RCS4-SA4C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Coupled | Straight Motor | Body Width 40 mm | 230V AC Servo Motor

■ Model Specification Items

RCS4	SA4C	WA	60	☐	☐	T2	☐	☐
Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
		WA: Battery-less Absolute	60: Servo motor 60W	16: 16mm 10: 10mm 5: 5mm 2.5:2.5mm	50:50mm ↕ 500:500mm (50mm increments)	T2:SCON MSCON SSEL XSEL-P/Q XSEL-RA/SA	N : None P : 1m S : 3m M: 5m X☐☐ : Specified Length R☐☐ : Robot Cable	Refer to Options table below.

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please refer to the Selection Notes on P.138 for more information.

POINT Selection Notes

(1) Longer strokes may cause the maximum speed to decrease due to resonance of the ball screw. Be sure to check the maximum speed of the desired stroke in the Actuator Specifications table, which can be found below.
(2) Both the horizontal and vertical payloads assume operation at an acceleration of 0.3G.
(3) When the acceleration is increased, the payload will be reduced. Please refer to "Table of Payload by Acceleration" on P.139 for more details.
(4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please refer to P. 149 for more information.

Actuator Specifications

■ Lead and Payload

Model Number	Motor wattage (W)	Lead (mm)	Max. payload Horizontal (kg)	Max. payload Vertical (kg)	Rated thrust (N)	Stroke (mm)
RCS4-SA4C-WA-60-16-①-T2-②-③	60	16	10	3	53	50~500 (50mm increments)
RCS4-SA4C-WA-60-10-①-T2-②-③		10	14	5	85	
RCS4-SA4C-WA-60-5-①-T2-②-③		5	17	8	170	
RCS4-SA4C-WA-60-2.5-①-T2-②-③		2.5	20	12	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed (Unit: mm/s)

Lead \ Stroke	50~450 (50mm increments)	500 (mm)
16	960	875
10	600	555
5	300	275
2.5	150	135

Cable Length

Type	Cable Code
Standard	**P** (1m)
	S (3m)
	M (5m)
Specified length (Standard cable)	**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)

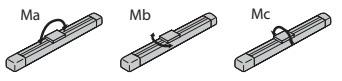
Actuator Specifications

Item	Description
Drive system	Ball screw ø8mm, rolled C10
Positioning repeatability (*1)	±0.01mm [±0.005mm]
Lost motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Allowable static moment	Ma direction: 13.0N·m, Mb direction: 18.6N·m, Mc direction: 25.3N·m
Allowable dynamic moment (*2)	Ma direction: 5.0N·m, Mb direction: 7.1N·m, Mc direction: 9.7N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

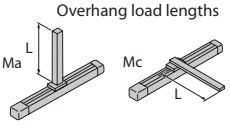
(*1) Values in [ ] are for high-precision specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions. Please contact IAI for details of the running life.

• Reference for overhang load length: Ma: 150mm or less, Mb, Mc: 150mm or less

Allowable load moment directions



Overhang load lengths



If the load moments in Ma/Mb/Mc direction are within the allowable ranges, there is no overhang load length limit.

Options

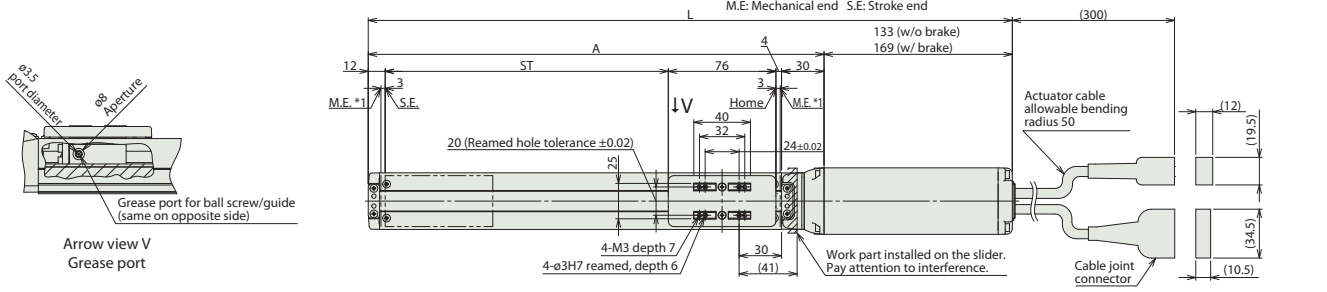
Name	Option Code	Reference Page
Brake	**B**	See P.131
Cable exit direction (Top)	**CJT**	See P.131
Cable exit direction (Right)	**CJR**	See P.131
Cable exit direction (Left)	**CJL**	See P.131
Cable exit direction (Bottom)	**CJB**	See P.131
High-Precision specification (*1)	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Double slider (*2)	**W**	See P.137
Round cable joint connector with screw locking (*3)	**EU**	See P.131

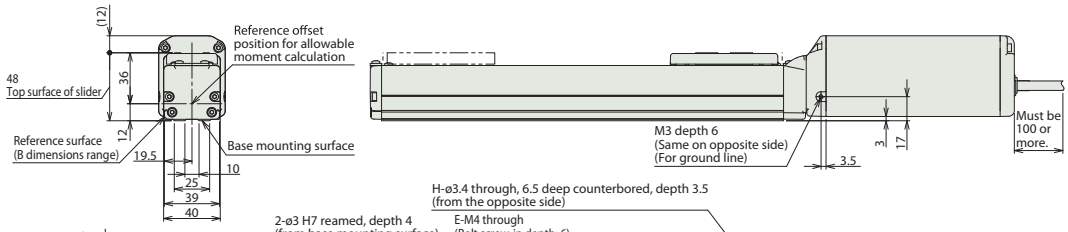
(*1) Double slider cannot be selected. (*2) Some leads cannot be selected. (Please see P. 150) (*3) EU option will be available soon.

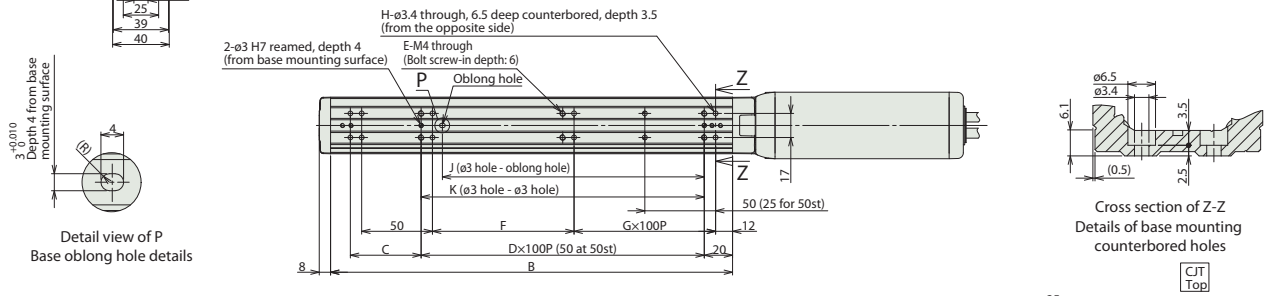
Dimensions

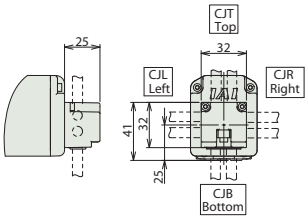
CAD drawings can be downloaded from our website.
www.robocylinder.de

*1 When the slider is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end









Dimensions and Mass by Stroke

	Stroke	50	100	150	200	250	300	350	400	450	500
L	W/o brake	305	355	405	455	505	555	605	655	705	755
	W/ brake	341	391	441	491	541	591	641	691	741	791
A		172	222	272	322	372	422	472	522	572	622
B		134	184	234	284	334	384	434	484	534	584
C		50	50	100	50	100	50	100	50	100	50
D		–	1	1	2	2	3	3	4	4	5
E		6	6	6	8	8	10	10	12	12	14
F		50	100	50	100	50	100	50	100	50	100
G		0	0	1	1	2	2	3	3	4	4
H		8	8	10	10	12	12	14	14	16	16
J		35	85	85	185	185	285	285	385	385	485
K		50	100	100	200	200	300	300	400	400	500
Mass (kg)	W/o brake	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.8	1.9	2.0
	W/ brake	1.4	1.5	1.6	1.7	1.7	1.8	1.9	2.0	2.1	2.2

Applicable Controllers

The RCS4 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Input power	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 115V/230VAC	●	●	–	DeviceNet, CC-Link, PROFIBUS, CompoNet, EtherCAT, EtherNet/IP, PROFINET	512 (768 for network spec.)	Please see P.151
SCON-LC/LCG (*)		1		–	–	●		512 (768 for network spec.)	Please see the dedicated controller catalog or manual.
SCON-CAL/CGAL		1		●	–	–		512 (768 for network spec.)	
MSCON-C		6		This model is network-compatible only.				256	
SSEL-CS		2		●	–	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	
XSEL-P/Q or XSEL-RA/SA (*)		6 or 8 (Depending on the type)	Single phase 230VAC Three-phase 230VAC	–	–	●		20000 or 55000 (Depending on the type)	

(*) Coming soon