RCS4-WSA10C

±10μm Standard | ±5μm High-precision Optional | Simple Dust-proof | Battery-less Absolute | Motor Unit Coupled | Straight Motor | Body Width 100 mm | 230V AC Servo Motor

■ Model Specification Items

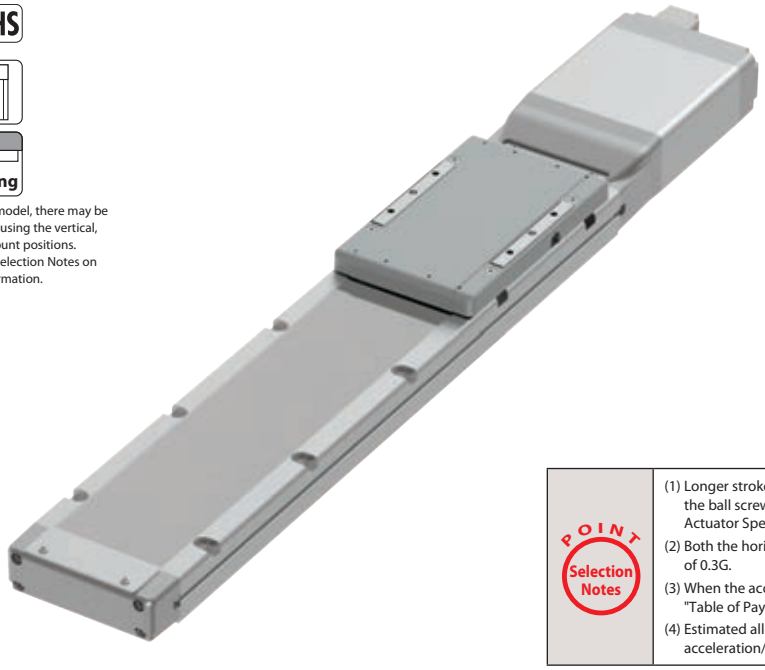
RCS4 — WSA10C — WA — 60 — ☐ — ☐ — T2 — ☐ — ☐

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS4	WSA10C	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. * Be sure to select an option for the cable exit direction.

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-WSA10C-WA-60-16-①-T2-②-③	60	16	7	–	53	50~500 (50mm increments)
RCS4-WSA10C-WA-60-10-①-T2-②-③		10	16	3	85	
RCS4-WSA10C-WA-60-5-①-T2-②-③		5	27	5	170	
RCS4-WSA10C-WA-60-2.5-①-T2-②-③		2.5	40	10	340	

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

(Unit: mm/s)

Lead \ Stroke	50~350 (50mm increments)	400 (mm)	450 (mm)	500 (mm)
16	960	930	775	660
10	600	590	490	415
5	300	290	245	205
2.5	150	145	120	100

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)

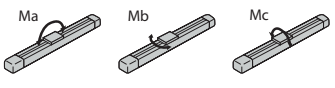
Actuator Specifications

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 271N·m, Mb direction 271N·m, Mc direction 553N·m
Allowable dynamic moment (*2)	Ma direction 65.4N·m, Mb direction 65.4N·m, Mc direction 134N·m
Ambient operating temp. & humidity	0~40°C, 85% RH or less (Non-condensing)

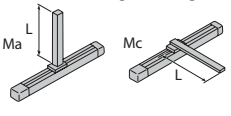
(*1) Values in [ ] are for high-precision specification.
(*2) Assumes a standard rated life of 5000km. The service life will vary depending on operation and installation conditions. Please contact IAI for details of the running life.

• Reference for overhang load length: Ma: 500mm or less, Mb, Mc: 500mm 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	**HPR**	See P.134
Non-motor end specification	**NM**	See P.136
Slider roller specification	**SR**	See P.137
Round cable joint connector with screw locking (*1)	**EU**	See P.131

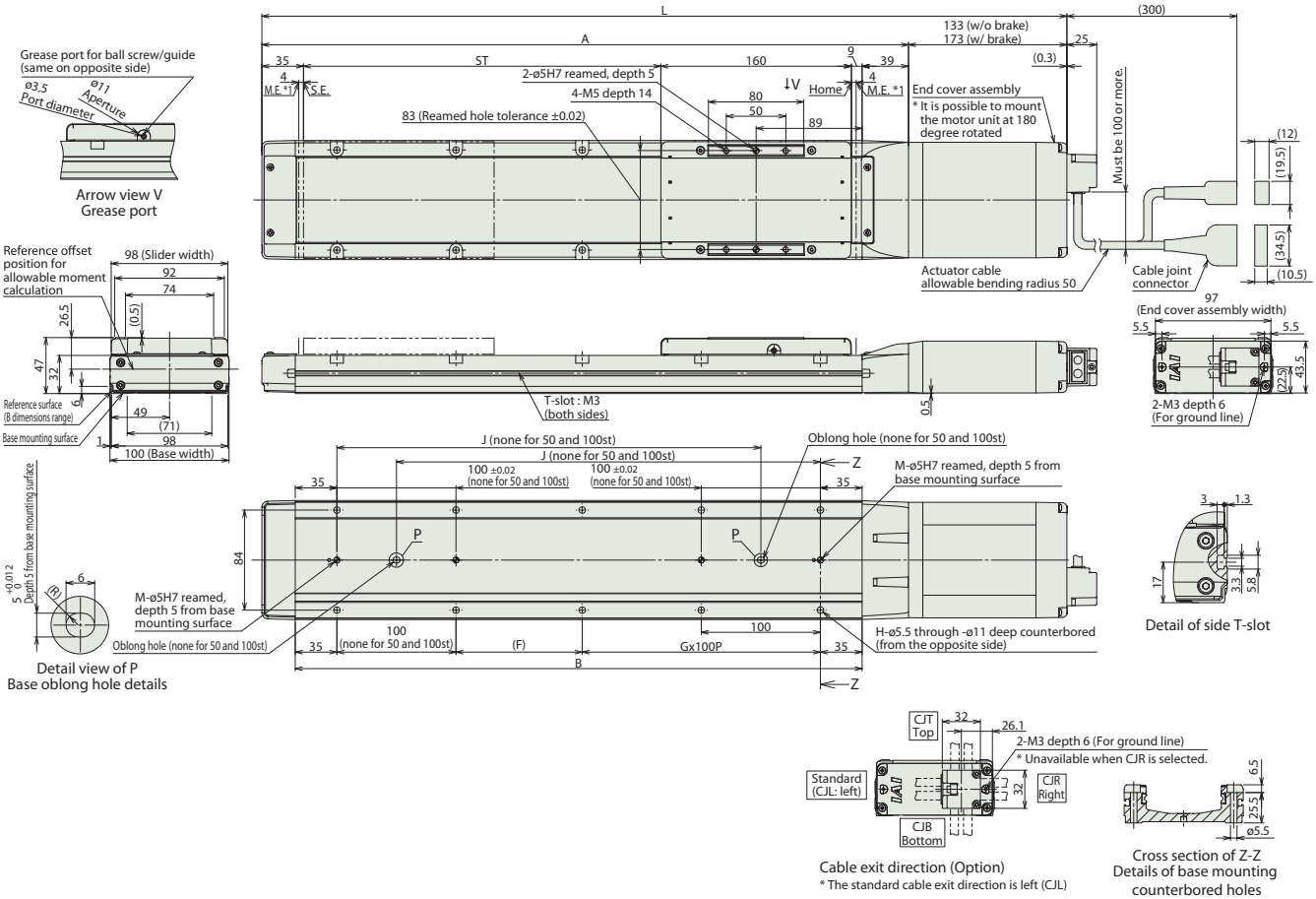
(*1) EU option will be available soon.

Dimensions

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

2D CAD 3D CAD

*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	426	476	526	576	626	676	726	776	826	876
	W/ brake	466	516	566	616	666	716	766	816	866	916
A		293	343	393	443	493	543	593	643	693	743
B		226	276	326	376	426	476	526	576	626	676
F		156	206	56	106	56	106	56	106	56	106
G		0	0	1	1	2	2	3	3	4	4
H		4	4	8	8	10	10	12	12	14	14
J		–	–	206	256	306	356	406	456	506	556
M		1	1	2	2	2	2	2	2	2	2
Mass (kg)	W/o brake	2.8	3.0	3.3	3.5	3.8	4.0	4.3	4.5	4.8	5.0
	W/ brake	3.1	3.3	3.6	3.8	4.1	4.3	4.6	4.8	5.1	5.3

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		●	–	●		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)	

Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.

(*) Coming soon