RCP4-SA3C

ROBO Cylinder, Slider Type, Motor Unit Coupled, Actuator Width 32mm, Pulse Motor 24V

I — 28P — □ — □ — □ — □ — □

Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
I: Incremental specification * The simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28□	6: 6mm 4: 4mm 2: 2mm	25: 25mm ↓ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the option list below.

RCP4-SA3R

ROBO Cylinder, Slider Type, Side-mounted Motor Unit, Actuator Width 32mm, Pulse Motor 24V

I — 28P — □ — □ — □ — □ — □

Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
I: Incremental specification * The Simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28□	6: 6mm 4: 4mm 2: 2mm	25: 25mm ↓ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the option list below.

RCP4-RA3C

ROBO Cylinder, Rod Type, Motor Unit Coupled, Actuator Width 32mm, Pulse Motor 24V

I — 28P — □ — □ — □ — □ — □

Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
I: Incremental specification * The Simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28□	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	25: 25mm ↓ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the option list below.

RCP4-RA3R

ROBO Cylinder, Rod Type, Side-mounted Motor Unit, Actuator Width 32mm, Pulse Motor 24V

I — 28P — □ — □ — □ — □ — □

Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
I: Incremental specification * The Simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28□	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	25: 25mm ↓ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the option list below.

RCP4CR-SA3C

Cleanroom Type ROBO Cylinder, Slider Type, Motor Unit Coupled, Actuator Width 32mm, Pulse Motor 24V

I — 28P — □ — □ — □ — □ — □

Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
I: Incremental specification * The simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28□	6: 6mm 4: 4mm 2: 2mm	25: 25mm ↓ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the option list below.

RCP4-SA3C

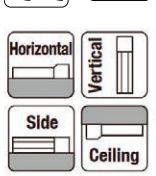
ROBO Cylinder, Slider Type, Motor Unit Coupled, Actuator Width 32mm, Pulse Motor 24V

Model Specification Items

RCP4	—	SA3C	—	I	—	28P	—	☐	—	☐	—	☐	—	☐	—	☐
Series		Type		Encoder type		Motor type		Lead		Stroke		Applicable controllers		Cable length		Options
				I: Incremental specification * The simple absolute encoder is also considered type "I."		28P: Pulse motor Size 28☐		6: 6mm 4: 4mm 2: 2mm		25: 25mm ~ 300: 300mm (Every 25mm)		P3: PCON / MSEL P5: RCON / RSEL		N: None P: 1m S: 3m M: 5m X☐☐: Specified length R☐☐: Robot cable		Refer to the option list below.

*Controller is not included.
*Please refer to our ROBO Cylinder General Catalog for the contents of the model specification items.

CE RoHS



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact us for more information.

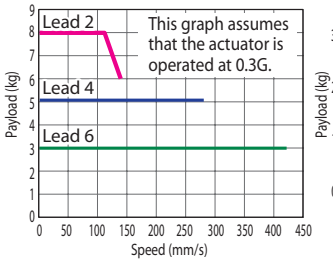
POINT Note on selection

(1) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to "The Tables for Payload by Speed and Acceleration" on P. 13.
(2) Please refer to "Correlation Diagrams Between Push Force and Current Limit" on P. 14 for push-motion operation.

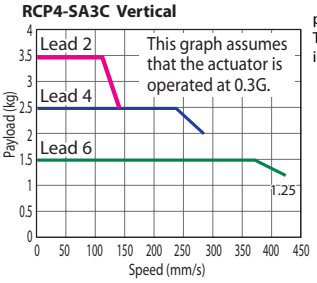
■Correlation Diagrams of Speed and Payload

①High output enabled PCON-CA, MSEP, MSEL connected

RCP4-SA3C Horizontal



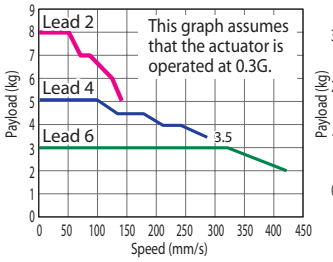
RCP4-SA3C Vertical



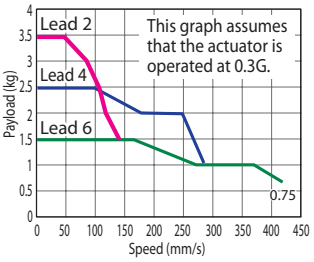
* PCON-CA is a previous model. The current model is PCON-CB.

②High output disabled PCON-CA, MSEP connected

RCP4-SA3C Horizontal



RCP4-SA3C Vertical



Actuator Specifications

■Lead and Payload

Model Number	Lead (mm)	Maximum Payload		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP4-SA3C-I-28P-6-①-P3-②-③	6	3	1.5	25 ~ 300 (Every 25mm)
RCP4-SA3C-I-28P-4-①-P3-②-③	4	5	2.5	
RCP4-SA3C-I-28P-2-①-P3-②-③	2	8	3.5	

Legend: ① Stroke ② Cable length ③ Options

■Stroke and Max. Speed (Unit: mm/s)

Lead (mm)	High-output Setting	25 ~ 300 (Every 25mm)
6	Enabled	420
	Disabled	
4	Enabled	280
	Disabled	
2	Enabled	140
	Disabled	

① Stroke

Stroke (mm)	Standard Price	Stroke (mm)	Standard Price
25	—	**175**	—
50	—	**200**	—
75	—	**225**	—
100	—	**250**	—
125	—	**275**	—
150	—	**300**	—

② Cable Length

Type	Cable Code	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)	—

* For a maintenance cable, please see the back cover.

③ Options

Name	Option Code	Reference Page	Standard Price
Brake	**B**	Please refer to our ROBO Cylinder General Catalog.	—
Home-position Check Sensor (On Left)	**HSL**		—
Home-position Check Sensor (On Right)	**HSR**		—
Non-motor End Specification	**NM**		—
Slider Roller Specification	**SR**		—

* For the home-position check sensor, there are 2 types; HSR (sensor attached on the right) and HSL (sensor attached on the left). Please see the following page for details.

*Additional Option: Designated grease specification - Code: G1, G3 or G4
Change the grease applied to the ball screw, linear guide, and rod sliding surface of the actuator to low dust-generating grease for clean environments.
((G1: Kuroda C grease, G3: AFF grease, G4: AFE-CA grease)

Actuator Specifications

Item	Description
Drive System	Ballscrew Ø6mm rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic Allowable Moment (*1)	Ma: 3.82N•m, Mb: 5.45N•m, Mc: 6.10N•m
Static Allowable Moment	Ma: 6.30N•m, Mb: 8.90N•m, Mc: 10.0N•m
Ambient Operating Temperature, Humidity	0 ~ 40°C, 85% RH or less (Non-condensing)

Reference for overhang load length of all 3 directions (Ma, Mb, and Mc): 100mm or less

(*1) This assumes a standard life of 5,000km. The operational life will vary depending on operation and installation conditions.
* Please refer to our ROBO Cylinder General Catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

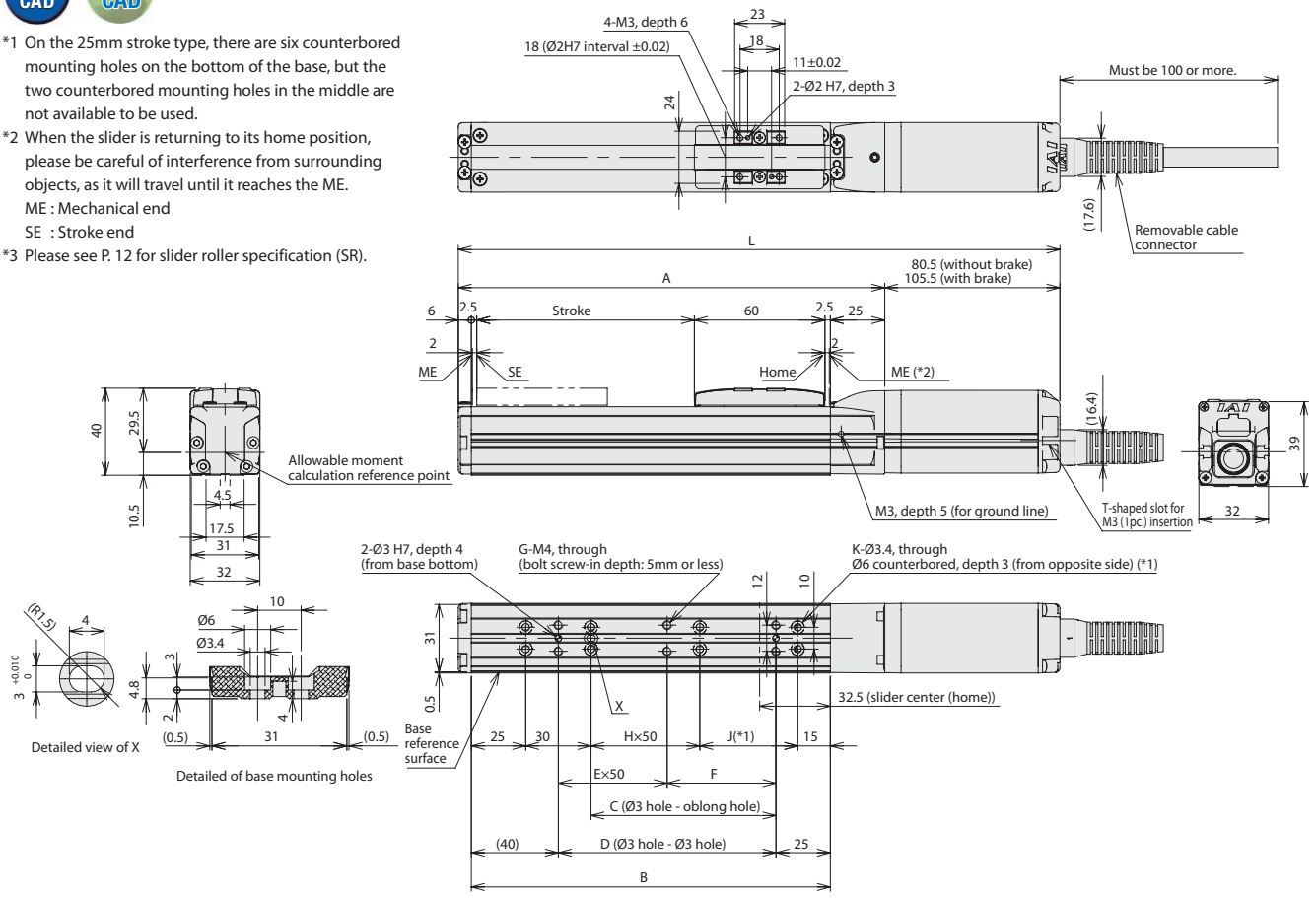
CAD drawings can be downloaded from our website. www.intelligentactuator.com

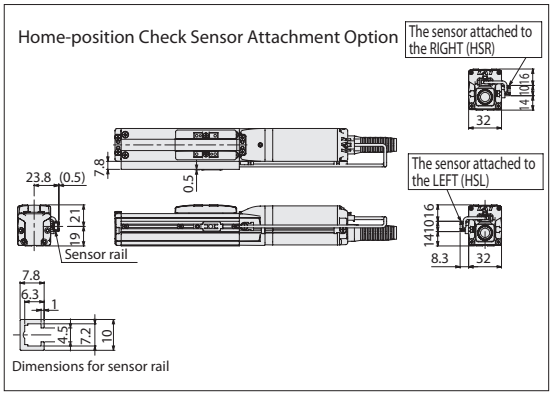
2D CAD 3D CAD

*1 On the 25mm stroke type, there are six counterbored mounting holes on the bottom of the base, but the two counterbored mounting holes in the middle are not available to be used.

*2 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 ME.
ME : Mechanical end
SE : Stroke end

*3 Please see P. 12 for slider roller specification (SR).





■Dimensions and Mass by Stroke

Stroke		25	50	75	100	125	150	175	200	225	250	275	300
L	Without Brake	201.5	226.5	251.5	276.5	301.5	326.5	351.5	376.5	401.5	426.5	451.5	476.5
	With Brake	226.5	251.5	276.5	301.5	326.5	351.5	376.5	401.5	426.5	451.5	476.5	501.5
A		121	146	171	196	221	246	271	296	321	346	371	396
B		90	115	140	165	190	215	240	265	290	315	340	365
C		10	35	60	85	110	135	160	185	210	235	260	285
D		25	50	75	100	125	150	175	200	225	250	275	300
E		0	0	0	1	1	2	2	3	3	4	4	5
F		25	50	75	50	75	50	75	50	75	50	75	50
G		4	4	4	6	6	8	8	10	10	12	12	14
H		0	0	0	1	1	2	2	3	3	4	4	5
J		(20)	45	70	45	70	45	70	45	70	45	70	45
K		(6)	6	6	8	8	10	10	12	12	14	14	16
Mass (kg)	Without Brake	0.51	0.55	0.58	0.61	0.65	0.68	0.71	0.75	0.78	0.81	0.85	0.88
	With Brake	0.6	0.64	0.67	0.7	0.74	0.77	0.8	0.84	0.87	0.9	0.94	0.97

Applicable Controllers

*** Controller for RCP4 series is PCON, MSEL, RCON or RSEL.**
Please refer our Controller General Catalog and/or contact IAI.

RCP4-SA3R

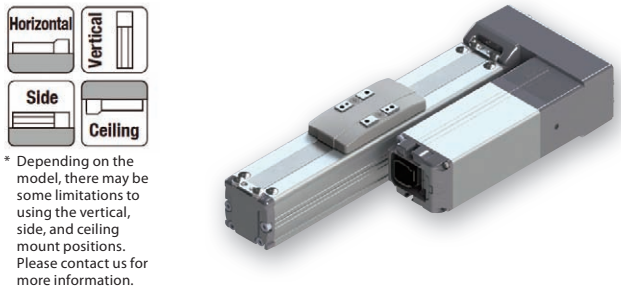
ROBO Cylinder, Slider Type, Side-mounted Motor Unit, Actuator Width 32mm, Pulse Motor 24V

Model Specification Items: **RCP4** — **SA3R** — **I** — **28P** — □ — □ — □ — □ — □

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
		I: Incremental specification * The Simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28□	6: 6mm 4: 4mm 2: 2mm	25: 25mm ~ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X□□: Specified length R□□: Robot cable	Refer to the option list below.

*Controller is not included.
*Please refer to our ROBO Cylinder General Catalog for the contents of the model specification items.

CE RoHS



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact us for more information.

The figure above is the side-mounted motor specification (ML).

POINT Note on selection

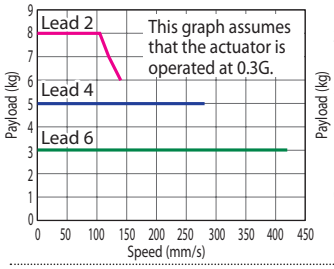
(1) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to "The Tables for Payload by Speed and Acceleration" on P. 13.
(2) Please refer to "Correlation Diagrams Between Push Force and Current Limit" on P. 14 for push-motion operation.

■Correlation Diagrams of Speed and Payload

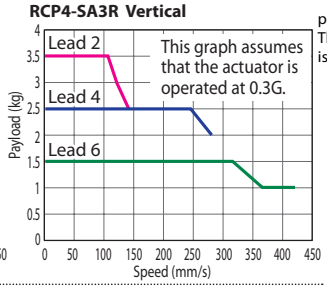
* PCON-CA is a previous model. The current model is PCON-CB.

①**High output enabled PCON-CA, MSEP, MSEL connected**

RCP4-SA3R Horizontal

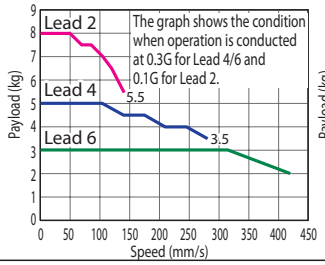


RCP4-SA3R Vertical

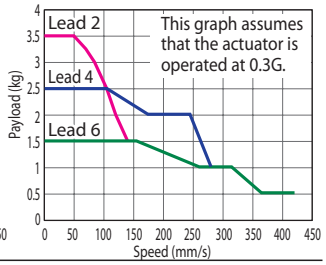


②**High output disabled PCON-CA, MSEP connected**

RCP4-SA3R Horizontal



RCP4-SA3R Vertical



Actuator Specifications

■Lead and Payload

Model Number	Lead (mm)	Maximum Payload Horizontal (kg)	Maximum Payload Vertical (kg)	Stroke (mm)
RCP4-SA3R-I-28P-6-①-P3-②-③	6	3	1.5	25 ~ 300 (Every 25mm)
RCP4-SA3R-I-28P-4-①-P3-②-③	4	5	2.5	
RCP4-SA3R-I-28P-2-①-P3-②-③	2	8	3.5	

Legend: ① Stroke ② Cable length ③ Options

■Stroke and Max. Speed (Unit: mm/s)

Lead (mm)	High-output Setting	25 ~ 300 (Every 25mm)
6	Enabled	420
	Disabled	
4	Enabled	280
	Disabled	
2	Enabled	140
	Disabled	

① Stroke

Stroke (mm)	Standard Price	Stroke (mm)	Standard Price
25	—	**175**	—
50	—	**200**	—
75	—	**225**	—
100	—	**250**	—
125	—	**275**	—
150	—	**300**	—

② Cable Length

Type	Cable Code	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)	—

* For a maintenance cable, please see the back cover.

③ Options*

Name	Option Code	Reference Page	Standard Price
Brake	**B**	Please refer to our ROBO Cylinder General Catalog.	—
Motor Side-mounted to the Left	**ML**		—
Motor Side-mounted to the Right	**MR**		—
Home-position Check Sensor (On Left)(*1)	**HSL**		—
Home-position Check Sensor (On Right)(*1)	**HSR**		—
Non-motor End Specification	**NM**		—
Slider Roller Specification	**SR**		—
Back Attachment Plate	**RP**	→P. 8	—

(*1) Select "HSR" when the motor mounted direction is ML and "HSL" when the motor mounted direction is MR.

*Additional Option: Designated grease specification - Code: G1, G3 or G4
Change the grease applied to the ball screw, linear guide, and rod sliding surface of the actuator to low dust-generating grease for clean environments.
((G1: Kuroda C grease, G3: AFF grease, G4: AFE-CA grease)

Actuator Specifications

Item	Description
Drive System	Ballscrew Ø6mm rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Dynamic Allowable Moment (*1)	Ma: 3.82N•m, Mb: 5.45N•m, Mc: 6.10N•m
Static Allowable Moment	Ma: 6.30N•m, Mb: 8.90N•m, Mc: 10.0N•m
Ambient Operating Temperature, Humidity	0 ~ 40°C, 85% RH or less (Non-condensing)

Reference for overhang load length of all 3 directions (Ma, Mb, and Mc): 100mm or less

(*1) This assumes a standard life of 5,000km. The operational life will vary depending on operation and installation conditions.
* Please refer to our ROBO Cylinder General Catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

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

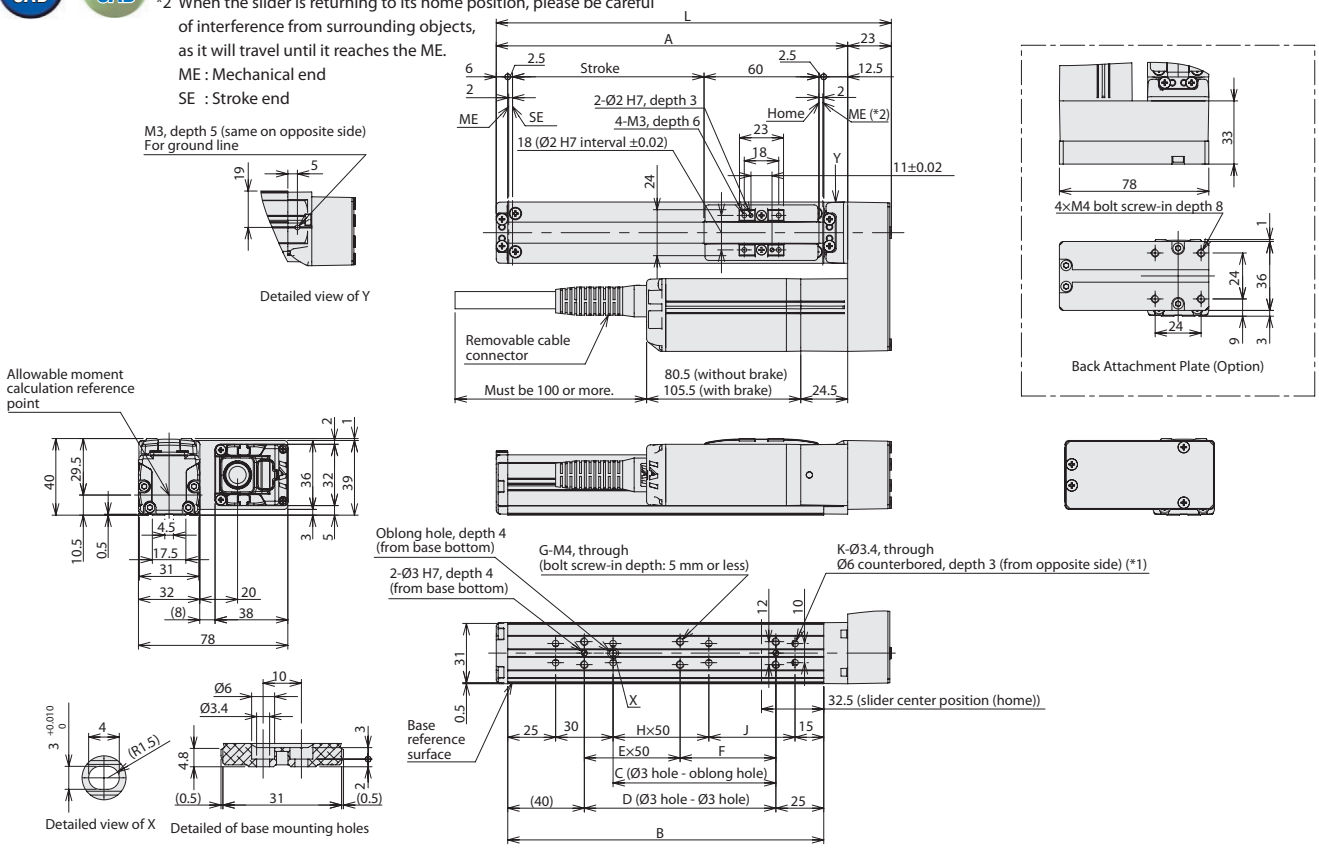
2D CAD 3D CAD

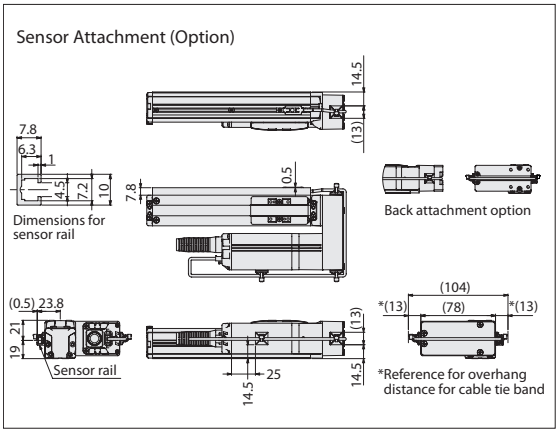
*1 On the 25mm stroke type, there are six counterbored mounting holes on the bottom of the base, but the two counterbored mounting holes in the middle are not available to be used.

*2 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 ME.

ME : Mechanical end

SE : Stroke end





■Dimensions and Mass by Stroke

Stroke		25	50	75	100	125	150	175	200	225	250	275	300
L	Standard	131.5	156.5	181.5	206.5	231.5	256.5	281.5	306.5	331.5	356.5	381.5	406.5
	Back Attachment Option	141.5	166.5	191.5	216.5	241.5	266.5	291.5	316.5	341.5	366.5	391.5	416.5
A		108.5	133.5	158.5	183.5	208.5	233.5	258.5	283.5	308.5	333.5	358.5	383.5
B		90	115	140	165	190	215	240	265	290	315	340	365
C		10	35	60	85	110	135	160	185	210	235	260	285
D		25	50	75	100	125	150	175	200	225	250	275	300
E		0	0	0	1	1	2	2	3	3	4	4	5
F		25	50	75	50	75	50	75	50	75	50	75	50
G		4	4	4	6	6	8	8	10	10	12	12	14
H		0	0	0	1	1	2	2	3	3	4	4	5
J		(20)	45	70	45	70	45	70	45	70	45	70	45
K		(6)	6	6	8	8	10	10	12	12	14	14	16
Mass (kg)	Without Brake	0.64	0.68	0.71	0.74	0.78	0.81	0.84	0.88	0.91	0.94	0.98	1.01
	With Brake	0.73	0.77	0.80	0.83	0.87	0.90	0.93	0.97	1.00	1.03	1.07	1.10

Applicable Controllers

*** Controller for RCP4 series is PCON, MSEL, RCON or RSEL.**
Please refer our Controller General Catalog and/or contact IAI.

RCP4-RA3C

ROBO Cylinder, Rod Type, Motor Unit Coupled, Actuator Width 32mm, Pulse Motor 24V

Model Specification Items: **RCP4 — RA3C — I — 28P — ☐ — ☐ — ☐ — ☐ — ☐**

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
		I: Incremental specification * The Simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28☐	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	25: 25mm ~ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X☐☐: Specified length R☐☐: Robot cable	Refer to the option list below.

*Controller is not included.
*Please refer to our ROBO Cylinder General Catalog for the contents of the model specification items.

Radial Load Applicable

Horizontal / Vertical / Side / Ceiling

* Depending on the model, there may be some limitations to using the vertical mount position. Please contact us for more information.

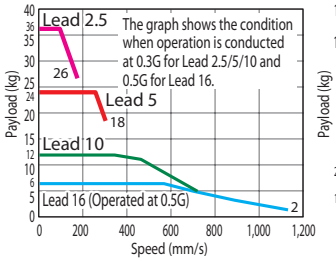
POINT Note on selection

(1) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to "The Tables for Payload by Speed and Acceleration" on P. 13.
(2) Please refer to "Correlation Diagrams Between Push Force and Current Limit" on P. 14 for push-motion operation.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the diagrams on back cover for allowable load mass.

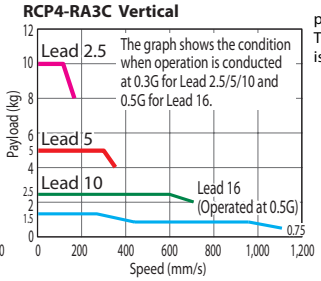
■Correlation Diagrams of Speed and Payload

①**High output enabled PCON-CA, MSEP, MSEL connected**

RCP4-RA3C Horizontal



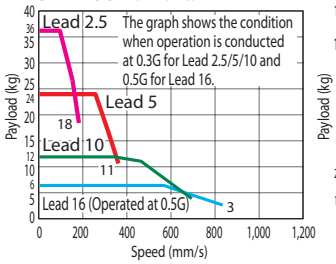
RCP4-RA3C Vertical



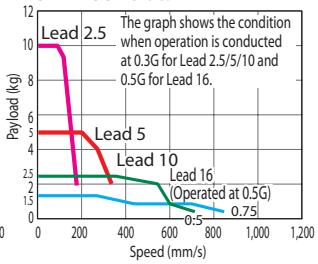
* PCON-CA is a previous model. The current model is PCON-CB.

②**High output disabled PCON-CA, MSEP connected**

RCP4-RA3C Horizontal



RCP4-RA3C Vertical



Actuator Specifications

■Lead and Payload

Model Number	Lead (mm)	Maximum Payload Horizontal (kg)	Maximum Payload Vertical (kg)	Maximum Push Force (N)	Stroke (mm)
RCP4-RA3C-I-28P-16-①-P3-②-③	16	6	1.5	36	25 ~ 300 (Every 25mm)
RCP4-RA3C-I-28P-10-①-P3-②-③	10	12	2.5	57	
RCP4-RA3C-I-28P-5-①-P3-②-③	5	24	5	114	
RCP4-RA3C-I-28P-2.5-①-P3-②-③	2.5	36	10	229	

Legend: ① Stroke ② Cable length ③ Options *Refer to P. 14 for the push-motion operation.

■Stroke and Max. Speed (Unit: mm/s)

Lead (mm)	High-output Setting	25 ~ 300 (Every 25mm)
16	Enabled	1,120
	Disabled	840
10	Enabled	700
	Disabled	
5	Enabled	350
	Disabled	
2.5	Enabled	175
	Disabled	

① Stroke

Stroke (mm)	Standard Price	Stroke (mm)	Standard Price
25	—	**175**	—
50	—	**200**	—
75	—	**225**	—
100	—	**250**	—
125	—	**275**	—
150	—	**300**	—

② Cable Length

Type	Cable Code	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)	—

* For a maintenance cable, please see the back cover.

③ Options

Name	Option Code	Reference Page	Standard Price
Brake	**B**	Please refer to our ROBO Cylinder General Catalog.	—
Home-position Check Sensor (Top)	**HS**		—
Non-motor End Specification	**NM**		—

Actuator Specifications

Item	Description
Drive System	Ballscrew Ø8mm rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod	Ø16mm Aluminum
Rod Non-rotation Precision(*1)	0 deg.
Allowable Load and Torque on Rod Tip	Refer to the table in the right page and the graph at the back cover of this catalog.
Rod Tip Overhang Distance	100mm or less
Ambient Operating Temperature, Humidity	0 ~ 40°C, 85% RH or less (Non-condensing)

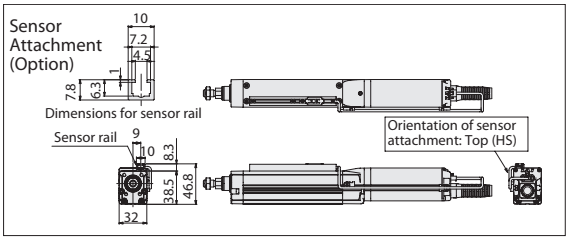
(*1) Accuracy of rod displacement in rotating direction when no load is received.

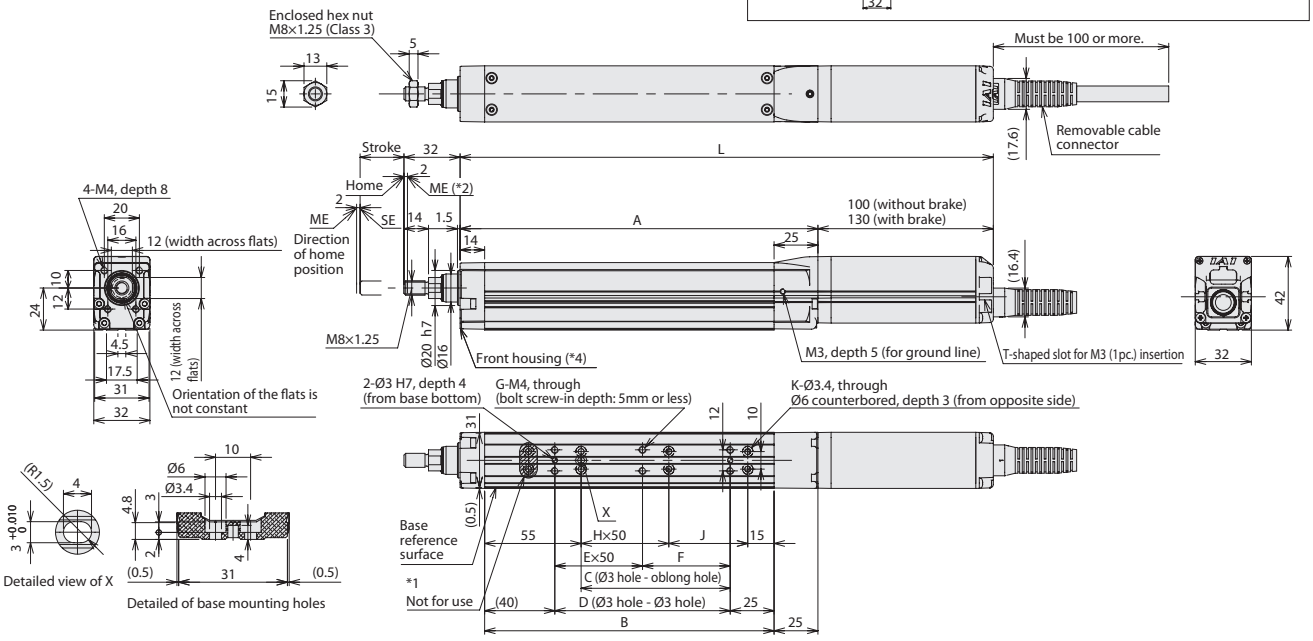
Dimensions

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

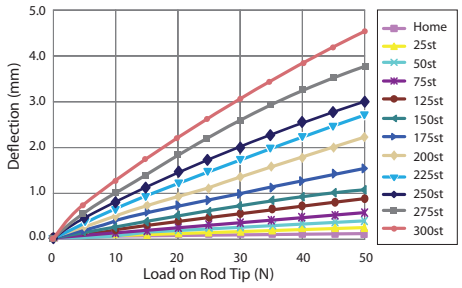
2D CAD 3D CAD

*1 The two counterbored mounting holes (K) on the bottom of the base near the rod end are not available to use.
*2 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
ME : Mechanical end
SE : Stroke end
*3 The orientation of the bolt varies depending on the product.
*4 If the actuator is installed using the front housing, make sure that the actuator will not receive any external force.





■RCP4-RA3C Rod Deflection (Reference)



■Dimensions and Mass by Stroke

Stroke		25	50	75	100	125	150	175	200	225	250	275	300
L	Without Brake	229	254	279	304	329	354	379	404	429	454	479	504
	With Brake	259	284	309	334	359	384	409	434	459	484	509	534
A		129	154	179	204	229	254	279	304	329	354	379	404
B		90	115	140	165	190	215	240	265	290	315	340	365
C		10	35	60	85	110	135	160	185	210	235	260	285
D		25	50	75	100	125	150	175	200	225	250	275	300
E		0	0	0	1	1	2	2	3	3	4	4	5
F		25	50	75	50	75	50	75	50	75	50	75	50
G		4	4	4	6	6	8	8	10	10	12	12	14
H		0	0	0	1	1	2	2	3	3	4	4	5
J		20	45	70	45	70	45	70	45	70	45	70	45
K		4	4	4	6	6	8	8	10	10	12	12	14
Allowable Static Load on Rod Tip (N)		38.8	33.5	29.5	26.3	23.7	21.6	19.8	18.2	16.9	15.7	14.7	13.8
Allowable Dynamic Load on Rod Tip (N)	Load Offset 0mm	19.4	16.6	14.2	12.2	10.7	9.5	8.5	7.7	7.0	6.4	5.8	5.4
	Load Offset 100mm	9.1	9.4	8.9	8.3	7.7	7.1	6.6	6.1	5.6	5.2	4.9	4.5
Allowable Static Torque on Rod Tip (N•m)		3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.4
Allowable Dynamic Torque on Rod Tip (N•m)		0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5
Mass (kg)	Without Brake	0.59	0.64	0.69	0.73	0.78	0.83	0.88	0.93	0.98	1.02	1.07	1.12
	With Brake	0.68	0.73	0.78	0.82	0.87	0.92	0.97	1.02	1.07	1.11	1.16	1.21

Applicable Controllers

*** Controller for RCP4 series is PCON, MSEL, RCON or RSEL.**
Please refer our Controller General Catalog and/or contact IAI.

RCP4-RA3R

ROBO Cylinder, Rod Type, Side-mounted Motor Unit, Actuator Width 32mm, Pulse Motor 24V

Model Specification Items: **RCP4 — RA3R — I — 28P — ☐ — ☐ — ☐ — ☐ — ☐ — ☐**

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
		I: Incremental specification * The Simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28☐	16: 16mm 10: 10mm 5: 5mm 2.5: 2.5mm	25: 25mm ~ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X☐☐: Specified length R☐☐: Robot cable	Refer to the option list below.

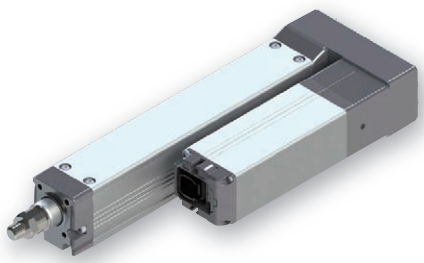
*Controller is not included.
*Please refer to our ROBO Cylinder General Catalog for the contents of the model specification items.

Radial Load Applicable

CE RoHS

Horizontal | Vertical | Side | Ceiling

* Depending on the model, there may be some limitations to using the vertical mount position. Please contact us for more information.



The figure above is the side-mounted motor specification (ML).

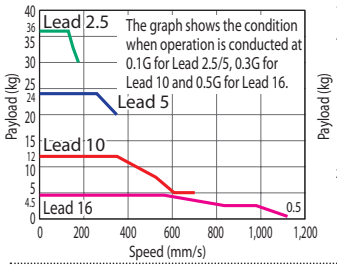
POINT — Note on selection

(1) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to "The Tables for Payload by Speed and Acceleration" on P. 13.
(2) Please refer to "Correlation Diagrams Between Push Force and Current Limit" on P. 14 for push-motion operation.
(3) The radial cylinder is equipped with a built-in guide. Please refer to the diagrams on back cover for allowable load mass.

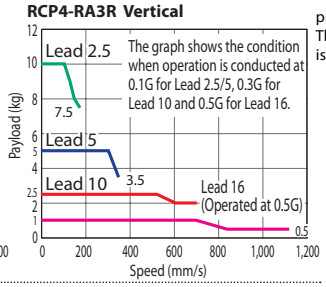
■Correlation Diagrams of Speed and Payload

①**High output enabled PCON-CA, MSEP, MSEL connected**

RCP4-RA3R Horizontal



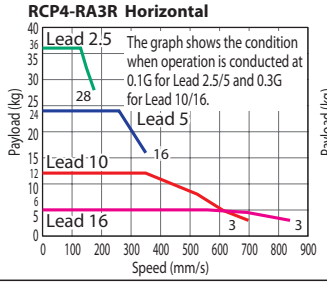
RCP4-RA3R Vertical



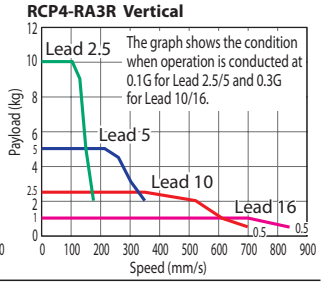
* PCON-CA is a previous model. The current model is PCON-CB.

②**High output disabled PCON-CA, MSEP connected**

RCP4-RA3R Horizontal



RCP4-RA3R Vertical



Actuator Specifications

■Lead and Payload

Model Number	Lead (mm)	Maximum Payload Horizontal (kg)	Maximum Payload Vertical (kg)	Maximum Push Force (N)	Stroke (mm)
RCP4-RA3R-I-28P-16-①-P3-②-③	16	5	1	36	25 ~ 300 (Every 25mm)
RCP4-RA3R-I-28P-10-①-P3-②-③	10	12	2.5	57	
RCP4-RA3R-I-28P-5-①-P3-②-③	5	24	5	114	
RCP4-RA3R-I-28P-2.5-①-P3-②-③	2.5	36	10	229	

Legend: ① Stroke ② Cable length ③ Options

■Stroke and Max. Speed (Unit: mm/s)

Lead (mm)	High-output Setting	25 ~ 300 (Every 25mm)
16	Enabled	1,120
	Disabled	840
10	Enabled	700
	Disabled	
5	Enabled	350
	Disabled	
2.5	Enabled	175
	Disabled	

① Stroke

Stroke (mm)	Standard Price	Stroke (mm)	Standard Price
25	—	**175**	—
50	—	**200**	—
75	—	**225**	—
100	—	**250**	—
125	—	**275**	—
150	—	**300**	—

② Cable Length

Type	Cable Code	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)	—

* For a maintenance cable, please see the back cover.

③ Options

Name	Option Code	Reference Page	Standard Price
Brake	**B**	Please refer to our ROBO Cylinder General Catalog.	—
Motor Side-mounted to the Left	**ML**		—
Motor Side-mounted to the Right	**MR**		—
Home-position Check Sensor	**HS**		—
Non-motor End Specification	**NM**		—
Back Attachment Plate	**RP**		—

Actuator Specifications

Item	Description
Drive System	Ballscrew Ø8mm rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod	Ø16mm Aluminum
Rod Non-rotation Precision(*1)	0 deg.
Allowable Load and Torque on Rod Tip	Refer to the table in the right page and the graph at the back cover of this catalog.
Rod Tip Overhang Distance	100mm or less
Ambient Operating Temperature, Humidity	0 ~ 40°C, 85% RH or less (Non-condensing)

(*1) Accuracy of rod displacement in rotating direction when no load is received.

Dimensions

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

2D CAD

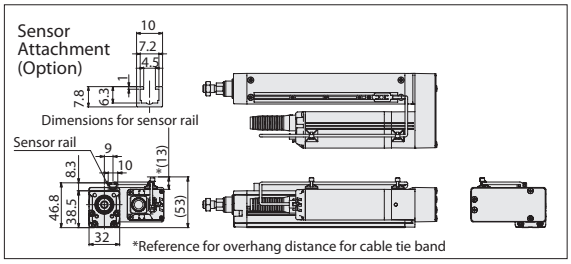
3D CAD

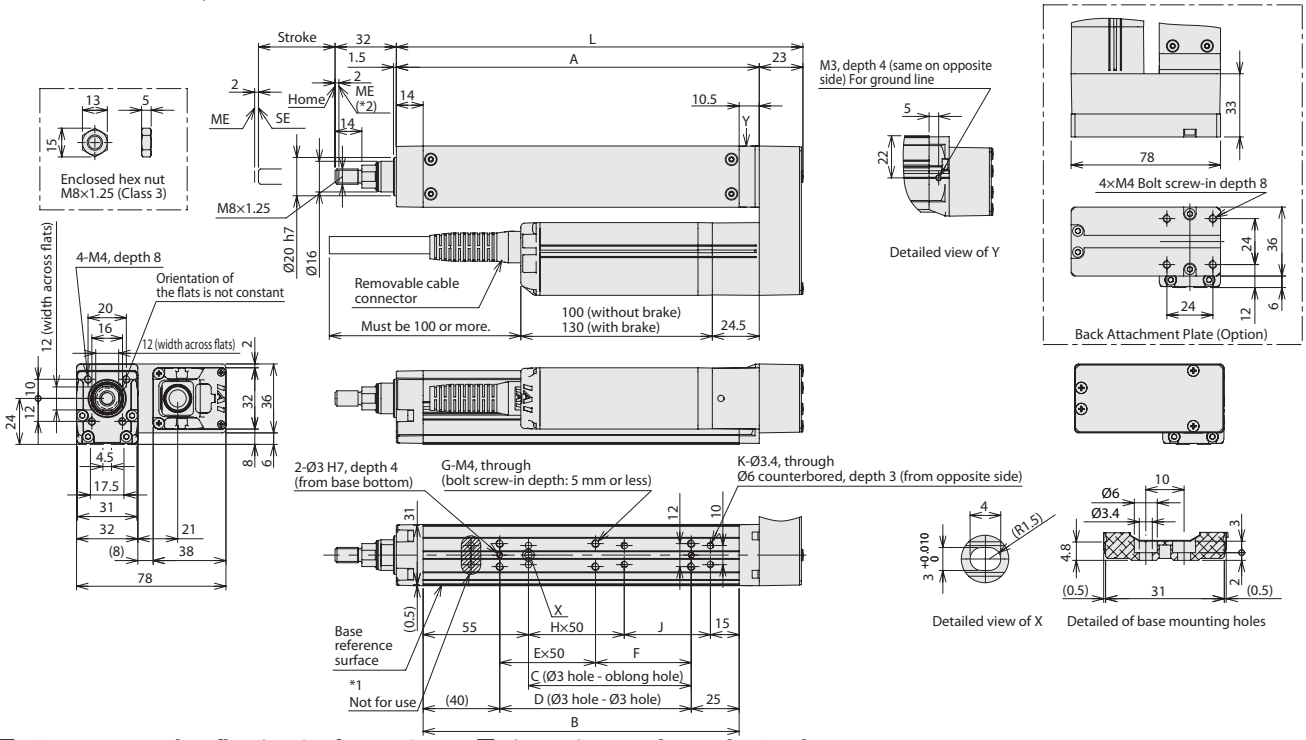
*1 The two counterbored mounting holes (K) on the bottom of the base near the rod end are not available to use.

*2 When the rod is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the ME.
ME : Mechanical end
SE : Stroke end

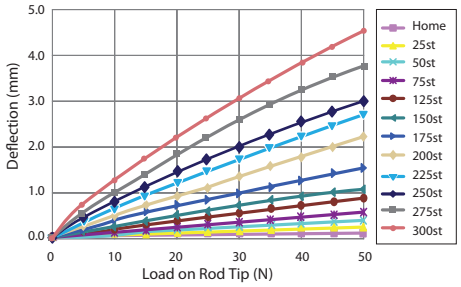
*3 The orientation of the bolt varies depending on the product.

*4 If the actuator is installed using the front housing, make sure that the actuator will not receive any external force.





■RCP4-RA3R Rod Deflection (Reference)



■Dimensions and Mass by Stroke

Stroke		25	50	75	100	125	150	175	200	225	250	275	300
L	Standard	137.5	162.5	187.5	212.5	237.5	262.5	287.5	312.5	337.5	362.5	387.5	412.5
	Back Attachment Option	147.5	172.5	197.5	222.5	247.5	272.5	297.5	322.5	347.5	372.5	397.5	422.5
A		114.5	139.5	164.5	189.5	214.5	239.5	264.5	289.5	314.5	339.5	364.5	389.5
B		90	115	140	165	190	215	240	265	290	315	340	365
C		10	35	60	85	110	135	160	185	210	235	260	285
D		25	50	75	100	125	150	175	200	225	250	275	300
E		0	0	0	1	1	2	2	3	3	4	4	5
F		25	50	75	50	75	50	75	50	75	50	75	50
G		4	4	4	6	6	8	8	10	10	12	12	14
H		0	0	0	1	1	2	2	3	3	4	4	5
J		20	45	70	45	70	45	70	45	70	45	70	45
K		4	4	4	6	6	8	8	10	10	12	12	14
Allowable Static Load on Rod Tip (N)		38.8	33.5	29.5	26.3	23.7	21.6	19.8	18.2	16.9	15.7	14.7	13.8
Allowable Dynamic Load on Rod Tip (N)	Load Offset 0mm	19.4	16.6	14.2	12.2	10.7	9.5	8.5	7.7	7.0	6.4	5.8	5.4
	Load Offset 100mm	9.1	9.4	8.9	8.3	7.7	7.1	6.6	6.1	5.6	5.2	4.9	4.5
Allowable Static Torque on Rod Tip (N•m)		3.9	3.4	3.0	2.7	2.4	2.2	2.0	1.9	1.7	1.6	1.5	1.4
Allowable Dynamic Torque on Rod Tip (N•m)		0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.5	0.5	0.5
Mass (kg)	Without Brake	0.71	0.76	0.81	0.85	0.90	0.95	1.00	1.05	1.10	1.14	1.19	1.24
	With Brake	0.80	0.85	0.90	0.94	0.99	1.04	1.09	1.14	1.19	1.23	1.28	1.33

Applicable Controllers

*** Controller for RCP4 series is PCON, MSEL, RCON or RSEL.**
Please refer our Controller General Catalog and/or contact IAI.

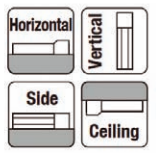
RCP4CR-SA3C Cleanroom Type ROBO Cylinder, Slider Type, Motor Unit Coupled, Actuator Width 32mm, Pulse Motor 24V

Model Specification Items: RCP4CR — SA3C — I — 28P — ☐ — ☐ — ☐ — ☐ — ☐

Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controllers	Cable length	Options
RCP4CR	SA3C	I: Incremental specification * The simple absolute encoder is also considered type "I."	28P: Pulse motor Size 28☐	6: 6mm 4: 4mm 2: 2mm	25: 25mm ~ 300: 300mm (Every 25mm)	P3: PCON / MSEL P5: RCON / RSEL	N: None P: 1m S: 3m M: 5m X☐☐: Specified length R☐☐: Robot cable	Refer to the option list below.

*Controller is not included.
*Please refer to our ROBO Cylinder General Catalog for the contents of the model specification items.

CE RoHS



* Depending on the model, there may be some limitations to using the vertical, side, and ceiling mount positions. Please contact us for more information.

POINT Note on selection

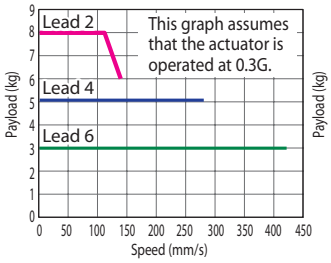
(1) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration. Please refer to "The Tables for Payload by Speed and Acceleration" on P. 13.
(2) Please refer to "Correlation Diagrams Between Push Force and Current Limit" on P. 14 for push-motion operation.

■Correlation Diagrams of Speed and Payload

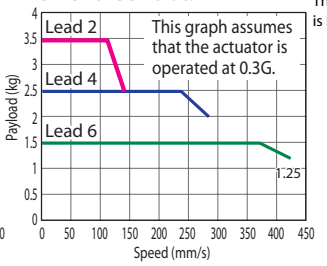
* PCON-CA is a previous model. The current model is PCON-CB.

①High output enabled PCON-CA, MSEP, MSEL connected

RCP4CR-SA3C Horizontal

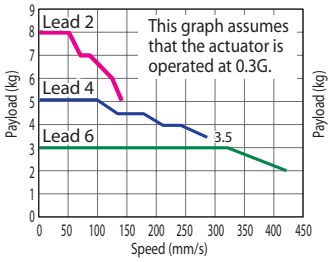


RCP4CR-SA3C Vertical

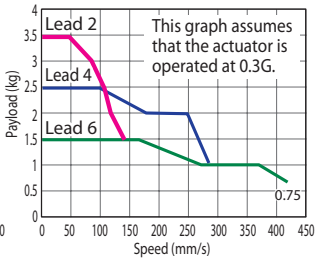


②High output disabled PCON-CA, MSEP connected

RCP4CR-SA3C Horizontal



RCP4CR-SA3C Vertical



Actuator Specifications

■Lead and Payload

Model Number	Lead (mm)	Maximum Payload Horizontal (kg)	Maximum Payload Vertical (kg)	Stroke (mm)
RCP4CR-SA3C-I-28P-6-①-P3-②-③	6	3	1.5	25 ~ 300 (Every 25mm)
RCP4CR-SA3C-I-28P-4-①-P3-②-③	4	5	2.5	
RCP4CR-SA3C-I-28P-2-①-P3-②-③	2	8	3.5	

Legend: ① Stroke ② Cable length ③ Options

■Stroke, Max. Speed and Vacuum Volume (Unit: mm/s)

Lead (mm)	High-output Setting	25 ~ 300 (Every 25mm)	Vacuum Volume (Nℓ/mm)
6	Enabled	420	20
	Disabled		
4	Enabled	280	15
	Disabled		
2	Enabled	140	10
	Disabled		

① Stroke

Stroke (mm)	Standard Price	Stroke (mm)	Standard Price
25	—	**175**	—
50	—	**200**	—
75	—	**225**	—
100	—	**250**	—
125	—	**275**	—
150	—	**300**	—

② Cable Length

Type	Cable Code	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)	—

* For a maintenance cable, please see the back cover.

③ Options

Name	Option Code	Reference Page	Standard Price
Brake	**B**	Please refer to our ROBO Cylinder General Catalog.	—
Home-position Check Sensor (On Left)	**HSL**		—
Home-position Check Sensor (On Right)	**HSR**		—
Non-motor End Specification	**NM**		—
Vacuum Joint Opposite Position	**VR**		—

* For the home-position check sensor, there are 2 types; HSR (sensor attached on the right) and HSL (sensor attached on the left). Please see the following page for details.

Additional Option: Designated grease specification - Code: G3 or G4
Change the grease applied to the ball screw, linear guide, and rod sliding surface of the actuator to low dust-generating grease for clean environments.
(G3: AFF grease, G4: AFE-CA grease)

Actuator Specifications

Item	Description
Drive System	Ballscrew Ø6mm rolled C10
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Aluminum with white alumite treatment
Guide	Linear guide
Dynamic Allowable Moment (*1)	Ma: 3.82N•m, Mb: 5.45N•m, Mc: 6.10N•m
Static Allowable Moment	Ma: 6.30N•m, Mb: 8.90N•m, Mc: 10.0N•m
Grease	Low particle-emission (urea based) grease used (on both ball screw and guide)
Cleanliness Class	Class 10 (Fed. Std. 209D), Equiv. to Class 2.5 (ISO 14644-1)
Ambient Operating Temperature, Humidity	0 ~ 40°C, 85% RH or less (Non-condensing)

Reference for overhang load length of all 3 directions (Ma, Mb, and Mc): 100mm or less

(*1) This assumes a standard life of 5,000km. The operational life will vary depending on operation and installation conditions.
* Please refer to our ROBO Cylinder General Catalog for details on operational life, allowable moment direction, and overhang load length.

Dimensions

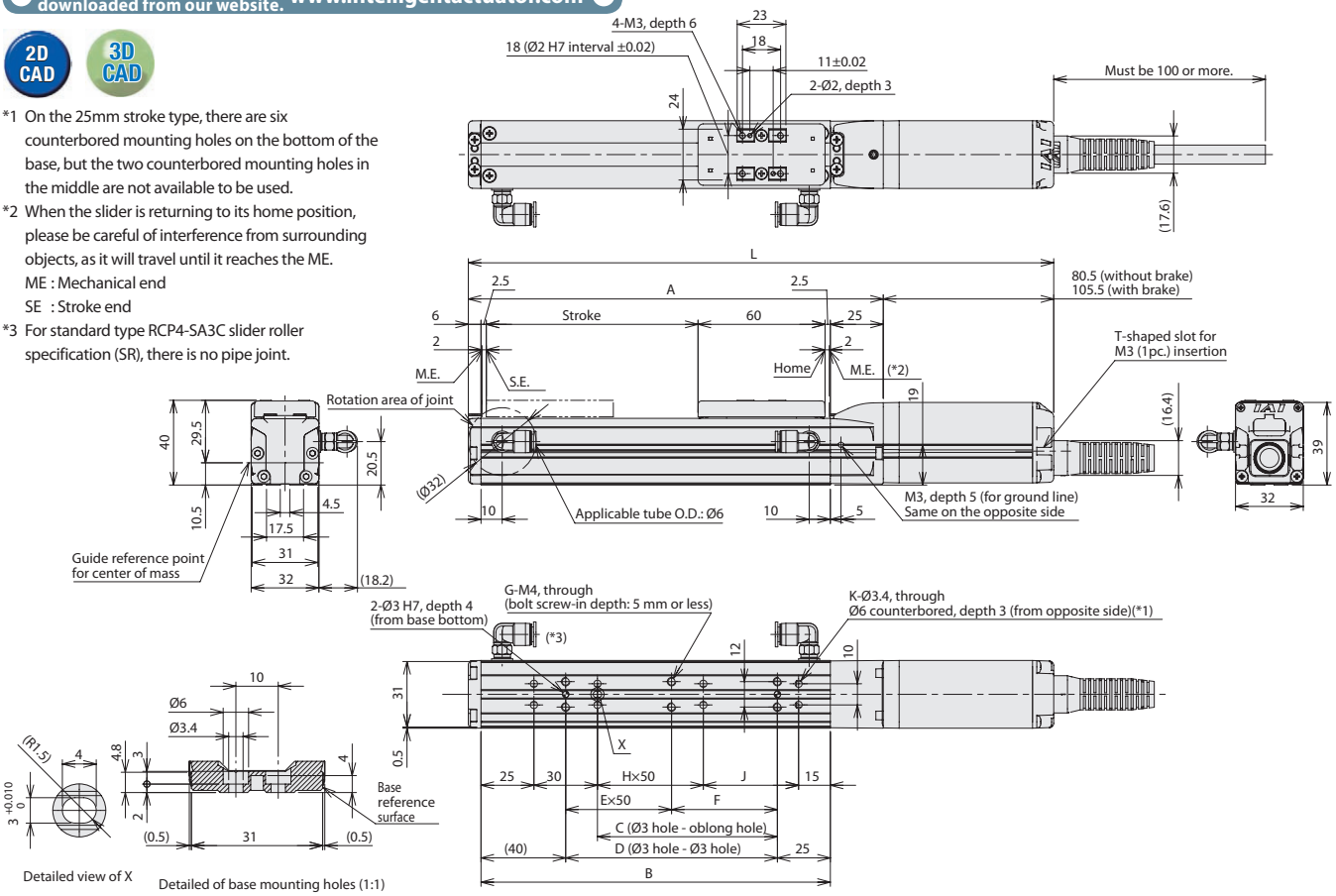
CAD drawings can be downloaded from our website. www.intelligentactuator.com

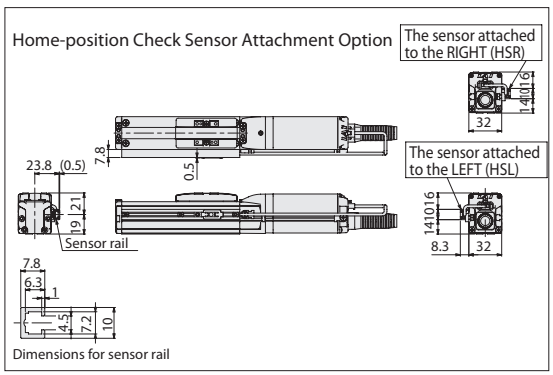
2D CAD 3D CAD

*1 On the 25mm stroke type, there are six counterbored mounting holes on the bottom of the base, but the two counterbored mounting holes in the middle are not available to be used.

*2 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 ME.
ME : Mechanical end
SE : Stroke end

*3 For standard type RCP4-SA3C slider roller specification (SR), there is no pipe joint.





■Dimensions and Mass by Stroke

Stroke		25	50	75	100	125	150	175	200	225	250	275	300
L	Without Brake	201.5	226.5	251.5	276.5	301.5	326.5	351.5	376.5	401.5	426.5	451.5	476.5
	With Brake	226.5	251.5	276.5	301.5	326.5	351.5	376.5	401.5	426.5	451.5	476.5	501.5
A		121	146	171	196	221	246	271	296	321	346	371	396
B		90	115	140	165	190	215	240	265	290	315	340	365
C		10	35	60	85	110	135	160	185	210	235	260	285
D		25	50	75	100	125	150	175	200	225	250	275	300
E		0	0	0	1	1	2	2	3	3	4	4	5
F		25	50	75	50	75	50	75	50	75	50	75	50
G		4	4	4	6	6	8	8	10	10	12	12	14
H		0	0	0	1	1	2	2	3	3	4	4	5
J		(20)	45	70	45	70	45	70	45	70	45	70	45
K		(6)	6	6	8	8	10	10	12	12	14	14	16
Mass (kg)	Without Brake	0.51	0.55	0.58	0.61	0.65	0.68	0.71	0.75	0.78	0.81	0.85	0.88
	With Brake	0.6	0.64	0.67	0.7	0.74	0.77	0.8	0.84	0.87	0.9	0.94	0.97

Applicable Controllers

*** Controller for RCP4 series is PCON, MSEL, RCON or RSEL.**
Please refer our Controller General Catalog and/or contact IAI.