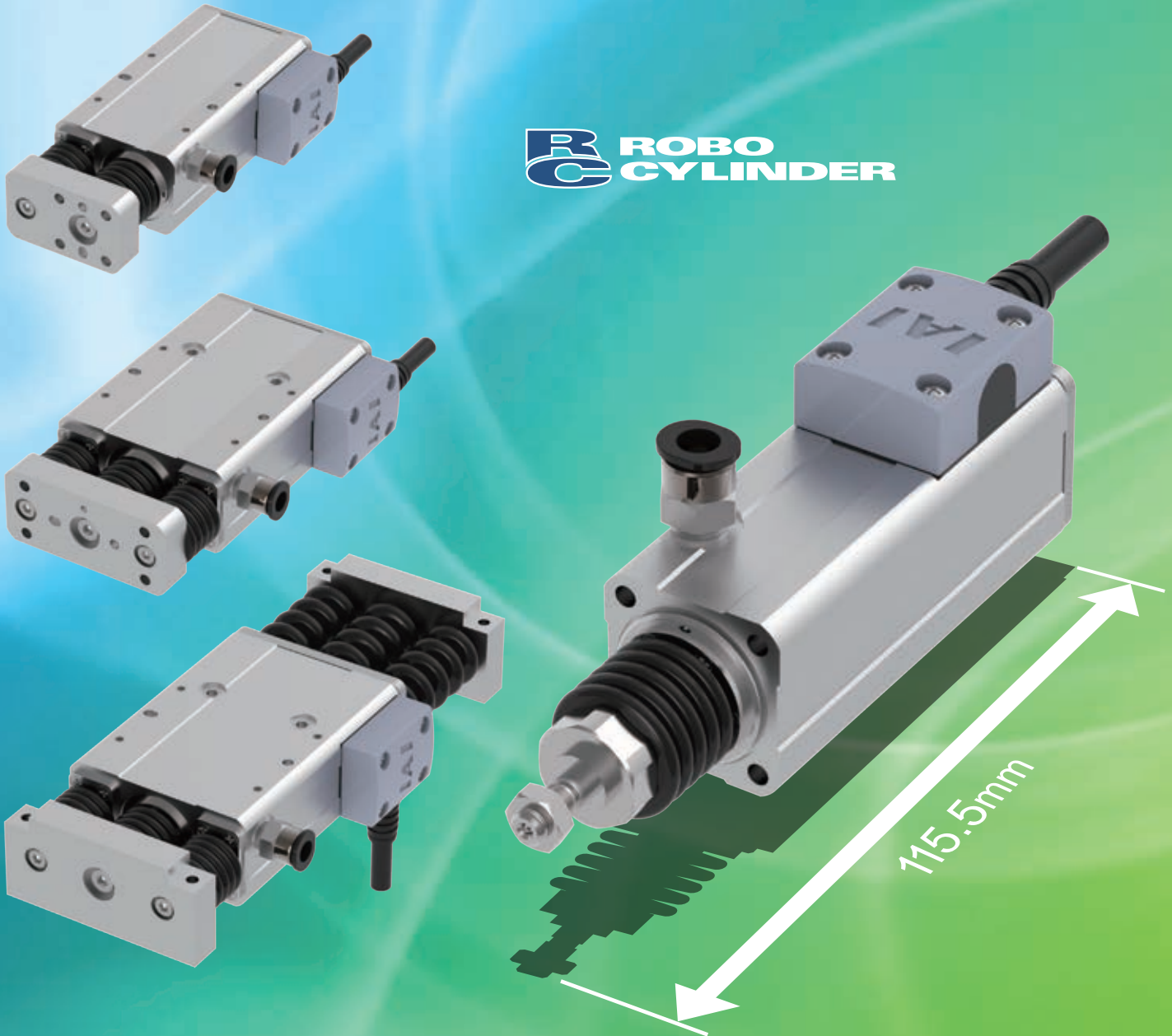


Mini RoboCylinder

Cleanroom & Dust/Splash-Proof Rod Types
With 24 VAC or 230 VAC Servo Motor

- RCA2CR
- RCA2W
- RCS2CR
- RCS2W



**ROBO
CYLINDER**

Next-generation cylinder that has achieved miniaturization

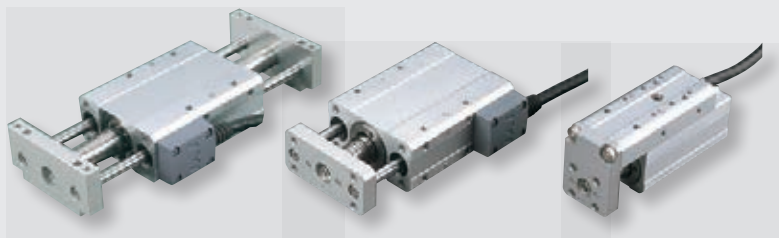
Mini RoboCylinder

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

01

Mini RoboCylinder 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 RoboCylinder 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:

Cleanliness Class 3.5

1. ISO Standard 14644-1:2015
The number of particles 0.1µm or larger in 1m³ is expressed in exponents when expressed in powers of 10.

Cleanliness Class 100

2. US FED Standard 209D
Displays the number of particles in 1ft³ with reference to particles of 0.5µm or more.
<Display method> Class 1, 10, 100, 1000, 10000, 100000

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

Type	Title	External view	Model		Body width	Max. payload (horizontal)	Reference page
			Series name	Type name			
Without guide	Short length type	 Fixed nut type	RCA2CR RCA2W	RN3NB	28mm	3kg	3
				RN4NB	34mm	6kg	5
			RCS2CR RCS2W	RN5NB	46mm	20kg	7
		 Tapped hole type	RCA2CR RCA2W	RP3NB	28mm	3kg	9
				RP4NB	34mm	6kg	11
			RCS2CR RCS2W	RP5NB	46mm	20kg	13
With guide	Short length type	 Single guide free mount type	RCA2CR RCA2W	GS3NB	28mm	3kg	15
				GS4NB	34mm	6kg	17
			RCS2CR RCS2W	GS5NB	46mm	20kg	19
		 Double guide free mount type	RCA2CR RCA2W	GD3NB	28mm	3kg	21
				GD4NB	34mm	6kg	23
			RCS2CR RCS2W	GD5NB	46mm	20kg	25
		 Double guide slide unit type	RCA2CR RCA2W	SD3NB	60mm	3kg	27
				SD4NB	72mm	6kg	29
			RCS2CR RCS2W	SD5NB	94mm	20kg	31

RCA2CR-RN3NB

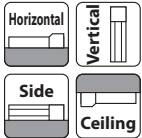
RCA2W-RN3NB

Cleanroom
Mini Rod Type
Short Fixed Nut Type
Built-in Motor
Body Width 28 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	RN3NB	I I: Incremental * Models used with the simple absolute encoder also have an "I" in the name.	10 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 (*) Coming soon	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.



Power-saving



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

Actuator Specifications

Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-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		

Stroke and Max Speed

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

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

(Unit: mm/s)

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.

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
Power-saving	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 ø4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED-STD class 100 (209D 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

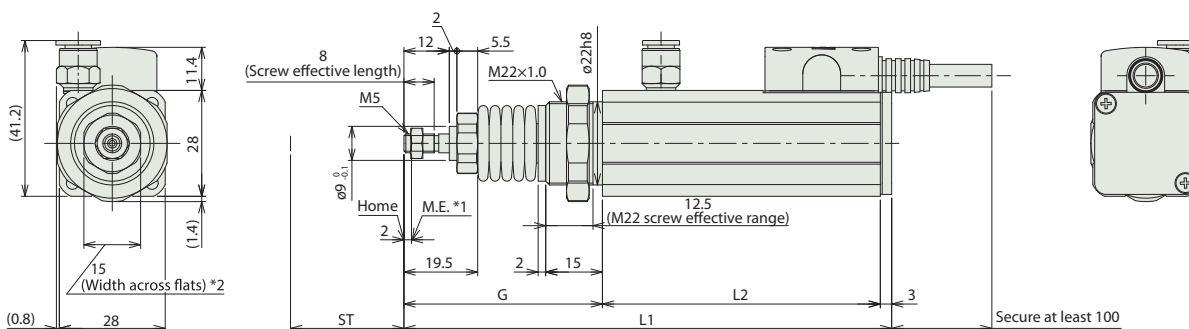
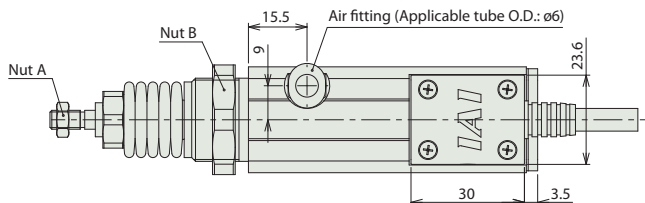
CAD drawings can be downloaded from our website.
www.robocylinder.de



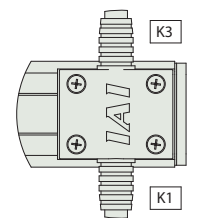
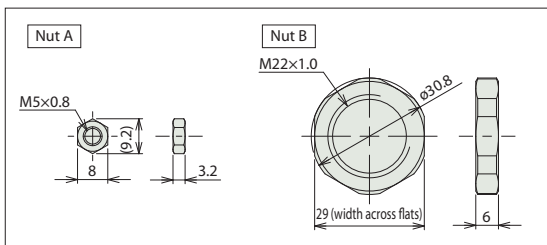
- *1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end
- *2 The direction of width across flats surface varies depending on the product.

Notes

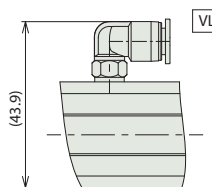
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



ST: Stroke
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

Notes

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

Applicable Controllers

The RCA2CR/RCA2W series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB (*)		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.					256
MCON-LC/LCG (*)		6		—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●		1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.					768

(*) Coming soon

RCA2CR-RN4NB

RCA2W-RN4NB

Cleanroom
Mini Rod Type
Short Fixed Nut Type
Built-in Motor
Body Width 34 mm
24v AC Servo Motor

Model Specification Items: **RN4NB** - **I** - **20**

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

Type: RN4NB

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

Motor Type: 20: 20W Servo motor

Lead: 6: Ball screw 6mm; 4: Ball screw 4mm; 2: Ball screw 2mm

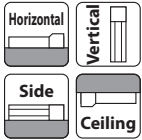
Stroke: 30: 30mm; 50: 50mm

Applicable Controllers: A1: ASEL; A3: ACON-CYB/PLB/POB(*); MCON; RCM-P6AC(*); A5: ACON-CB/CGB (*Coming soon)

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.



Power-saving



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

Actuator Specifications

Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-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	Stroke (mm)	
	30 (mm)	50 (mm)
6	270<220>	300
4	200	
2	100	

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

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.

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
Power-saving	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 ø6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D standard)	
Suction pressure	4kPa	
Protective structure	IP52	
Air purge	Do not purge	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

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

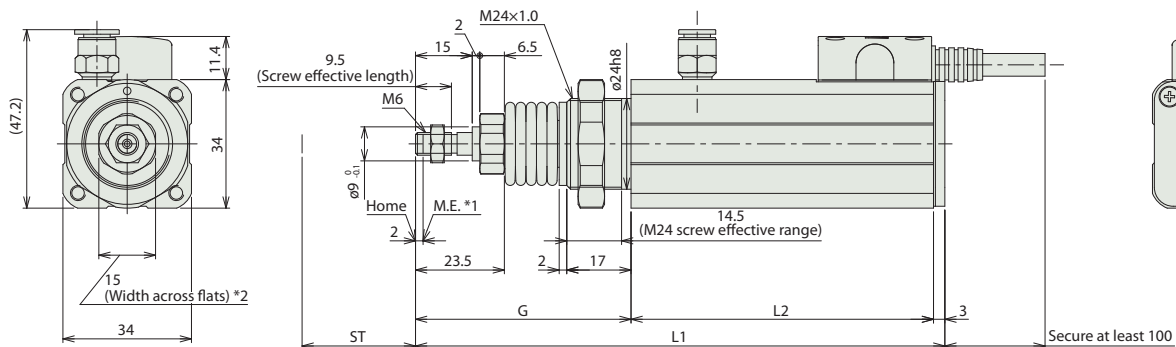
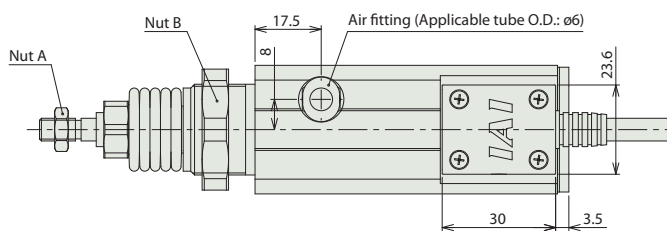


*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end

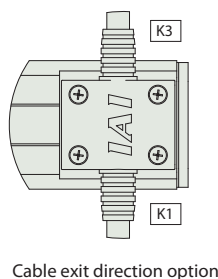
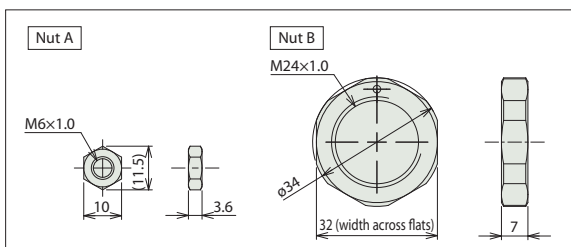
*2 The direction of width across flats surface varies depending on the product.

Notes

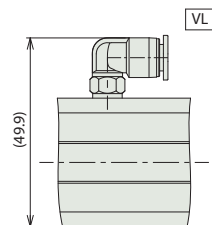
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



ST: Stroke
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

Notes

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

Applicable Controllers

The RCA2CR/RCA2W series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB (*)		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.					256
MCON-LC/LCG (*)		6		—	—	●		256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.					768

(*) Coming soon

RCS2CR-RN5NB

RCS2W-RN5NB

Cleanroom Mini Rod Type Short Fixed Nut Type Built-in Motor Body Width 46 mm 230V AC Servo Motor

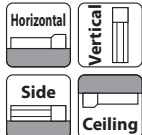
Dust/Splash-proof

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
	RCS2CR: Cleanroom specification RCS2W: Dust-proof/splash-proof specification	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	Refer to Options table below.
								X□□ : Special Length R□□ : Robot cable	

* Does not include a controller.



* CE conformity must be specified as standard option.



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



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

Actuator Specifications

Lead and Payload

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

Legend: ① Stroke ② Cable Length ③ Option

Stroke and Max Speed

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

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

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)
	R01(1m) ~ R03(3m)
Robot cable	R04(4m) ~ R05(5m)
	R06(6m) ~ R10(10m)
	R11(11m) ~ R15(15m)
	R16(16m) ~ R20(20m)

Options

Name	Option code	Reference page
CE compliant specification (standard option)	CE	—
Connector cable exit from left side	K1	See back page
Connector cable exit from right side	K3	See back page
L-shaped vacuum joint specification	VL	See back page

Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED-STD class 100 (209D standard)	—
Suction pressure	1kPa	—
Protective structure	—	IP52
Air purge	—	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

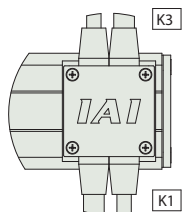
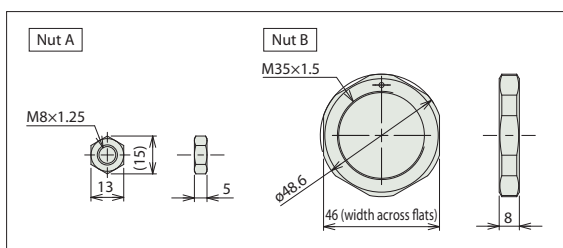
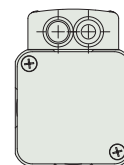
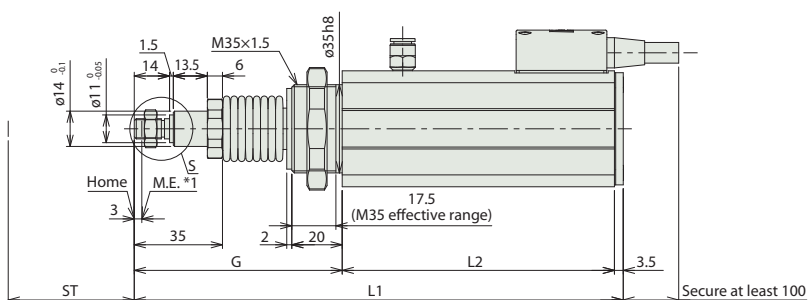
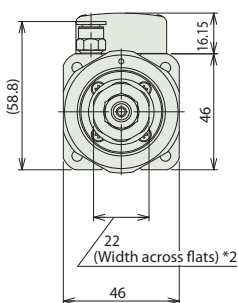
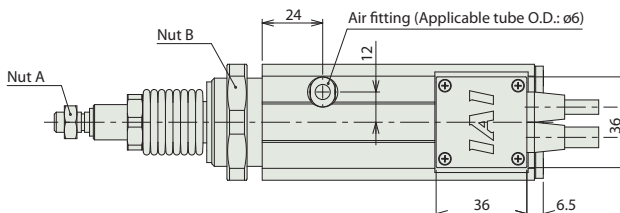
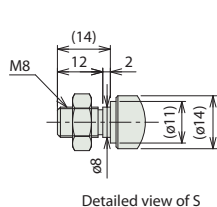
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www.robocylinder.de



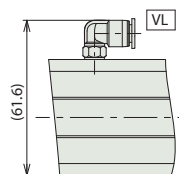
- *1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end
- *2 The direction of width across flats surface varies depending on the product.

Notes

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



Cable exit direction option



L-shaped vacuum joint option

Notes

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

Cleanroom specification actuator 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 100/230VAC	●	●	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
SCON-LC/LCG (*)		1		—	—	●		 	512 (768 for network spec.)
SSEL-CS		2		●	—	●	 	20000	Refer to the RC General catalog V4b.
XSEL-P/Q (**)		6	Single phase 230VAC Three-phase 230VAC	—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	Refer to the RC General catalog V4b.

(*) Coming soon (**) Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA (coming soon).

RCA2CR-RP3NB

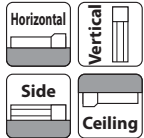
RCA2W-RP3NB

Cleanroom
Mini Rod Type
Short Tapped Hole Type
Built-in Motor
Body Width 28 mm
24V AC Servo Motor

Model Specification Items: **RP3NB** - **I** - **10**

Series: RP3NB | Type: I | Encoder Type: 10: 10W Servo motor | Lead: 4: Ball screw 4mm, 2: Ball screw 2mm, 1: Ball screw 1mm | Stroke: 30: 30mm, 50: 50mm | Applicable Controllers: A1: ASEL, A3: ACON-CYB/PLB/POB(*), MCON, RCM-P6AC(*), A5: ACON-CB/CGB (*Coming soon) | Cable Length: N: None, P: 1m, S: 3m, M: 5m | 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.



Power-saving



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

Actuator Specifications

Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-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

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

(Unit: mm/s)

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.

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
Power-saving	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 ø4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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

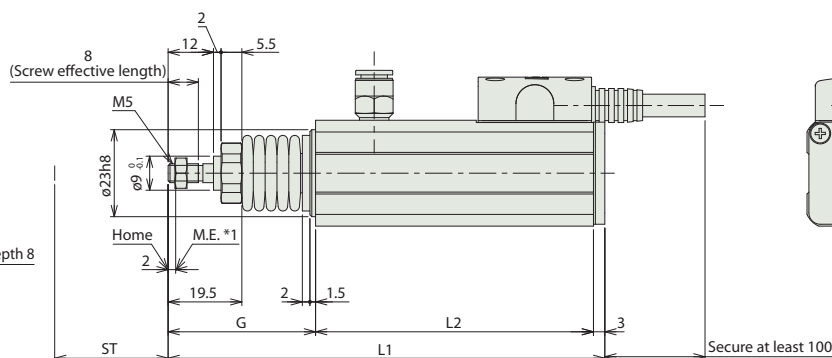
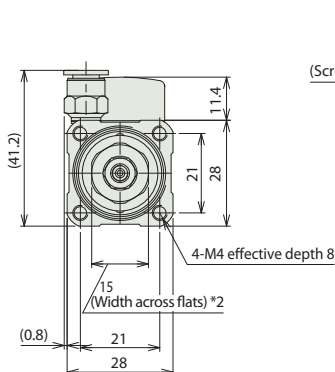
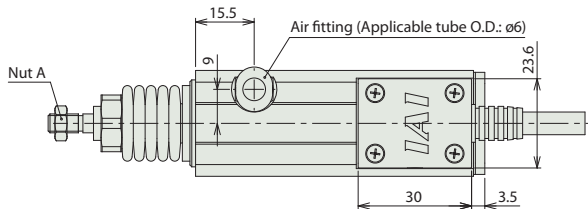
CAD drawings can be downloaded from our website.
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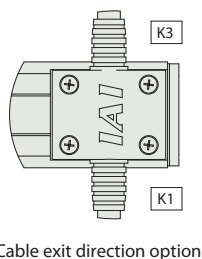
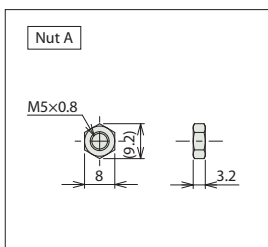
*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end
*2 The direction of width across flats surface varies depending on the product.

Notes

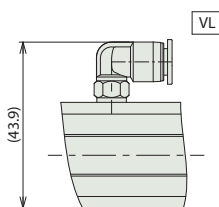
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



ST: Stroke
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

Notes

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

Applicable Controllers

The RCA2CR/RCA2W series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB (*)		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.				Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	256
MCON-LC/LCG (*)		6		—	—	●	256		Please contact IAI for more information.
ASEL-CS		2		●	—	●	1500	Refer to the RC General catalog V4b.	
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog V3.

(*) Coming soon

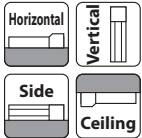
RCA2CR-RP4NB

RCA2W-RP4NB

Cleanroom
Mini Rod Type
Short Tapped Hole 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
	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 (*) Coming soon	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.



Power-saving



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

Actuator Specifications

Lead and Payload

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

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

Stroke and Max Speed

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

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

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.

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
Power-saving	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 ø6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D standard)	
Suction pressure	4kPa	-
Protective structure	-	IP52
Air purge	-	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

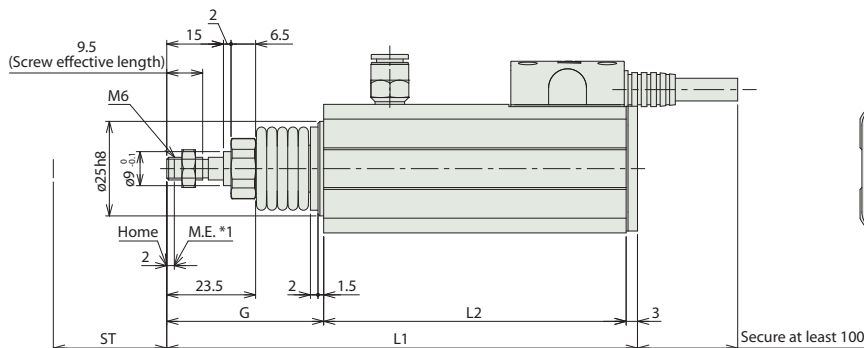
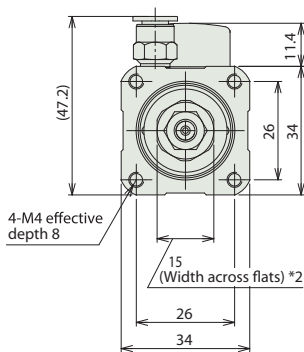
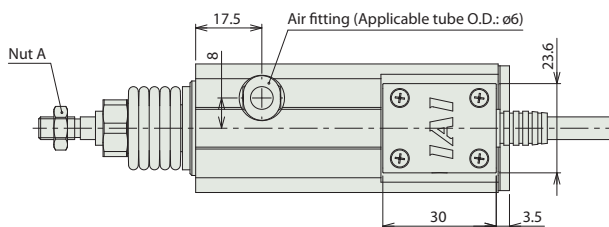
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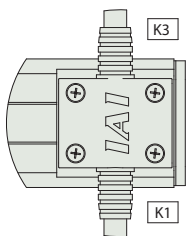
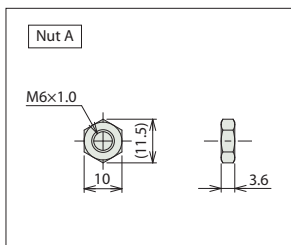
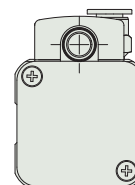
- *1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end
- *2 The direction of width across flats surface varies depending on the product.

Notes

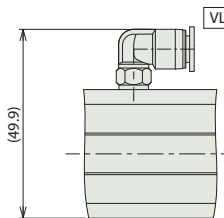
The feed screw of this product has no rotation stopper, so an external rotation stopper should be added.



ST: Stroke
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

Notes

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

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	—	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.			256	Refer to the MCON catalog.
MCON-LC/LCG (*)		6		—	—	●	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP65 Gateway system.			768	Refer to the RCP6 catalog V3.

(*) Coming soon

RCS2CR-RP5NB

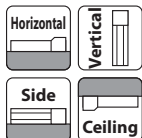
RCS2W-RP5NB

Cleanroom
Mini Rod Type
Short Tapped Hole Type
Built-in Motor
Body Width 46 mm
230V AC Servo Motor

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



* CE conformity must be specified as standard option.



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



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

Actuator Specifications

Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
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	Max Speed	
	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)

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)
	R01(1m) ~ R03(3m)
Robot cable	R04(4m) ~ R05(5m)
	R06(6m) ~ R10(10m)
	R11(11m) ~ R15(15m)
	R16(16m) ~ R20(20m)

Options

Name	Option code	Reference page
CE compliant specification (standard option)	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 ø8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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	

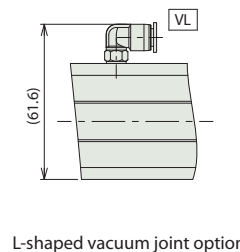
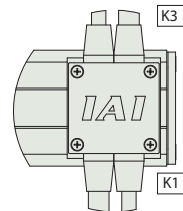
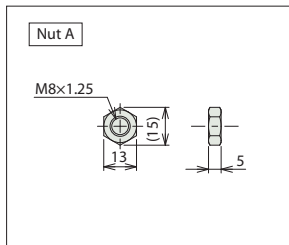
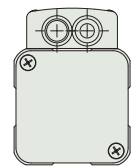
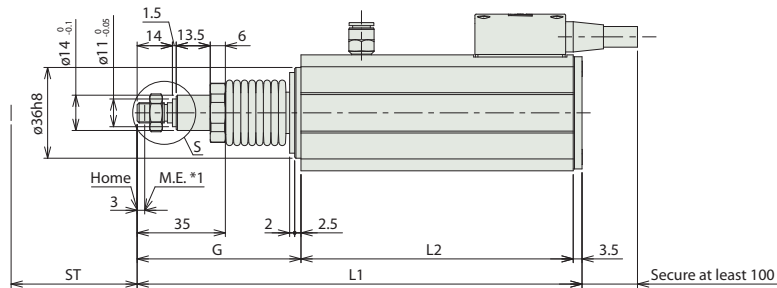
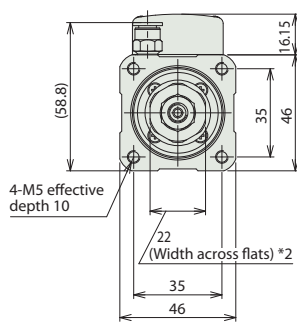
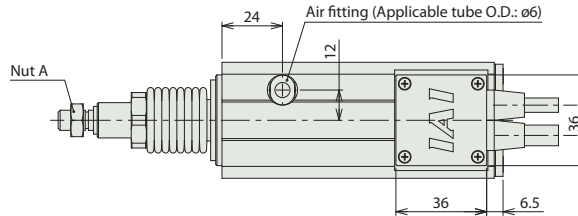
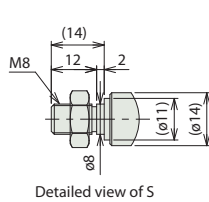
Dimensions

CAD drawings can be downloaded from our website.
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*1 When homing, the rod moves to the mechanical end; therefore, please watch for any interference with the surrounding objects.
 M.E: Mechanical end

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



Notes

Dust-proof/splash-proof specification actuator cable length is 2000mm. The connector at the end of the actuator cable is not covered by the protective structure.
 Cleanroom specification actuator 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 100/230VAC	●	●	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
SCON-LC/LCG (*)		1		—	—	●		512 (768 for network spec.)	Refer to the SCON-LC catalog.
SSEL-CS		2		●	—	●		20000	Refer to the RC General catalog V4b.
XSEL-P/Q (**)		6	Single phase 230VAC Three-phase 230VAC	—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	Refer to the RC General catalog V4b.

(*) Coming soon (**) Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA (coming soon).

RCA2CR-GS3NB

RCA2W-GS3NB

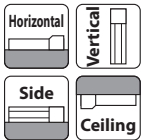
Cleanroom Mini Rod Type Short Free Mount Type With Single Guide Built-in Motor Body Width 28 mm 24V AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
	GS3NB	I	10	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 (*) Coming soon	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Refer to Options table below.

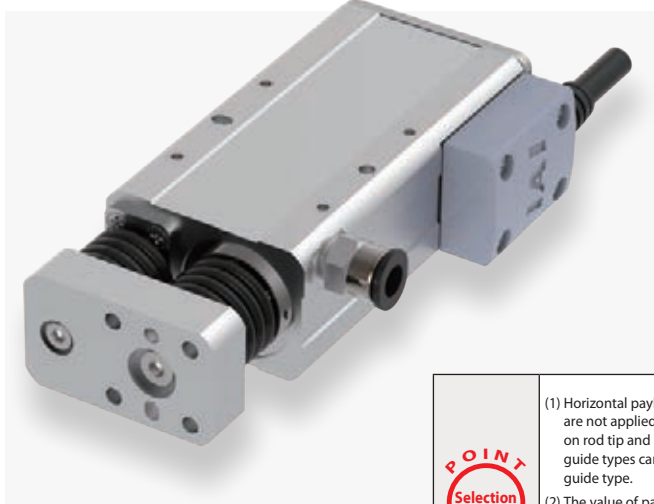
* Does not include a controller.



Power-saving



* 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		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-GS3NB-I-10-4-①-②-③-④	10	Ball screw	4	0.75	0.25	42.7	±0.02	30 50
RCA2CR/W-GS3NB-I-10-2-①-②-③-④			2	1.5	0.5	85.5		
RCA2CR/W-GS3NB-I-10-1-①-②-③-④			1	3	1	170.9		

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

Stroke and Max Speed

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

(Unit: mm/s)

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.

Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED-STD class 100 (209D 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	

Options

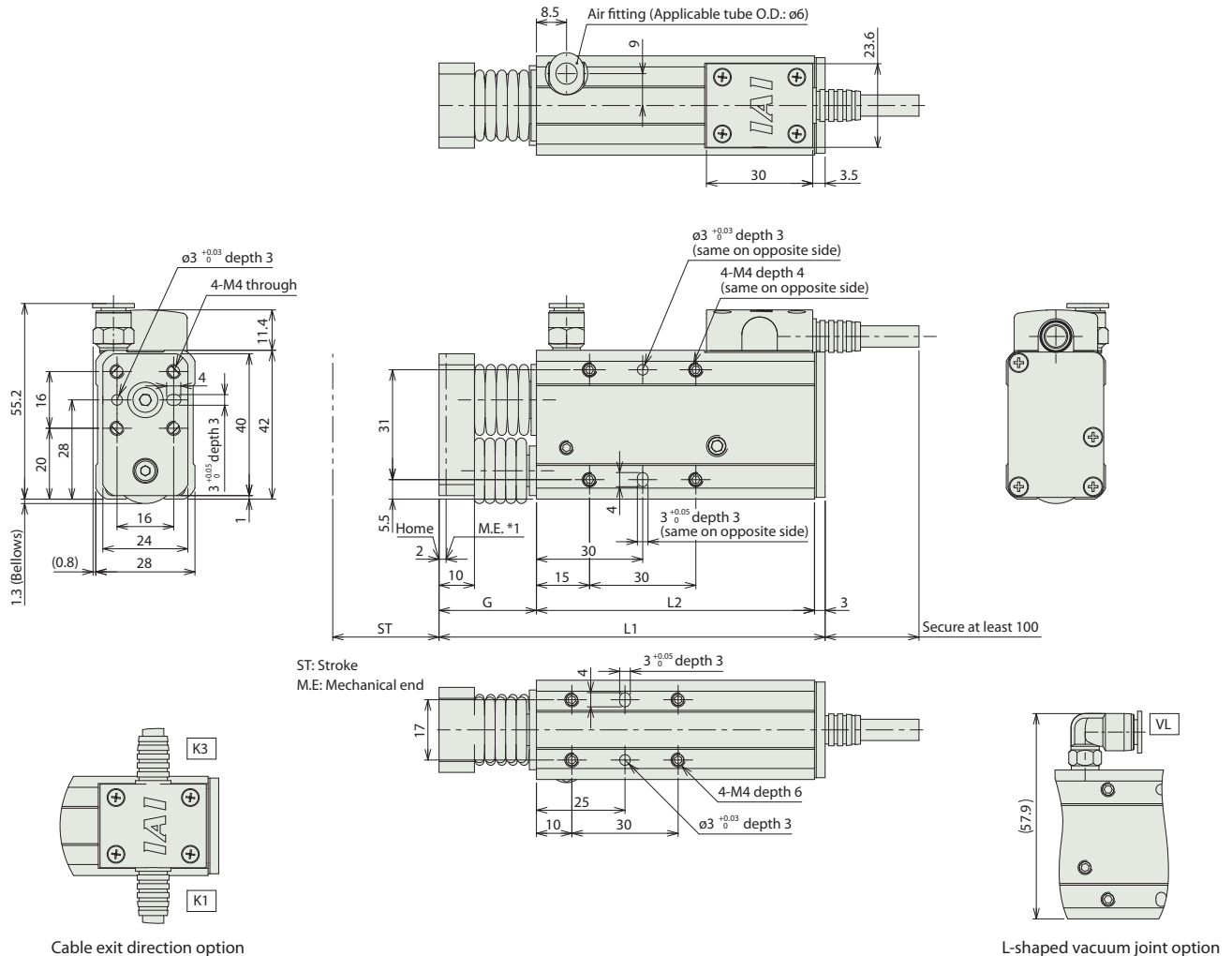
Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Power-saving	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

Dimensions

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



*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 cable length is 2100mm.
The connector at the end of the actuator cable is not covered by the protective structure.
Cleanroom specification actuator 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

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.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.				256	Refer to the MCON catalog.
MCON-LC/LCG (*)		6		—	—	●	—	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	—	1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog V3.

(*) Coming soon

RCA2CR-GS4NB

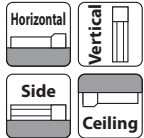
RCA2W-GS4NB

Cleanroom Mini Rod Type Short Free Mount Type With Single Guide Built-in Motor Body Width 34 mm 24v AC Servo Motor

Dust/Splash-proof

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
	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 (*) Coming soon	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Refer to Options table below.

* Does not include a controller.
 I: Incremental
 * Models used with the simple absolute encoder also have an "I" in the name.



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



Power-saving



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

Actuator Specifications

Lead and Payload

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

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

Stroke and Max Speed

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

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

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.

Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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	

Options

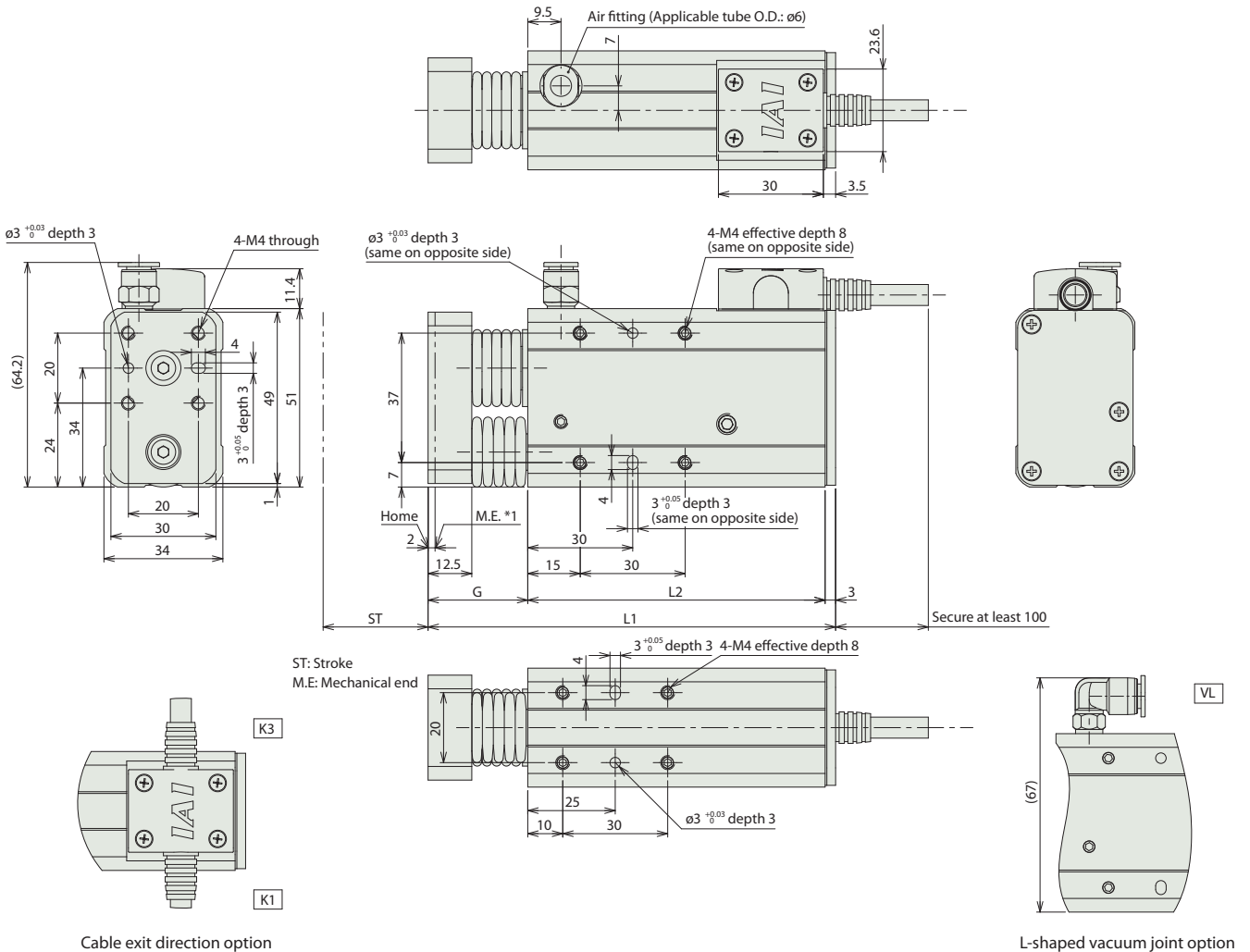
Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Power-saving	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

Dimensions

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



*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 cable length is 2100mm.
The connector at the end of the actuator cable is not covered by the protective structure.
Cleanroom specification actuator 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

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.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.				256	Refer to the MCON catalog.
MCON-LC/LCG (*)		6		—	—	●		256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	1500	Refer to the RC General catalog V4b.	
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog V3.

(*) Coming soon

RCS2CR-GS5NB

RCS2W-GS5NB

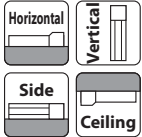
Cleanroom Mini Rod Type Short Free Mount Type With Single Guide Built-in Motor Body Width 46 mm 230V AC Servo Motor

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

* Does not include a controller.



* CE conformity must be specified as standard 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)			
RCS2CR/W-GS5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	50 75
RCS2CR/W-GS5NB-I-60-5-①-T2-②-③			5	10	3	178		
RCS2CR/W-GS5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		

Legend: ① Stroke ② Cable Length ③ Option

Stroke and Max Speed

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)

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)
	R16(16m) ~ R20(20m)

Options

Name	Option code	Reference page
CE compliant specification (standard option)	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

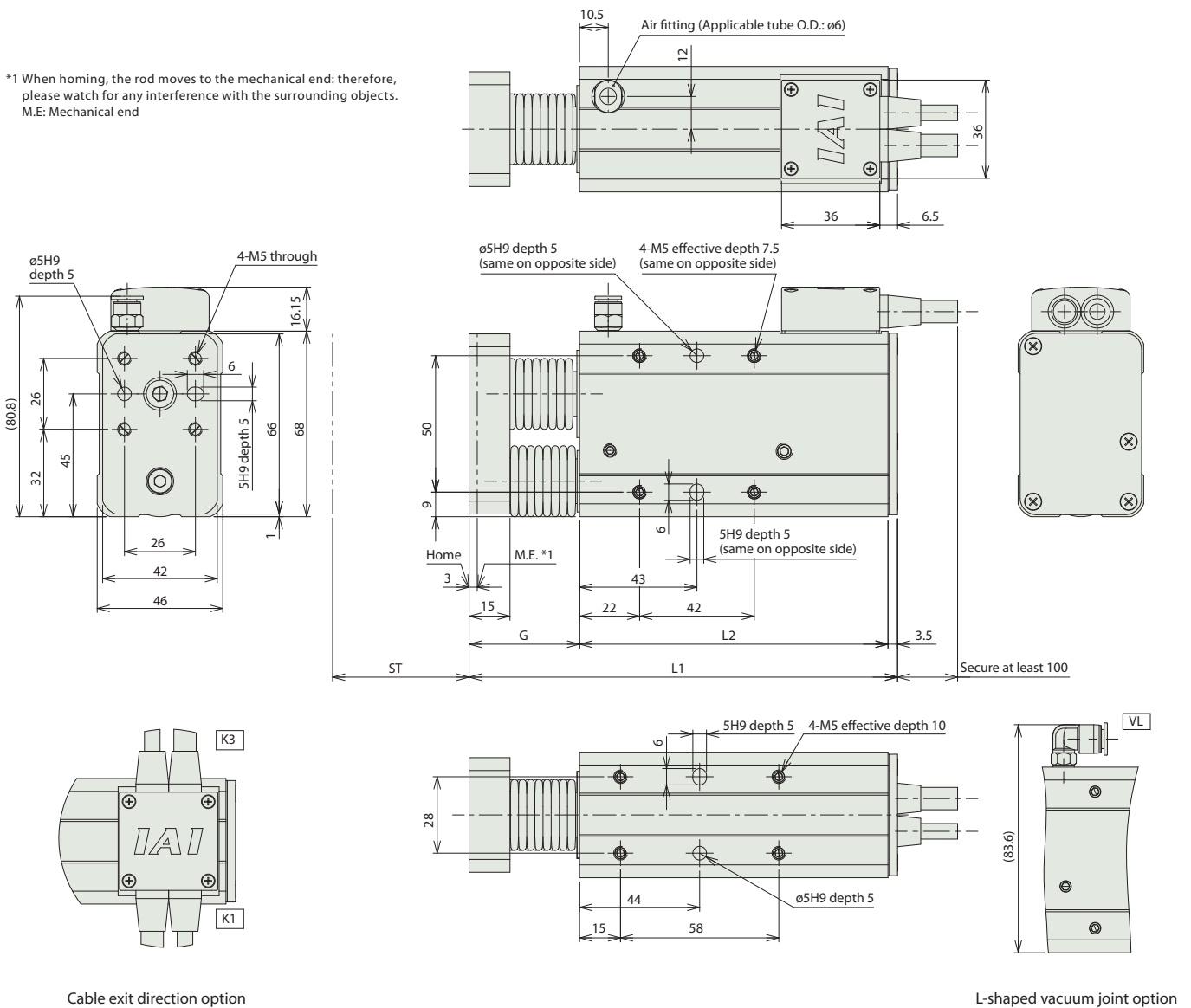
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1 mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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.robocylinder.de



*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 cable length is 2000mm. The connector at the end of the actuator cable is not covered by the protective structure.
Cleanroom specification actuator 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 100/230VAC	●	●	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
SCON-LC/LCG (*)		1		—	—	●		512 (768 for network spec.)	Refer to the SCON-LC catalog.
SSEL-CS		2		●	—	●		20000	Refer to the RC General catalog V4b.
XSEL-P/Q (**)		6	Single phase 230VAC Three-phase 230VAC	—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	Refer to the RC General catalog V4b.

(*) Coming soon (**) Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA (coming soon).

RCA2CR-GD3NB

RCA2W-GD3NB

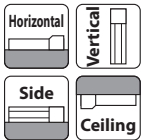
Cleanroom Mini Rod Type Short Free Mount Type With Double Guide Built-in Motor Body Width 28 mm 24V AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
	GD3NB	I	10	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 (*) Coming soon	N : None P : 1m S : 3m M : 5m X□□ : Special Length	Refer to Options table below.

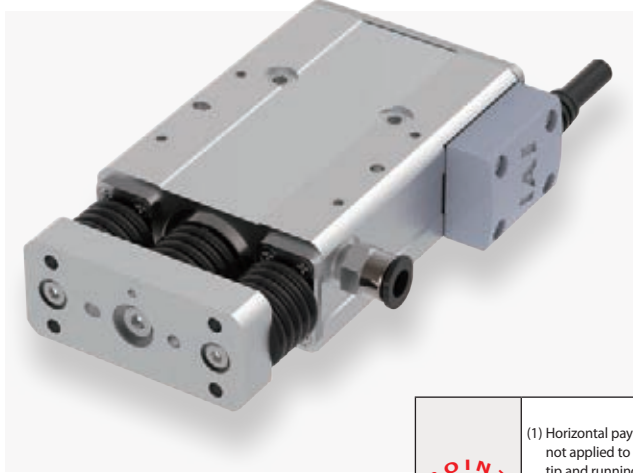
* Does not include a controller.



Power-saving



* 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 (0.2G for lead 1 and vertical use). The indicated values are the upper limits for the allowable acceleration.
- (3) Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
- (4) If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

Actuator Specifications

Lead and Payload

Model specification items	Motor wattage (W)	Feed screw	Lead (mm)	Max. payload		Rated thrust (N)	Positioning repeatability (mm)	Stroke (mm)
				Horizontal (kg)	Vertical (kg)			
RCA2CR/W-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		

Stroke and Max Speed

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

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

(Unit: mm/s)

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.

Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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	

Options

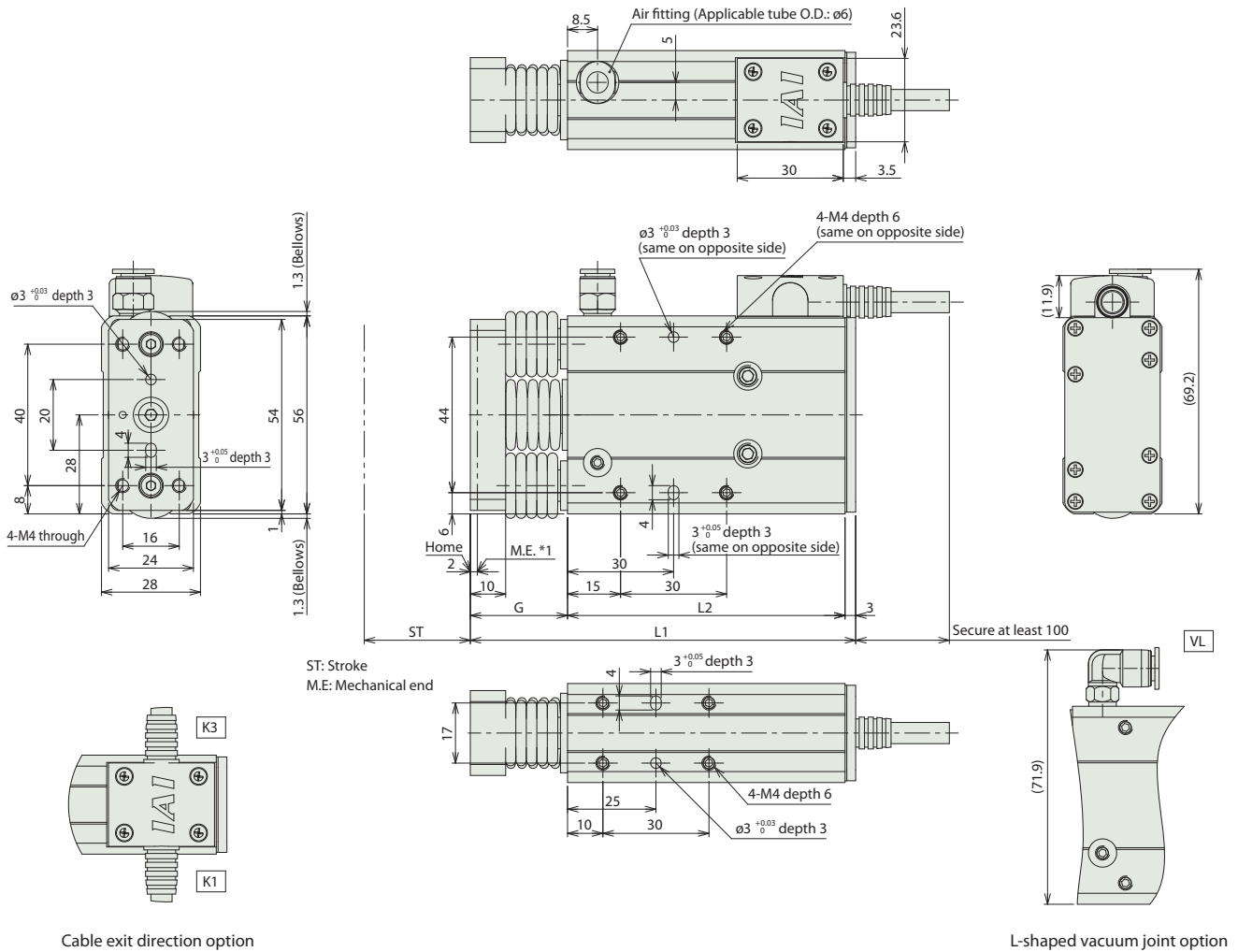
Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Power-saving	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

Dimensions

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



*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 cable length is 2100mm.
The connector at the end of the actuator cable is not covered by the protective structure.
Cleanroom specification actuator 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

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	—	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.			256	Refer to the MCON catalog.
MCON-LC/LCG (*)		6		—	—	●	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.			768	Refer to the RCP6 catalog V3.

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

(*) Coming soon

RCA2CR-GD4NB

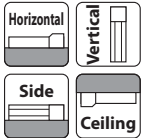
RCA2W-GD4NB

Cleanroom
Dust/Splash-proof
Mini Rod Type
Short Free Mount Type
With Double Guide
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: 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 (*) Coming soon	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.



Power-saving



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

Actuator Specifications

Lead and Payload

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

Stroke and Max Speed

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

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

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

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.

Actuator Specifications

Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D standard)	
Suction pressure	4kPa	
Protective structure	-	
Air purge	IP52 Do not purge	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Options

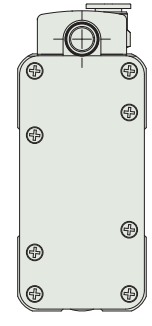
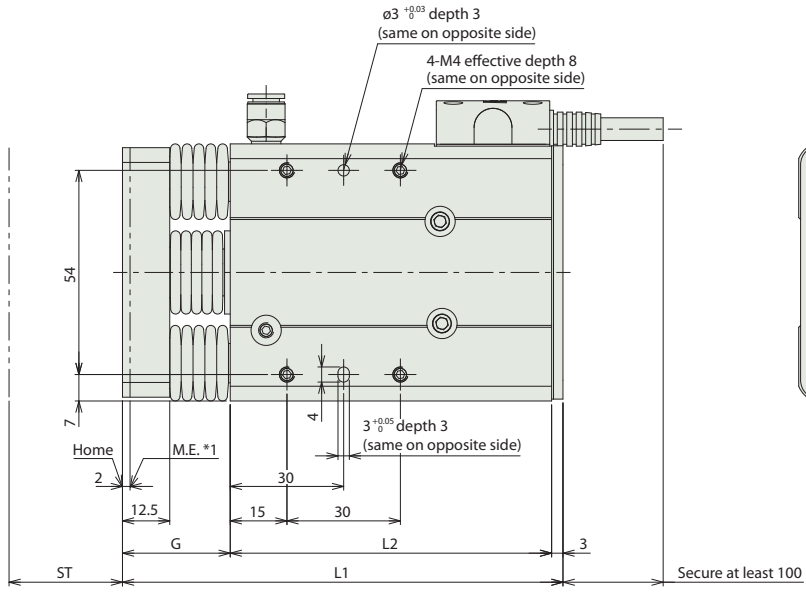
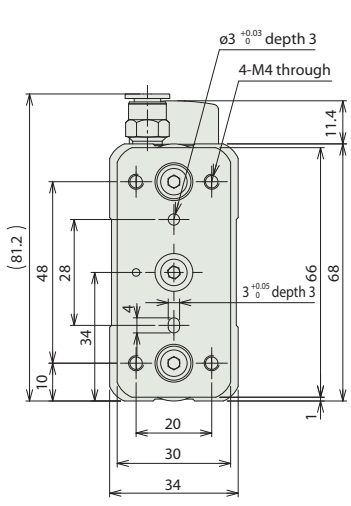
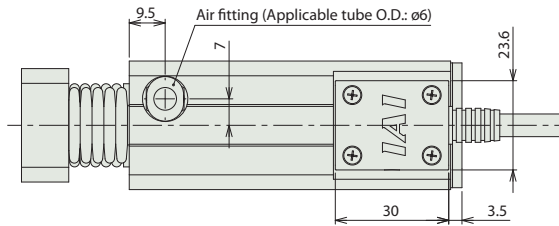
Name	Option code	Reference page
Connector cable exit from left side	K1	See P.36
Connector cable exit from right side	K3	See P.36
Power-saving	LA	See P.36
L-shaped vacuum joint specification	VL	See P.36

Dimensions

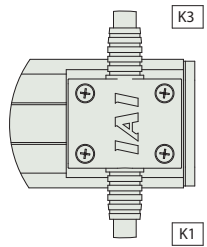
CAD drawings can be downloaded from our website.
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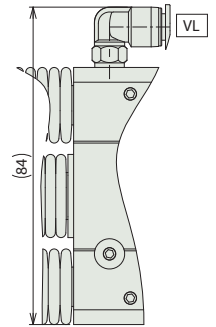
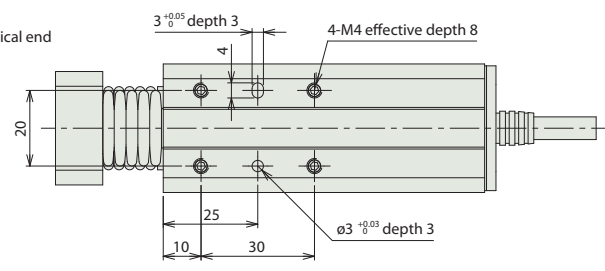
*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end



ST: Stroke
M.E: Mechanical end



Cable exit direction option



L-shaped vacuum joint option

■ Dimensions and Mass by Stroke

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

Notes

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

Applicable Controllers

The RCA2CR/RCA2W series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB (*)		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.				256	Refer to the MCON catalog.
MCON-LC/LCG (*)		6		—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●		1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog V3.

(*) Coming soon

RCS2CR-GD5NB

RCS2W-GD5NB

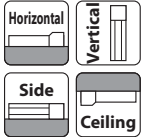
Cleanroom
Mini Rod Type
Short Free Mount Type
With Double Guide
Built-in Motor
Body Width 46 mm
230V AC Servo Motor

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

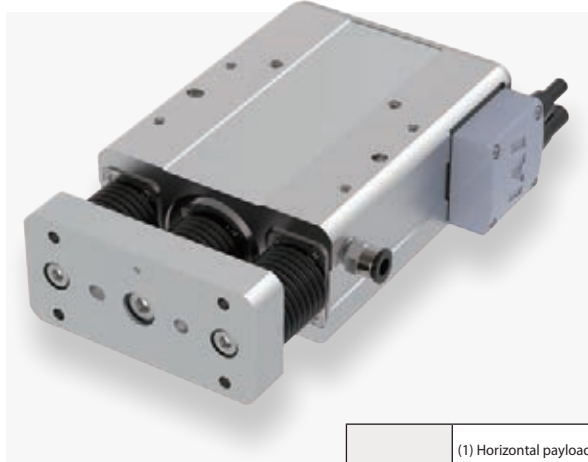
* Does not include a controller.



* CE conformity must be specified as standard 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)			
RCS2CR/W-GD5NB-I-60-10-①-T2-②-③	60	Ball screw	10	5	1.5	89	±0.02	50 75
RCS2CR/W-GD5NB-I-60-5-①-T2-②-③			5	10	3	178		
RCS2CR/W-GD5NB-I-60-2.5-①-T2-②-③			2.5	20	6	356		

Legend: ① Stroke ② Cable Length ③ Option

Stroke and Max Speed

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)

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)
	R16(16m) ~ R20(20m)

Options

Name	Option code	Reference page
CE compliant specification (standard option)	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 ø8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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	

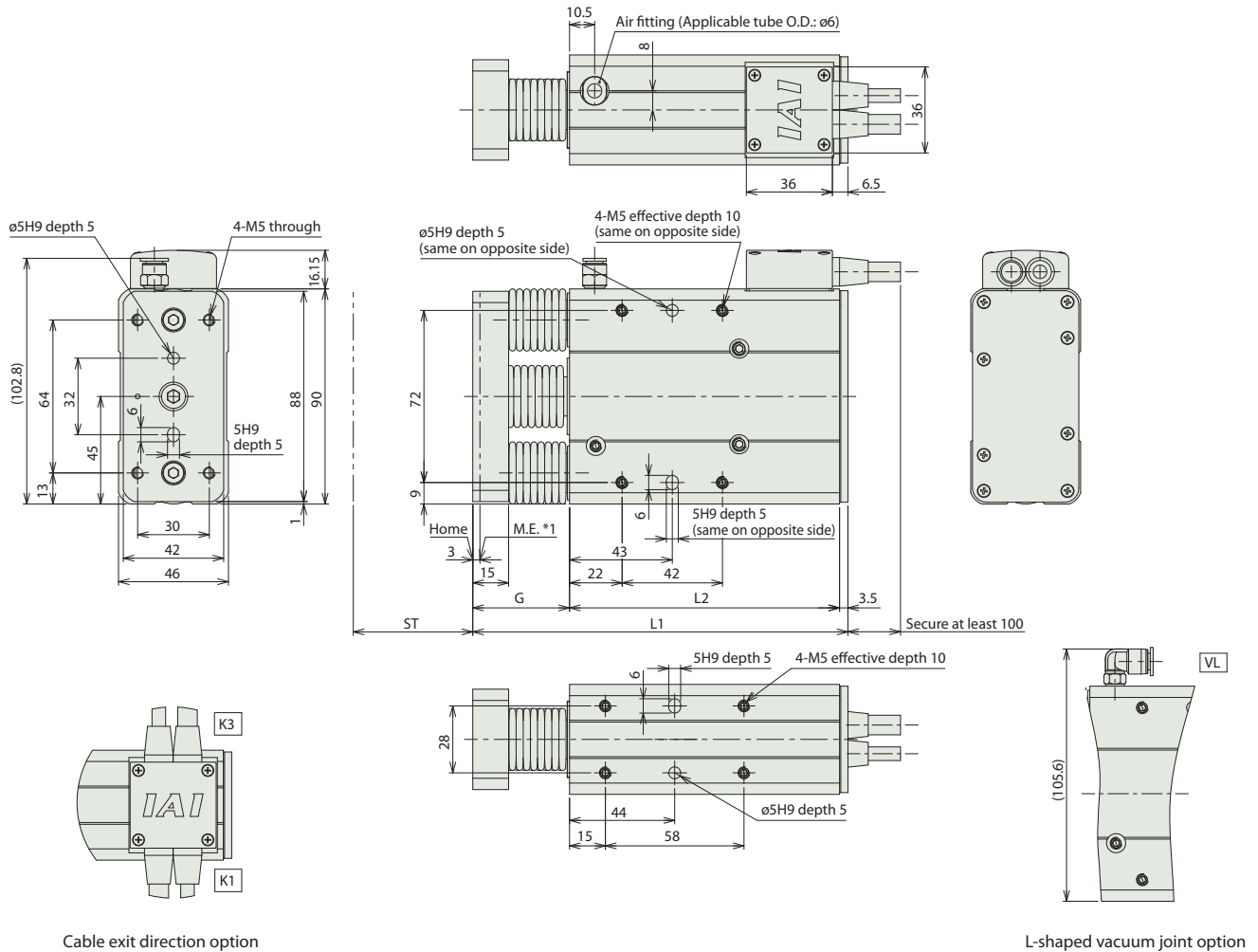
Dimensions

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

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 cable length is 2000mm. The connector at the end of the actuator cable is not covered by the protective structure.
Cleanroom specification actuator 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 100/230VAC	●	●	—	DeviceNet CC-Link Profinet CompoNet EtherCAT EtherNet/IP	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
SCON-LC/LCG (*)		1		—	—	●		512 (768 for network spec.)	Refer to the SCON-LC catalog.
SSEL-CS		2		●	—	●		20000	Refer to the RC General catalog V4b.
XSEL-P/Q (**)		6	Single phase 230VAC Three-phase 230VAC	—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	20000	Refer to the RC General catalog V4b.

(*) Coming soon (**) Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA (coming soon).

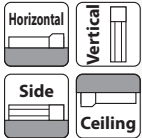
RCA2CR-SD3NB

RCA2W-SD3NB

Cleanroom Mini Rod Type Short Slide Unit Type With Double Guide Built-in Motor Body Width 60 mm 24v AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
	SD3NB	I	10	10: 10W Servo motor	4: Ball screw 4mm 2: Ball screw 2mm 1: Ball screw 1mm	25: 25mm 50: 50mm	A1: ASEL A3: ACON-CYB/PLB/POB(*) MCON RCM-P6AC(*) A5: ACON-CB/CGB (*) Coming soon	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.



Power-saving



- (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 (*)	42.7	±0.02	25 50
RCA2CR/W-SD3NB-I-10-2-①-②-③-④			2	1.5	0.5 (*)	85.5		
RCA2CR/W-SD3NB-I-10-1-①-②-③-④			1	3	1 (*)	170.9		

(*) With main body fixed

Stroke and Max Speed

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

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

(Unit: mm/s)

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.

Options

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

Actuator Specifications

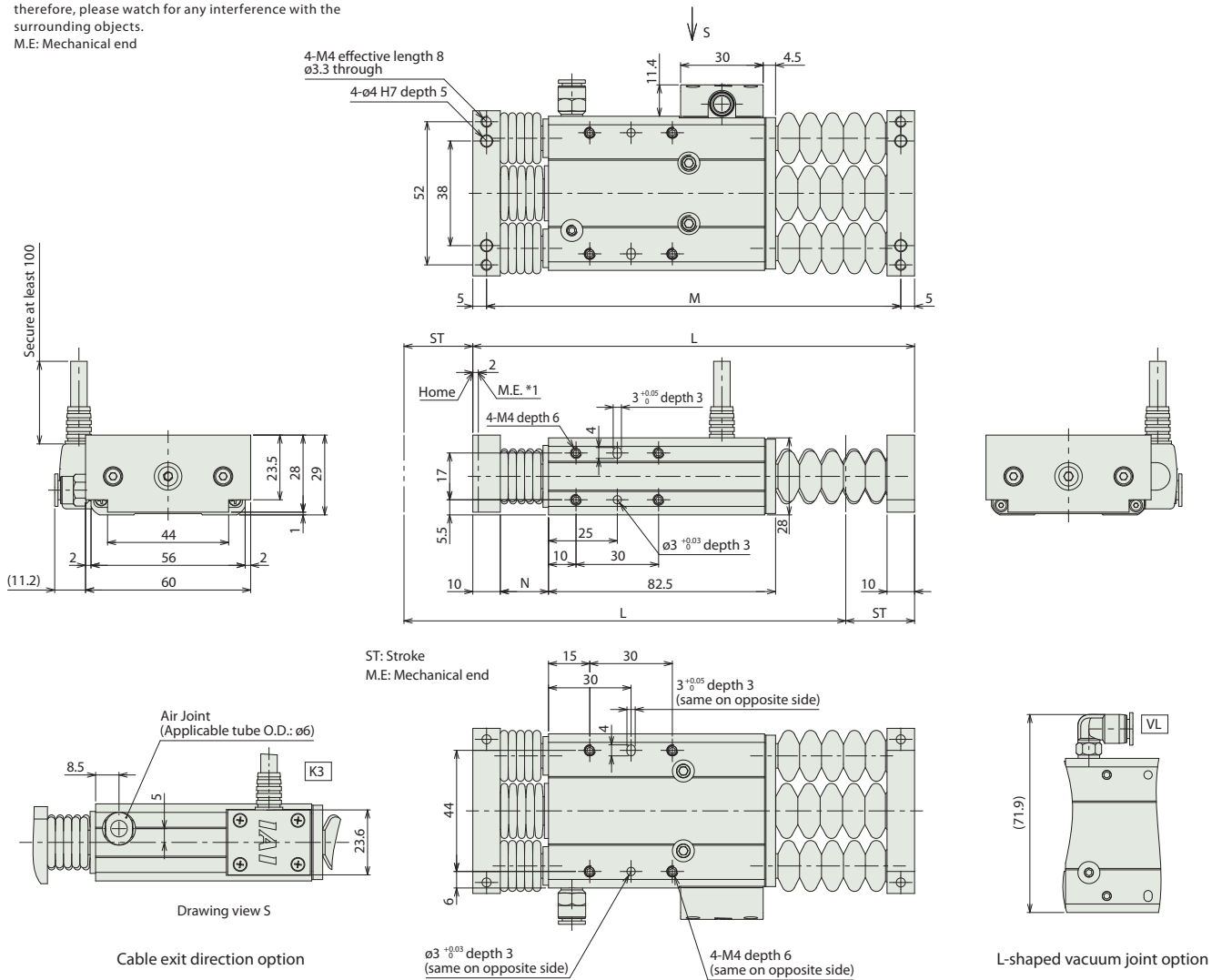
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø4mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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.
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*1 When homing, the rod moves to the mechanical end: therefore, please watch for any interference with the surrounding objects.
M.E: Mechanical end



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

Applicable Controllers
The RCA2CR/RCA2W series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use.

Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
ACON-CYB/PLB/POB (*)		1	24VDC	● * Option	● * Option	—	Network cannot be selected	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.				256	Refer to the MCON catalog.
MCON-LC/LCG (*)		6		—	—	●	Note: The type of compatible networks will vary depending on the controller. Please refer to the reference page for more information.	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●		1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.				768	Refer to the RCP6 catalog V3.

(*) Coming soon

RCA2CR-SD4NB

RCA2W-SD4NB

Cleanroom Mini Rod Type Short Slide Unit Type With Double Guide Built-in Motor Body Width 72 mm 24v AC Servo Motor

Model Specification Items: **SD4NB I 20**

Series: RCA2CR (Cleanroom specification), RCA2W (Dust-proof/splash-proof specification)

Encoder Type: I (Incremental), * Models used with the simple absolute encoder also have an "I" in the name.

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 (*Coming soon)

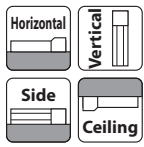
Cable Length: N: None, P: 1m, S: 3m, M: 5m, X□□: Special Length

Options: Refer to Options table below.

* Does not include a controller.



Power-saving



* 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 (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 (*1) With main body fixed		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)			
RCA2CR/W-SD4NB-I-20-2-①-②-③-④			2	6	1.5 (*1)			

Stroke and Max Speed

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

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

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

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.

Options

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

Actuator Specifications

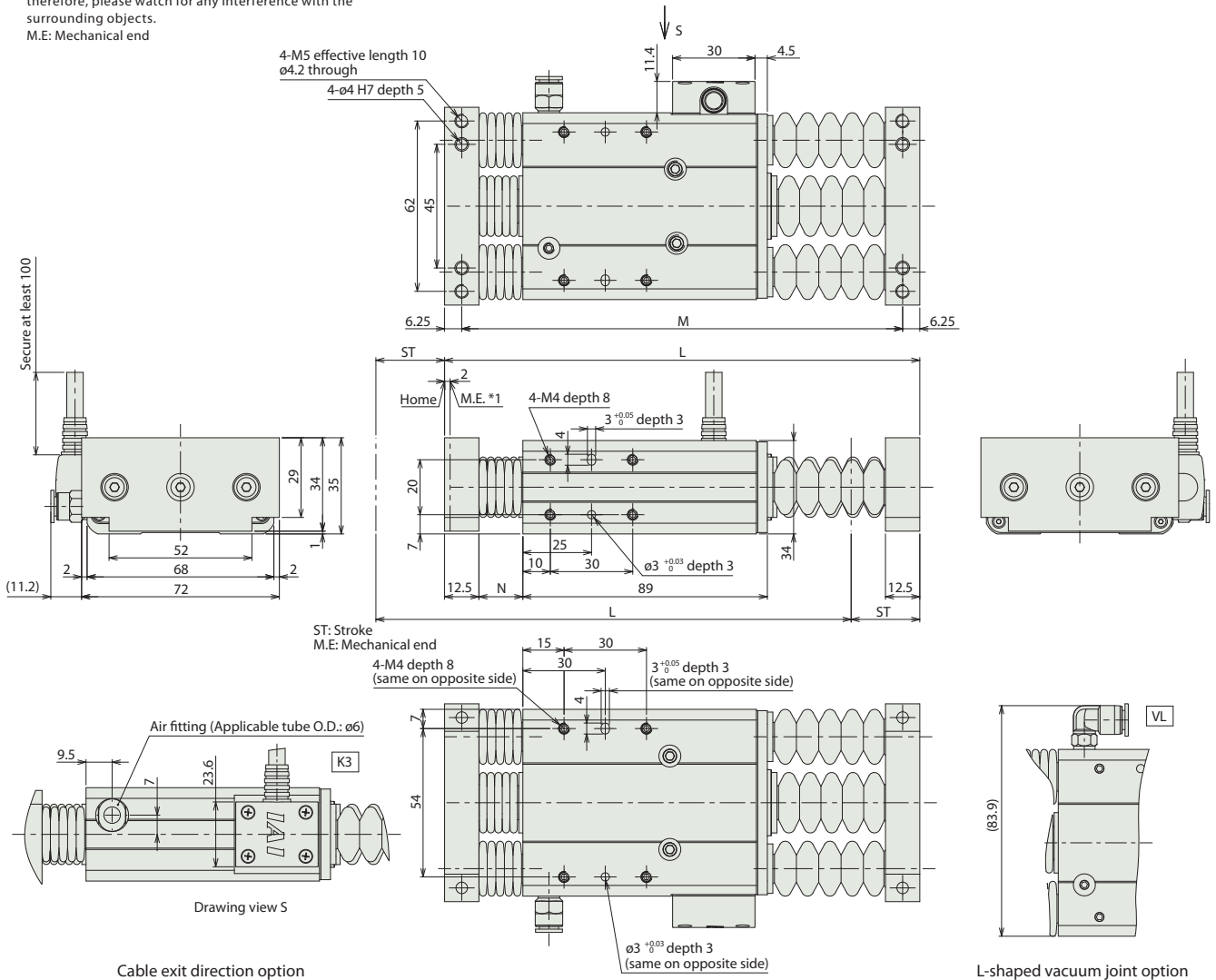
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø6mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D standard)	-
Suction pressure	4kPa	-
Protective structure	-	IP52
Air purge	-	Do not purge
Ambient operating temperature, humidity	0~40°C, 85% RH or less (Non-condensing)	
Service life	5000km or 50 million cycles	

Dimensions

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



*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 cable length is 2100mm.
The connector at the end of the actuator cable is not covered by the protective structure.
Cleanroom specification actuator cable length is 300mm.

■ Dimensions and Mass by Stroke

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

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	—	64	Please contact IAI for more information.
ACON-CB/CGB		1		● * Option	● * Option	—	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
MCON-C/CG		8		This model is network-compatible only.			256	Refer to the MCON catalog.
MCON-LC/LCG (*)		6		—	—	●	256	Please contact IAI for more information.
ASEL-CS		2		●	—	●	1500	Refer to the RC General catalog V4b.
RCM-P6AC (*)		1		Can be used within the RCP6S Gateway system.			768	Refer to the RCP6 catalog V3.

(*) Coming soon

RCS2CR-SD5NB

RCS2W-SD5NB

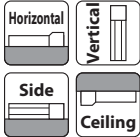
Cleanroom Mini Rod Type Short Slide Unit Type With Double Guide Built-in Motor Body Width 94 mm 230v AC Servo Motor

Model Specification Items	Series	Type	Encoder Type	Motor Type	Lead	Stroke	Applicable Controllers	Cable Length	Options
RCS2CR: Cleanroom specification Dust-proof/splash-proof specification	SD5NB	I	60	T2	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.

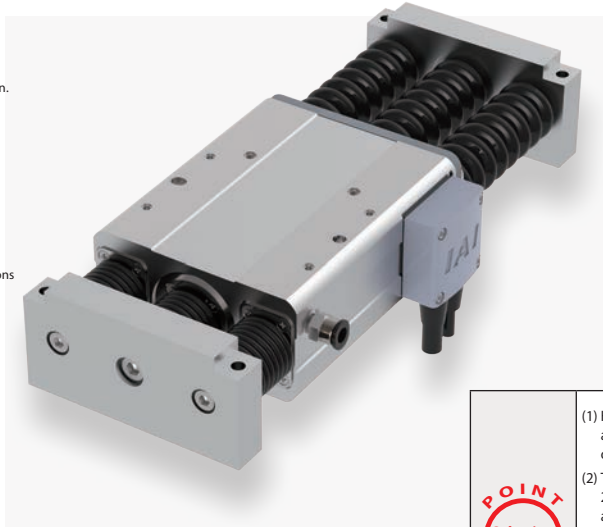
* Does not include a controller.



* CE conformity must be specified as standard option.



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



- 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).
- 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.
- Estimated allowable duty varies depending on operating conditions (payload, acceleration/deceleration, etc.). Please contact IAI for more information.
- 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.
- If the power is cut during vertical use, the rod will drop, so take care to avoid interference.

Actuator Specifications

Lead and Payload

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

(*1) With main body fixed

Stroke and Max Speed

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

Legend: ① Stroke ② Cable Length ③ Option

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

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)
	R20(20m)

Options

Name	Option code	Reference page
CE compliant specification (standard option)	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

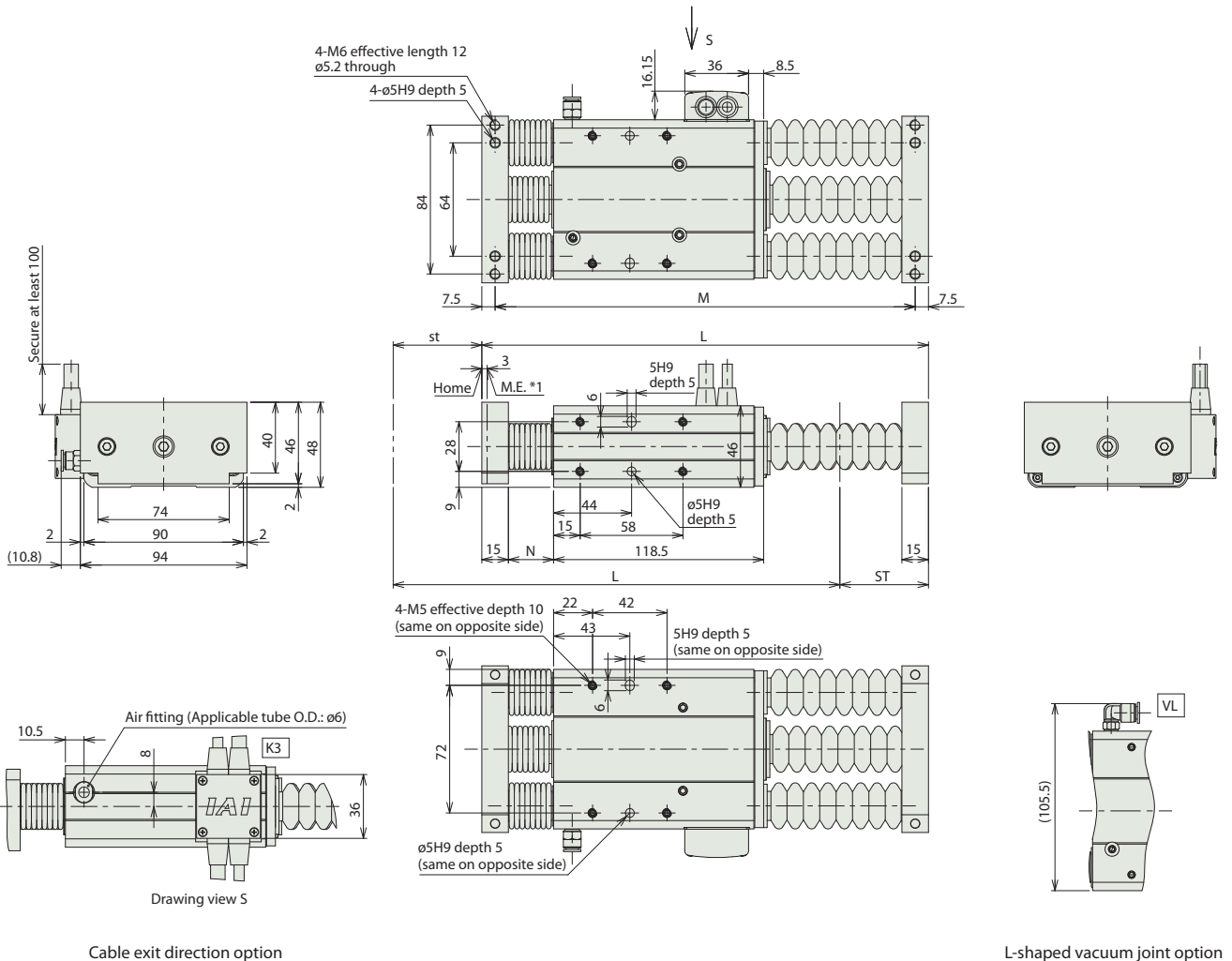
Item	Description	
	Cleanroom	Dust/Splash-proof
Drive system	Ball screw ø8mm, rolled C10	
Positioning repeatability	±0.02mm	
Lost motion	0.1mm or less (initial value)	
Frame	Material: Aluminum with white alumite treatment	
Cleanliness	ISO class 3.5 or equivalent (ISO14644-1:2015 standard), US FED STD class 100 (209D 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.robocylinder.de



*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 cable length is 2000mm.
The connector at the end of the actuator cable is not covered by the protective structure.
Cleanroom specification actuator 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.

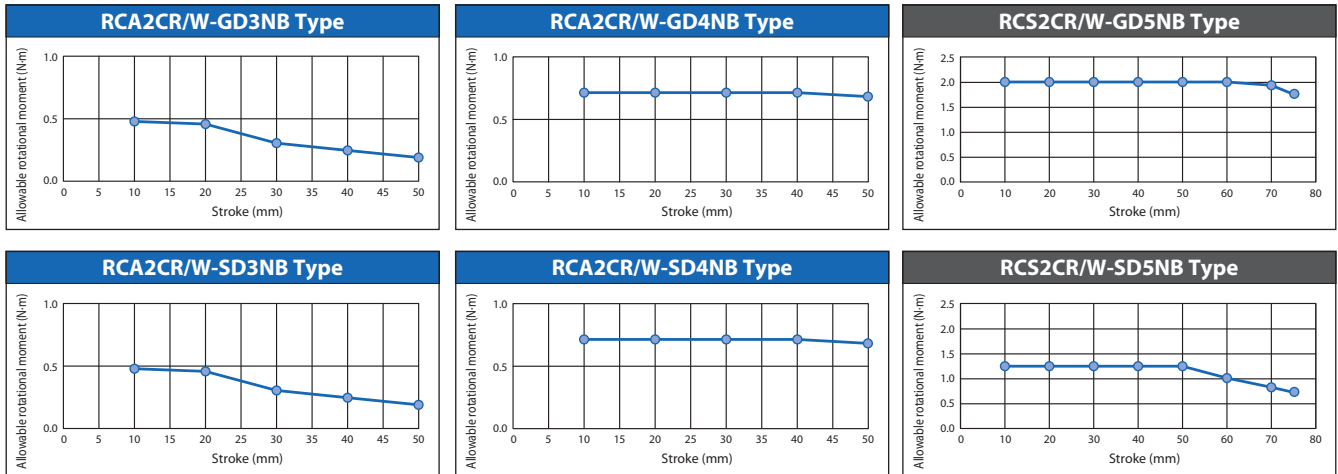
Name	External view	Max. number of connectable axes	Power supply voltage	Control method				Maximum number of positioning points	Reference page
				Positioner	Pulse-train	Program	Network * Option		
SCON-CB/CGB		1	Single phase 100/230VAC	●	●	—	 	512 (768 for network spec.)	Refer to the RCA/RCS2(3) catalog.
SCON-LC/LCG (*)		1		—	—	●		512 (768 for network spec.)	Refer to the SCON-LC catalog.
SSEL-CS		2		●	—	●	 	20000	Refer to the RC General catalog V4b.
XSEL-P/Q (**)		6	Single phase 230VAC Three-phase 230VAC	—	—	●	 	20000	Refer to the RC General catalog V4b.

(*) Coming soon (**) Cannot be connected to XSEL-P/Q 5th/6th axes or XSEL-RA/SA (coming soon).

Model Selection Materials (Guide)

Allowable Torque

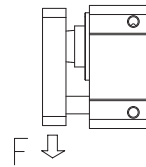
The following diagram shows the allowable torque for each model. If applying rotational torque, use within the range of values listed below. Rotational torque cannot be applied to single guide types.



Correlation of Allowable Load on Rod Tip and Running Life

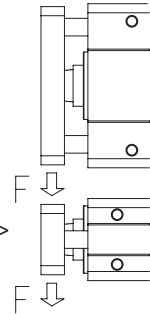
The larger the load on the guide tip, the shorter the life will become. Select a model with consideration for the balance between load and life.

Single guide type

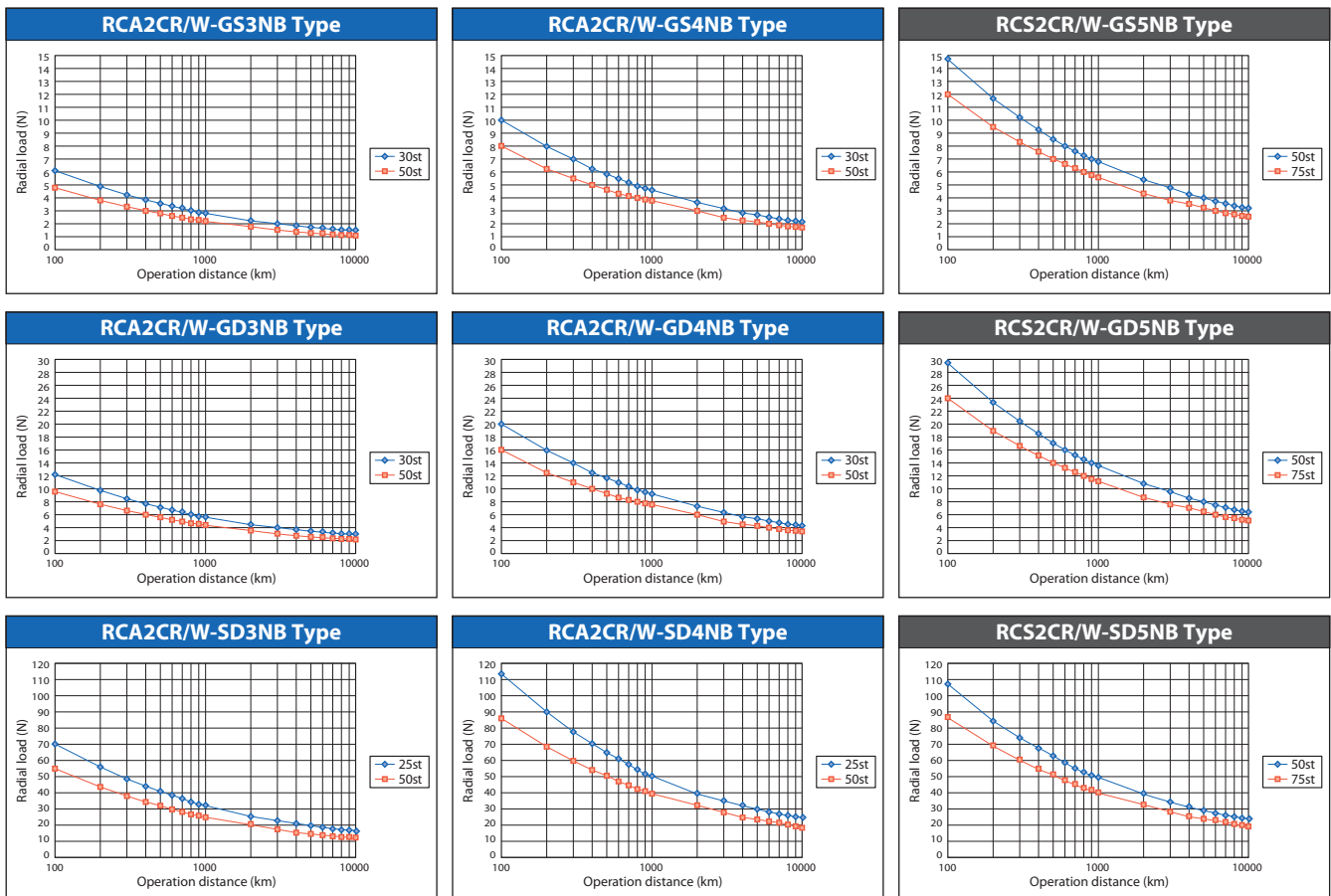


* Single guide specification can only be used with vertical loads.

Double guide type <Vertical>



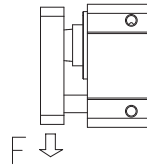
<Horizontal>



Radial Load and Tip Deflection Amount

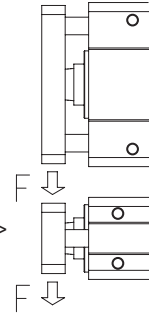
The graphs below show the correlation between the load exerted at the guide tip and the amount of deflection caused.

■ Single guide type

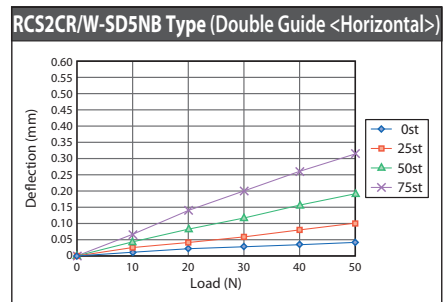
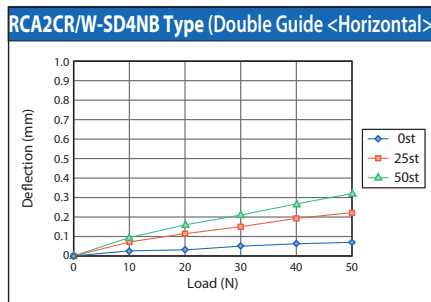
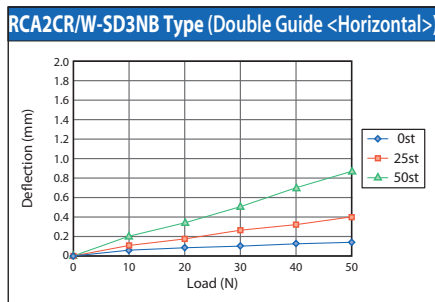
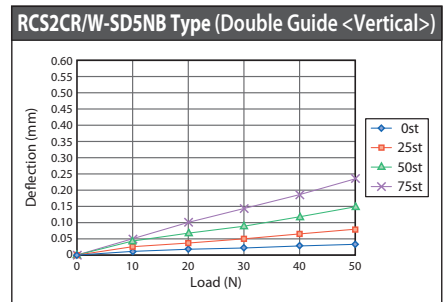
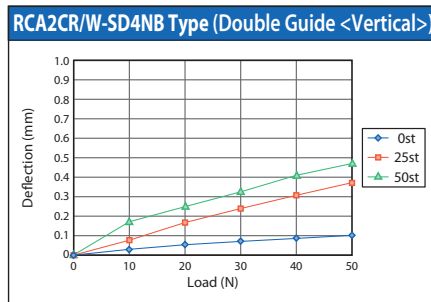
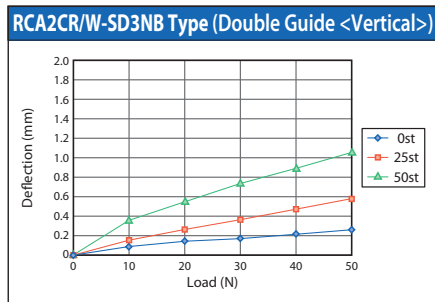
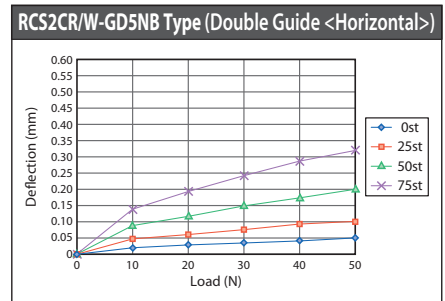
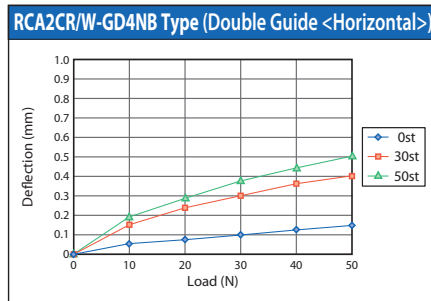
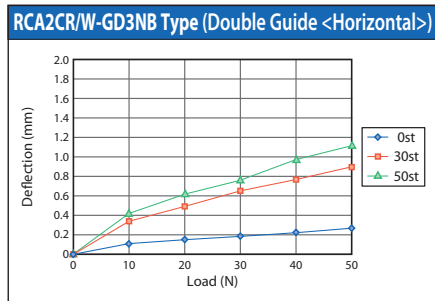
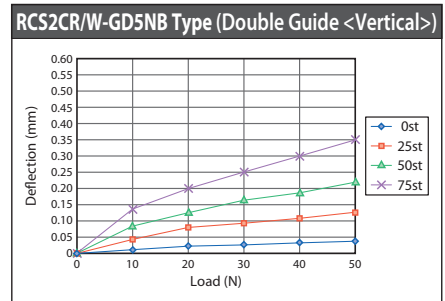
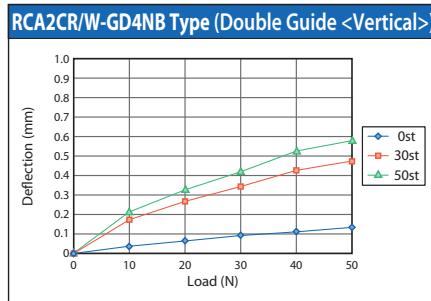
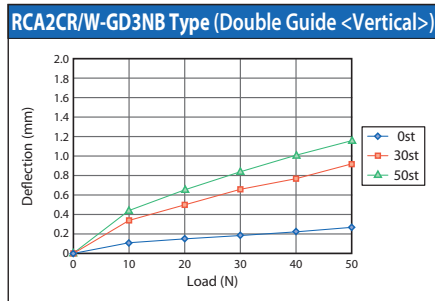
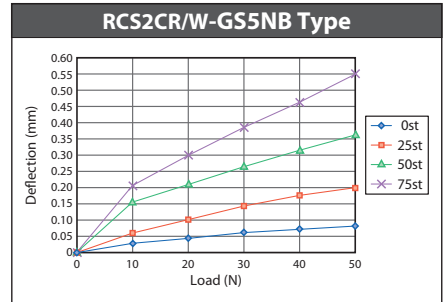
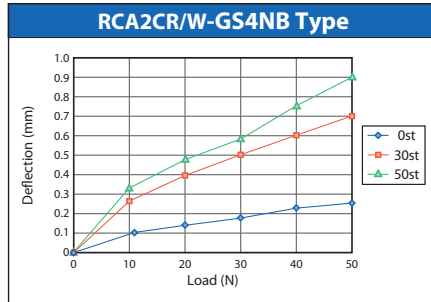
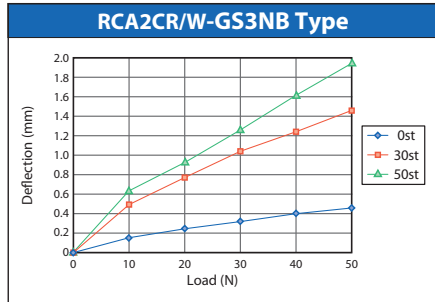


* Single guide specification can only be used with vertical loads.

■ Double guide type
<Vertical>



<Horizontal>



Reference Data

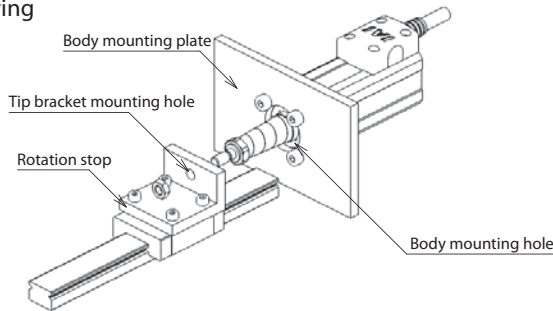
Mini Rod Type Rotation Stop Mounting Method

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.

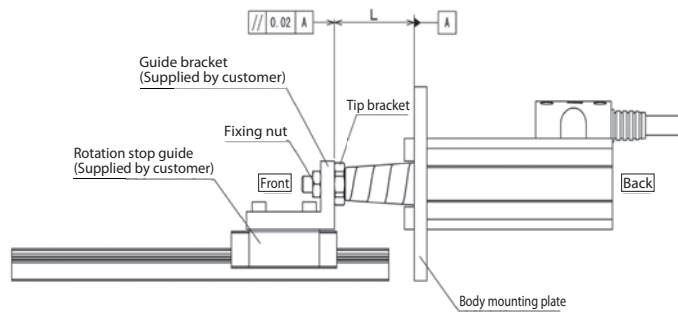
Target models RCA2CR/W-RN3NB, RN4NB, RP3NB, RP4NB
RCS2CR/W-RN5NB, RP5NB

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.

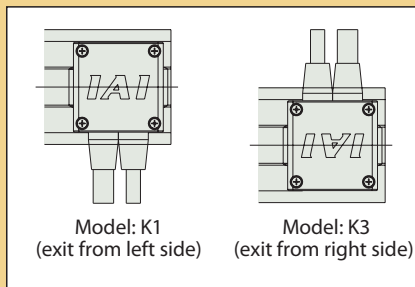


Options

Changing connector cable exit direction

Model K1 / K3

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



Power-saving

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.