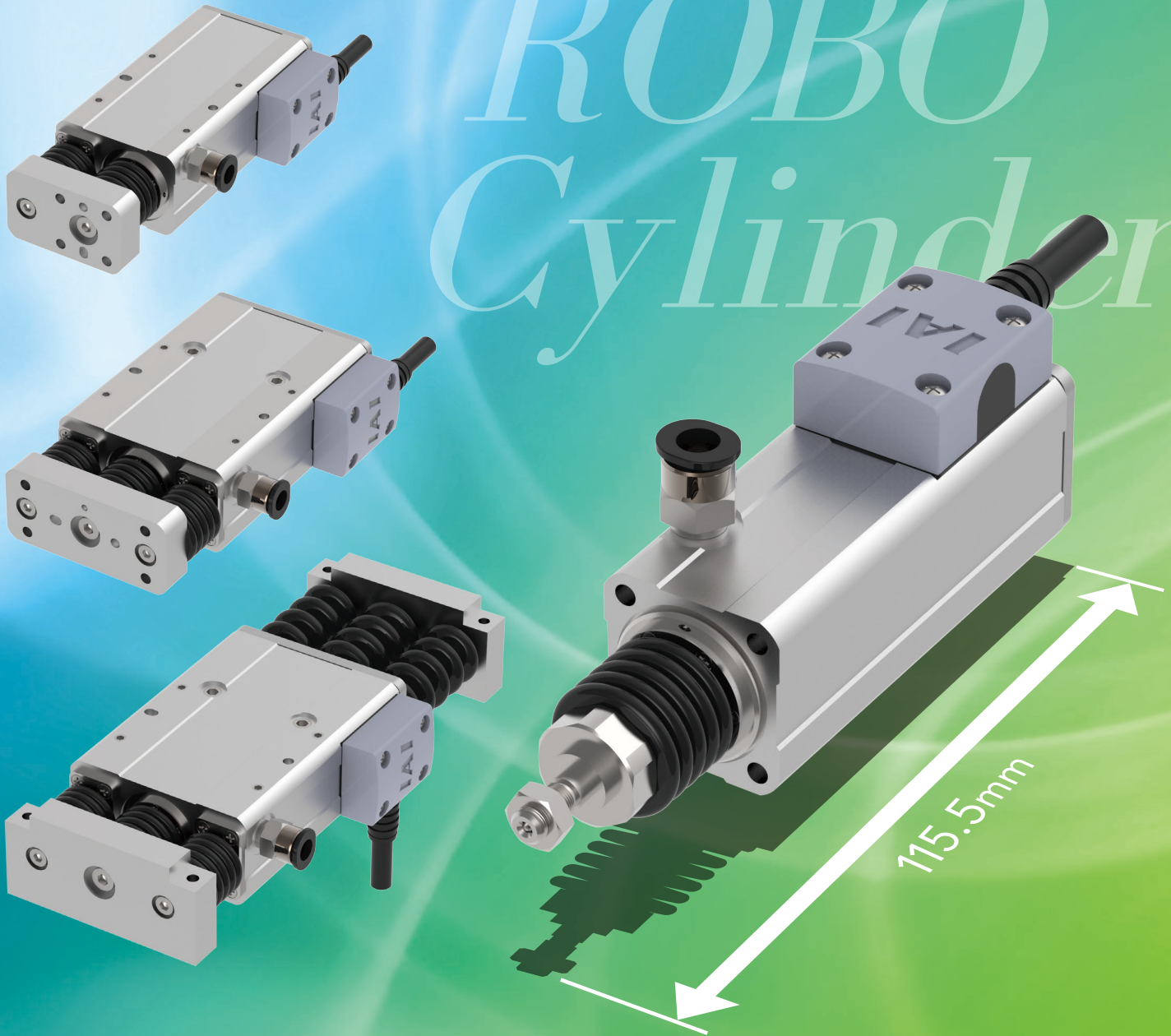


Cleanroom Specification/
Dust · Splash-Proof Specification

Mini ROBO Cylinder®



Next-generation cylinder that has achieved miniaturization

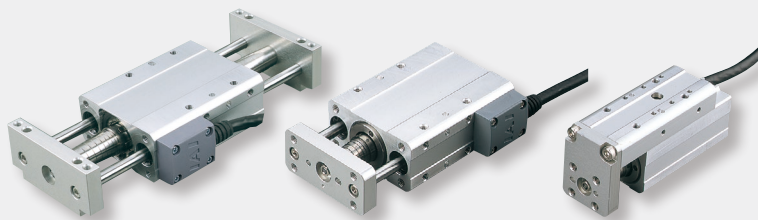
Mini ROBO Cylinder®

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 ⁵ ²
It is the IEC standard regulated grade for the degree of waterproofing and dustproofing.

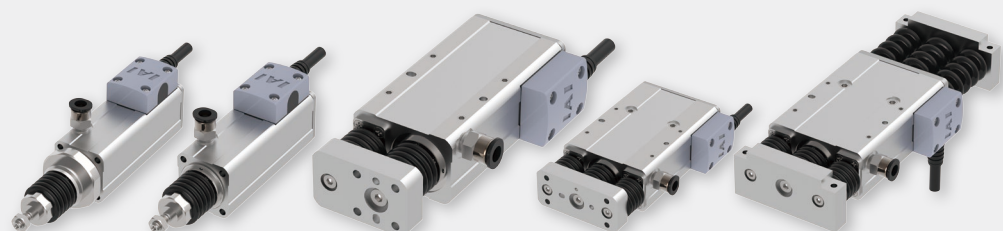
2nd Display Number ... Protection from water ingress
2: No harmful effects from water drops falling within 15° from the vertical.

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
				RCS2CR RCS2W	RN5NB	46mm	20kg	7
		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** — Type — **I** — Encoder Type — **10** — Motor Type — **10** — Lead — **4** — Stroke — **30:30mm** — Applicable Controllers — **A1:ASEL** — Cable Length — **N** — 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
 4: Ball screw 4mm
 2: Ball screw 2mm
 1: Ball screw 1mm

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

* Does not include a controller.



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


Energy saver


- (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 P35 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 the 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)
	200	100
4	200	100
2	100	50
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

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

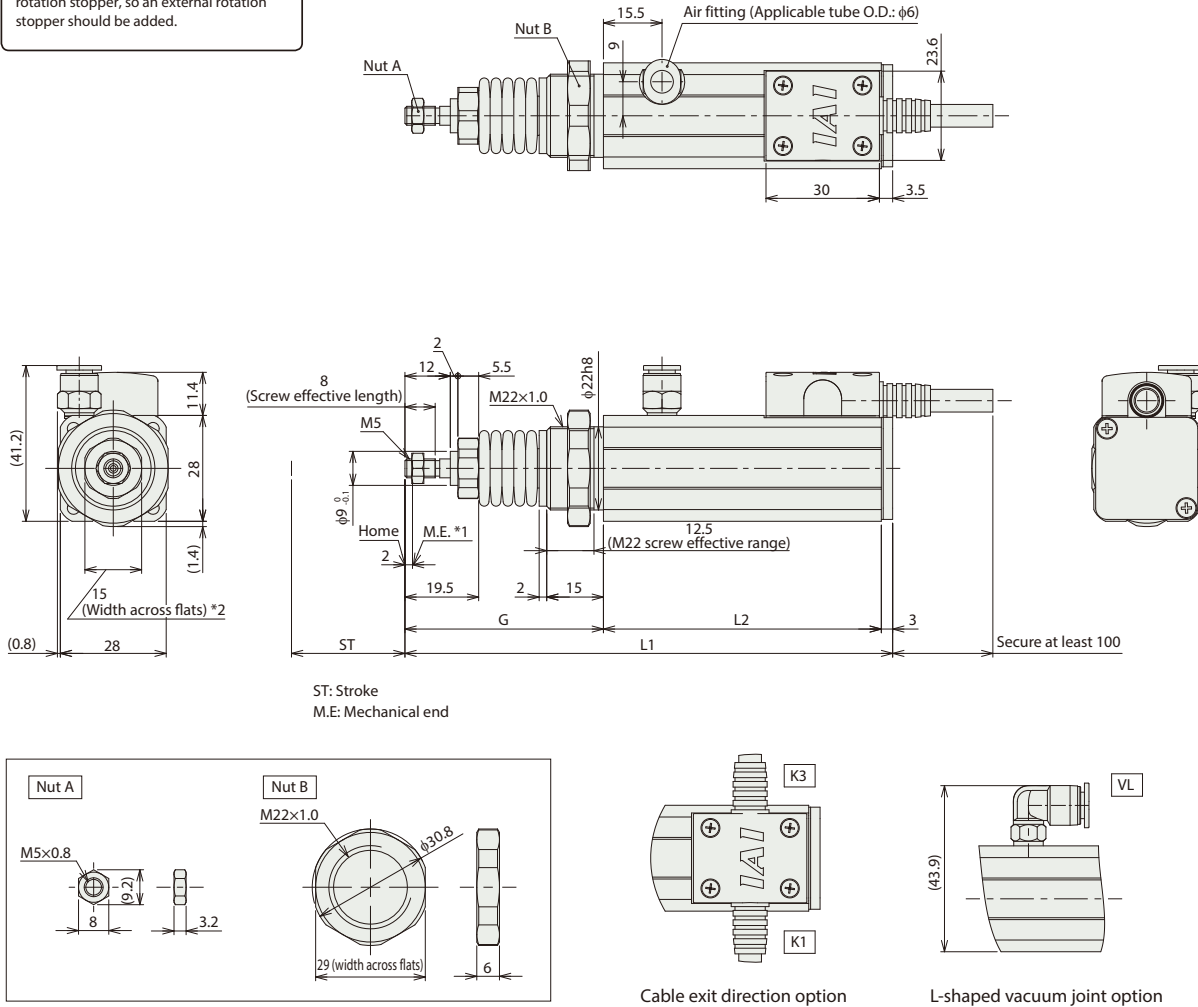


*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end

*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.



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

RCA2CR-RN4NB

RCA2W-RN4NB

Cleanroom

Mini

Motor
Unit
Type

Built-in
Motor

Body Width
34
mm

24v
AC Servo
Motor

Model Specification Items

 — **RN4NB** — **I** — **20** — — — — —

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

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


- (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 P35 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 Horizontal (kg) Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
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>	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

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	—	
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

2D
CAD

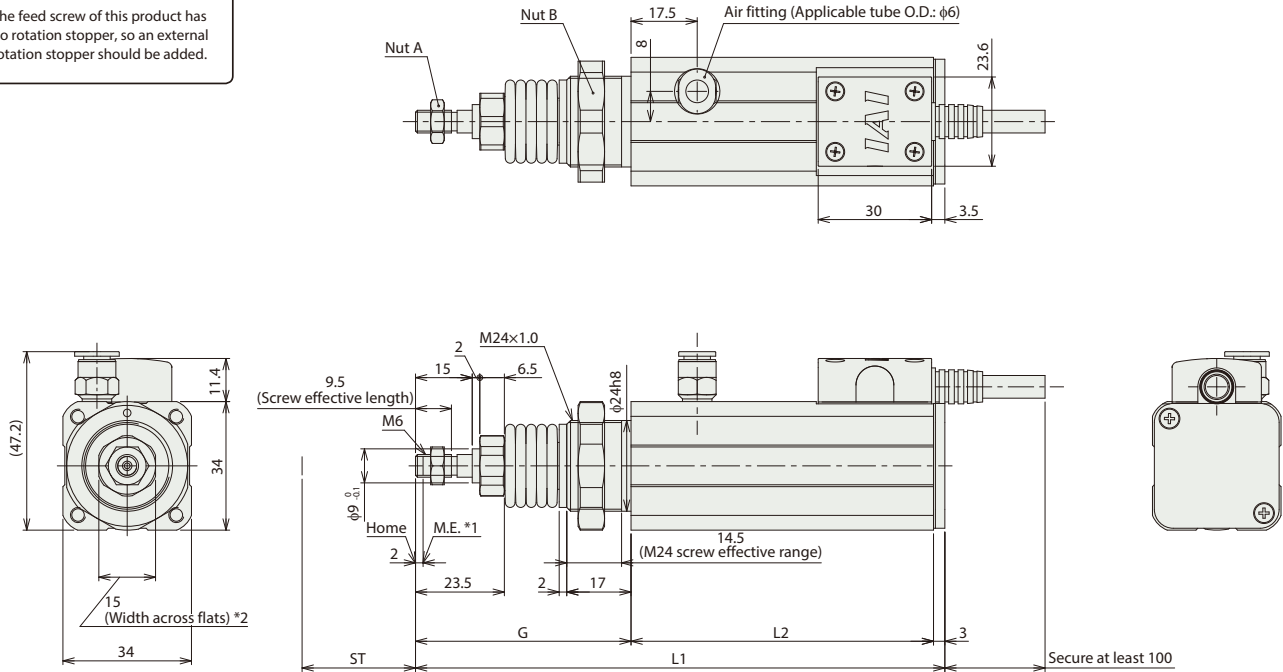
3D
CAD

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

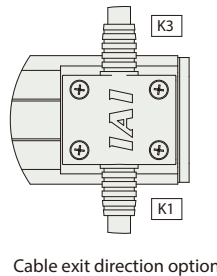
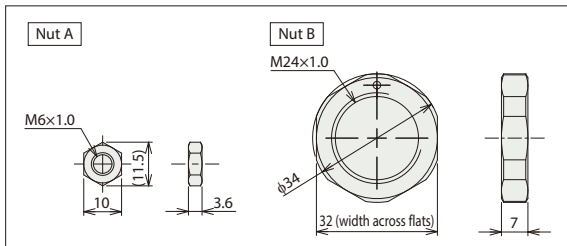
*2 The direction of width across flats surface varies depending on the product.

Notes

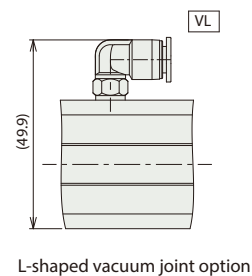
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



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

RCS2CR-RN5NB

RCS2W-RN5NB

Cleanroom

Mini

Motor Unit Type

Built-in Motor

Body Width
34 mm

200v
AC Servo Motor

■ **Model Specification Items**

Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS2CR: Cleanroom specification	RN5NB	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.

- (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)		
						Horizontal (kg)	Vertical (kg)				
RCS2CR/W-RN5NB-I-60-10-①-T2-②-③			60	Ball screw	10	5	1.5	89	±0.02		
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			
									Stroke (mm)		
									50 75		

Legend: ① Stroke ② Cable Length ③ Option

■ Stroke and Max Speed

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		
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	

7 RCS2CR-RN5NB/RCS2W-RN5NB

Dimensions

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

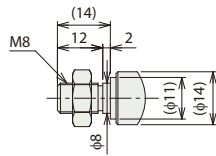
2D
CAD

3D
CAD

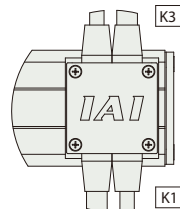
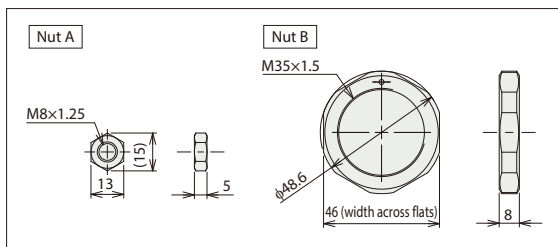
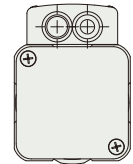
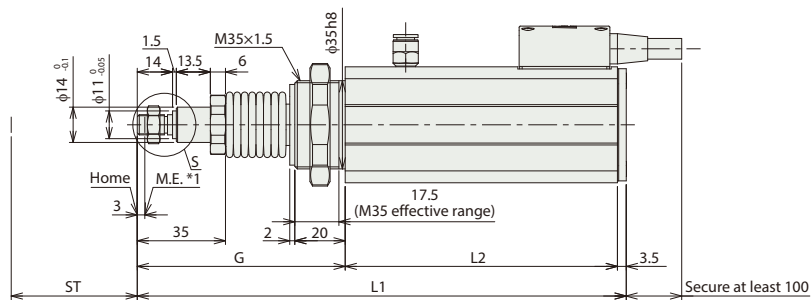
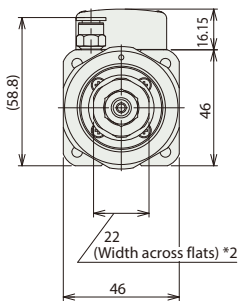
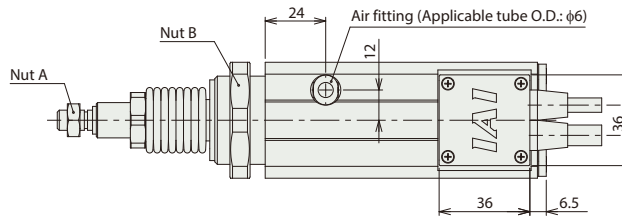
- *1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end
- *2 The direction of width across flats surface varies depending on the product.

Notes

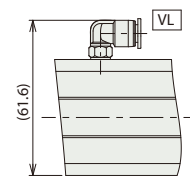
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



Detailed view of S



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 PROFINET CompoNet MECHATROLINK EtherCAT EtherNet/IP CANopen	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	Please contact IAI for more information.

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

RCA2CR-RP3NB

RCA2W-RP3NB

Cleanroom

Mini

Motor
Unit
Type

Built-in
Motor

Body Width
28
mm

24v
AC Servo
Motor

Model Specification Items

 — **RP3NB** — **I** — **10** — — — — —

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

Lead
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

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


- (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 P35 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)
	200	100
4		
2		
1		

(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

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

2D
CAD

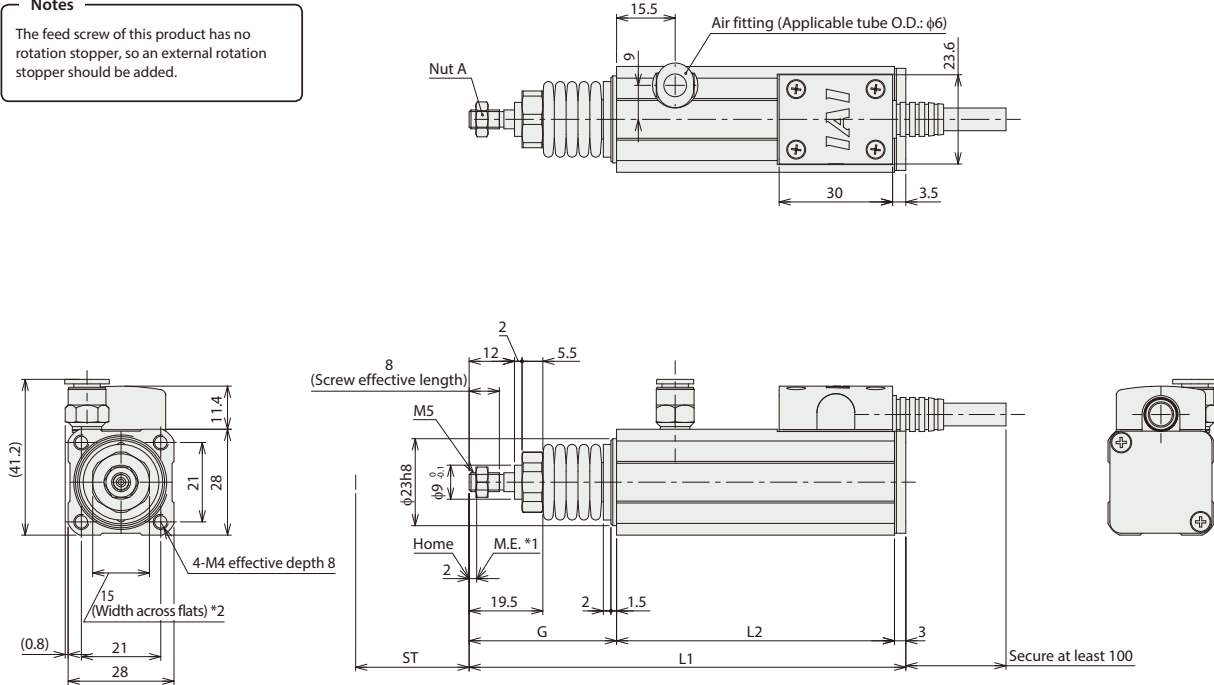
3D
CAD

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

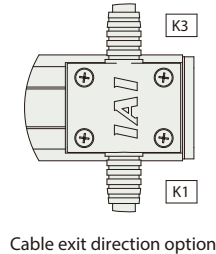
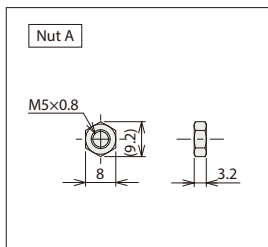
*2 The direction of width across flats surface varies depending on the product.

Notes

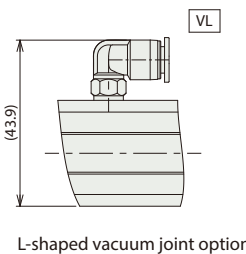
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



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	—	<div>DeviceNet</div> <div>MECHATROLINK</div> <div>EtherCAT</div> <div>EtherNet/IP</div> <div>CC-Link</div> <div>CompoNet</div> <div>SSCNET III/H</div> <div>Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.</div>	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-RP4NB

RCA2W-RP4NB

Cleanroom

Mini

Motor
Unit
Type

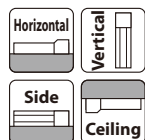
Built-in
Motor

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	RP4NB	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


- (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 Horizontal (kg) / Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
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>	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

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	—	
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

2D
CAD

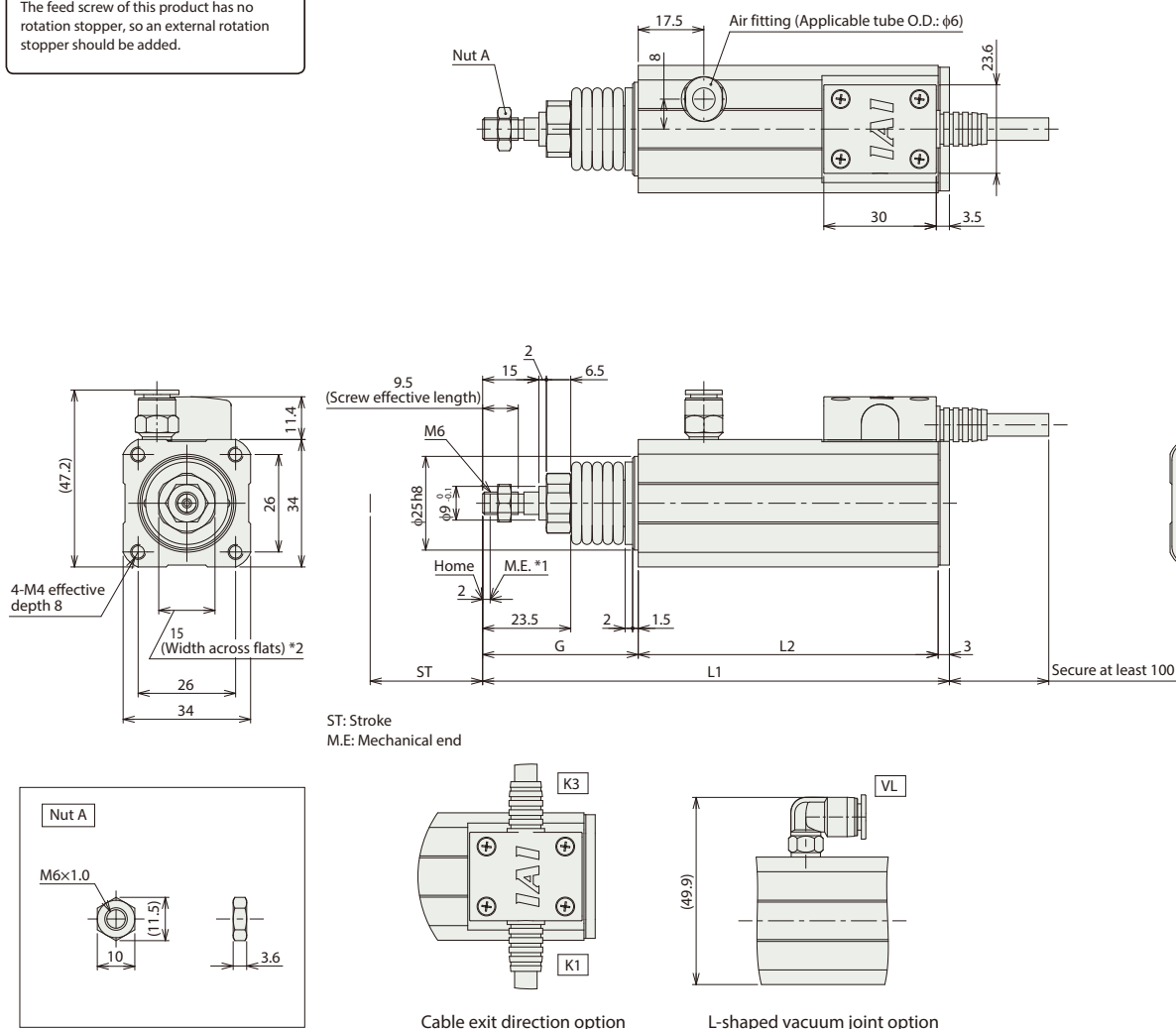
3D
CAD

*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	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			
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	—	<div>DeviceNet</div> <div>CC-Link</div> <div>MECHATROLINK</div> <div>EtherCAT</div> <div>EtherNet/IP</div> <div>CompoNet</div> <div>SSENET III/H</div> <div>Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.</div>	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)

RCS2CR-RP5NB

RCS2W-RP5NB

Cleanroom

Mini

Motor
Unit
Type

Built-in
Motor

Body Width
46
mm

200v
AC Servo
Motor

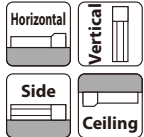
Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS2CR: Cleanroom specification RCS2W: Dust-proof/splash-proof specification	RP5NB	I	60	60 : 60W Servo motor	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50-50mm 75:75mm	T2:SCON SSEL XSEL-P/Q	N : None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

* Does not include a controller.

* 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.



- (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 the 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	50 (mm)	75 (mm)
	280<230>	380<330>
10	250<230>	250
5	125	
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

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

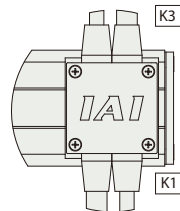
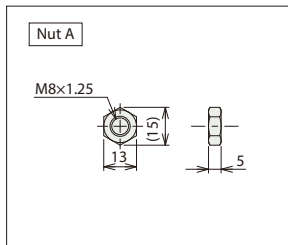
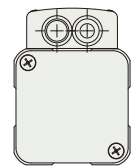
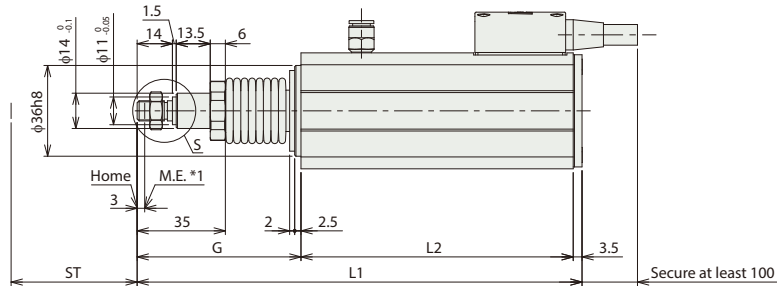
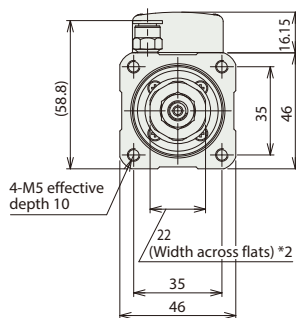
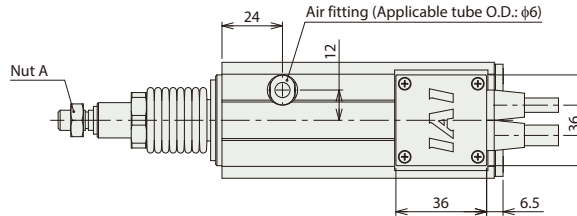
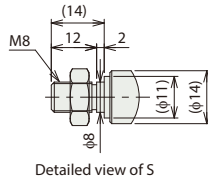
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

2D
CAD

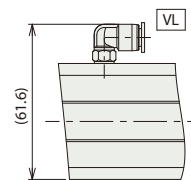
3D
CAD

*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.



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	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	●	●	—	 	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	Please contact IAI for more information.

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

RCA2CR-GS3NB

RCA2W-GS3NB

Cleanroom

Dust/Splash-proof

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 — Lead — Stroke — Applicable Controllers — Cable Length — Options

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

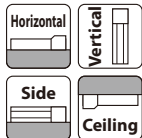
30:30mm
50:50mm

A1:ASEL
A3:ACON-CYB/PLB/POB
MCON
RCM-P6AC
A5:ACON-CB/CGB

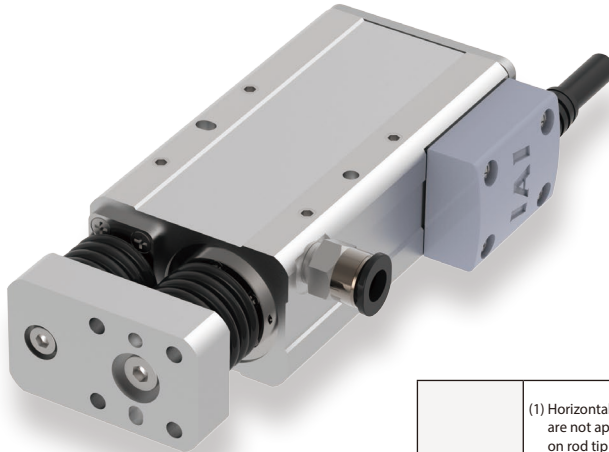
N : None
P : 1m
S : 3m
M : 5m
X□□ : Special Length

Refer to Options table below.

* Does not include a controller.


Energy saver


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



- (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 Horizontal (kg) Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
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

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

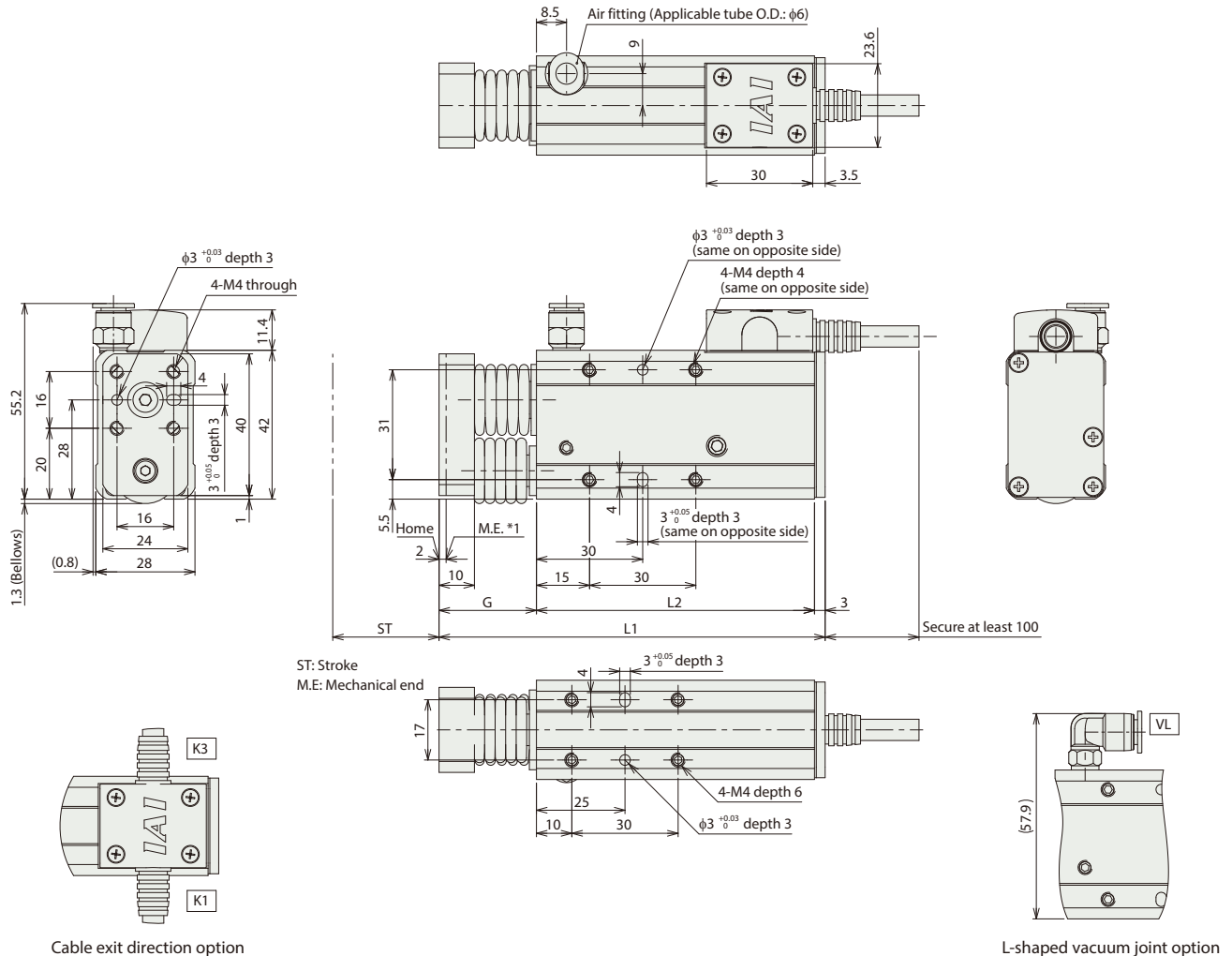
CAD drawings can be downloaded from our website.
www.intelligentactuator.com



*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	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.	
ACON-CB/CGB		1		● * Option	● * Option	—	<div>DeviceNet</div> <div>MECHATROLINK</div> <div>CC-Link</div> <div>EtherCAT</div> <div>EtherNet/IP</div> <div>PROFINET</div> <div>CompoNet</div> <div>SCSNET/H</div> <div>Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.</div>	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)

RCA2CR-GS4NB

RCA2W-GS4NB

Cleanroom

Dust/Splash-proof

Mini

Single
with
Guide

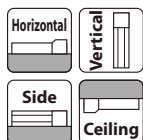
Motor
Unit
Type

Built-in
Motor

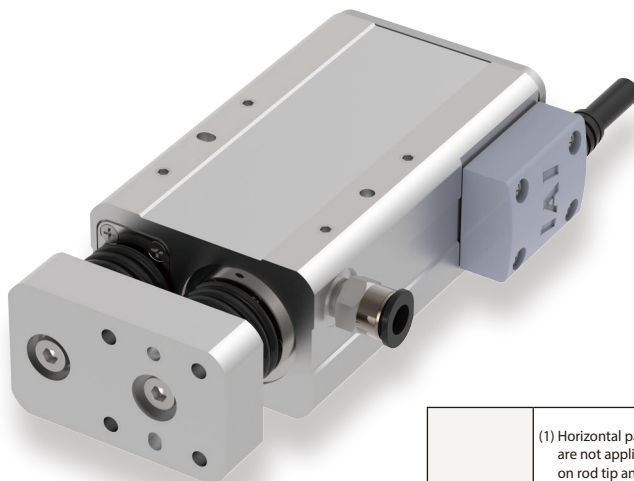
Body Width
**34
mm**
24v
AC Servo
Motor

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	GS4NB	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.

Energy saver


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



- (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)
RCA2CR/W-GS4NB-I-20-6-①-②-③-④	20	Ball screw	6	2	0.5	±0.02	30 50
RCA2CR/W-GS4NB-I-20-4-①-②-③-④			4	3	0.75		
RCA2CR/W-GS4NB-I-20-2-①-②-③-④			2	6	1.5		

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

Stroke and Max Speed

Stroke	30 (mm)	50 (mm)
Lead		
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

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	—	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

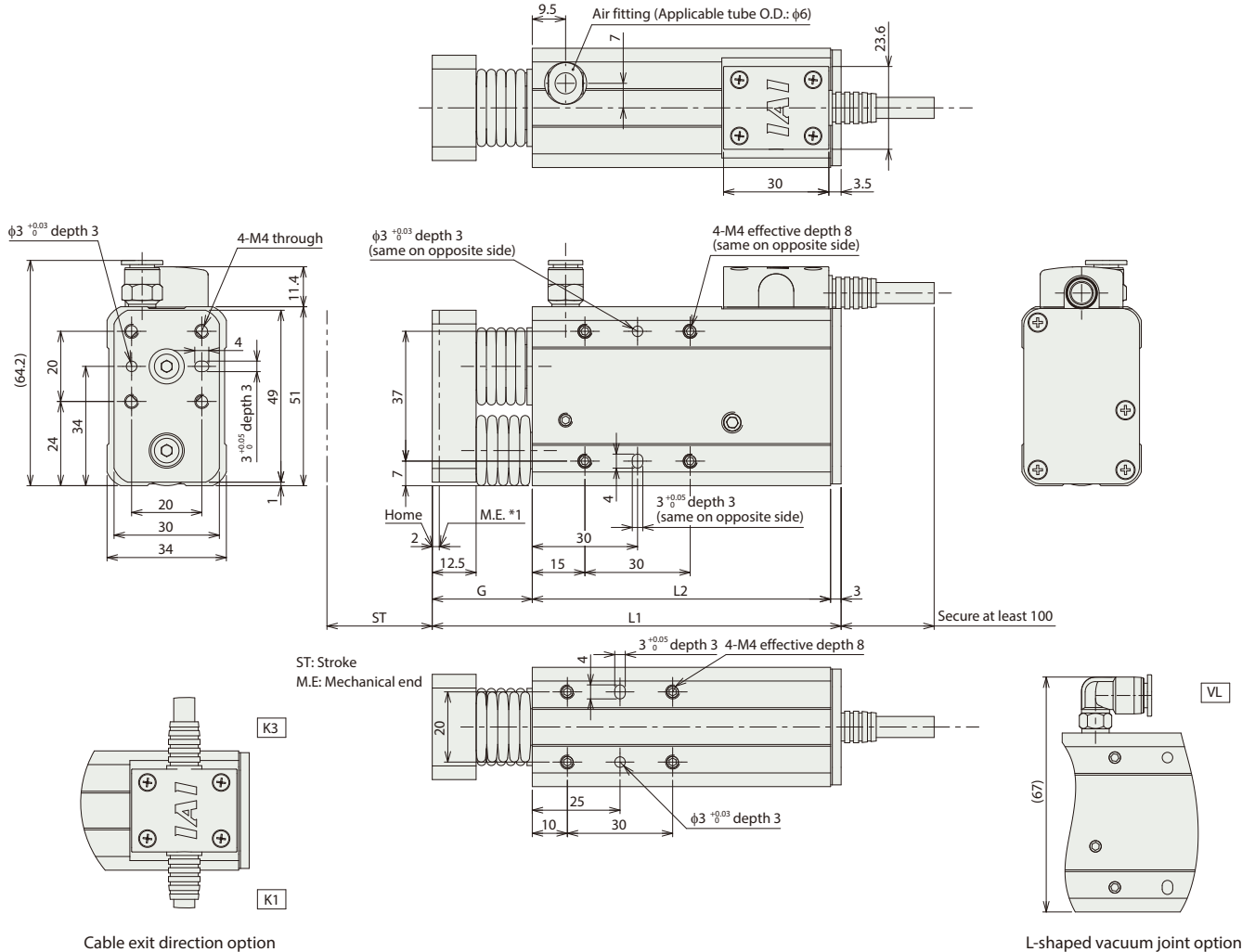
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

2D
CAD

3D
CAD

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

RCS2CR-GS5NB

RCS2W-GS5NB

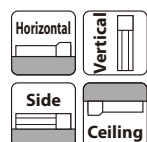
Cleanroom
Dust/Splash-proof
Mini
Single with Guide
Motor Unit Type
Built-in Motor
Body Width
46 mm
200v
AC Servo Motor

Model Specification Items
 Series: **GS5NB** | Type: **I** | Encoder Type: **60** | Motor Type: **60 : 60W Servo motor** | 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.

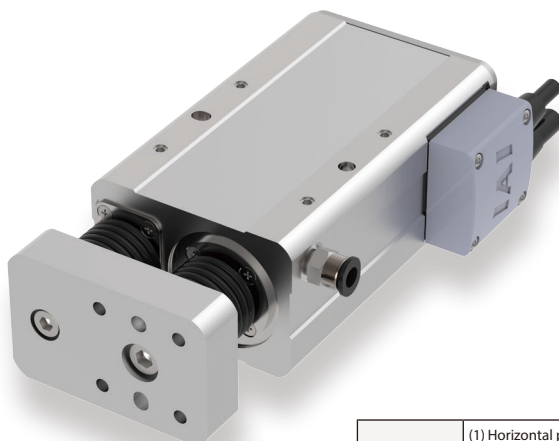
* Does not include a controller.



* CE is an available option.



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



- (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)			50 (mm)	75 (mm)
RCS2CR/W-GS5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	10	280<230> 380<330>
RCS2CR/W-GS5NB-I-60-5-①-T2-②-③			5	10	3	178		5	250<230> 250
RCS2CR/W-GS5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		2.5	125

Legend: ① Stroke ② Cable Length ③ Option

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		
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

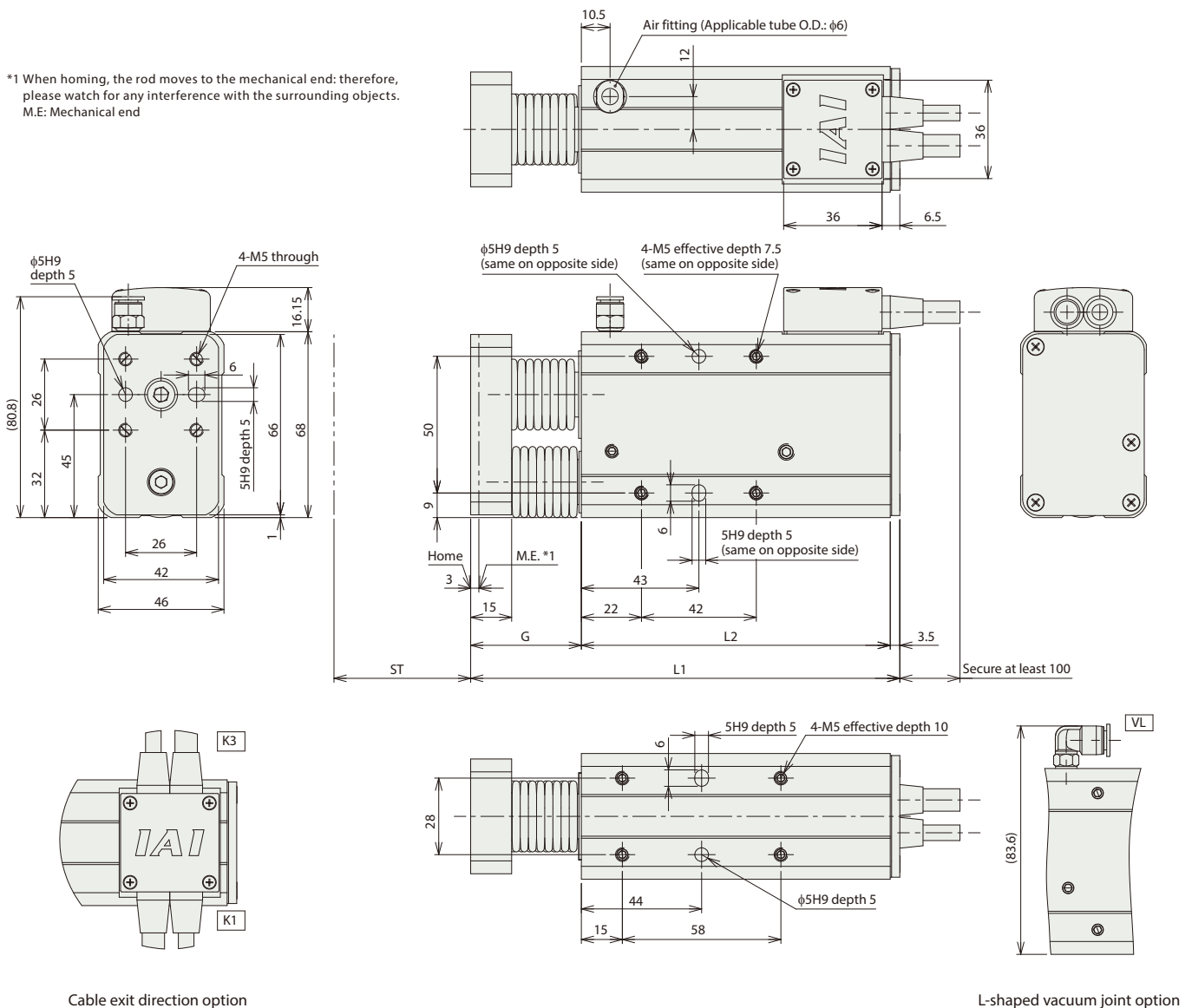
Actuator Specifications		
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw φ8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (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



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	●	●	—	    EtherCAT [®] 	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

Dust/Splash-proof

Mini

Double
With
guide

Motor
Unit
Type

Built-in
Motor

Body Width
**28
mm**
24v
AC Servo
Motor

Model Specification Items

 — **GD3NB** — **I** — **10** — — — — —

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

30:30mm
50:50mm

A1:ASEL
A3:ACON-CYB/PLB/POB
MCON
RCM-P6AC
A5:ACON-CB/CGB

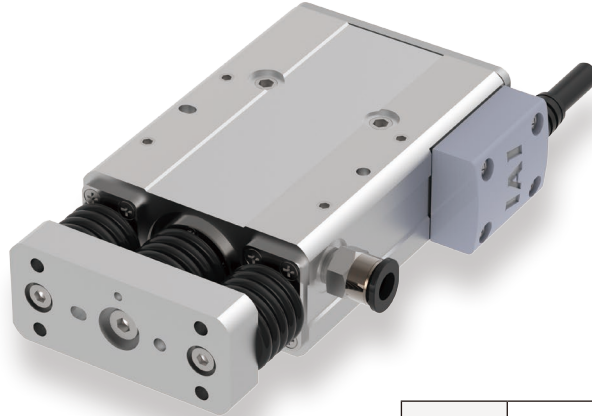
N : None
P : 1m
S : 3m
M : 5m
X□□ : Special Length

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


- (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

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (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
RCA2CR/W-GD3NB-I-10-2-①-②-③-④			2	1.5	0.5	85.5		
RCA2CR/W-GD3NB-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)
	200	100
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

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	

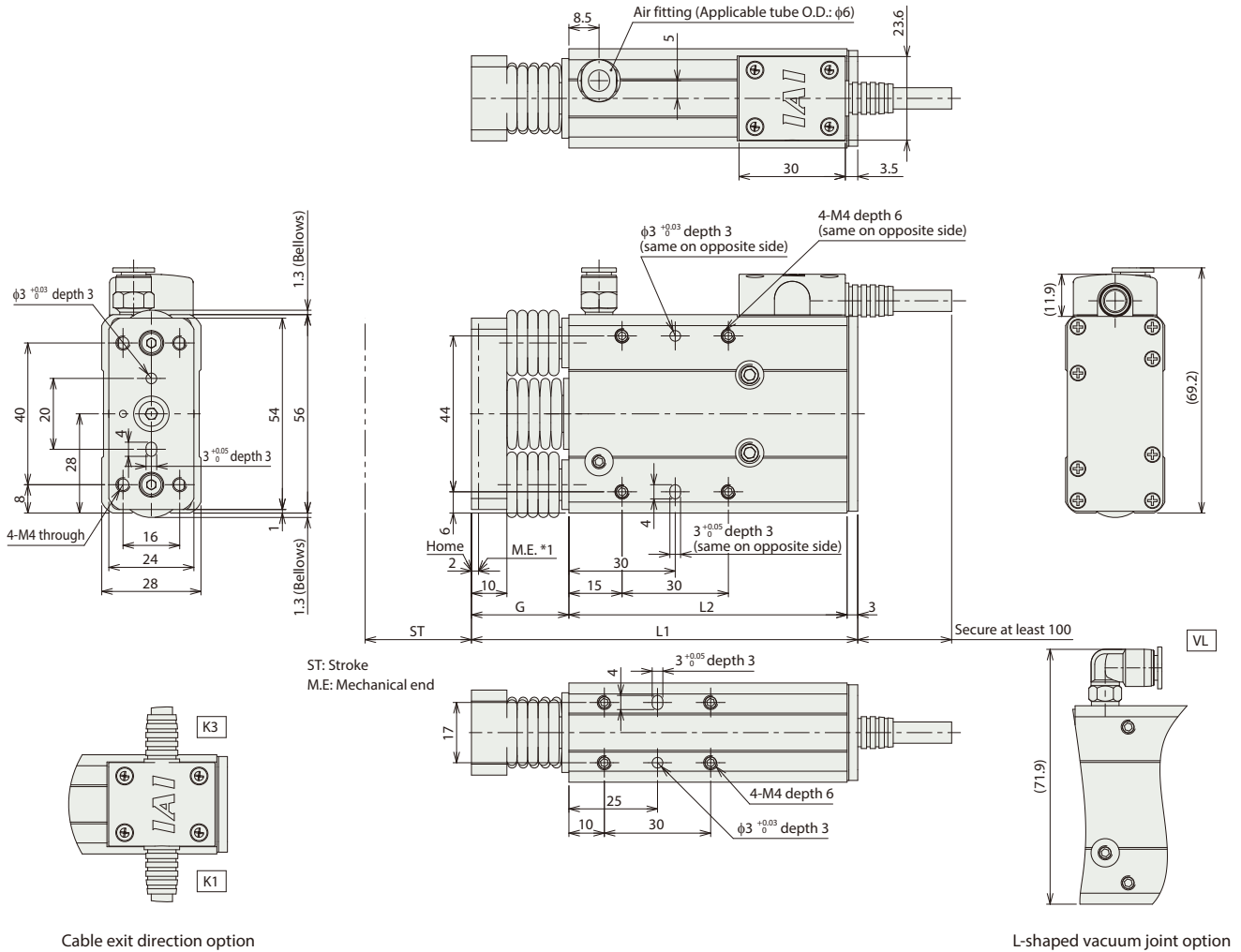
Dimensions

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

2D
CAD

3D
CAD

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

RCA2CR-GD4NB

RCA2W-GD4NB

Cleanroom

Dust/Splash-proof

Mini

Double
With
guide

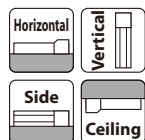
Motor
Unit
Type

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	GD4NB	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


- (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 Horizontal (kg) Vertical (kg)	Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
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		

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

Stroke and Max Speed

Stroke	30 (mm)	50 (mm)
Lead		
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

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	

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

RCS2CR: Cleanroom specification

RCS2W: Dust-proof/splash-proof specification

Series: **GD5NB**

Type: **I**

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

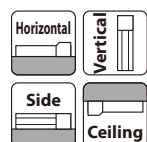
Options

Refer to Options table below.

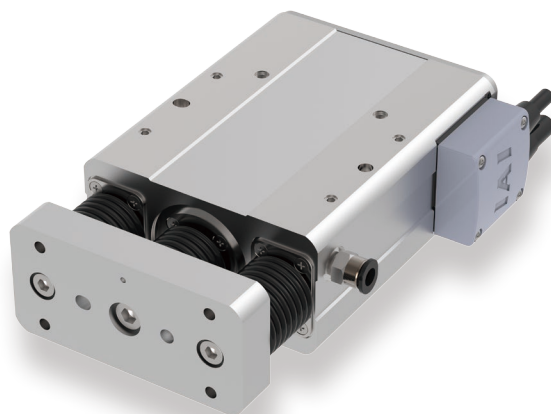
* Does not include a controller.



* CE is an available option.



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



- (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)			50 (mm)	75 (mm)
RCS2CR/W-GD5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	10	280<230> 380<330>
RCS2CR/W-GD5NB-I-60-5-①-T2-②-③			5	10	3	178		5	250<230> 250
RCS2CR/W-GD5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		2.5	125

Legend: ① Stroke ② Cable Length ③ Option

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		
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	

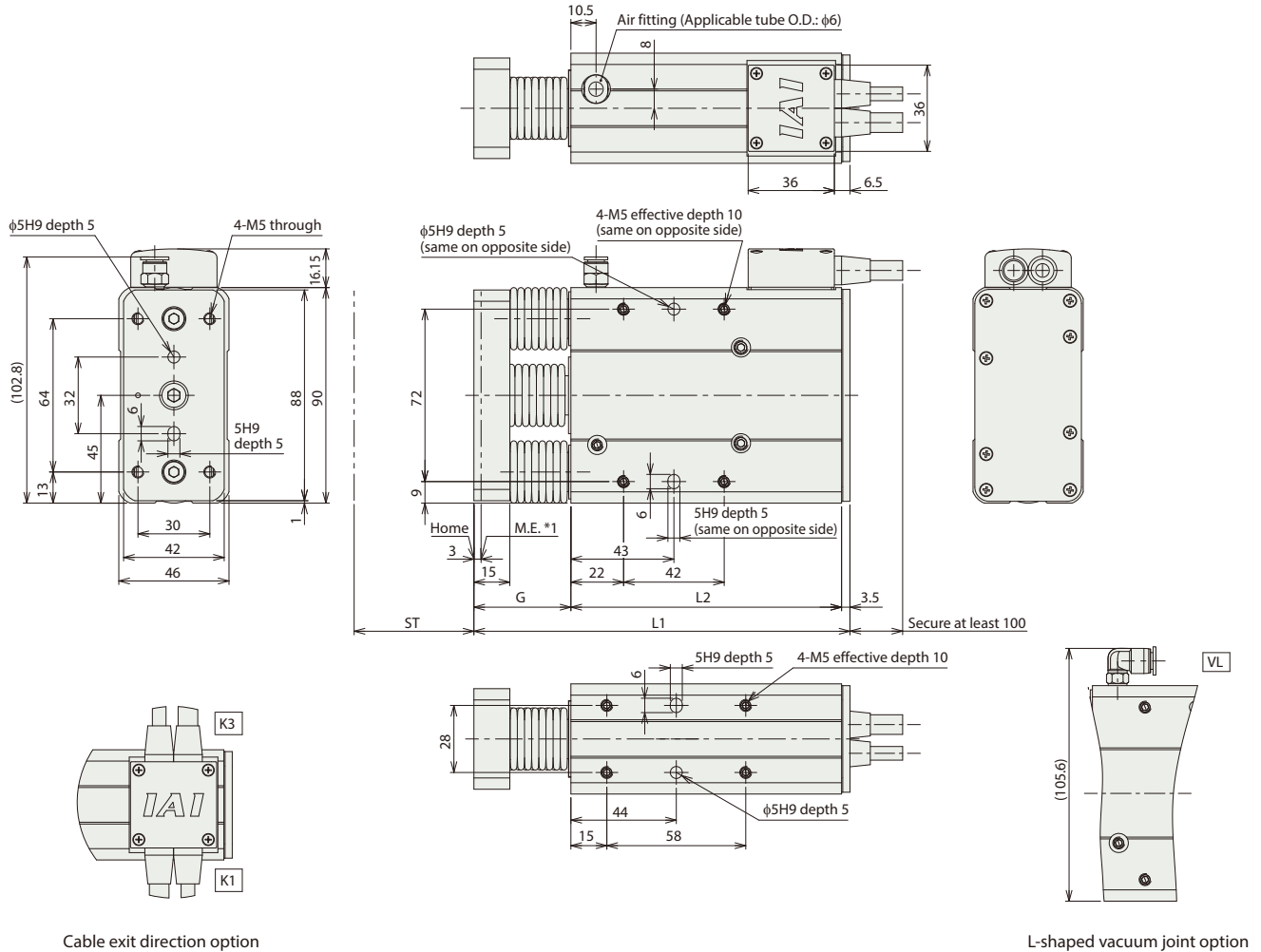
Dimensions

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

2D
CAD

3D
CAD

*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 PROFINET CompoNet MECHATROLINK EtherCAT EtherNet/IP Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	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	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

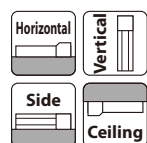
Body Width
60 mm

24v
AC Servo Motor

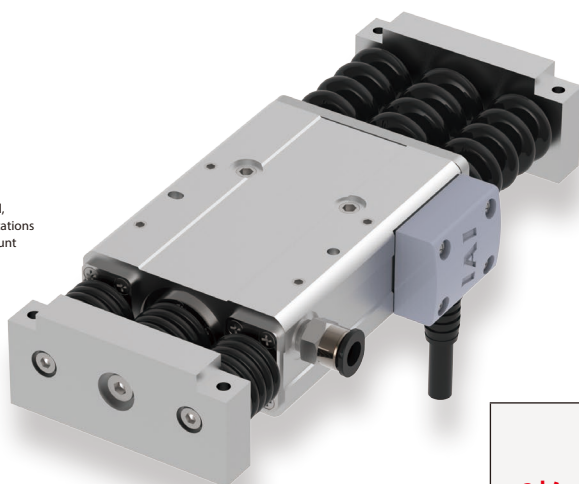
Model Specification Items
 Series: **SD3NB** Type: **I** Encoder Type: **10** Motor Type: **10** Lead: **4** Stroke: **25** Applicable Controllers: **A1:ASEL, A3:ACON-CYB/PLB/POB, MCON, RCM-P6AC, A5:ACON-CB/CGB** Cable Length: **N** Options: **Refer to Options table below.**

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
 4: Ball screw 4mm
 2: Ball screw 2mm
 1: Ball screw 1mm
 25: 25mm
 50: 50mm
 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


- (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		

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

Stroke and Max Speed

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

(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

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	

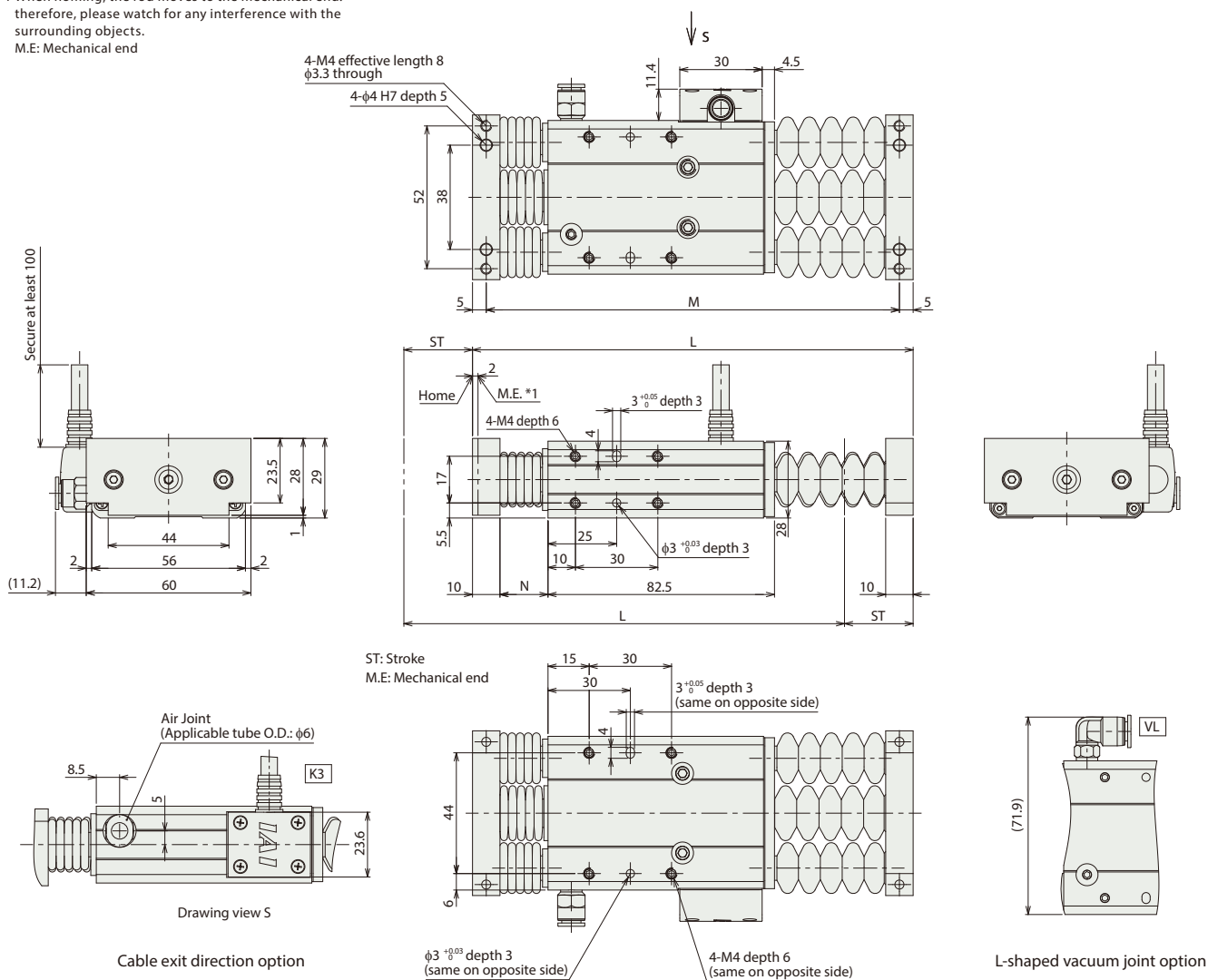
Dimensions

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

2D
CAD

3D
CAD

*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	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			
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	—	<div>DeviceNet</div> <div>CC-Link</div> <div>CompoNet</div> <div>MECHATROLINK</div> <div>EtherCAT</div> <div>EtherNet/IP</div> <div>SSCNET III/H</div> <div>Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.</div>	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)

RCA2CR-SD4NB

RCA2W-SD4NB

Cleanroom

Dust/Splash-proof

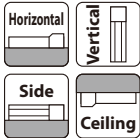
Mini

Double
With
guideMotor
Unit
TypeBuilt-in
MotorBody Width
72
mm**24v**
AC Servo
Motor

Model Specification Items

Series	SD4NB	Type	I	Encoder Type	20	Motor Type	20 : 20W Servo motor	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.
--------	-------	------	---	--------------	----	------------	----------------------	------	--	--------	--------------------	------------------------	--	--------------	--	---------	-------------------------------

* Does not include a controller.



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


Energy saver


- (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) 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	Max Speed	
	25 (mm)	50 (mm)
6	240<200>	300
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

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	

RCS2W-SD5NB

Dust/Splash-

Double
With
guide

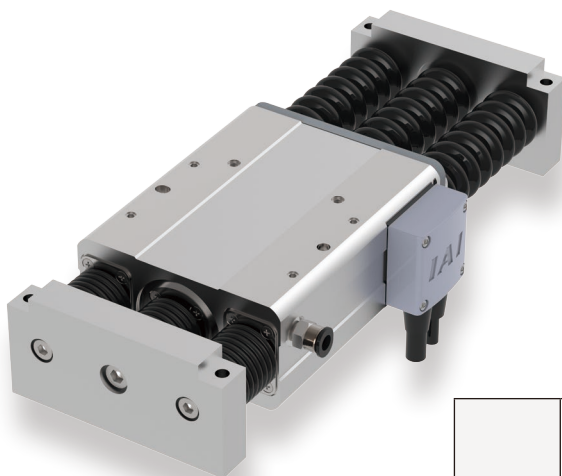
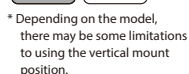
Motor
Unit
Type

Built-in Motor

Body Width
94
mm

200v
AC Servo
Motor

* Does not include a controller.



- (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 line (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.

■ Lead and Payload

Legend: ① Stroke ② Cable Length ③ Option

Stroke and Max Speed

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

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

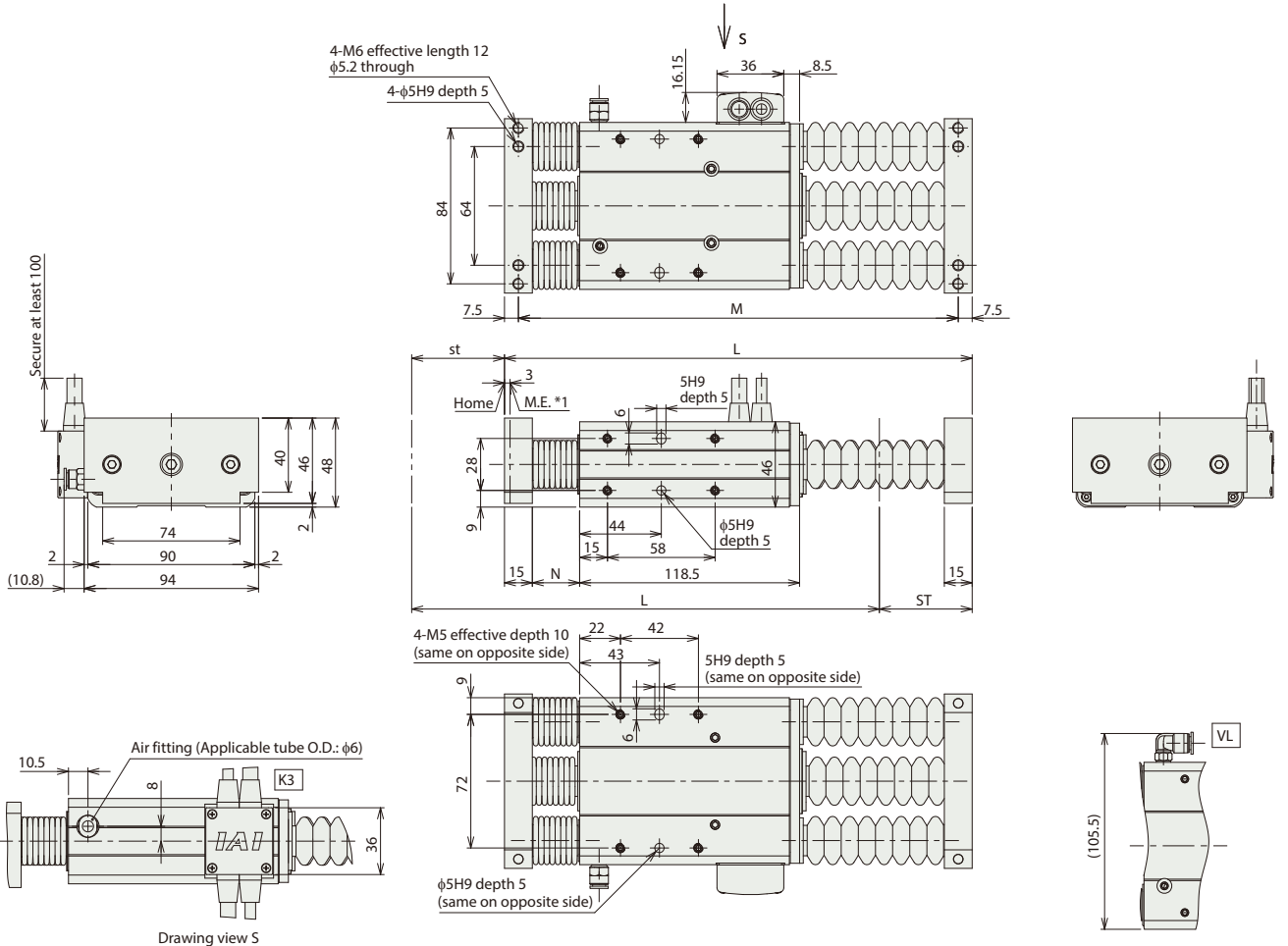
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw $\phi 8\text{mm}$, rolled C10	
Positioning repeatability	$\pm 0.02\text{mm}$	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	Class 100 (Fed.Std.209D), class 3.5 or equivalent (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.

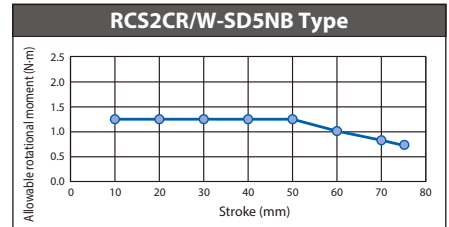
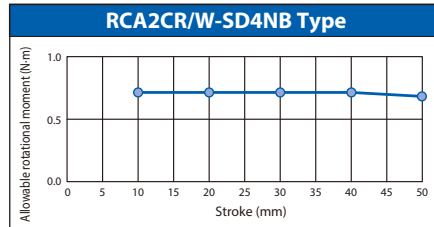
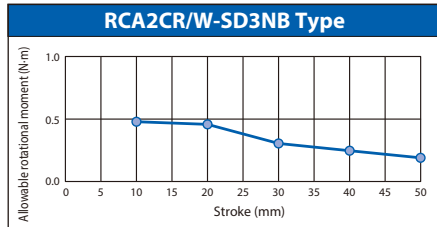
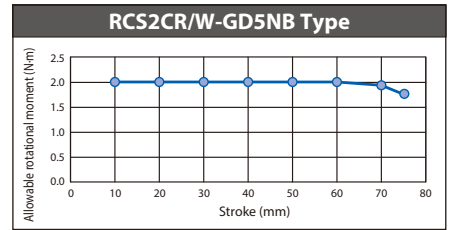
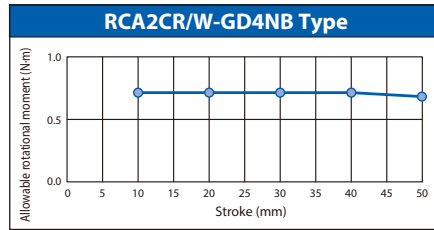
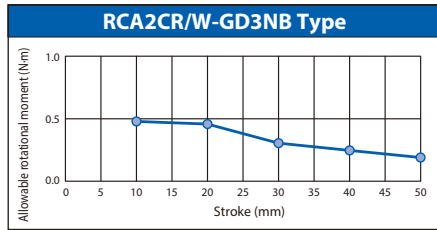
Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100/200VAC	●	●	—	<p>Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.</p>	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	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.

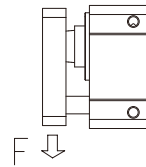
If applying rotational torque, use within the range of values listed below. Rotational torque cannot be applied to single guide types.



Correlation of Allowable Load on Rod Tip and Running Life

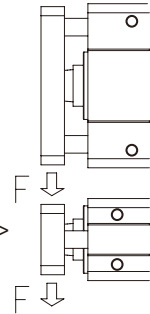
The larger the load on the guide tip, the shorter the life will become. Select a model with consideration for the balance between load and life.

Single guide type

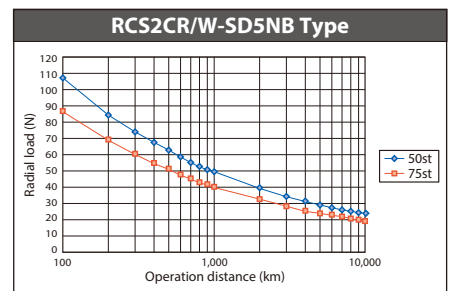
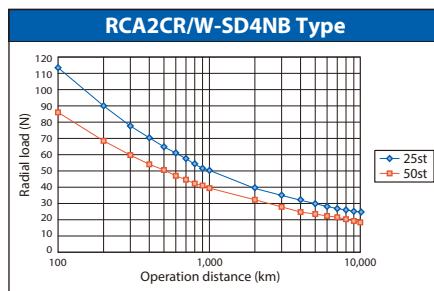
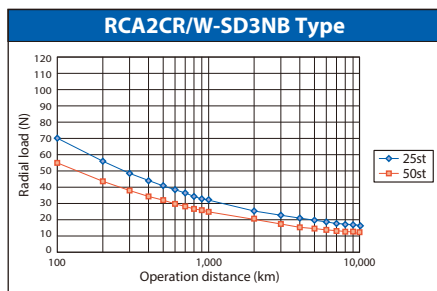
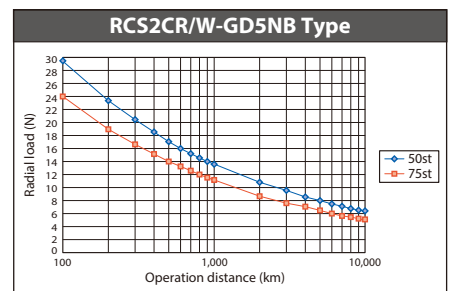
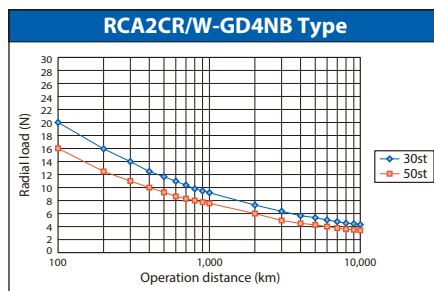
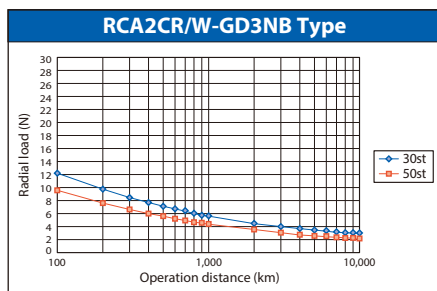
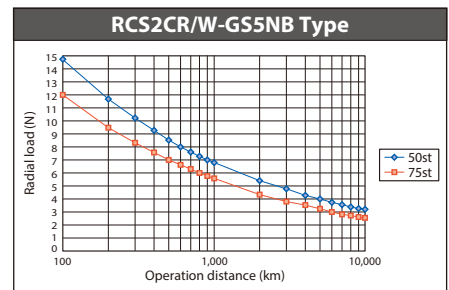
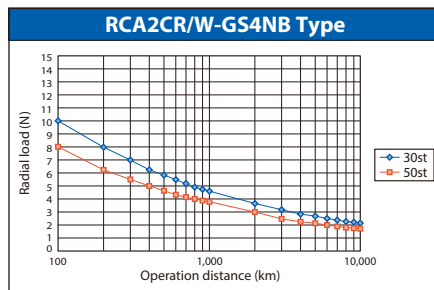
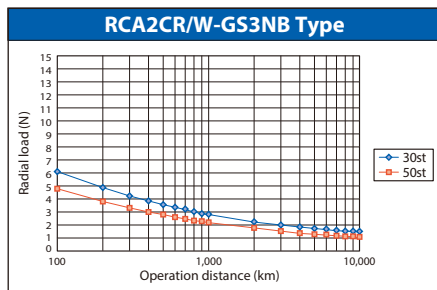


* Single guide specification can only be used with vertical loads.

Double guide type <Vertical>



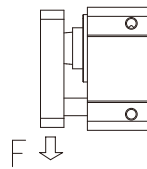
<Horizontal>



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.

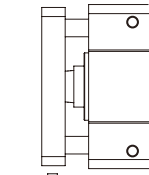
Single guide type



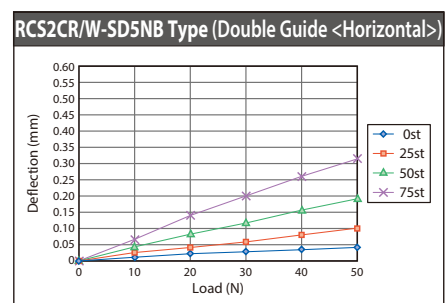
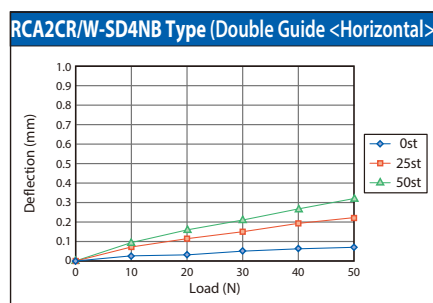
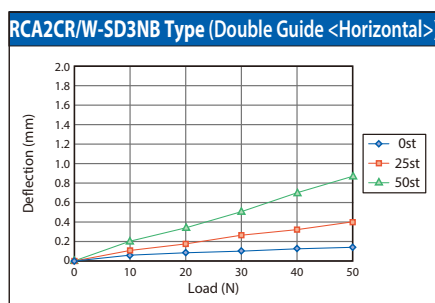
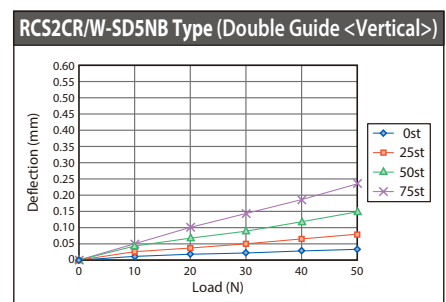
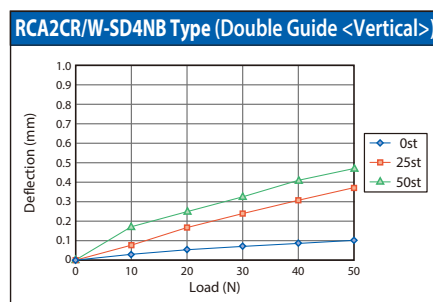
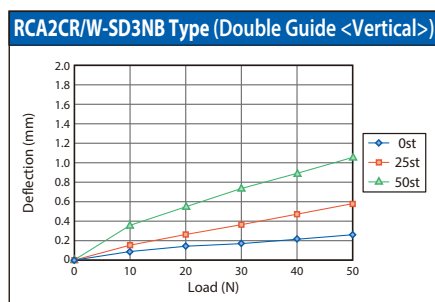
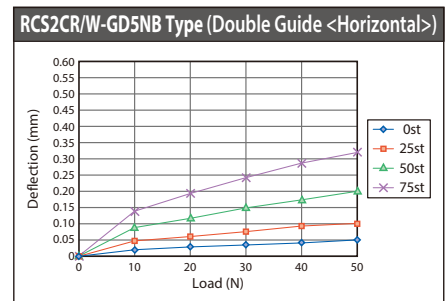
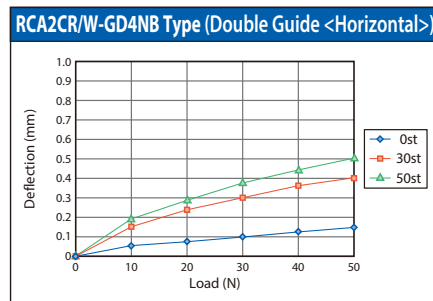
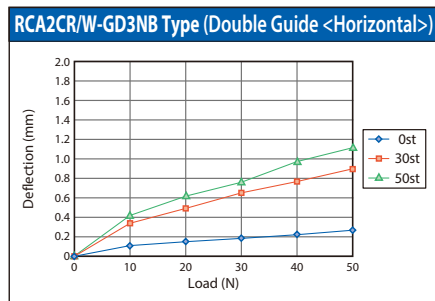
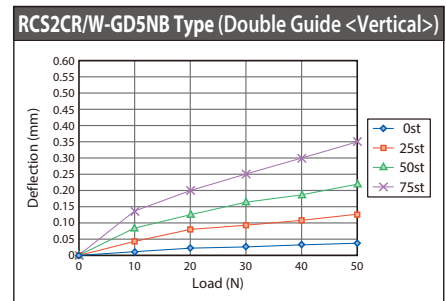
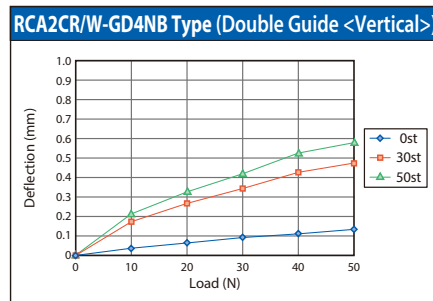
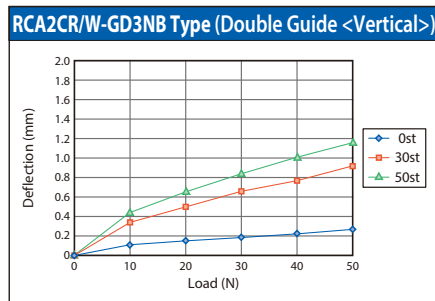
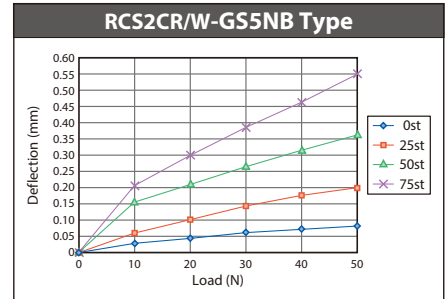
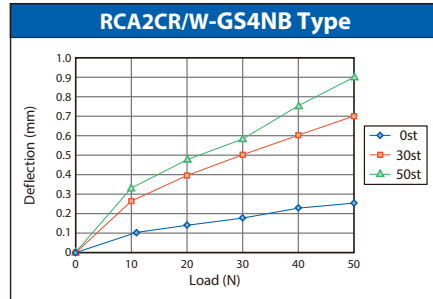
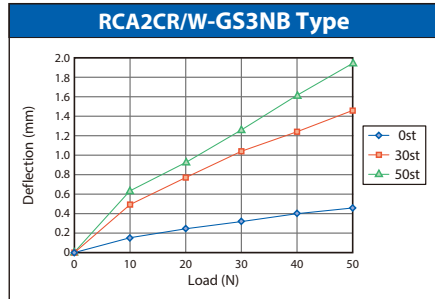
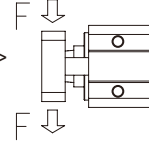
* Single guide specification can only be used with vertical loads.

Double guide type

<Vertical>



<Horizontal>



Mini Rod Type Rotation Stop Mounting Method

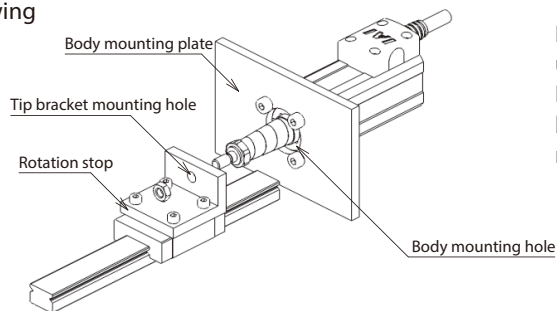
■ Mini ROBO Cylinder rod type rotation stop

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.

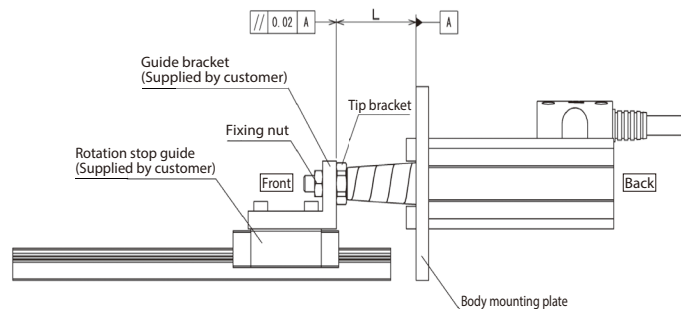
Target models RCA2CR/W-RN3NB, RN4NB, RP3NB, RP4NB
RCS2CR/W-RN5NB, RP5NB

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

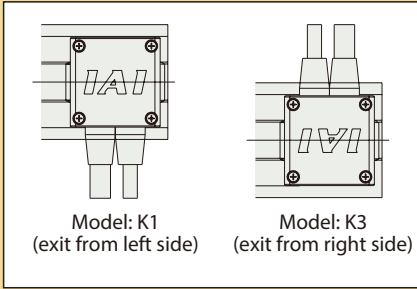
Model **CE**

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

MEMO

IAI America, Inc.

Headquarters: 2690 W. 237th Street, Torrance, CA 90505 (800) 736-1712
Chicago Office: 110 E. State Pkwy, Schaumburg, IL 60173 (800) 944-0333
Atlanta Office: 1220 Kennestone Circle, Suite 108, Marietta, GA 30066 (888) 354-9470

www.intelligentactuator.com

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

IAI Industrieroboter GmbH

Ober der Röth 4, D-65824 Schwalbach am Taunus, Germany

IAI (Shanghai) Co., Ltd.

Shanghai Jiahua Business Center A8-303, 808,
Hongqiao Rd., Shanghai 200030, China

IAI Robot (Thailand) Co., Ltd.

825 Phairojkiija Tower 12th Floor, Bangna-Trad RD.,
Bangna, Bangna, Bangkok 10260, Thailand