 2.7N·m, Mb: 3.9N·m, Mc: 6.8N·m
Overhang load length	Ma direction: 120mm or less, Mb Mc direction: 120 mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



Controlled-Integrated
Slider Type
Rod Type
Table Arm/Flat Type
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

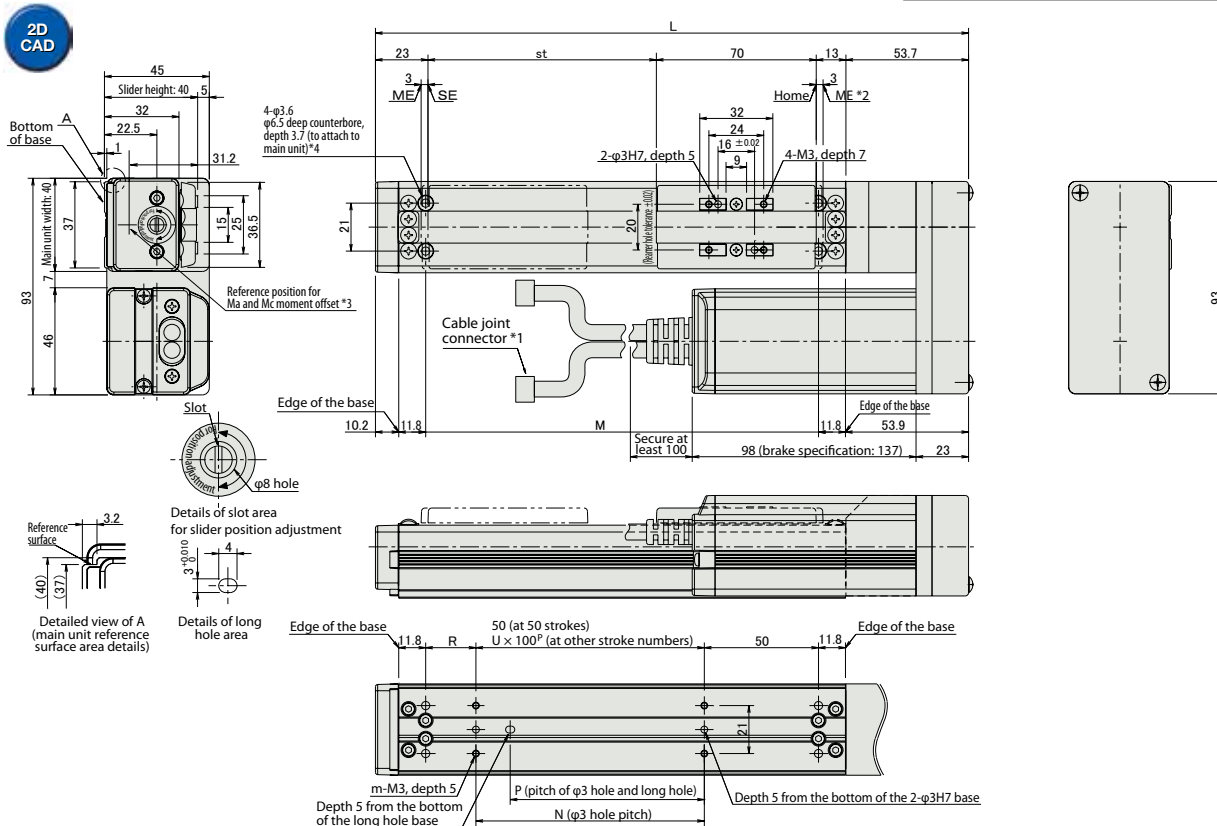
Dimensional Drawings

CAD drawings can be downloaded from the website.

www.intelligentactuator.com

Information on special orders

P.454



- *1 Connect motor encoder cable. See P394 for details on cables.
- 2. The slider moves to the ME during home return. Pay attention to prevent contact between the slider and surrounding parts.
ME: Mechanical end SE: Stroke end
- *3 Reference position for calculating Ma moment
- *4 If the actuator is affixed using only the mounting holes provided in the top face of the base, the base may twist to cause abnormal sliding of the slider or generate noise. When the mounting holes in the top face of the base are used, keep the stroke to 200 mm or less.

■ Dimensions and Weight by Stroke brake weight increased by 0.3kg.

Stroke	50	100	150	200	250	300	350	400
L	209.7	259.7	309.7	359.7	409.7	459.7	509.7	559.7
M	122	172	222	272	322	372	422	472
N	50	100	100	200	200	300	300	400
P	35	85	85	185	185	285	285	385
R	22	22	72	22	72	22	72	22
U	-	1	1	2	2	3	3	4
m	4	4	4	6	6	8	8	10
Weight (kg)	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-20①-NP-2-②	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	—	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulsetrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type		SSEL-C-1-20①-NP-2-②	Programmable type Capable of operating up to 2-axis	20000 points			—	P415
Program control 1-6 axis type		XSEL-③-1-20①-N1-EEE-2-④	Programmable type Maximum of 6-axis operation possible	4000 points			—	P425

- *SSEL, XSEL is for 1-axis specification.
- *① Indicates the encoder type (I: Incremental /A: Absolute) is needed.
- *② Power source voltage type needed is (1:100V/2:Single-phase 200V).
- *③ XSEL typenames (J/K/P/Q) needed.
- *④ Power source voltage type needed is (1:100V/2:Single-phase 200V/3:3-phase 200V).

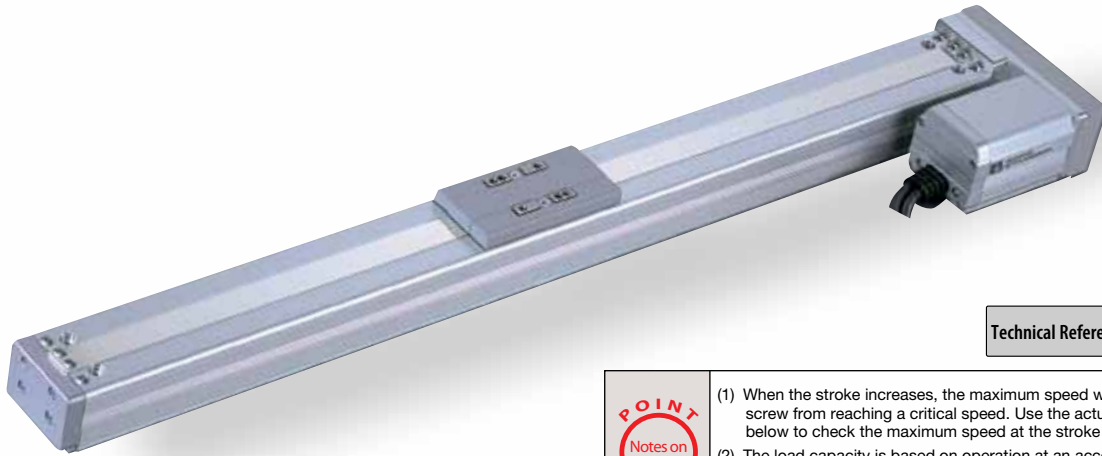
RCS2-SA5R

ROBO Cylinder, Slider Type, Actuator Dimensions 52mm, 200V Servo Motor, Reversing Specification

Model Description **RCS2** — **SA5R** — — **20** — — — — —

Series	Type	Encoder category I: Incremental specifications A: Absolute Specifications	Motor category 20: Servo Motor 20W	Lead 12: 12mm 6: 6mm 3: 3mm	Stroke 50-50mm to 500-500mm (Every 50mm pitch setting)	Applicable controller T1: XSEL-I/K T2: SCON SSEL XSEL-P/Q	Cable length N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Option B: Brake HS: Home check sensor NM: Reversed-home specification ML: Motor reversing on left (standard) MR: Motor reversing on right (arm)
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See preceding section for model descriptions.



Technical Reference P.451

- POINT** Notes on selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA5R-①-20-12-②-③-④-⑤	20	12	4	1	16.7	5 to 500 (each 50mm)
RCS2-SA5R-①-20-6-②-③-④-⑤		6	8	2	33.3	
RCS2-SA5R-①-20-3-②-③-④-⑤		3	12	4	65.7	

Stroke and Maximum Speed

Stroke Lead	50 to 450 (each 50mm)	500 (mm)
	12	800
6	400	380
3	200	190

(Unit: mm/s)

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA5R	
	Encoder type	
	Incremental	Absolute
50	I	A
100	I	A
150	I	A
200	I	A
250	I	A
300	I	A
350	I	A
400	I	A
450	I	A
500	I	A

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) – X10 (10m)	—
	X11 (11m) – X15 (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)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

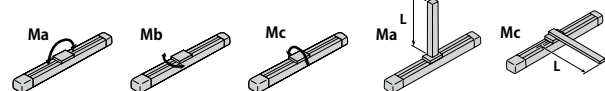
Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Motor reversing on left (arm) specification (standard)	ML	P444	—
Motor reversing on right (arm) specification	MR	P444	—
Slider roller specification	SR	P445	—

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 4.9N·m Mb: 6.8N·m Mc: 11.7N·m
Overhang load length	Ma direction: 150mm or less, Mb/Mc directions: 150mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



Controlled-Integrated Slider Type Rod Type Table Arm/Flat Gripper/Rotary Type Cleanroom Splash-resistant Controller Coupling Built-in Reversed-mounted Pulse Motor 20P Pulse Motor 28P Pulse Motor 35P Pulse Motor 42P Pulse Motor 56P Pulse Motor 86P Servo Motor 10W Servo Motor 20W Servo Motor 30W Servo Motor 60W Servo Motor 100W Servo Motor 150W Servo Motor 750W

RCS2-SA6R

ROBO Cylinder, Slider Type, Actuator Dimensions 58mm, 200V Servo Motor, Reversing Specification

Model Description **RCS2** — **SA6R** — — **30** — — — — — — — —

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

30: Servo Motor 30W

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

50:50mm to 600:600mm (Every 50mm pitch setting)

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

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

B: Brake
HS: Home check sensor
NM: Reversed-home specification
ML: Motor reversing on left (standard)
MR: Motor reversing on right (arm)

See preceding section for model descriptions.



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical 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 0.3 G (or 0.2 G if the lead is 3). This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA6R-①-30-12-②-③-④-⑤	30	12	6	1.5	24.2	50 to 600 (each 50mm)
RCS2-SA6R-①-30-6-②-③-④-⑤		6	12	3	48.4	
RCS2-SA6R-①-30-3-②-③-④-⑤		3	18	6	96.8	

Stroke and Maximum Speed

Stroke / Lead	50 to 450 (each 50mm)	500 (mm)	550 (mm)	600 (mm)
	12	800	760	640
6	400	380	320	270
3	200	190	160	135

(Unit: mm/s)

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA6R	
	Encoder type	
	Incremental	Absolute
50	I	A
100	I	A
150	I	A
200	I	A
250	I	A
300	I	A
350	I	A
400	I	A
450	I	A
500	I	A
550	I	A
600	I	A

⑤ Option Price Table

Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Home check sensor	HS	P442	—
Reversed-home specification	NM	P442	—
Motor reversing on left (arm) specification (standard)	ML	P444	—
Motor reversing on right (arm) specification	MR	P444	—
Slider roller specification	SR	P445	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—
Robot Cable	R01 (1m) — R03 (3m)	—
	R04 (4m) — R05 (5m)	—
	R06 (6m) — R10 (10m)	—
	R11 (11m) — R15 (15m)	—
	R16 (16m) — R20 (20m)	—

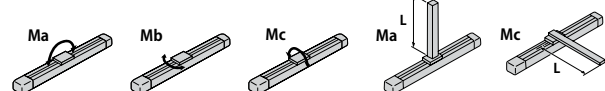
*See P394 for details on maintenance cable.

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 8.9N·m Mb: 12.7N·m Mc: 18.6N·m
Overhang load length	Ma direction: 220mm or less, Mb/Mc directions: 220mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



Controlled-Integrated Slider Type Rod Type Table Arm/Flat Gripper/Rotary Type Cleanroom Splash-resistant Controller Coupling Built-in Reversed-mounted Pulse Motor 20P Pulse Motor 28P Pulse Motor 35P Pulse Motor 42P Pulse Motor 56P Pulse Motor 86P Servo Motor 10W Servo Motor 20W Servo Motor 30W Servo Motor 60W Servo Motor 100W Servo Motor 150W Servo Motor 750W

RCS2-SA7R

ROBO Cylinder, Slider Type, Actuator Dimensions 73mm, 200V Servo Motor, Reversing Specification

Model Description **RCS2** — **SA7R** — — **60** — — — — —

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

60: Servo Motor 60W

16: 16mm
8: 8mm
4: 4mm

50:50mm to 800:800mm (Set at every 50mm pitch)

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

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

B: Brake
NM: Reversed-Home specification
ML: Motor reversing on left (standard)
MR: Motor reversing on right (arm)
SR: Slider part roller specification

See preceding section for model descriptions.



Technical Reference P.451

- POINT** Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) Payload acceleration value is 0.3G (Lead 4 0.2G) during operation. This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SA7R-①-60-16-②-③-④-⑤	60	16	12	3	63.8	50 to 800 (every 50mm)
RCS2-SA7R-①-60-8-②-③-④-⑤		8	25	6	127.5	
RCS2-SA7R-①-60-4-②-③-④-⑤		4	40	12	255.0	

Stroke and Maximum Speed

Stroke / Lead	50 to 600 (each 50mm)	~700 (mm)	~800 (mm)
	16	800	640
8	400	320	240
4	200	160	120

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SA7R	
	Encoder type	
	Incremental	Absolute
50/100	—	—
150/200	—	—
250/300	—	—
350/400	—	—
450/500	—	—
550/600	—	—
650/700	—	—
750/800	—	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) — X10 (10m)	—
	X11 (11m) — X15 (15m)	—
	X16 (16m) — X20 (20m)	—
Robot Cable	R01 (1m) — R03 (3m)	—
	R04 (4m) — R05 (5m)	—
	R06 (6m) — R10 (10m)	—
	R11 (11m) — R15 (15m)	—
	R16 (16m) — R20 (20m)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

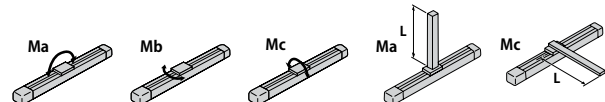
Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Reversed-home specification	NM	P442	—
Motor reversing on left (arm) specification (standard)	ML	P444	—
Motor reversing on right (arm) specification	MR	P444	—
Slider roller specification	SR	P445	—

Actuator Specifications

Item	Details
Drive method	Ball screw 12mm Roller process C10
Positioning repeatability	±0.02mm
Backlash	0.1mm or less
Base	Material: Aluminum with alumite treatment
Allowable load moment	Ma: 13.9N·m Mb: 19.9N·m Mc: 38.3N·m
Overhang load length	Ma direction 230mm or less Mb, Mc direction 230mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



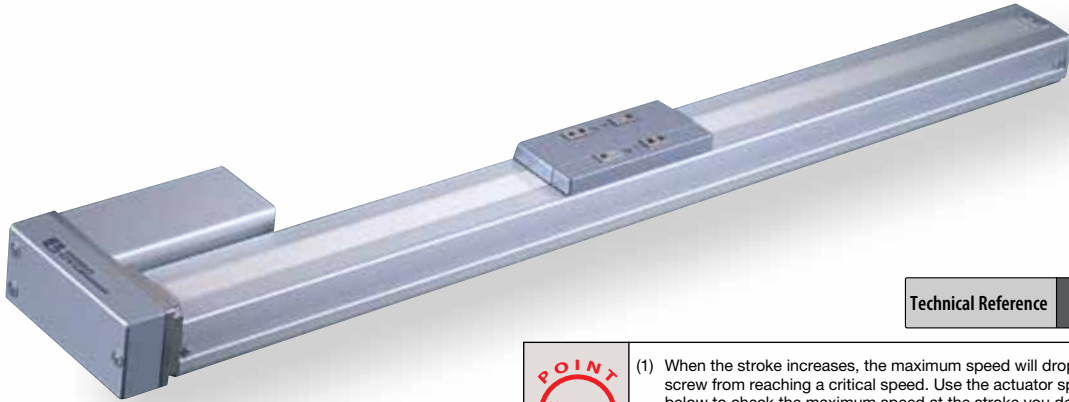
Controller-Integrated
Slider Type
Rod Type
Table Arm/Flat
Gripper/Rotary Type
Cleanroom
Splash-resistant
Controller
Coupling
Built-in (Direct)
Reversed-mounted
Pulse Motor 20P
Pulse Motor 28P
Pulse Motor 35P
Pulse Motor 42P
Pulse Motor 56P
Pulse Motor 86P
Servo Motor 10W
Servo Motor 20W
Servo Motor 30W
Servo Motor 60W
Servo Motor 100W
Servo Motor 150W
Servo Motor 750W

RCS2-SS7R

ROBO Cylinder, Slider Type, Actuator Dimensions 60mm, 200V Servo Motor, Reversing Specification, Steel Base Type

Model Description	RCS2 — SS7R — [] — 60 — [] — [] — [] — [] — []							
Series	Type	Encoder category	Motor category	Lead	Stroke	Applicable controller	Cable length	Option
I: Incremental specifications A: Absolute Specifications	60: Servo Motor 60W	12: 12mm 6: 6mm	50:50mm to 600:600mm (Set at every 50mm pitch)	T1: XSEL-J/K T2: SCON SSEL XSEL-P/Q	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	B: Brake NM: Reversed-Home specification ML: Motor reversing on left (standard) MR: Motor reversing on right (arm)		

See preceding section for model descriptions.



Technical Reference P.451

POINT Notes on selection

- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
- Value when operated at payload acceleration of 0.3G. This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SS7R-①-60-12-②-③-④-⑤	60	12	15	4	85	50 to 600 (each 50mm)
RCS2-SS7R-①-60-6-②-③-④-⑤		6	30	8		

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 500 (each 50mm)	~600 (mm)
	12	600
6	300	230

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol	
	SS7R	
	Encoder type	
	Incremental	Absolute
100	—	—
200	—	—
300	—	—
400	—	—
500	—	—
600	—	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) – X10 (10m)	—
	X11 (11m) – X15 (15m)	—
	X16 (16m) – X20 (20m)	—
Robot Cable	R01 (1m) – R03 (3m)	—
	R04 (4m) – R05 (5m)	—
	R06 (6m) – R10 (10m)	—
	R11 (11m) – R15 (15m)	—
	R16 (16m) – R20 (20m)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

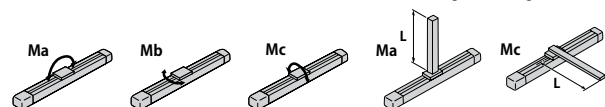
Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Reversed-home specification	NM	P442	—
Motor reversing on left (arm) specification (standard)	ML	P444	—
Motor reversing on right (arm) specification	MR	P444	—
Slider roller specification	SR	P445	—

Actuator Specifications

Item	Details
Drive method	Ball screw ϕ 10mm, rolled C10
Positioning repeatability	\pm 0.02mm
Backlash	0.1mm or less
Base	Material: Special alloy steel
Allowable load moment	Ma: 14.7N·m Mb: 14.7N·m Mc: 33.3N·m
Overhang load length	Ma direction 300mm or less Mb, Mc direction 300mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

Overhang load length



- Controler-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- C Coupling
- D Built-in (Direct)
- R Reversed-mounted
- 20P Pulse Motor
- 28P Pulse Motor
- 35P Pulse Motor
- 42P Pulse Motor
- 56P Pulse Motor
- 86P Pulse Motor
- 10W Servo Motor
- 20W Servo Motor
- 30W Servo Motor
- 60W Servo Motor
- 100W Servo Motor
- 150W Servo Motor
- 750W Servo Motor

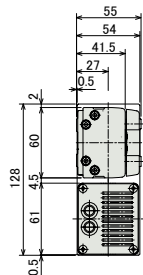
Dimensional Drawings

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

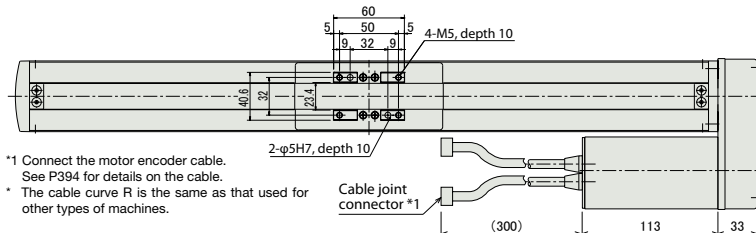
Information on special orders P.454

2D CAD

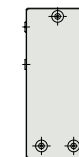
*The reference surface is the same as that of the SA7C type. (See P98)
 *Ma Moment Offset Standard position is the same as that for SS7Ctype. (See P98)



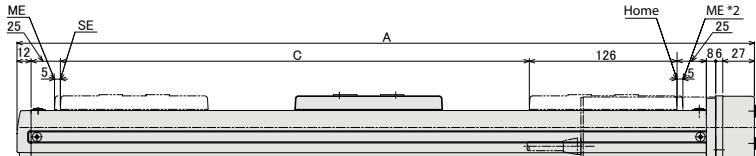
*For Reversed-Home specification the motor side dimensions (ME to Home distance and Anti Motor side dimensions are reversed.



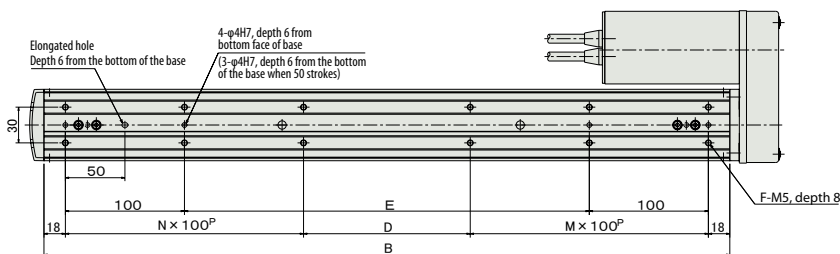
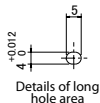
*1 Connect the motor encoder cable. See P394 for details on the cable.
 * The cable curve R is the same as that used for other types of machines.



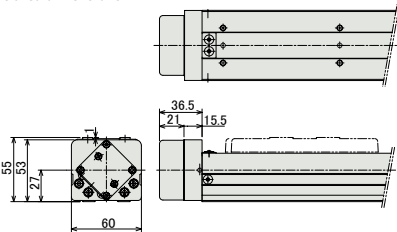
*2 Be careful about the surroundings interfering because the slider moves as far as the ME during home return.
 SE: Stroke end
 ME: Mechanical end



* With brake the total length increases to 24.5mm, and weight increases 0.3kg.



Brake area dimensions



■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
A	279	329	379	429	479	529	579	629	679	729	779	829
B	226	276	326	376	426	476	526	576	626	676	726	776
C	50	100	150	200	250	300	350	400	450	500	550	600
D	90	40	90	140	190	40	90	140	190	40	90	140
E	0	40	90	140	190	240	290	340	390	440	490	540
F	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
Weight (kg)	3.7	4.0	4.3	4.6	4.9	5.2	5.5	5.8	6.1	6.4	6.7	7.0

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-60①-NP-2-②	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	—	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulsetrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type			SSEL-C-1-60①-NP-2-②	Programmable type Capable of operating up to 2-axis				
Program control 1-6 axis type	XSEL-③-1-60①-N1-EEE-2-④	Programmable type Maximum of 6-axis operation possible	4000 points	—	P425			

*SSEL, XSEL is for 1-axis specification.
 *(1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
 *(2) Power source voltage type needed is (1:100V/2:Single-phase 200V).
 *(3) XSEL typenames (J/K/P/Q) needed.
 *(4) Power source voltage type needed is (1:100V/2:Single-phase 200V/3:3-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Fat Type
- Gripper/Rotary Type
- Cleanroom
- Splash-resistant
- Controller
- Coupling
- Built-in (Direct)
- Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W

RCS2-SS8R

ROBO Cylinder, Slider Type, Actuator Dimensions 80mm, 200V Servo Motor, Reversing Specification, Steel Base Type

Model Description **RCS2** — **SS8R** — [] — [] — [] — [] — [] — [] — [] — []

Series — Type — Encoder category — Motor category — Lead — Stroke — Applicable controller — Cable length — Option

I: Incremental specifications
A: Absolute Specifications

100: Servo Motor 100W
150: Servo Motor 150W

20: 20mm
10: 10mm

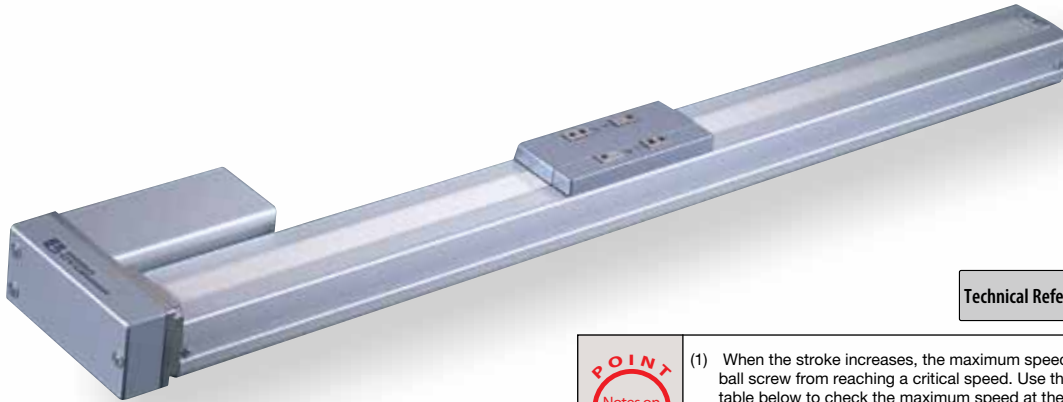
50:50mm to 1000:1000mm (Every 50mm pitch setting)

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

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

B: Brake
NM: Reversed-home specification
ML: Motor reversing on left (standard)
MR: Motor reversing on right (arm)
SR: Slider part roller specification

See preceding section for model descriptions.



Technical Reference P.451

- POINT**
Notes on selection
- (1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching a critical speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - (2) Value when operated at payload acceleration of 0.3G. This is the maximum acceleration.

Actuator Specifications Table

Lead and Load Capacity

Model	Motor output (W)	Lead (mm)	Maximum load capacity		Rated thrust (N)	Stroke (mm)
			Horizontal (kg)	Vertical (kg)		
RCS2-SS8R-①-100-20-②-③-④-⑤	100	20	20	4	84.9	50 to 1000 (each 50mm)
RCS2-SS8R-①-100-10-②-③-④-⑤		10	40	8		
RCS2-SS8R-①-150-20-②-③-④-⑤	150	20	30	6	128	
RCS2-SS8R-①-150-10-②-③-④-⑤		10	60	12	256	

Legend: ① Encoder category ② Stroke ③ Response controller ④ Cable length ⑤ Option

Stroke and Maximum Speed

Stroke Lead	50 to 600 (each 50mm)	~700 (mm)	~800 (mm)	~900 (mm)	~1000 (mm)
	20	1000	960	765	625
10	500	480	380	310	255

(Unit: mm/s)

① Encoder type and ② Stroke Price Table

② Stroke (mm)	Type symbol			
	SS8R			
	Encoder type			
	Incremental		Absolute	
	Motor W number	Motor W number	Motor W number	Motor W number
	100W	150W	100W	150W
50/100	—	—	—	—
150/200	—	—	—	—
250/300	—	—	—	—
350/400	—	—	—	—
450/500	—	—	—	—
550/600	—	—	—	—
650/700	—	—	—	—
750/800	—	—	—	—
850/900	—	—	—	—
950/1000	—	—	—	—

④ Cable Length Price Table

Category	Cable mark	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Specified length	X06 (6m) – X10 (10m)	—
	X11 (11m) – X15 (15m)	—
	X16 (16m) – X20 (20m)	—
Robot Cable	R01 (1m) – R03 (3m)	—
	R04 (4m) – R05 (5m)	—
	R06 (6m) – R10 (10m)	—
	R11 (11m) – R15 (15m)	—
	R16 (16m) – R20 (20m)	—

*See P394 for details on maintenance cable.

⑤ Option Price Table

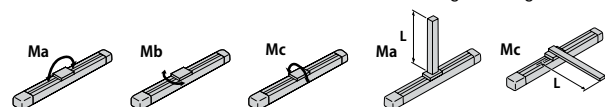
Name	Option mark	Reference page	Standard price
Brake	B	P437	—
Reversed-home specification	NM	P442	—
Motor reversing on left (arm) specification (standard)	ML	P444	—
Motor reversing on right (arm) specification	MR	P444	—
Slider roller specification	SR	P445	—

Actuator Specifications

Item	Details
Drive method	Ball Screw ϕ 16mm Roller process C10
Positioning repeatability	± 0.02 mm
Backlash	0.1mm or less
Base	Material Special Steel Alloy
Allowable load moment	Ma: 36.3N·m Mb: 36.3N·m Mc: 77.4N·m
Overhang load length	Ma direction 450mm or less Mb, Mc direction 450mm or less
Ambient operating temperature, humidity	0 to 40°C, 85%RH or below (non-condensing)

Direction of allowable load moment

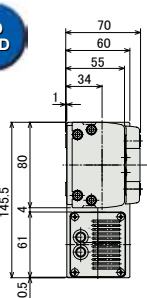
Overhang load length



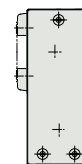
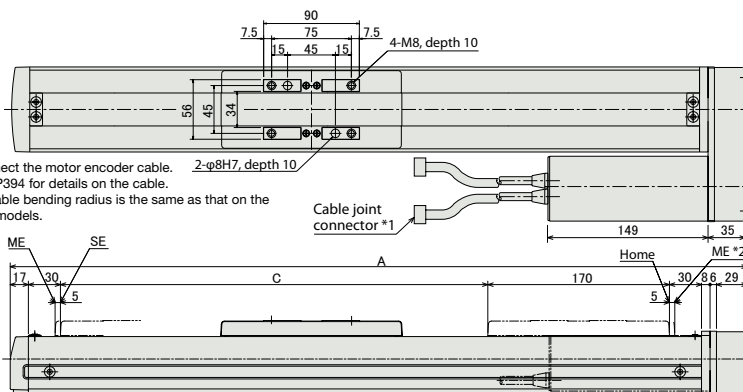
Dimensional Drawings

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

Information on special orders P.454



*The reference surface is the same as that of the SS8C type. (Refer to p. 100)

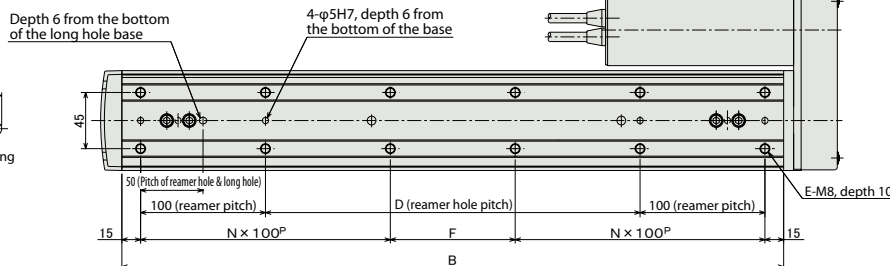
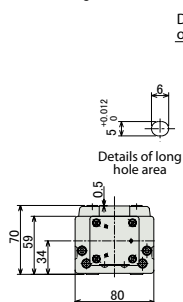


*2 Be careful about the surroundings interfering because the slider moves as far as the ME during home return.

SE: Stroke end
ME: Mechanical end

Brake area dimensions

* With brakethe total length increases to 26mm; the weight increases 0.5kg.



*Ma Moment offset standard position is the same as that for the SS8C type. (See P84)
*In this case the motor side dimensions (distance from ME to home) the anti motor side dimensions become reversed.

■ Dimensions and Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
A	340	390	440	490	540	590	640	690	740	790	840	890	940	990	1040	1090	1140	1190	1240	1290
B	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
C	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
E	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight (kg)	6.7	7.2	7.7	8.2	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2	14.7	15.2	15.7	16.2

Compatible Controllers

RCS2 Series Actuators can be operated with the following controllers. Please select a type that corresponds to your use.

Name	External view	Model	Features	Maximum number of positioning points	Input power supply	Power supply capacity	Standard price	Reference page
Positioner Mode		SCON-C-100①-NP-2-② SCON-C-150①-NP-2-②	Maximum number of positioning points Positioning is possible.	512 points	Single-phase AC 100V Single-phase AC 200V 3-phase AC 200V (XSEL-P/Q only)	Maximum 360VA *1 axis specification For 150W operation	-	P385
Solenoid			Same as solenoid valve Operation possible with controller	7 points				
Serial Communications Type			Serial communications Dedicated-use type	64 points				
Pulsetrain input Control type			Pulse train input Dedicated-use type	(-)				
Program control 1-2 axis type		SSEL-C-1-100①-NP-2-② SSEL-C-1-150①-NP-2-②	Programmable type Capable of operating up to 2-axis	20000 points			-	P415
Program control 1-6 axis type		XSEL-③-1-100①-N1-EEE-2-④ XSEL-③-1-150①-N1-EEE-2-④	Programmable type Maximum of 6-axis operation possible	4000 points			-	P425

*SSEL, XSEL is for 1-axis specification.
*(1) Indicates the encoder type (I: Incremental /A: Absolute) is needed.
*(2) Power source voltage type needed is (1:100V/2:Single-phase 200V).
*(3) XSEL typenames (J/K/P/Q) needed.
*(4) Power source voltage type needed is (1:100V/2:Single-phase 200V/3:3-phase 200V).

- Controller-Integrated
- Slider Type
- Rod Type
- Table Arm/Flat
- Gripper/Rotary Type
- Cleanroom
- Slash-resistant
- Controller
- C Coupling
- D Built-in (Direct)
- R Reverse-mounted
- Pulse Motor 20P
- Pulse Motor 28P
- Pulse Motor 35P
- Pulse Motor 42P
- Pulse Motor 56P
- Pulse Motor 86P
- Servo Motor 10W
- Servo Motor 20W
- Servo Motor 30W
- Servo Motor 60W
- Servo Motor 100W
- Servo Motor 150W
- Servo Motor 750W