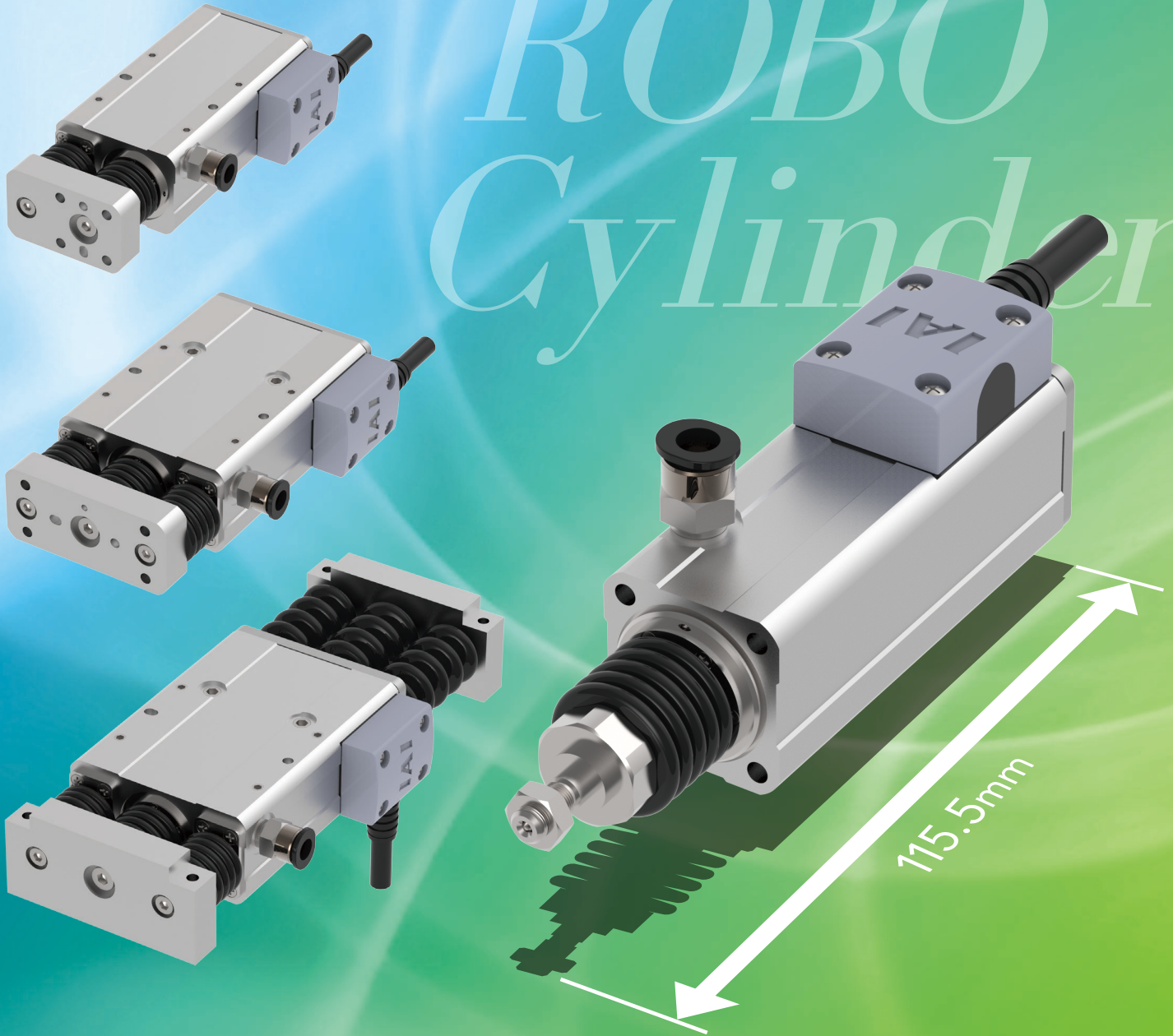


# IAI

Quality and Innovation

Cleanroom Specification/  
Dust/Splash-Proof Specification

## Mini ROBO Cylinder®



[www.intelligentactuator.com](http://www.intelligentactuator.com)

Next-generation cylinder that has achieved miniaturization

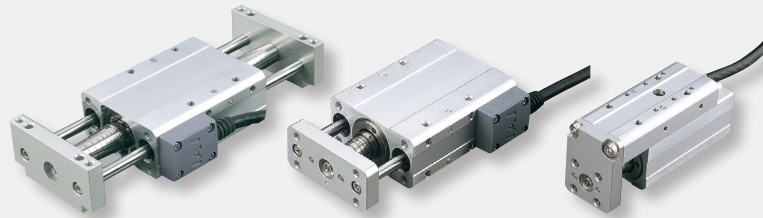
# Mini ROBO Cylinder®

Now with Additional Cleanroom Specification and Dust-proof/Splash-Proof Specification!

01

Mini ROBO Cylinder® Introduction

The newly developed motor allows for a far more compact size, comparable in size to an air cylinder. Models are available with the same shape as a typical air cylinder. This ROBO Cylinder can be used in applications where limited space previously required air cylinders.



02

Additional Cleanroom Specification and Dust-Proof/Splash-Proof Specification Series

Cleanroom specification and dust-proof/splash-proof specification types have been added. Select the type best suited to your environment.

Two standards represent cleanliness:

Clean Class 100

1. Fed.Std.209D Standard  
Displays the number of particles in 1ft3 with reference to particles of 0.5µm or more.  
<Display method> Class 1, 10, 100, 1,000, 10,000, 100,000

Clean Class 3.5

2. JIS B9920 (ISO 14644-1) Standard  
The number of particles 0.1µm or larger in 1m3 is expressed in exponents when expressed in powers of 10.

IP52

What is IP? IP <sup>5</sup> <sup>2</sup>  
It is the IEC standard regulated grade for the degree of waterproofing and dustproofing.

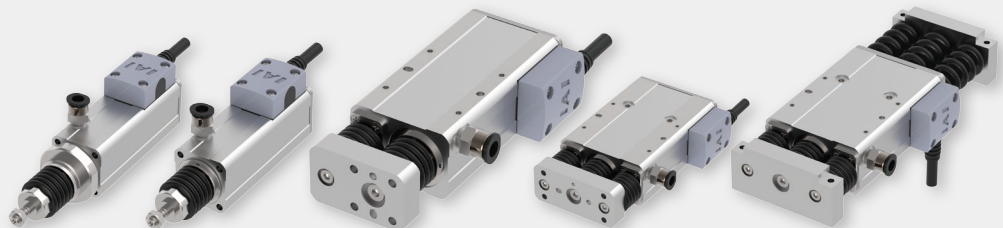
2nd Display Number ... Protection from water ingress  
2: No harmful effects from water drops falling within 15° from the vertical.

1st Display Number ... Protection from the human body or solid foreign matter  
5: Dust that will affect operation will not enter the main body.










03

Abundant Variation

Cleanroom, dust-proof and splash-proof models have been added to 5 types, with 3 sizes of each type, for a total of 15 models.



# Product Lineup

Shape	Name	External view	Model		Body width	Max. payload (horizontal)	Reference page	
			Series name	Type name				
Without guide	Overall length short type	 Nut fixing type		RCA2CR RCA2W	RN3NB	28mm	3kg	3
					RN4NB	34mm	6kg	5
		 Tapped mounting hole type		RCA2CR RCA2W	RP3NB	28mm	3kg	9
					RP4NB	34mm	6kg	11
				RCS2CR RCS2W	RP5NB	46mm	20kg	13
With guide	Overall length short type	 Single guide type		RCA2CR RCA2W	GS3NB	28mm	3kg	15
					GS4NB	34mm	6kg	17
				RCS2CR RCS2W	GS5NB	46mm	20kg	19
		 Double guide type		RCA2CR RCA2W	GD3NB	28mm	3kg	21
					GD4NB	34mm	6kg	23
				RCS2CR RCS2W	GD5NB	46mm	20kg	25
		 Slide unit type		RCA2CR RCA2W	SD3NB	60mm	3kg	27
					SD4NB	72mm	6kg	29
				RCS2CR RCS2W	SD5NB	94mm	20kg	31

# RCA2CR-RN3NB

# RCA2W-RN3NB

Cleanroom

Dust/Splash-proof

Mini

Motor Unit Type

Built-in Motor

Body Width  
28 mm

24v  
AC Servo Motor

Model Specification Items

Series	—	RN3NB	—	I	—	10	—		—		—		—		—	
RCA2CR: Cleanroom specification				I: Incremental * Models used with the simple absolute encoder also have an "I" in the name.		10: 10W Servo motor		4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm		30:30mm 50:50mm		A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB		N: None P: 1m S: 3m M: 5m X: Special Length		Refer to Options table below.

\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

- POINT Selection Notes**
- (1) The feed screw of this product has no rotation stopper. A rotation stop mechanism such as a guide on the tip of the feed screw must be added. (Without a rotation stopper the feed screw will idle and cannot move back and forth.) Also, do not use floating joints when connecting the rotation stop mechanism to the rod. Please refer to P.35 for more information about the mounting method and criteria.
  - (2) The value of the horizontal payload assumes that there is an external guide.
  - (3) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 1 and vertical use). The indicated values are the upper limits for the allowable acceleration.
  - (4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
  - (5) Do not apply external force to the rod in a direction other than the rod moving direction.
  - (6) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-RN3NB-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25	42.7	±0.02	30 50
RCA2CR/W-RN3NB-I-10-2-①-②-③-④			2	1.5	0.5	85.5		
RCA2CR/W-RN3NB-I-10-1-①-②-③-④			1	3	1	170.9		

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

### Stroke and Max Speed

Stroke / Lead	30 (mm)	50 (mm)
	4	200
2	100	
1	50	

(Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	8kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	1mm Lead: 3000km or 50 million cycles, 2mm Lead, 4mm: 5000km or 50 million cycles	

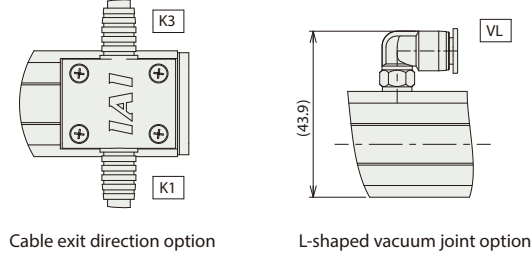
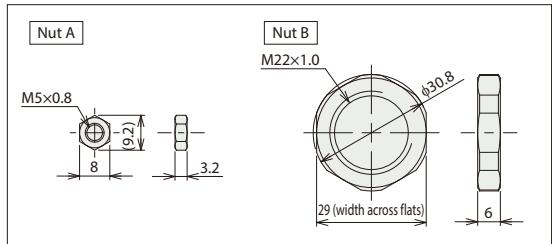
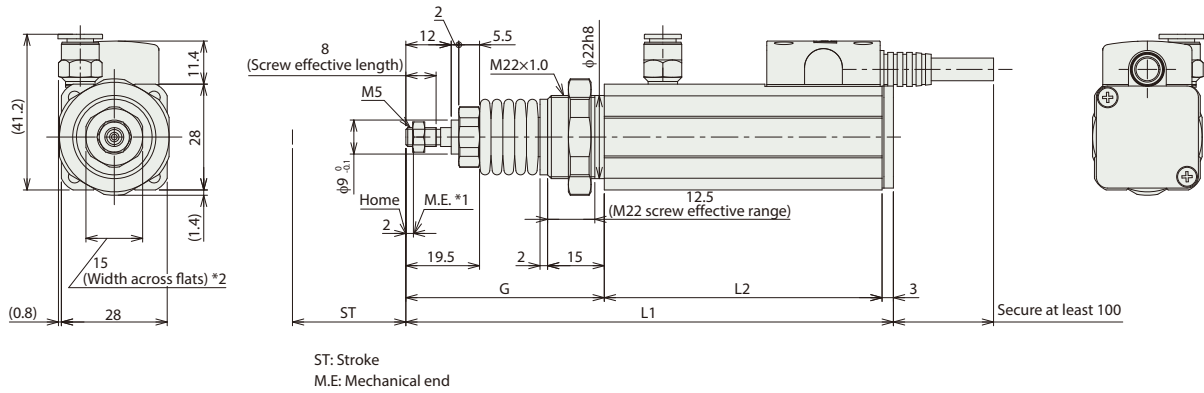
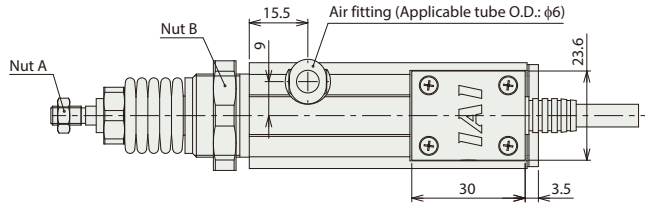
Dimensions

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



- \*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end
- \*2 The direction of width across flats surface varies depending on the product.

**Notes**  
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



**Notes**  
Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

**Dimensions and Mass by Stroke**

Stroke (ST)	30	50
L1	129	155
L2	73.5	93.5
G	52.5	58.5
Mass (kg)	0.30	0.34

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	DeviceNet, CC-Link, CompoNet, MECHATROLINK, EtherCAT, EtherNet/IP, SSCNET III/H	512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		—	—	●	SSCNET III/H	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500	Please contact IAI for more information.
RCM-P6AC		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog (CJ238-3A)

# RCA2CR-RN4NB

# RCA2W-RN4NB

Cleanroom

Mini

Motor Unit Type

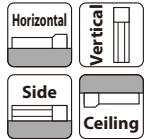
Built-in Motor

Body Width  
34 mm

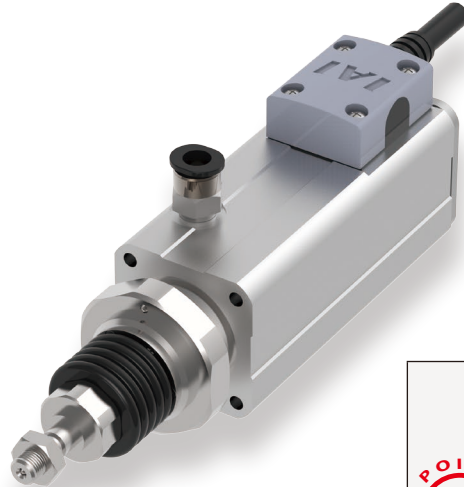
24v  
AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCA2CR: Cleanroom specification RCA2W: Dust-proof/splash-proof specification	RN4NB	I	20	20 : 20W Servo motor	6 : Ball screw 6mm 4 : Ball screw 4mm 2 : Ball screw 2mm	30:30mm 50:50mm	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Refer to Options table below.

\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

- POINT Selection Notes**
- (1) The feed screw of this product has no rotation stopper. A rotation stop mechanism such as a guide on the tip of the feed screw must be added. (Without a rotation stopper the feed screw will idle and cannot move back and forth.) Also, do not use floating joints when connecting the rotation stop mechanism to the rod. Please refer to P.35 for more information about the mounting method and criteria.
  - (2) The value of the horizontal payload assumes that there is an external guide.
  - (3) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 2 and vertical use). The indicated values are the upper limits for the allowable acceleration.
  - (4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
  - (5) Do not apply external force to the rod in a direction other than the rod moving direction.
  - (6) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-RN4NB-I-20-6-①-②-③-④	20	Ball screw	6	2	0.5	33.8	±0.02	30 50
RCA2CR/W-RN4NB-I-20-4-①-②-③-④			4	3	0.75	50.7		
RCA2CR/W-RN4NB-I-20-2-①-②-③-④			2	6	1.5	101.5		

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

### Stroke and Max Speed

Stroke / Lead	30 (mm)	50 (mm)
	6	270<220>
4	200	
2	100	

\*Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	
Suction pressure	4kPa	
Protective structure	-	
Air purge	IP52	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

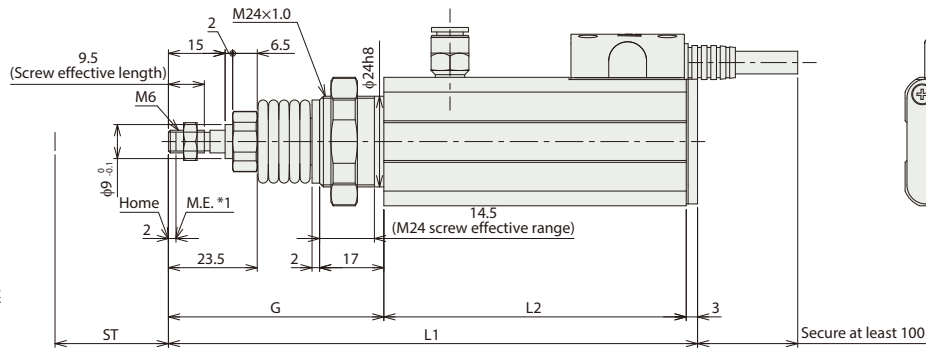
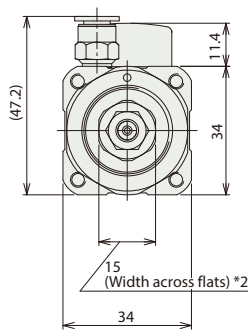
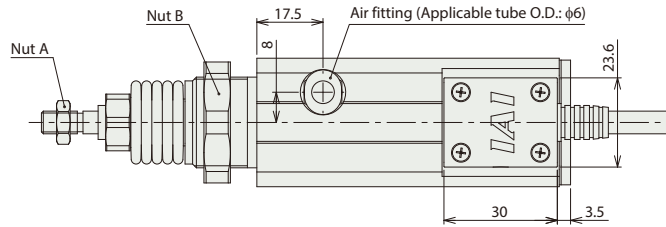
CAD drawings can be downloaded from our website.  
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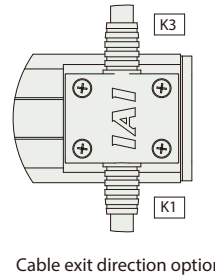
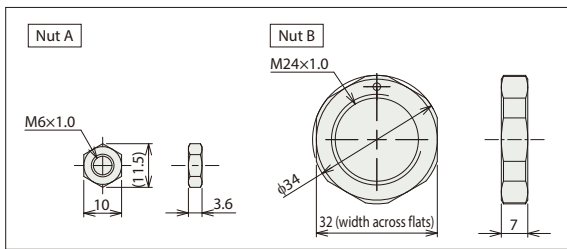
- \*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end
- \*2 The direction of width across flats surface varies depending on the product.

Notes

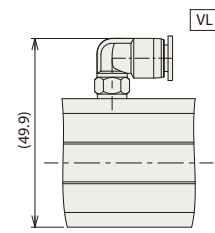
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



ST: Stroke  
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

Dimensions and Mass by Stroke

Stroke (ST)	30	50
L1	140	166
L2	80	100
G	57	63
Mass (kg)	0.44	0.50

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—		512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.				—	256
MCON-LC/LCG		6		—	—	●	—	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	—	1500	Please contact IAI for more information.
RCM-P6AC		1		Can be used within the RCP6S Gateway system.				—	768

# RCS2CR-RN5NB

# RCS2W-RN5NB

Cleanroom

Mini

Motor Unit Type

Built-in Motor

Body Width  
34 mm

200V AC Servo Motor

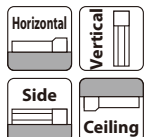
Model Specification Items

Series	—	<b>RN5NB</b>	—	<b>I</b>	—	<b>60</b>	—		—	<b>T2</b>	—		—	
RCS2CR: Cleanroom specification				I: Incremental		60 : 60W Servo motor		10 : 10mm 5 : 5mm 2.5 : 2.5mm		50:50mm 75:75mm		T2:SCON SSEL XSEL-P/Q		N : None P : 1m S : 3m M : 5m X□□ : Special Length R□□ : Robot cable
RCS2W: Dust-proof/splash-proof specification														Refer to Options table below.

\* Does not include a controller.



\* CE is an available option.



\* Depending on the model, there may be some limitations to using the vertical mount position.



- POINT Selection Notes**
- (1) The feed screw of this product has no rotation stopper. A rotation stop mechanism such as a guide on the tip of the feed screw must be added. (Without a rotation stopper the feed screw will idle and cannot move back and forth.) Also, do not use floating joints when connecting the rotation stop mechanism to the rod. Please refer to P.35 for more information about the mounting method and criteria.
  - (2) The value of the horizontal payload assumes that there is an external guide.
  - (3) The value of payload is when operating at an acceleration of 0.3G horizontally (0.2G for lead 2.5) and 0.2G vertically. The indicated values are the upper limits for the allowable acceleration.
  - (4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
  - (5) Do not apply external force to the rod in a direction other than the rod moving direction.
  - (6) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCS2CR/W-RN5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	50 75
RCS2CR/W-RN5NB-I-60-5-①-T2-②-③			5	10	3	178		
RCS2CR/W-RN5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		

Legend: ① Stroke ② Cable Length ③ Option

### Stroke and Max Speed

Lead	Stroke	50 (mm)	75 (mm)
		10	280<230>
5		250<230>	250
2.5		125	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
50	○	○
75	○	○

### ② Cable Length

Type	Cable code
Standard	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)

### ③ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
CE compliant specification	<b>CE</b>	See P.36
Connector cable exit from left side	<b>K1</b>	See P.36
Connector cable exit from right side	<b>K3</b>	See P.36
L-shaped vacuum joint specification	<b>VL</b>	See P.36

## Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	1kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	



Dimensions

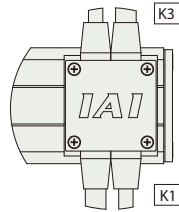
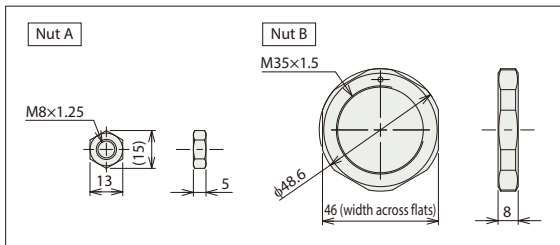
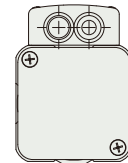
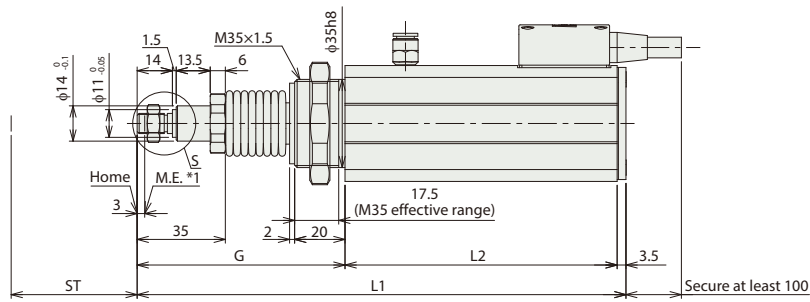
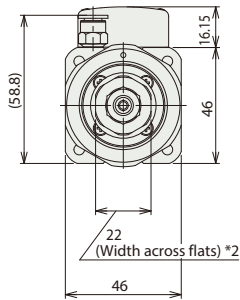
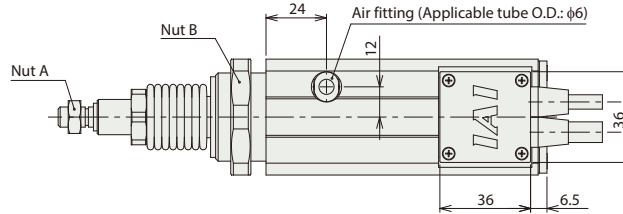
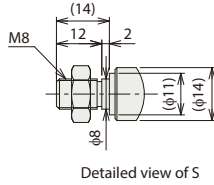
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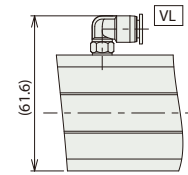
- \*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end
- \*2 The direction of width across flats surface varies depending on the product.

Notes

The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



Cable exit direction option



L-shaped vacuum joint option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2000mm.  
The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

■ Dimensions and Mass by Stroke

Stroke (ST)	50	75
L1	194	225
L2	108	133
G	82.5	88.5
Mass (kg)	1.06	1.18

Applicable Controllers

The RCS2CR/RCS2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100/200VAC	●	●	-	DeviceNet CC-Link CompoNet MECHATROLINK EtherCAT EtherNet/IP	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		-	-	●		512 (768 for network spec.)	Please contact IAI for more information.
SSEL-CS		2		●	-	●		20000	Please contact IAI for more information.
XSEL-P/Q		6		Single phase 200VAC Three-phase 200VAC	-	-		●	20000

\* Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA.

# RCA2CR-RP3NB

# RCA2W-RP3NB

Cleanroom

Dust/Splash-proof

Mini

Motor Unit Type

Built-in Motor

Body Width  
28 mm

24v  
AC Servo  
Motor

Model Specification Items

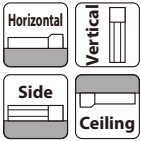
Series	RP3NB	Encoder Type	I	Motor Type	10	Lead	4 : Ball screw 4mm 2 : Ball screw 2mm 1 : Ball screw 1mm	Stroke	30:30mm 50:50mm	Applicable Controllers	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	Cable Length	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Options	Refer to Options table below.
--------	-------	--------------	---	------------	----	------	--	--------	--------------------	------------------------	--	--------------	--	---------	-------------------------------

RCA2CR: Cleanroom specification  
RCA2W: Dust-proof/splash-proof specification

I: Incremental  
\* Models used with the simple absolute encoder also have an "I" in the name.

10 : 10W Servo motor

\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

- POINT Selection Notes**
- (1) The feed screw of this product has no rotation stopper. A rotation stop mechanism such as a guide on the tip of the feed screw must be added. (Without a rotation stopper the feed screw will idle and cannot move back and forth.) Also, do not use floating joints when connecting the rotation stop mechanism to the rod. Please refer to P.35 for more information about the mounting method and criteria.
  - (2) The value of the horizontal payload assumes that there is an external guide.
  - (3) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 1 and vertical use). The indicated values are the upper limits for the allowable acceleration.
  - (4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
  - (5) Do not apply external force to the rod in a direction other than the rod moving direction.
  - (6) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-RP3NB-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25	42.7	±0.02	30 50
RCA2CR/W-RP3NB-I-10-2-①-②-③-④			2	1.5	0.5	85.5		
RCA2CR/W-RP3NB-I-10-1-①-②-③-④			1	3	1	170.9		

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

### Stroke and Max Speed

Stroke / Lead	30 (mm)	50 (mm)
	4	200
2	100	
1	50	

(Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	
Suction pressure	8kPa	
Protective structure	-	
Air purge	IP52	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	1mm Lead: 3000km or 50 million cycles, 2mm Lead, 4mm: 5000km or 50 million cycles	

Dimensions

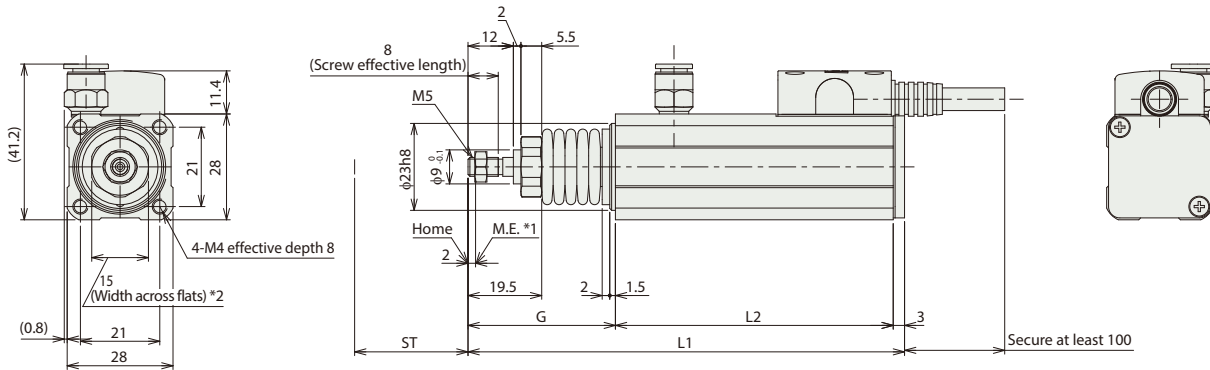
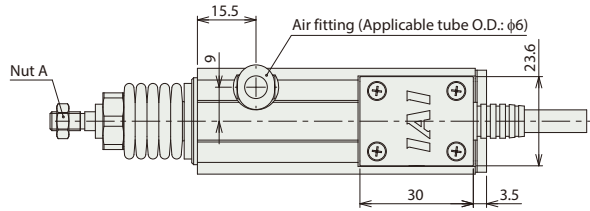
CAD drawings can be downloaded from our website.  
www.intelligentactuator.com



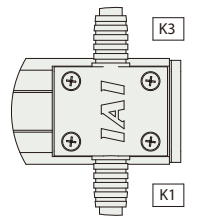
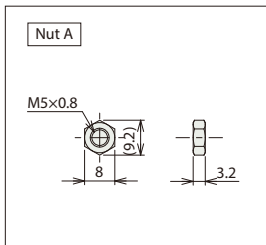
- \*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end
- \*2 The direction of width across flats surface varies depending on the product.

Notes

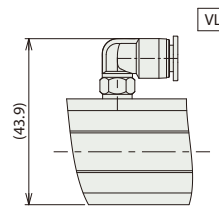
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



ST: Stroke  
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

Dimensions and Mass by Stroke

Stroke (ST)	30	50
L1	115.5	141.5
L2	73.5	93.5
G	39	45
Mass (kg)	0.25	0.29

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—		512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.					256
MCON-LC/LCG		6		—	—	●	256		Please contact IAI for more information.
ASEL-CS		2		●	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500	Please contact IAI for more information.
RCM-P6AC		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog (CJ238-3A)

# RCA2CR-RP4NB

# RCA2W-RP4NB

Cleanroom

Mini

Motor Unit Type

Built-in Motor

Body Width  
34 mm

24V AC Servo Motor

Model Specification Items

Series	RP4NB	Encoder Type	I	Motor Type	20	Lead	6 : Ball screw 6mm 4 : Ball screw 4mm 2 : Ball screw 2mm	Stroke	30:30mm 50:50mm	Applicable Controllers	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	Cable Length	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Options	Refer to Options table below.
--------	-------	--------------	---	------------	----	------	--	--------	--------------------	------------------------	--	--------------	--	---------	-------------------------------

\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

**POINT Selection Notes**

- The feed screw of this product has no rotation stopper. A rotation stop mechanism such as a guide on the tip of the feed screw must be added. (Without a rotation stopper the feed screw will idle and cannot move back and forth.) Also, do not use floating joints when connecting the rotation stop mechanism to the rod. Please refer to P.35 for more information about the mounting method and criteria.
- The value of the horizontal payload assumes that there is an external guide.
- The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 2 and vertical use). The indicated values are the upper limits for the allowable acceleration.
- Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
- Do not apply external force to the rod in a direction other than the rod moving direction.
- If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-RP4NB-I-20-6-①-②-③-④	20	Ball screw	6	2	0.5	33.8	±0.02	30 50
RCA2CR/W-RP4NB-I-20-4-①-②-③-④			4	3	0.75	50.7		
RCA2CR/W-RP4NB-I-20-2-①-②-③-④			2	6	1.5	101.5		

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

### Stroke and Max Speed

Stroke / Lead	30 (mm)	50 (mm)
	6	270<220>
4	200	
2	100	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

### Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	-
Suction pressure	4kPa	-
Protective structure	-	IP52
Air purge	-	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

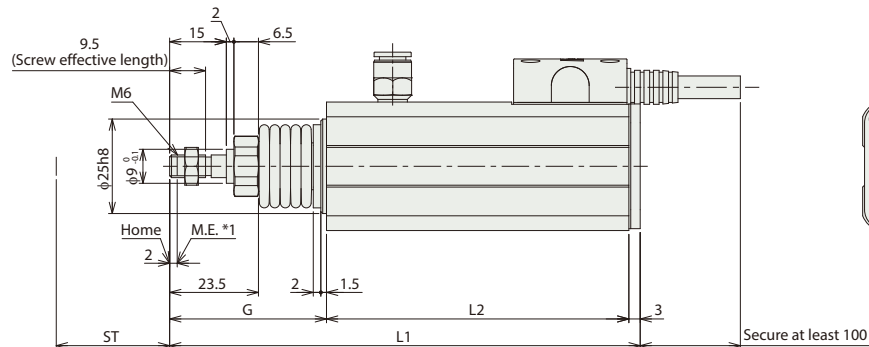
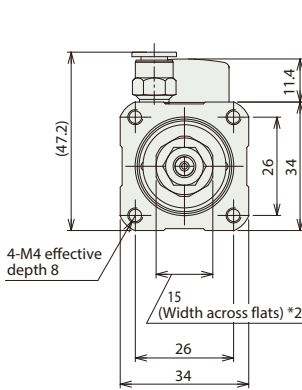
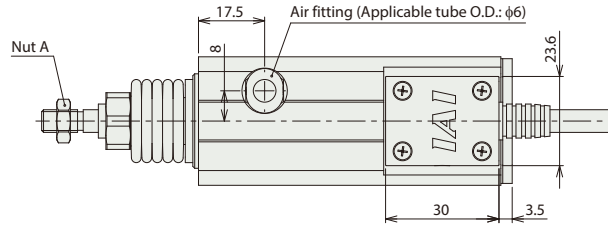
Dimensions

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

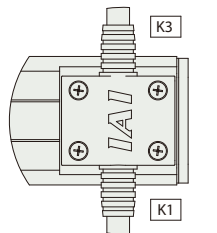
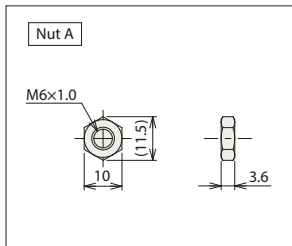


- \*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end
- \*2 The direction of width across flats surface varies depending on the product.

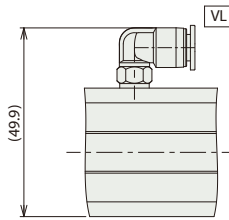
**Notes**  
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



ST: Stroke  
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

**Notes**  
Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

■ Dimensions and Mass by Stroke

Stroke (ST)	30	50
L1	124.5	150.5
L2	80	100
G	41.5	47.5
Mass (kg)	0.36	0.42

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—		512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.					256
MCON-LC/LCG		6		—	—	●		256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500	Please contact IAI for more information.
RCM-P6AC		1		Can be used within the RCP6S Gateway system.					768

# RCS2CR-RP5NB

# RCS2W-RP5NB

Cleanroom

Mini

Motor Unit Type

Built-in Motor

Body Width  
46 mm

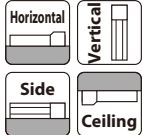
200V AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS2CR: Cleanroom specification RCS2W: Dust-proof/splash-proof specification	RP5NB	I	Incremental	60 : 60W Servo motor	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm 75:75mm	T2:SCON SSEL XSEL-P/Q	N : None P : 1m S : 3m M : 5m X □: Special Length R □: Robot cable	Refer to Options table below.

\* Does not include a controller.



\* CE is an available option.



\* Depending on the model, there may be some limitations to using the vertical mount position.



- POINT Selection Notes**
- (1) The feed screw of this product has no rotation stopper. A rotation stop mechanism such as a guide on the tip of the feed screw must be added. (Without a rotation stopper the feed screw will idle and cannot move back and forth.) Also, do not use floating joints when connecting the rotation stop mechanism to the rod. Please refer to P.35 for more information about the mounting method and criteria.
  - (2) The value of the horizontal payload assumes that there is an external guide.
  - (3) The value of payload is when operating at an acceleration of 0.3G horizontally (0.2G for lead 2.5) and 0.2G vertically. The indicated values are the upper limits for the allowable acceleration.
  - (4) Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
  - (5) Do not apply external force to the rod in a direction other than the rod moving direction.
  - (6) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCS2CR/W-RP5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	50 75
RCS2CR/W-RP5NB-I-60-5-①-T2-②-③			5	10	3	178		
RCS2CR/W-RP5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		

Legend: ① Stroke ② Cable Length ③ Option

### Stroke and Max Speed

Stroke / Lead	Stroke (mm)	
	50 (mm)	75 (mm)
10	280<230>	380<330>
5	250<230>	250
2.5	125	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
50	○	○
75	○	○

### ② Cable Length

Type	Cable code
Standard	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)

### ③ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
CE compliant specification	CE	See P.36
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

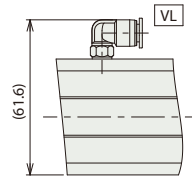
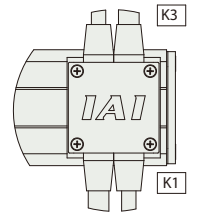
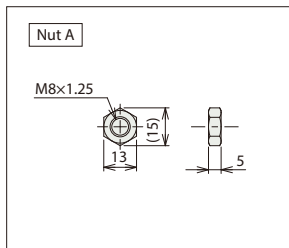
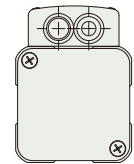
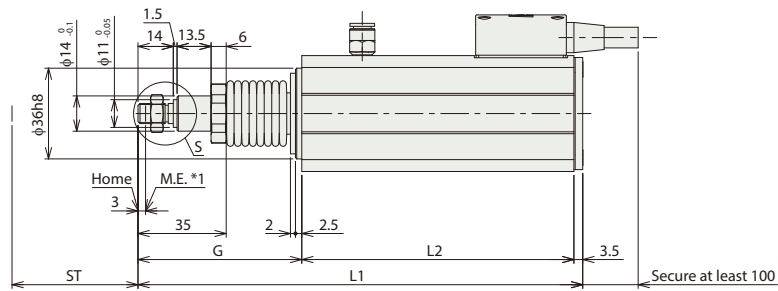
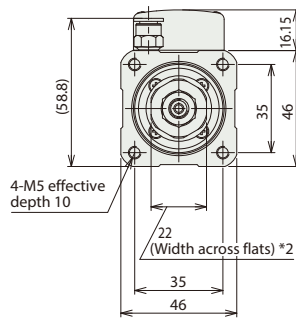
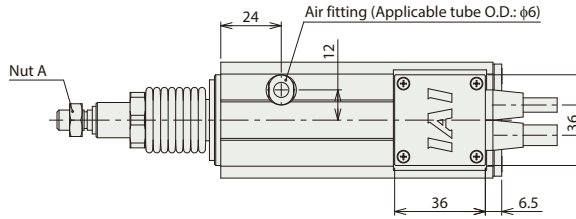
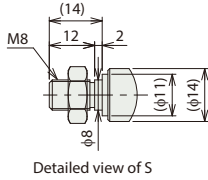
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	1kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

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



- \*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end
- \*2 The direction of width across flats surface varies depending on the product.



Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2000mm.  
The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

Dimensions and Mass by Stroke

Stroke (ST)	50	75
L1	176.5	207.5
L2	108	133
G	65	71
Mass (kg)	0.91	1.08

Applicable Controllers

The RCS2CR/RCS2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100/200VAC	●	●	-	DeviceNet CC-Link CompoNet MECHATROLINK EtherCAT EtherNet/IP	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		-	-	●		512 (768 for network spec.)	Please contact IAI for more information.
SSEL-CS		2		●	-	●		20000	Please contact IAI for more information.
XSEL-P/Q		6		-	-	●		20000	Please contact IAI for more information.

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

\* Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA.

# RCA2CR-GS3NB

# RCA2W-GS3NB

Cleanroom

Mini

Single with Guide

Motor Unit Type

Built-in Motor

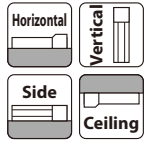
Body Width  
28 mm

24V AC Servo Motor

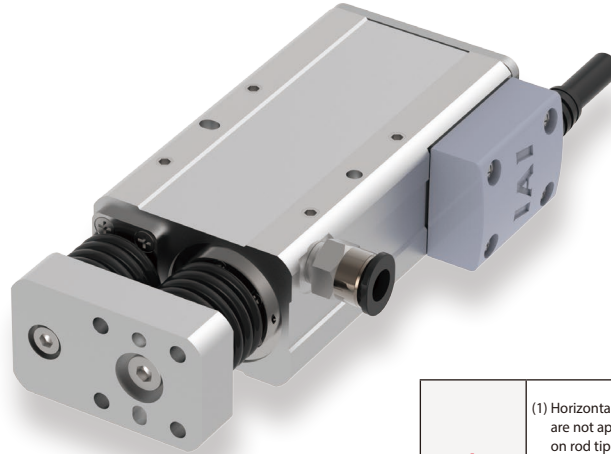
Model Specification Items

Series	GS3NB	Type	I	Encoder Type	10	Motor Type	10 : 10W Servo motor	Lead	4 : Ball screw 4mm 2 : Ball screw 2mm 1 : Ball screw 1mm	Stroke	30:30mm 50:50mm	Applicable Controllers	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	Cable Length	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Options	Refer to Options table below.
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\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

**POINT Selection Notes**

- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information). Single guide types cannot be used if force will be applied in the direction of rotation. Use a double guide type.
- (2) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 1 and vertical use). The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
- (4) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-GS3NB-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25	42.7	±0.02	30 50
RCA2CR/W-GS3NB-I-10-2-①-②-③-④			2	1.5	0.5	85.5		
RCA2CR/W-GS3NB-I-10-1-①-②-③-④			1	3	1	170.9		

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

### Stroke and Max Speed

Stroke / Lead	30 (mm)	50 (mm)
	4	200
2	100	
1	50	

(Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	8kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	1mm Lead: 3000km or 50 million cycles, 2mm Lead, 4mm: 5000km or 50 million cycles	

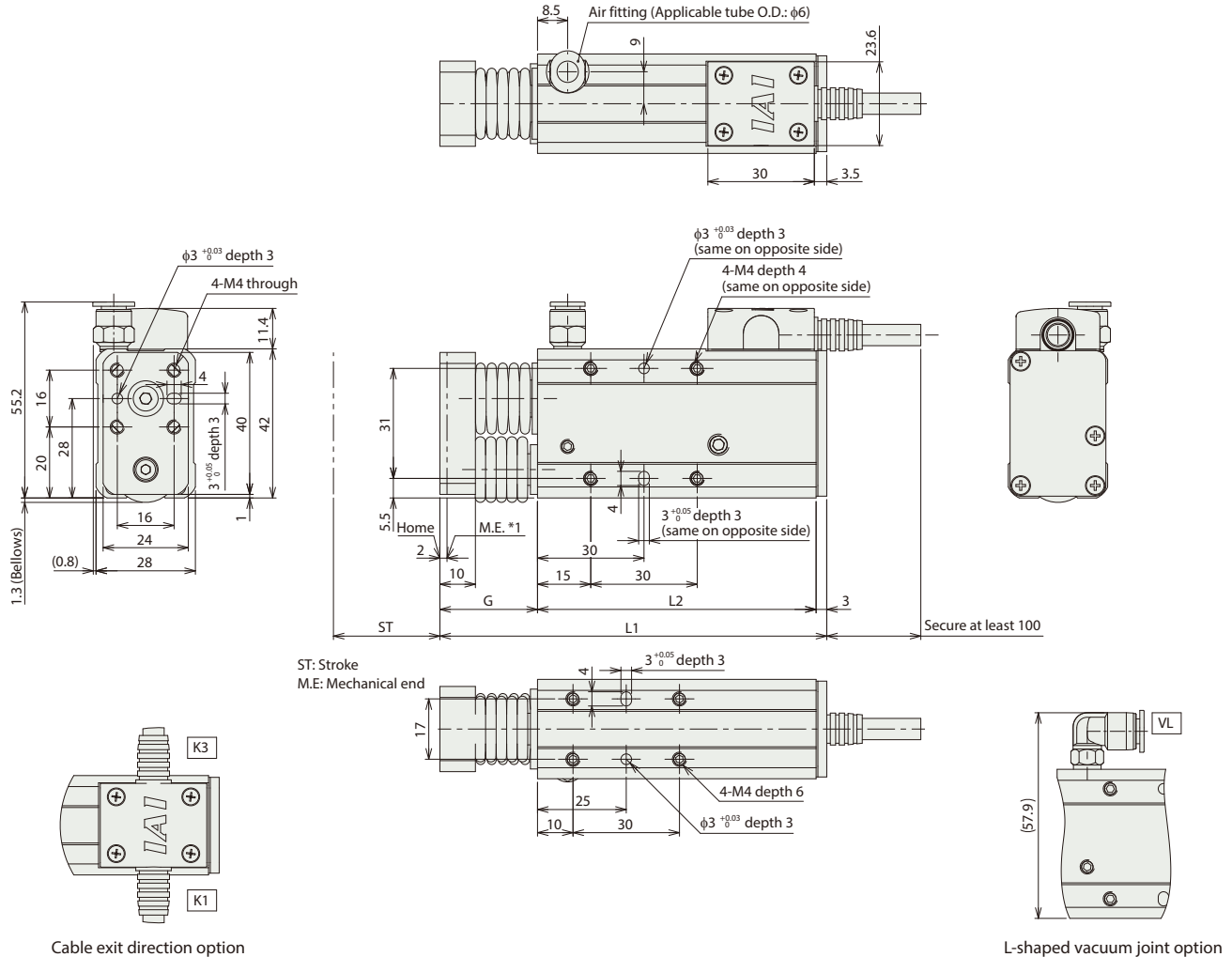


Dimensions

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



\*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end  
\* Ensure the screw depth does not exceed that listed in the table.



**Notes**  
Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

**Dimensions and Mass by Stroke**

Stroke (ST)	30	50
L1	109	135
L2	78.5	98.5
G	27.5	33.5
Mass (kg)	0.34	0.39

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	●	●	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		* Option	* Option	—	  	512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.				   	256
MCON-LC/LCG		6		—	—	●	256		Please contact IAI for more information.
ASEL-CS		2		●	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500	Please contact IAI for more information.
RCM-P6AC		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog (CJ238-3A)

# RCA2CR-GS4NB

# RCA2W-GS4NB

Cleanroom

Mini

Single with Guide

Motor Unit Type

Built-in Motor

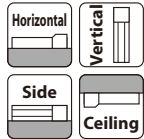
Body Width  
**34 mm**

**24v**  
AC Servo Motor

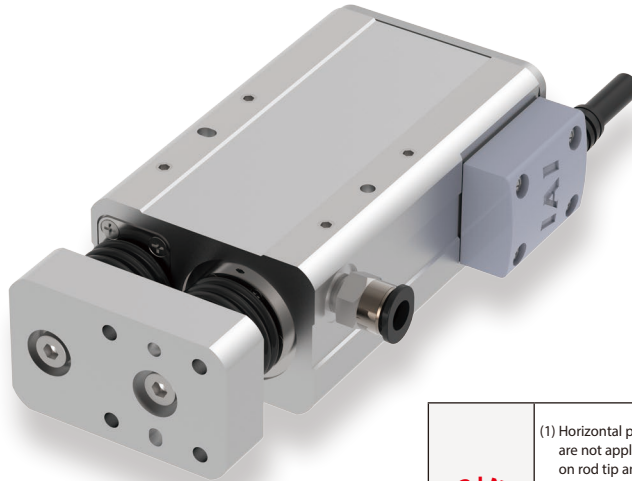
Model Specification Items

Series	GS4NB	Encoder Type	I	Motor Type	20	Lead	6 : Ball screw 6mm 4 : Ball screw 4mm 2 : Ball screw 2mm	Stroke	30:30mm 50:50mm	Applicable Controllers	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	Cable Length	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Options	Refer to Options table below.
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\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

**POINT Selection Notes**

- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information). Single guide types cannot be used if force will be applied in the direction of rotation. Use a double guide type.
- (2) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 2 and vertical use). The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
- (4) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-GS4NB-I-20-6-①-②-③-④	20	Ball screw	6	2	0.5	33.8	±0.02	30 50
RCA2CR/W-GS4NB-I-20-4-①-②-③-④			4	3	0.75	50.7		
RCA2CR/W-GS4NB-I-20-2-①-②-③-④			2	6	1.5	101.5		

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

### Stroke and Max Speed

Stroke / Lead	Stroke	30 (mm)	50 (mm)
	6	270<220>	300
4		200	
2		100	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

### Actuator Specifications

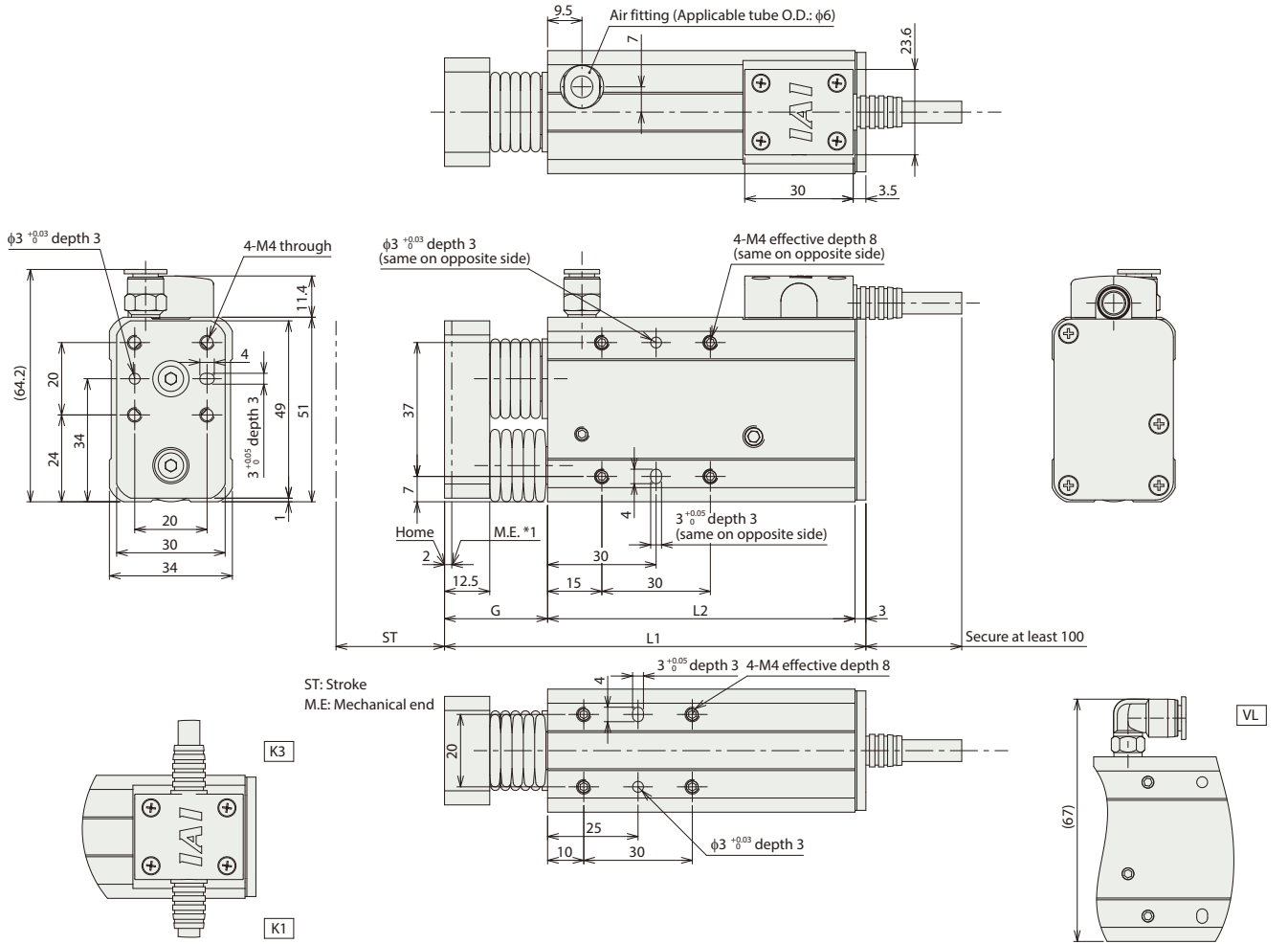
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	4kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

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



- \*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end
- \* Ensure the screw depth does not exceed that listed in the table.



Cable exit direction option

L-shaped vacuum joint option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

■ Dimensions and Mass by Stroke

Stroke (ST)	30	50
L1	116.5	142.5
L2	85	105
G	28.5	34.5
Mass (kg)	0.64	0.70

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—		512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		—	—	●		256	Please contact IAI for more information.
ASEL-CS		2		●	—	●		Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500
RCM-P6AC		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog (CJ238-3A)

# RCS2CR-GS5NB

# RCS2W-GS5NB

Cleanroom

Mini

Single with Guide

Motor Unit Type

Built-in Motor

Body Width  
**46 mm**

**200v**  
AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS2CR: Cleanroom specification RCS2W: Dust-proof/splash-proof specification	GS5NB	I	Incremental	60 : 60W Servo motor	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm 75:75mm	T2:SCON SSEL XSEL-P/Q	N : None P : 1m S : 3m M : 5m X : Special Length R : Robot cable	Refer to Options table below.

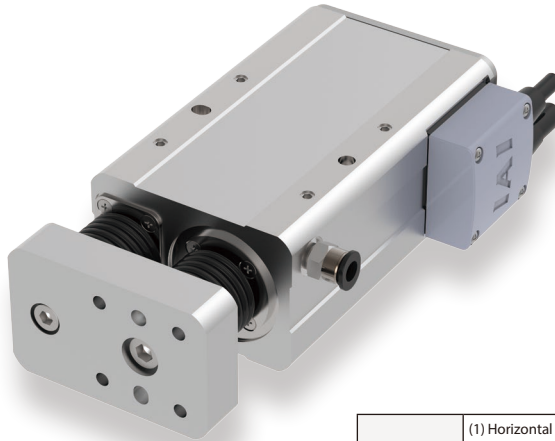
\* Does not include a controller.



\* CE is an available option.



\* Depending on the model, there may be some limitations to using the vertical mount position.



**POINT Selection Notes**

- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information). Single guide types cannot be used if force will be applied in the direction of rotation. Use a double guide type.
- (2) The value of payload is when operating at an acceleration of 0.3G horizontally (0.2G for lead 2.5) and 0.2G vertically. The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
- (4) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCS2CR/W-GS5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	50 75
RCS2CR/W-GS5NB-I-60-5-①-T2-②-③			5	10	3	178		
RCS2CR/W-GS5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		

Legend: ① Stroke ② Cable Length ③ Option

### Stroke and Max Speed

Stroke \ Lead	Stroke	
	50 (mm)	75 (mm)
10	280<230>	380<330>
5	250<230>	250
2.5	125	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
50	○	○
75	○	○

### ② Cable Length

Type	Cable code
Standard	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)

### ③ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
CE compliant specification	CE	See P.36
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

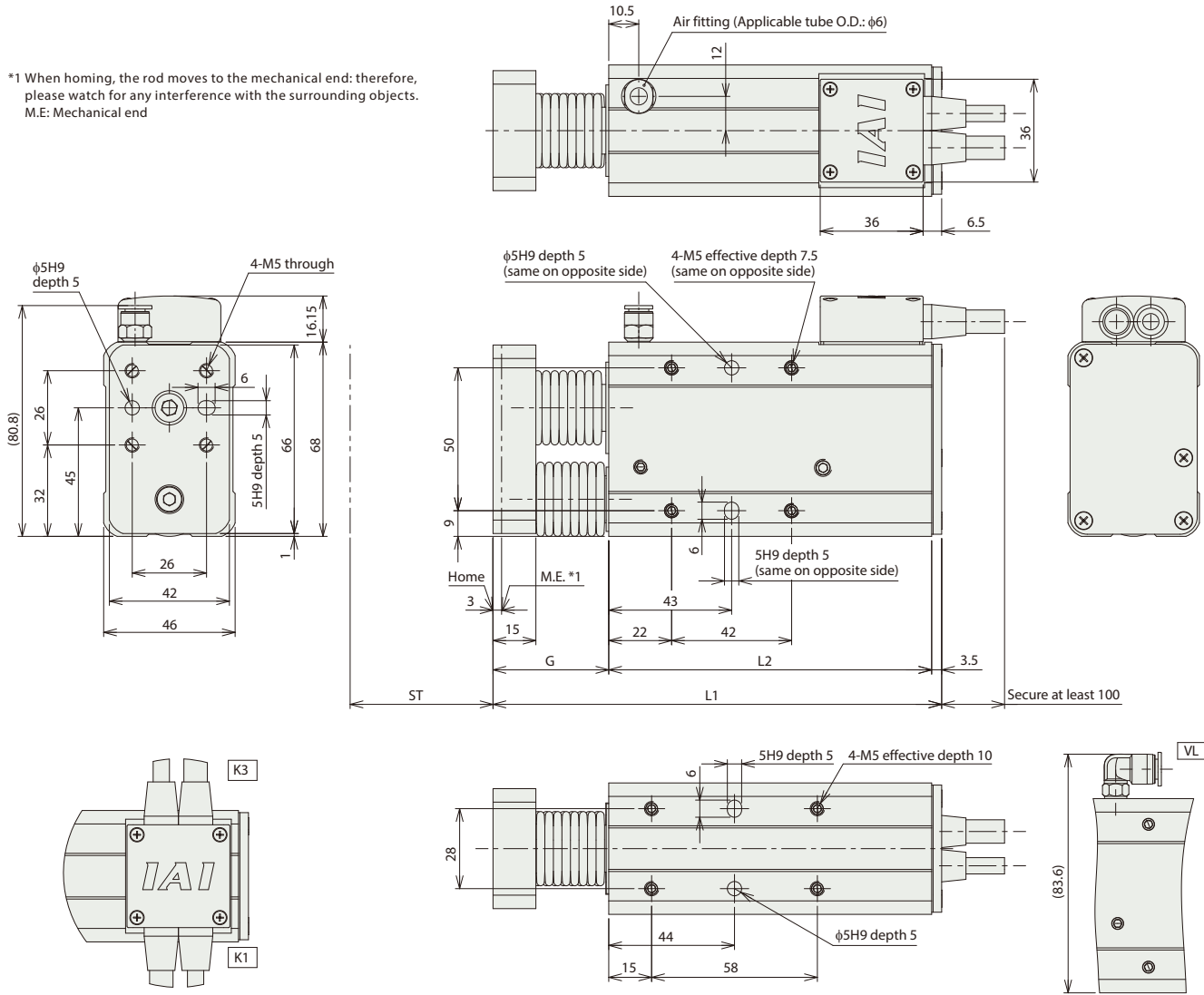
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	-
Suction pressure	1kPa	-
Protective structure	-	IP52
Air purge	-	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

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



\*1 When homing, the rod moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end



Cable exit direction option

L-shaped vacuum joint option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2000mm.  
The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

Dimensions and Mass by Stroke

Stroke (ST)	50	75
L1	157	188
L2	113	138
G	40.5	46.5
Mass (kg)	1.38	1.48

Applicable Controllers

The RCS2CR/RCS2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100/200VAC	●	●	-	DeviceNet CC-Link CompoNet MECHATROLINK EtherCAT EtherNet/IP	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		-	-	●		512 (768 for network spec.)	Please contact IAI for more information.
SSEL-CS		2		●	-	●		20000	Please contact IAI for more information.
XSEL-P/Q		6	Single phase 200VAC Three-phase 200VAC	-	-	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	Please contact IAI for more information.

\* Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA.

# RCA2CR-GD3NB

# RCA2W-GD3NB

Cleanroom Mini Double With guide Motor Unit Type Built-in Motor Body Width 28mm 24v AC Servo Motor

Model Specification Items

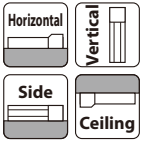
Series	GD3NB	Encoder Type	I	Motor Type	10	Lead	30:30mm 50:50mm	Stroke	30:30mm 50:50mm	Applicable Controllers	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	Cable Length	N : None P : 1m S : 3m M : 5m X: Special Length	Options	Refer to Options table below.
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RCA2CR: Cleanroom specification  
RCA2W: Dust-proof/splash-proof specification

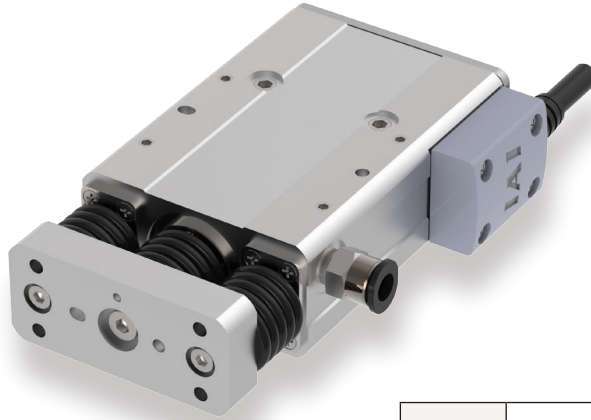
I: Incremental  
\* Models used with the simple absolute encoder also have an "I" in the name.

10: 10W Servo motor  
4: Ball screw 4mm  
2: Ball screw 2mm  
1: Ball screw 1mm

\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

**POINT Selection Notes**

- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information).
- (2) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 1 and vertical use). The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
- (4) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

Actuator Specifications											
Lead and Payload					Stroke and Max Speed						
Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)	Stroke		
				Horizontal (kg)	Vertical (kg)				Lead	30 (mm)	50 (mm)
RCA2CR/W-GD3NB-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25	42.7	±0.02	30 50	4	200	
RCA2CR/W-GD3NB-I-10-2-①-②-③-④			2	1.5	0.5	85.5			2	100	
RCA2CR/W-GD3NB-I-10-1-①-②-③-④			1	3	1	170.9			1	50	

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options (Unit: mm/s)

**① Stroke**

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

**③ Cable Length**

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

\* RCA2 cables are robot cables as standard.

**④ Options** \* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

**Actuator Specifications**

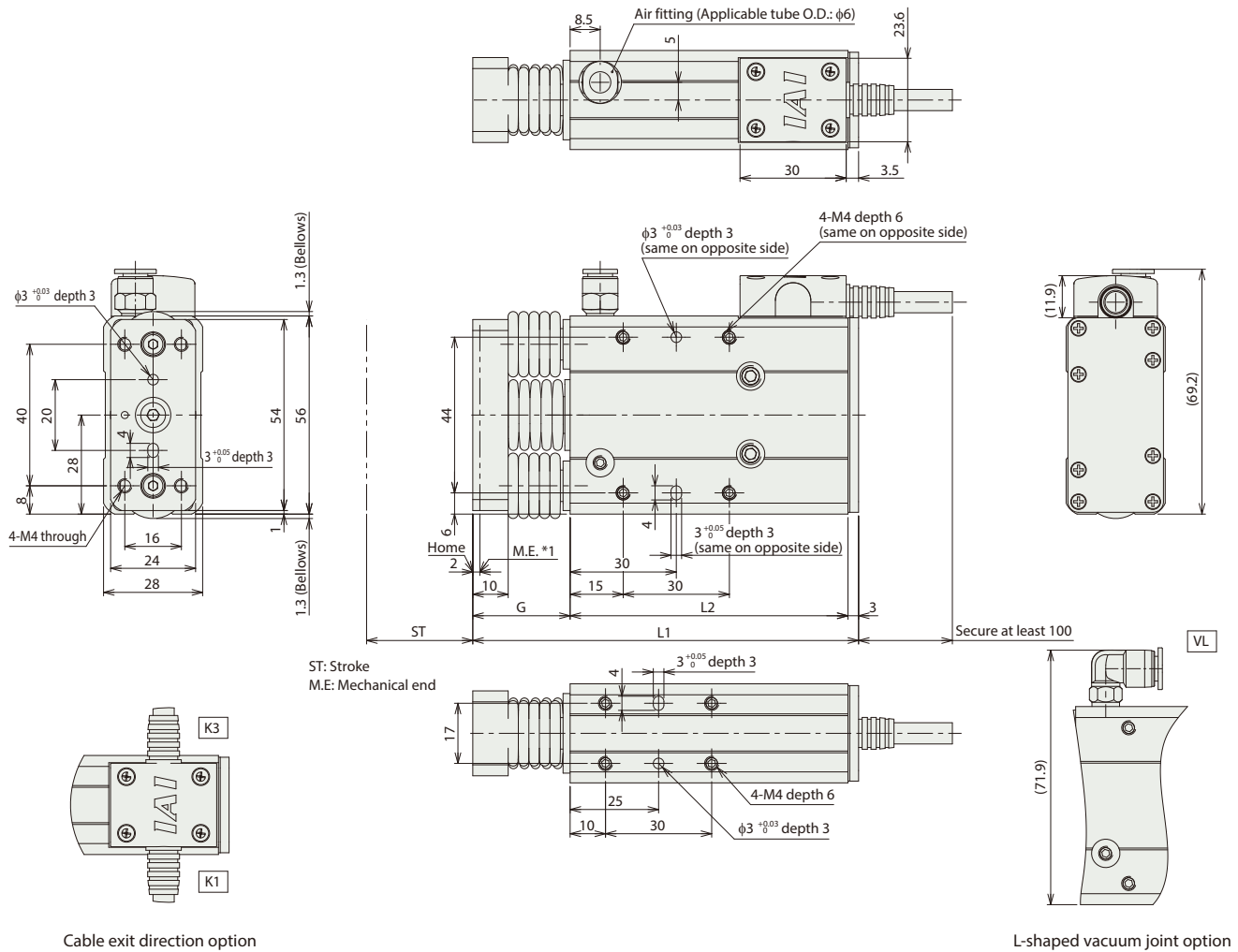
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	8kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	1mm Lead: 3000km or 50 million cycles, 2mm Lead, 4mm: 5000km or 50 million cycles	

Dimensions

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



\*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end



**Notes**  
Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

■ Dimensions and Mass by Stroke

Stroke (ST)	30	50
L1	109	135
L2	78.5	98.5
G	27.5	33.5
Mass (kg)	0.44	0.54

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—		512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		—	—	●		256	Please contact IAI for more information.
ASEL-CS		2		●	—	●		1500	Please contact IAI for more information.
RCM-P6AC		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog (CJ238-3A)

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

# RCA2CR-GD4NB

# RCA2W-GD4NB

Cleanroom    Mini    Double With guide    Motor Unit Type    Built-in Motor    Body Width 34 mm    24v AC Servo Motor

**Model Specification Items**  
 Series: **GD4NB**    Type: **I**    Encoder Type: **20**    Motor Type: **20**    Lead: **6**    Stroke: **30:30mm / 50:50mm**    Applicable Controllers: **A1:ASEL, A3:ACON-CYB/PLB/POB, MCON, RCM-P6AC, A5:ACON-CB/CGB**    Cable Length: **N, P, S, M, X**    Options: Refer to Options table below.

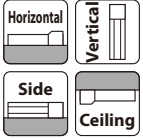
RCA2CR: Cleanroom specification  
 RCA2W: Dust-proof/splash-proof specification

I: Incremental  
 \* Models used with the simple absolute encoder also have an "I" in the name.

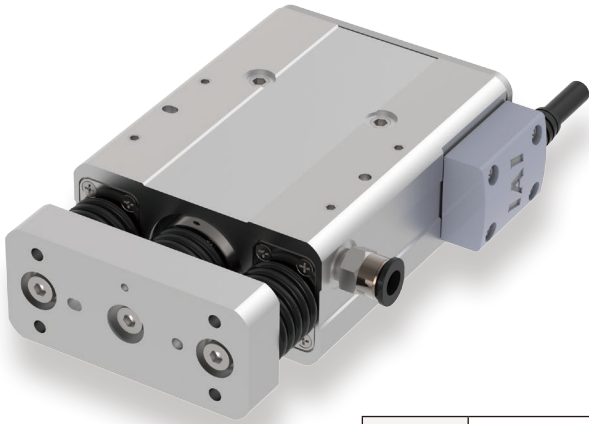
20: 20W Servo motor  
 6: Ball screw 6mm  
 4: Ball screw 4mm  
 2: Ball screw 2mm

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

\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

**POINT Selection Notes**

- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information).
- (2) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 2 and vertical use). The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
- (4) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-GD4NB-I-20-6-①-②-③-④	20	Ball screw	6	2	0.5	33.8	±0.02	30 50
RCA2CR/W-GD4NB-I-20-4-①-②-③-④			4	3	0.75	50.7		
RCA2CR/W-GD4NB-I-20-2-①-②-③-④			2	6	1.5	101.5		

### Stroke and Max Speed

Stroke / Lead	30 (mm)	50 (mm)
	6	270<220>
4	200	
2	100	

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options      Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
30	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options \* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Energy saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

### Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	-
Suction pressure	4kPa	-
Protective structure	-	IP52
Air purge	-	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

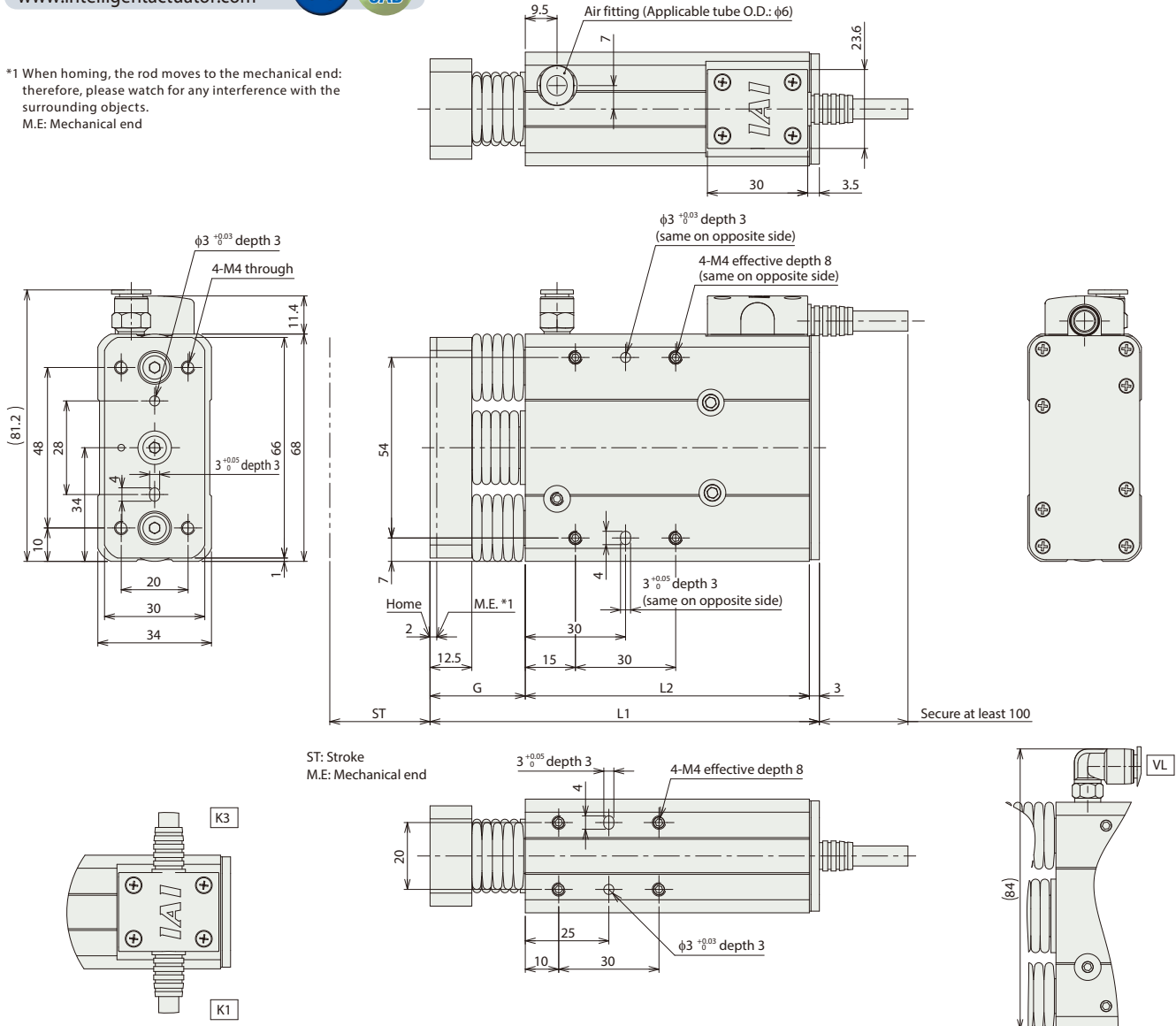


Dimensions

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



\*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end



Cable exit direction option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

L-shaped vacuum joint option  
■ Dimensions and Mass by Stroke

Stroke (ST)	30	50
L1	116.5	142.5
L2	85	105
G	28.5	34.5
Mass (kg)	0.72	0.86

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	DeviceNet CC-Link CompoNet	512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		—	—	●	MECHATROLINK EtherCAT EtherNet/IP SACNET III/IIH	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500	Please contact IAI for more information.
RCM-P6AC		1	Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog (CJ238-3A)	

# RCS2CR-GD5NB

# RCS2W-GD5NB

Cleanroom

Mini

Double With guide

Motor Unit Type

Built-in Motor

Body Width **46 mm**

**200v** AC Servo Motor

Dust/Splash-proof

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS2CR: Cleanroom specification RCS2W: Dust-proof/splash-proof specification	GD5NB	I	60	60 : 60W Servo motor	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50:50mm 75:75mm	T2:SCON SSEL XSEL-P/Q	N : None P : 1m S : 3m M : 5m X□□ : Special Length R□□ : Robot cable	Refer to Options table below.

\* Does not include a controller.



\* CE is an available option.



\* Depending on the model, there may be some limitations to using the vertical mount position.



**POINT Selection Notes**

- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information).
- (2) The value of payload is when operating at an acceleration of 0.3G horizontally (0.2G for lead 2.5) and 0.2G vertically. The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/ deceleration, etc.). Please contact IAI for more information.
- (4) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (w)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCS2CR/W-GD5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	50 75
RCS2CR/W-GD5NB-I-60-5-①-T2-②-③			5	10	3	178		
RCS2CR/W-GD5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		

Legend: ① Stroke ② Cable Length ③ Option

### Stroke and Max Speed

Stroke / Lead	50 (mm)	75 (mm)
	10	280<230>
5	250<230>	250
2.5	125	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
50	○	○
75	○	○

### ② Cable Length

Type	Cable code
Standard	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)

### ③ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
CE compliant specification	CE	See P.36
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

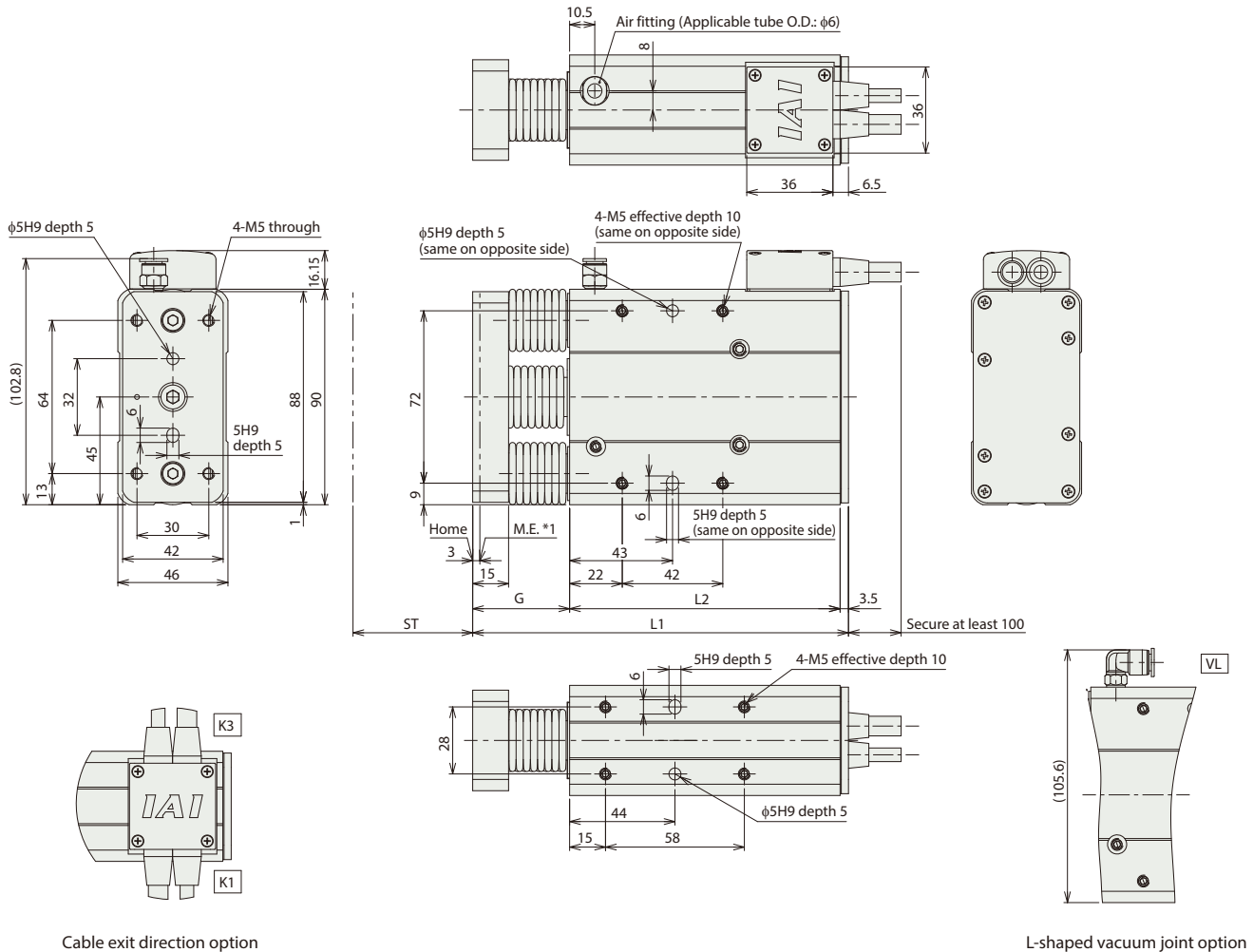
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	1kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

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



\*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end



Cable exit direction option

L-shaped vacuum joint option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2000mm.  
The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

Dimensions and Mass by Stroke

Stroke (ST)	50	75
L1	157	188
L2	113	138
G	40.5	46.5
Mass (kg)	1.80	2.06

Applicable Controllers

The RCS2CR/RCS2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100/200VAC	●	●	-	DeviceNet CC-Link CompoNet MECHATROLINK EtherCAT EtherNet/IP	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		-	-	●		512 (768 for network spec.)	Please contact IAI for more information.
SSEL-CS		2		●	-	●		20000	Please contact IAI for more information.
XSEL-P/Q		6	Single phase 200VAC Three-phase 200VAC	-	-	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	Please contact IAI for more information.

\* Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA.

# RCA2CR-SD3NB

# RCA2W-SD3NB

Cleanroom

Mini

Double With guide

Motor Unit Type

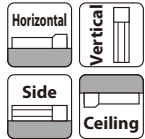
Built-in Motor

Body Width 60mm

24v AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCA2CR: Cleanroom specification RCA2W: Dust-proof/splash-proof specification	SD3NB	I	10	10 : 10W Servo motor	4 : Ball screw 4mm 2 : Ball screw 2mm 1 : Ball screw 1mm	25:25mm 50:50mm	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	N : None P : 1m S : 3m M : 5m X□□□: Special Length	Refer to Options table below.

\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

- POINT Selection Notes**
- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information).
  - (2) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 1 and vertical use). The indicated values are the upper limits for the allowable acceleration.
  - (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
  - (4) The vertical payload value is when the main body is fixed and the side bracket is moving. Note that it is not possible to operate the actuator vertically with the side bracket fixed and the main body moving.
  - (5) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-SD3NB-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25 (*1)	42.7	±0.02	25 50
RCA2CR/W-SD3NB-I-10-2-①-②-③-④			2	1.5	0.5 (*1)	85.5		
RCA2CR/W-SD3NB-I-10-1-①-②-③-④			1	3	1 (*1)	170.9		

### Stroke and Max Speed

Stroke / Lead	25 (mm)	50 (mm)
	4	200
2	100	
1	50	

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

(Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
25	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from right side	K3	See P.36
Power Saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

### Actuator Specifications

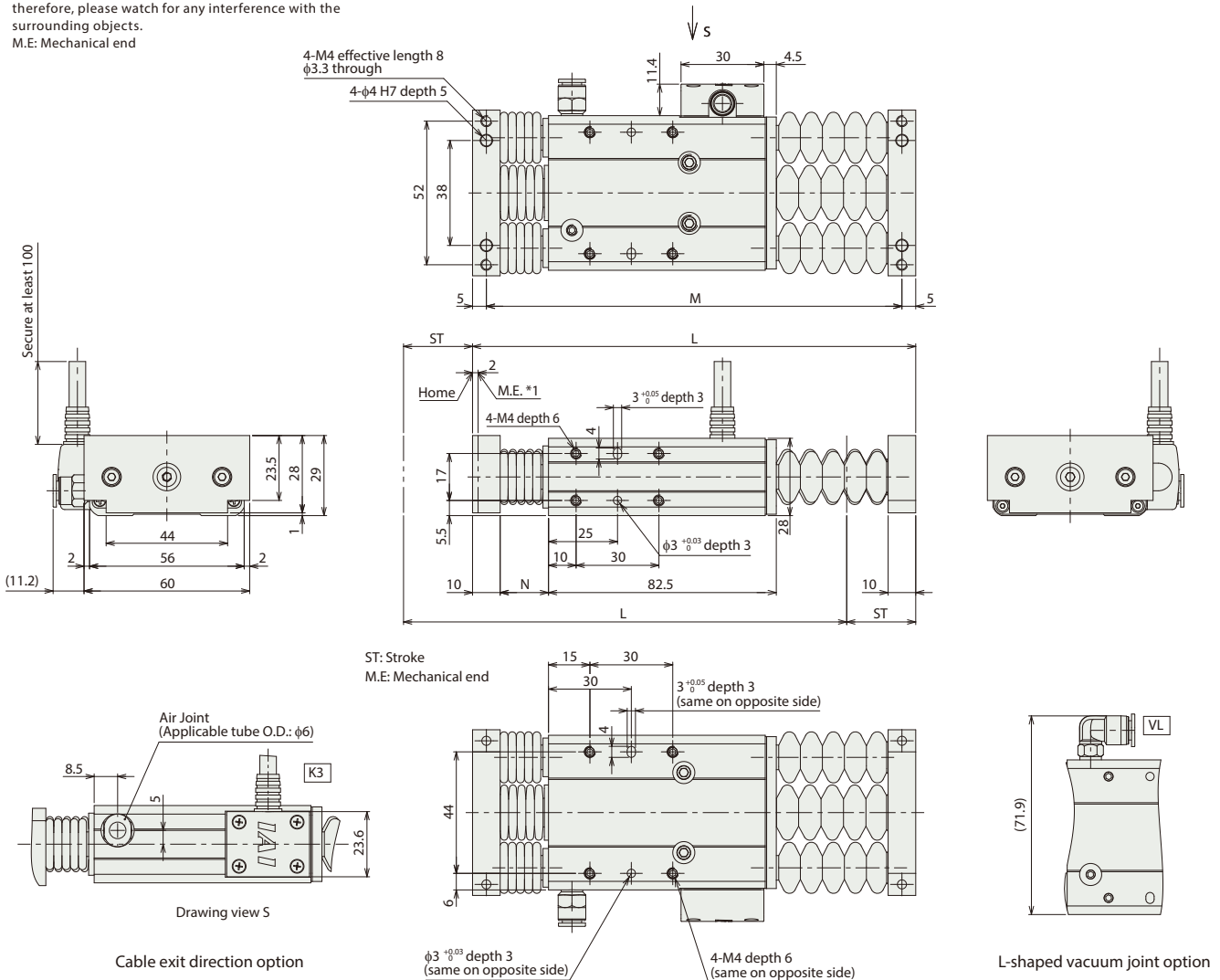
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	8kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	1mm Lead: 3000km or 50 million cycles, 2mm Lead, 4mm: 5000km or 50 million cycles	

Dimensions

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



\*1 When homing, the rod moves to the mechanical end:  
therefore, please watch for any interference with the  
surrounding objects.  
M.E: Mechanical end



ST: Stroke  
M.E: Mechanical end

**Notes**  
Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm.  
The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

■ Dimensions and Mass by Stroke

Stroke (ST)	25	50
L	160.5	197.5
M	150.5	187.5
N	17.5	23.5
Mass (kg)	0.52	0.54

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page	
				Positioner	Pulse-train	Program	Network * Option			
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.	
ACON-CB/CGB		1		● * Option	● * Option	—		512 (768 for network spec.)	Please contact IAI for more information.	
MCON-C/CG		8		This model is network-compatible only.					256	Please contact IAI for more information.
MCON-LC/LCG		6		—	—	●		256	Please contact IAI for more information.	
ASEL-CS		2		●	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500	Please contact IAI for more information.	
RCM-P6AC		1		Can be used within the RCP6S Gateway system.					768	Refer to the RCP6 catalog (CJ238-3A)

# RCA2CR-SD4NB

# RCA2W-SD4NB

Cleanroom

Mini

Double With guide

Motor Unit Type

Built-in Motor

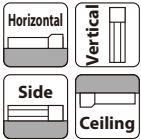
Body Width  
72 mm

24v  
AC Servo  
Motor

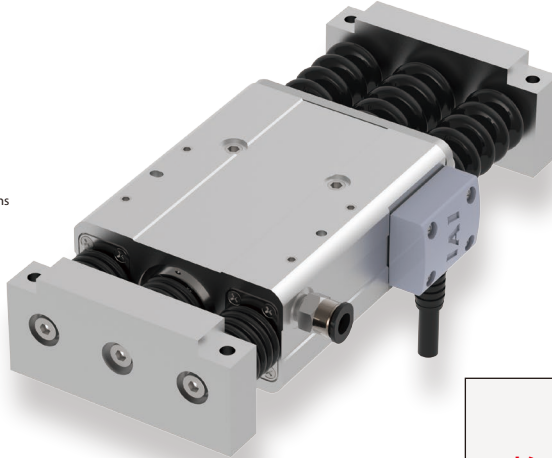
Model Specification Items

Series	SD4NB	Encoder Type	I	Motor Type	20	Lead	6 : Ball screw 6mm 4 : Ball screw 4mm 2 : Ball screw 2mm	Stroke	25:25mm 50:50mm	Applicable Controllers	A1:ASEL A3:ACON-CYB/PLB/POB MCON RCM-P6AC A5:ACON-CB/CGB	Cable Length	N : None P : 1m S : 3m M : 5m X□□□: Special Length	Options	Refer to Options table below.
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\* Does not include a controller.



\* Depending on the model, there may be some limitations to using the vertical mount position.



Energy saver

- POINT Selection Notes**
- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P.33 or contact IAI for more information).
  - (2) The value of payload is when operating at an acceleration of 0.3G (0.2G for lead 2 and vertical use). The indicated values are the upper limits for the allowable acceleration.
  - (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
  - (4) The vertical payload value is when the main body is fixed and the side bracket is moving. Note that it is not possible to operate the actuator vertically with the side bracket fixed and the main body moving.
  - (5) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (w)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-SD4NB-I-20-6-①-②-③-④	20	Ball screw	6	2	0.5 (*1)	33.8	±0.02	25 50
RCA2CR/W-SD4NB-I-20-4-①-②-③-④			4	3	0.75 (*1)	50.7		
RCA2CR/W-SD4NB-I-20-2-①-②-③-④			2	6	1.5 (*1)	101.5		

Legend: ① Stroke ② Applicable Controllers ③ Cable Length ④ Options

### Stroke and Max Speed

Stroke / Lead	25 (mm)	50 (mm)
	6	240<200>
4	200	
2	100	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
25	○	○
50	○	○

### ③ Cable Length

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

\* RCA2 cables are robot cables as standard.

### ④ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
Connector cable exit from right side	K3	See P.36
Power Saver	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

### Actuator Specifications

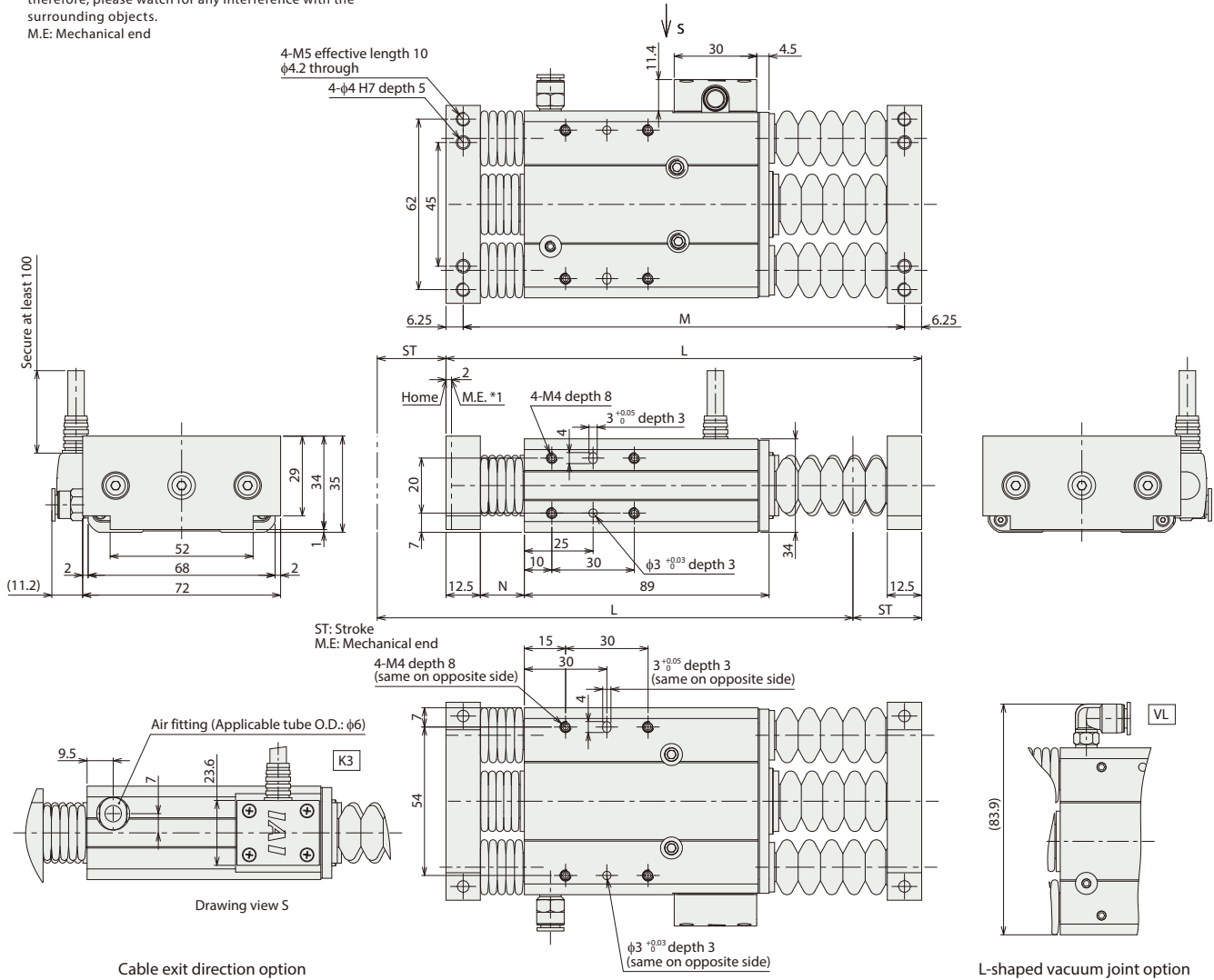
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	—
Suction pressure	4kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

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



\*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end



Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2100mm. The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

■ Dimensions and Mass by Stroke

Stroke (ST)	25	50
L	173	210
M	160.5	197.5
N	16	22
Mass (kg)	0.86	0.88

② Applicable Controllers

The RCA2CR/RCA2W 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	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—		512 (768 for network spec.)	Please contact IAI for more information.
MCON-C/CG		8		This model is network-compatible only.				256	Please contact IAI for more information.
MCON-LC/LCG		6		—	—	●		256	Please contact IAI for more information.
ASEL-CS		2		●	—	●		Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500
RCM-P6AC		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog (CJ238-3A)

# RCS2CR-SD5NB

# RCS2W-SD5NB

Cleanroom Mini Double With guide Motor Unit Type Built-in Motor Body Width 94mm 200V AC Servo Motor

Dust/Splash-proof

Model Specification Items

Series	SD5NB	Encoder Type	I	Motor Type	60	Lead	10 : 10mm 5 : 5mm 2.5 : 2.5mm	Stroke	50:50mm 75:75mm	Applicable Controllers	T2:SCON SSEL XSEL-P/Q	Cable Length	N : None P : 1m S : 3m M : 5m X: Special Length R: Robot cable	Options	Refer to Options table below.
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RCS2CR: Cleanroom specification  
RCS2W: Dust-proof/splash-proof specification

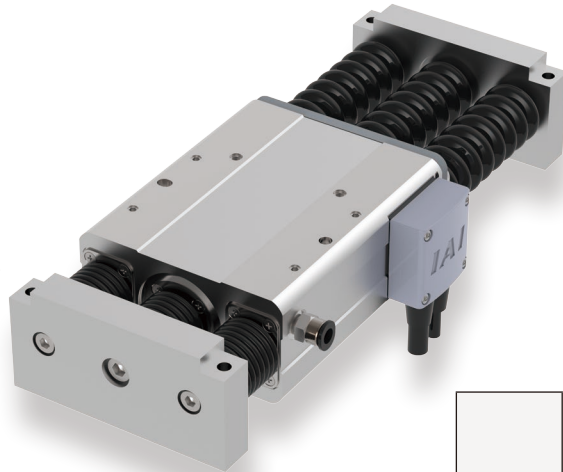
\* Does not include a controller.



\* CE is an available option.



\* Depending on the model, there may be some limitations to using the vertical mount position.



**POINT Selection Notes**

- (1) Horizontal payload is the value when also using a guide so that radial and moment loads are not applied to the rod. If not installing a guide, refer to the correlation diagram of load on rod tip and running life (Please refer to P33 or contact IAI for more information).
- (2) The value of payload is when operating at an acceleration of 0.3G horizontally (0.2G for lead 2.5) and 0.2G vertically. The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
- (4) The vertical payload value is when the main body is fixed and the side bracket is moving. Note that it is not possible to operate the actuator vertically with the side bracket fixed and the main body moving.
- (5) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

## Actuator Specifications

### Lead and Payload

Model specification items	Motor wattage (w)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCS2CR/W-SD5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5 (*1)	89	±0.02	50 75
RCS2CR/W-SD5NB-I-60-5-①-T2-②-③			5	10	3 (*1)	178		
RCS2CR/W-SD5NB-I-60-2.5-①-T2-②-③			2.5	20	6 (*1)	356		

Legend: ① Stroke ② Cable Length ③ Option

### Stroke and Max Speed

Stroke / Lead	50 (mm)	75 (mm)
	10	280<230>
5	250<230>	250
2.5	125	

Values in brackets < > are for vertical use. (Unit: mm/s)

### ① Stroke

Stroke (mm)	Cleanroom	Dust/Splash-proof
50	○	○
75	○	○

### ② Cable Length

Type	Cable code
Standard	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)

### ③ Options

\* Please check the Options reference pages to confirm each option.

Name	Option code	Reference page
CE compliant specification	CE	See P.36
Connector cable exit from right side	K3	See P.36
L-shaped vacuum joint specification	VL	See P.36

## Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (ISO14644-1 Standard)	-
Suction pressure	1kPa	-
Protective structure	-	IP52
Air purge	-	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

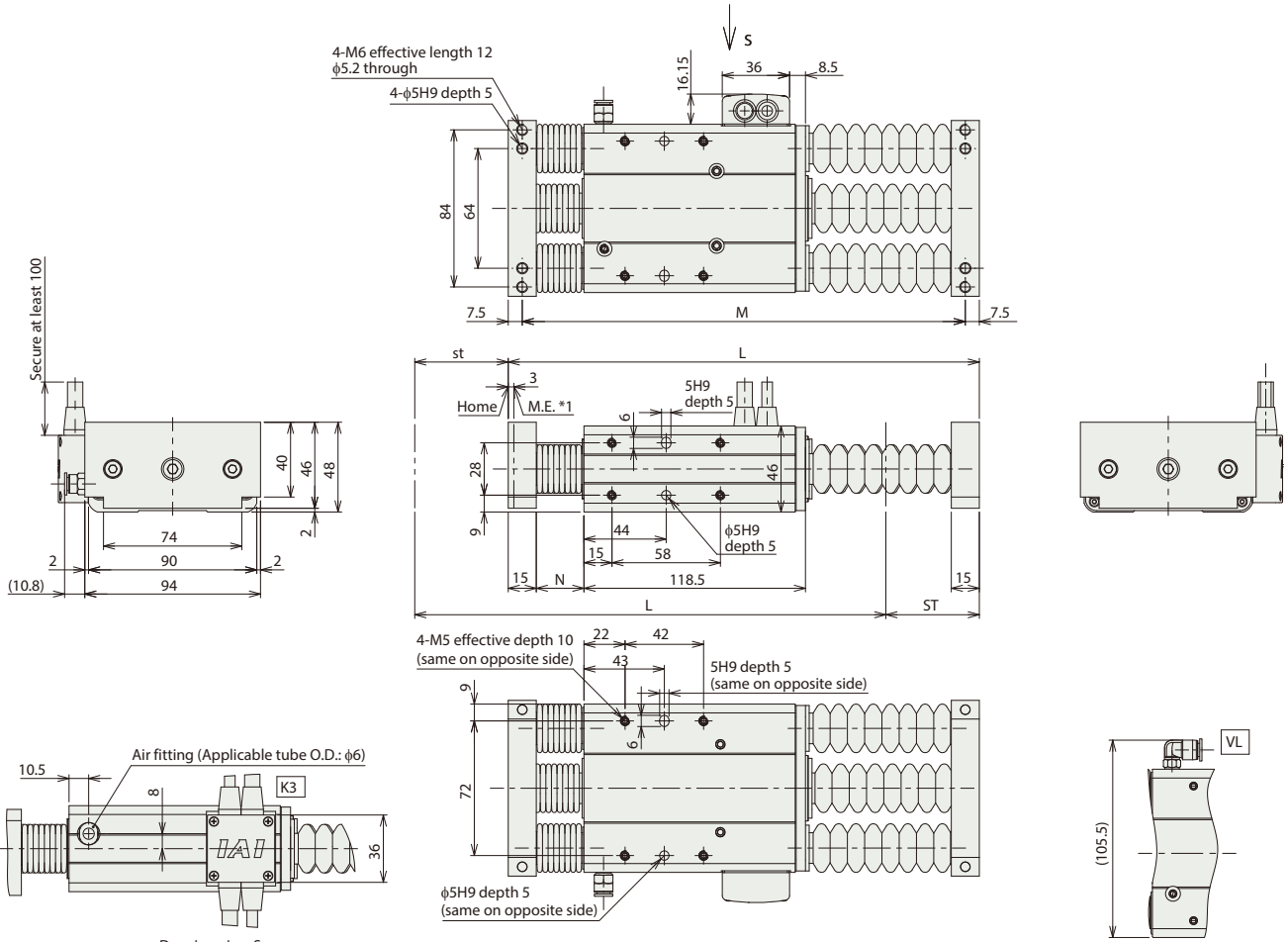


Dimensions

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



\*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.  
M.E: Mechanical end



Cable exit direction option

L-shaped vacuum joint option

Notes

Dust-proof/splash-proof specification actuator's pigtail cable length is 2000mm.  
The connector at the end of the actuator's pigtail cable is not covered by the protective structure.  
Cleanroom specification actuator's pigtail cable length is 300mm.

Dimensions and Mass by Stroke

Stroke (ST)	50	75
L	252	289
M	237	274
N	25.5	31.5
Mass (kg)	1.80	2.06

Applicable Controllers

The RCS2CR/RCS2W series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

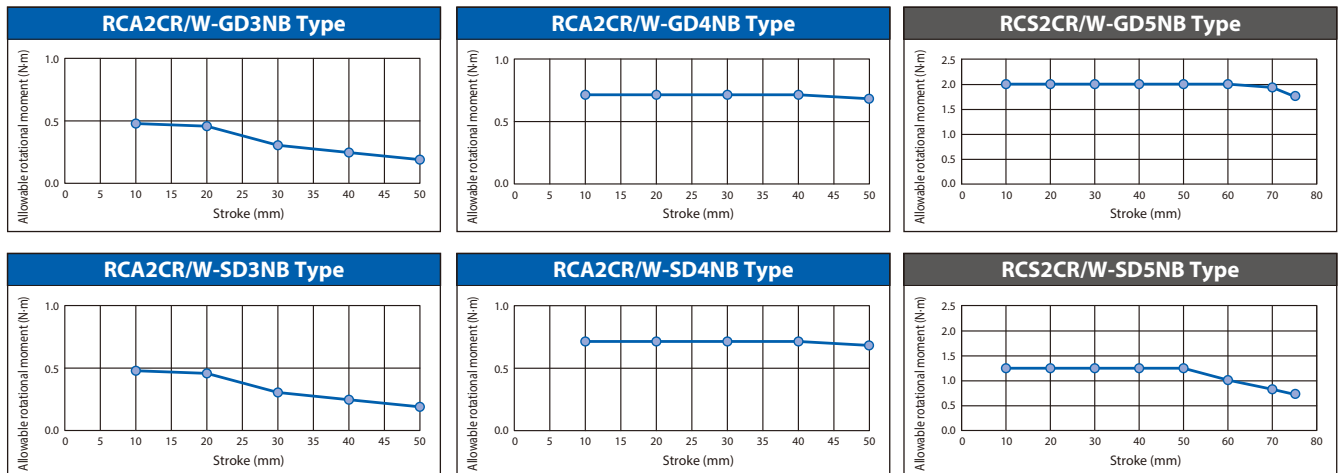
Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100/200VAC	●	●	-	DeviceNet CC-Link CompoNet MECHATROLINK EtherCAT EtherNet/IP	512 (768 for network spec.)	Please contact IAI for more information.
SCON-LC/LCG		1		-	-	●		512 (768 for network spec.)	Please contact IAI for more information.
SSEL-CS		2		●	-	●		20000	Please contact IAI for more information.
XSEL-P/Q		6	Single phase 200VAC Three-phase 200VAC	-	-	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	Please contact IAI for more information.

\* Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA.

## Allowable Torque

The following diagram shows the allowable torque for each model.

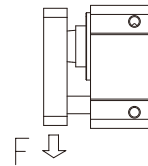
If applying rotational torque, use within the range of values listed below. Rotational torque cannot be applied to single guide types.



## Correlation of Allowable Load on Rod Tip and Running Life

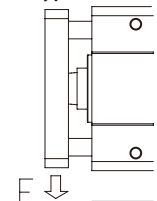
The larger the load on the guide tip, the shorter the life will become. Select a model with consideration for the balance between load and life.

### Single guide type

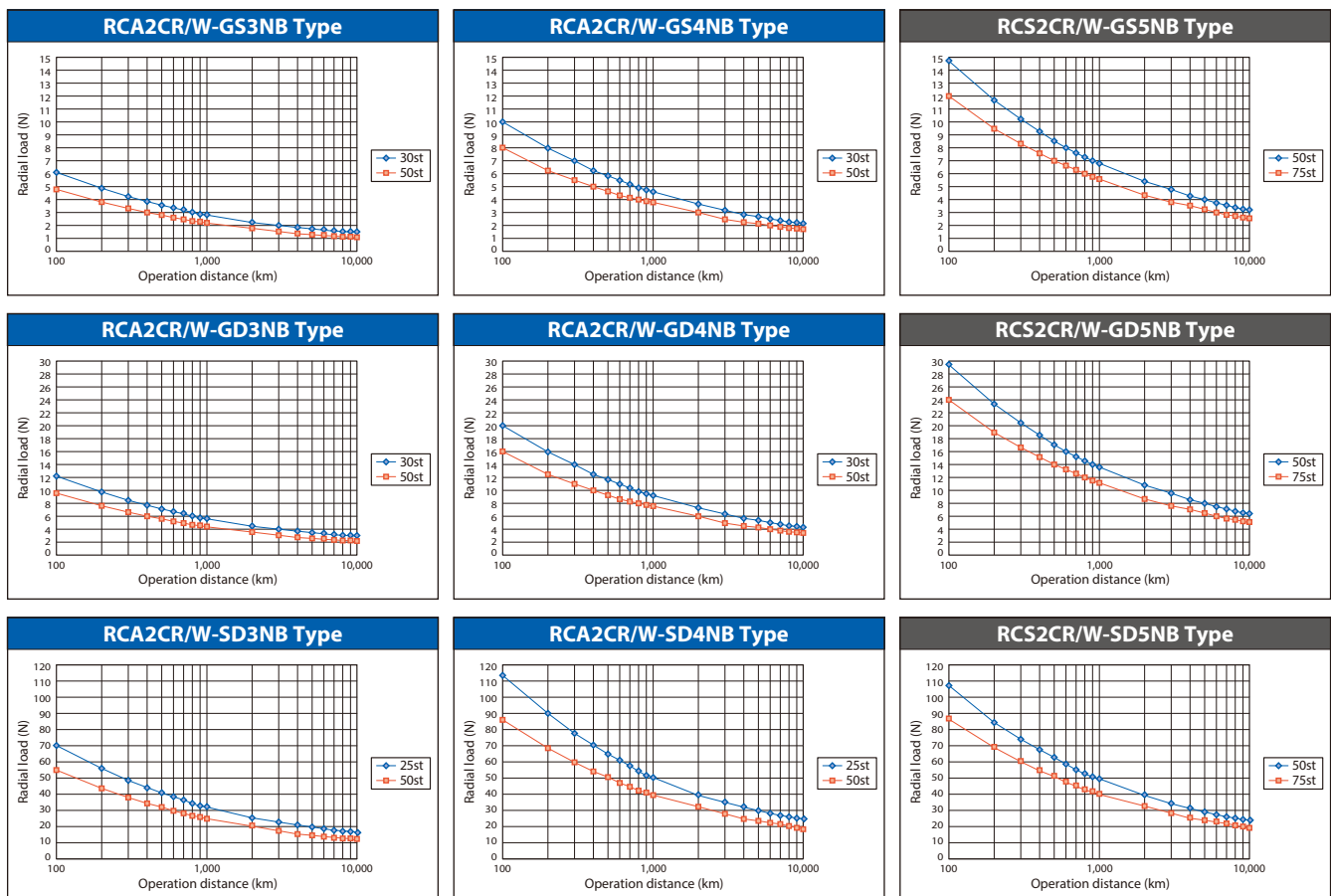
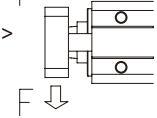


\* Single guide specification can only be used with vertical loads.

### Double guide type <Vertical>



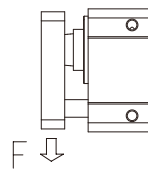
### <Horizontal>



## Radial Load and Tip Deflection Amount

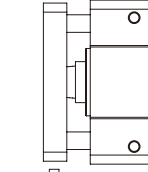
The graphs below show the correlation between the load exerted at the guide tip and the amount of deflection caused.

■ Single guide type

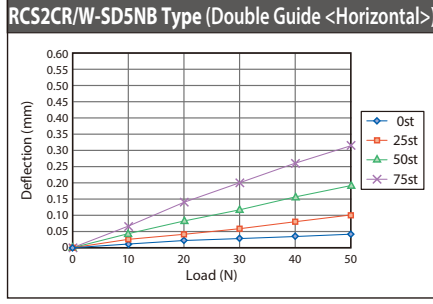
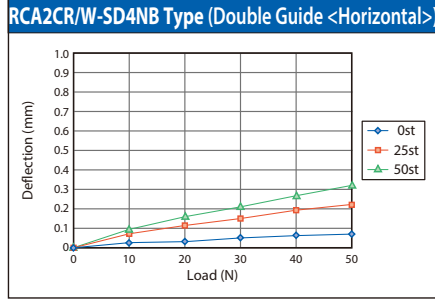
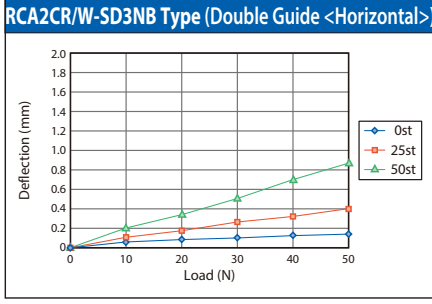
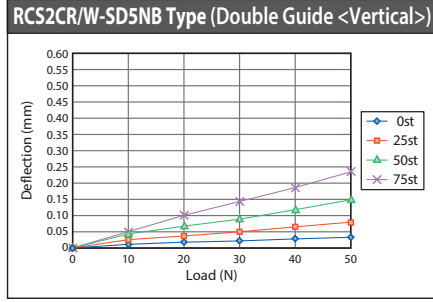
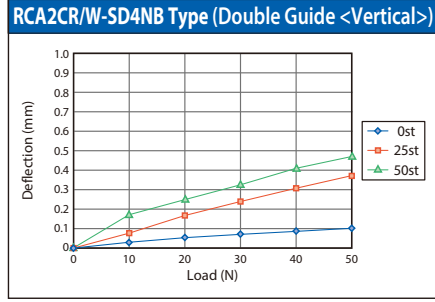
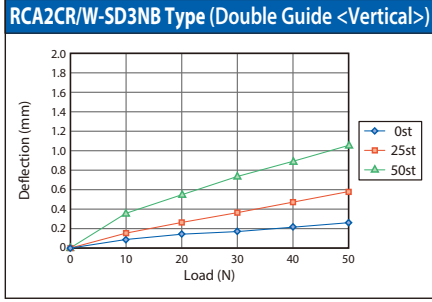
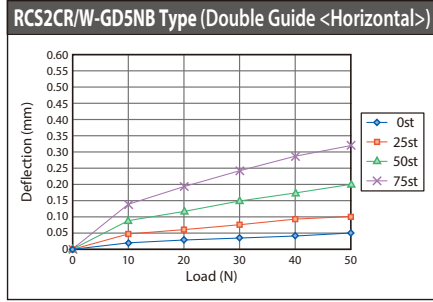
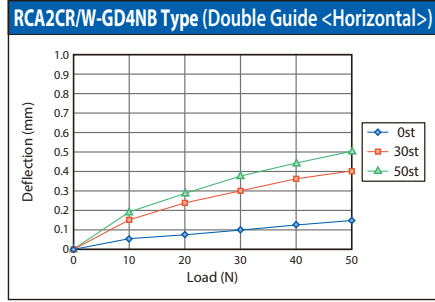
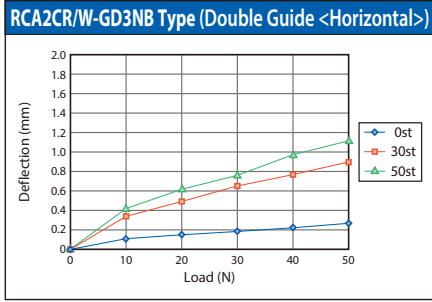
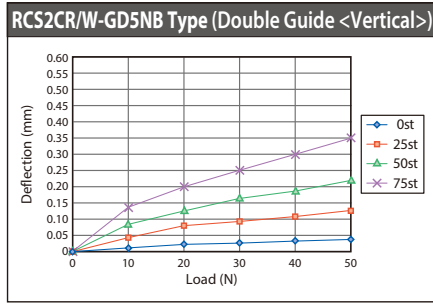
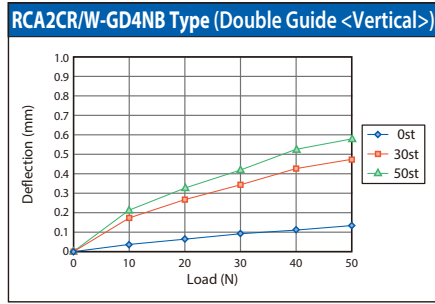
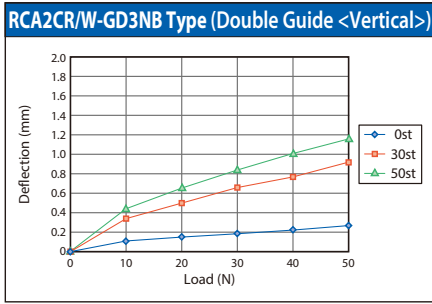
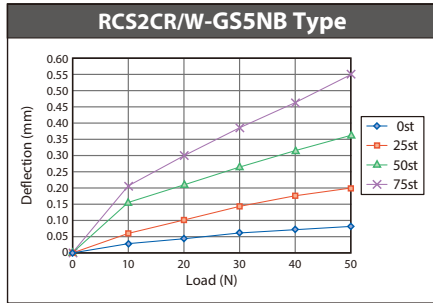
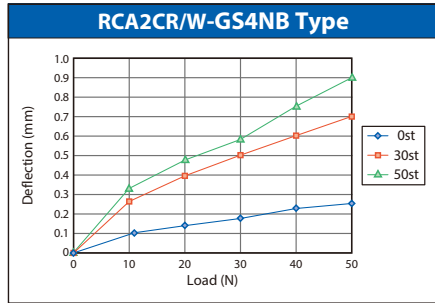
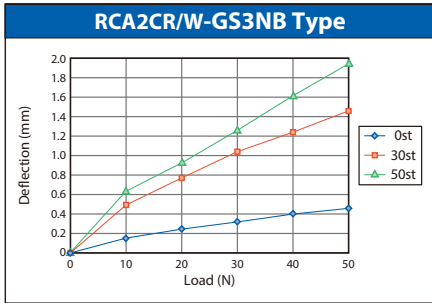
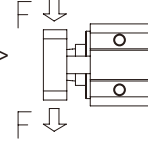


\* Single guide specification can only be used with vertical loads.

■ Double guide type  
<Vertical>



<Horizontal>



# Mini Rod Type Rotation Stop Mounting Method

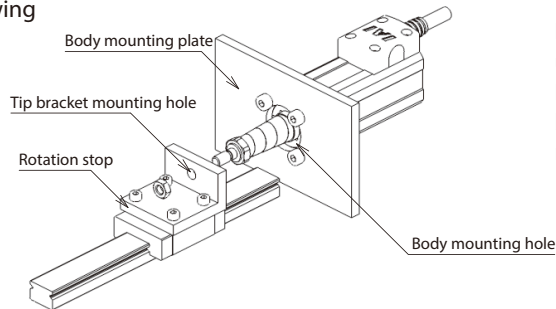
## ■ Mini ROBO Cylinder rod type rotation stop

The following models do not have a ball screw rotation stop inside the main body, so a rotation stop should be installed externally for use.

When installing a rotation stop, use the following tolerances as the basis for installation. If operated without a rotation stop installed, the ball screw may idle and the rod will fail to move forward or backward, causing the encoder rotation and actual rotation travel distance to fall out of sync and resulting in positioning deviation.

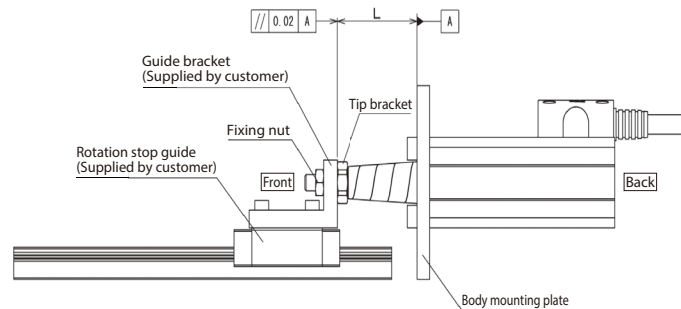
Target models RCA2CR/W-RN3NB, RN4NB, RP3NB, RP4NB  
RCS2CR/W-RN5NB, RP5NB

### Mounting drawing



Do not connect a rotation stop to the actuator rod tip using a floating joint.  
If a radial load is caused due to screw shaft eccentricity being applied, the actuator may not operate correctly or may fail prematurely.

Installation method tolerances The body fixing plate, mounting body holes, and guide bracket mounting hole alignment should all be within 0.05mm. The degree of parallelism should be within 0.02mm.



# Options

## CE compliant

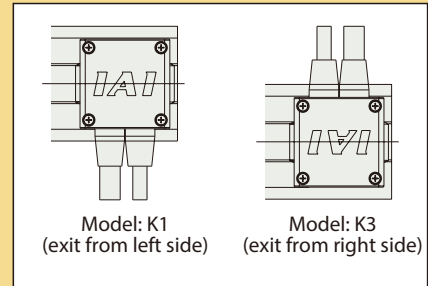
Model **CE**

Description Specify this option for RCS2 series if CE compatibility is required.

## Changing connector cable exit direction

Model **K1 / K3**

Description Connector cable exit direction can be selected from either left side or right side.



## Energy saver

Model **LA**

Description This option reduces the controller power supply capacity. The maximum current for the standard or high acceleration/deceleration types is 5.1A, but it is reduced to 3.4A when selecting a power saving type. (The maximum value changes depending on the model. Refer to the power capacity page of each controller for details)

## L-shaped vacuum joint specification

Model **VL**

Description This option changes the straight type suction joint to an L-shaped type.

# MEMO

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# MEMO

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The information contained in this product brochure may change without prior notice due to product improvements.

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