IAI
Quality and Innovation

ROBO Cylinder® Configurations
2-axis Cartesian Robot IK2-P6-Series

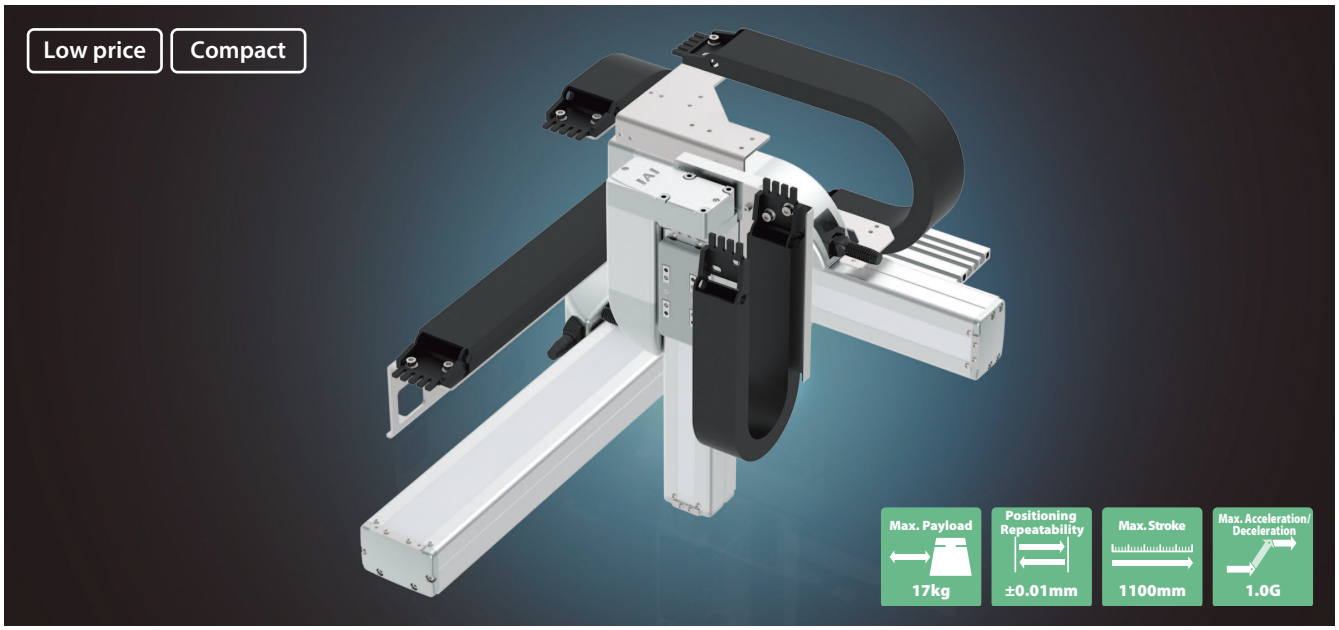
ATB Automation
Mechanics | Motion Control

www.intelligentactuator.com

Cartesian Robots have never been more affordable.

Low price & compact
ROBO Cylinder®
configuration

The ROBO Cylinder® equipped as standard with a Battery-less Absolute Encoder has been added to the "IK Series". It helps reduce the design and assembly steps.
The ROBO Cylinder® RCP6 Series has been adopted to achieve even higher speeds compared with conventional models.



1 Diverse Configurations

The available configurations have been greatly expanded from the conventional models,
allowing the ideal selection to suit your needs from 396 options. (7,056 options including the cable track selection)
New configuration types using the RCP6 wide slider type (WSA) have been added.

2-axis configurations (X-axis/Y-axis)

- SA8 + SA7
- SA7 + SA6
- NEW SA6 + SA4
- NEW WSA16 + SA8
- NEW WSA14 + SA7

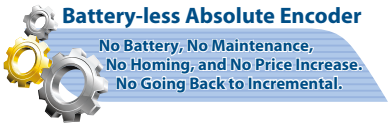
2-axis configurations (Y-axis/Z-axis)

- SA8 + SA7
- NEW SA7 + SA6
- NEW SA6 + SA4

NEW · · · Newly added size combinations

2 Equipped with high resolution Battery-less Absolute Encoder as standard.

Equipped as standard with Battery-less Absolute Encoder for all configuration axes.
No battery maintenance is required since there is no battery.
Homing operation is not required at startup or after emergency stop or malfunction.
This reduces your operation time, resulting in reduced production costs.



The advantages of using an absolute encoder.

(1) With an absolute encoder, home return is not required.

(2) No external home sensor is required since home return is not necessary.

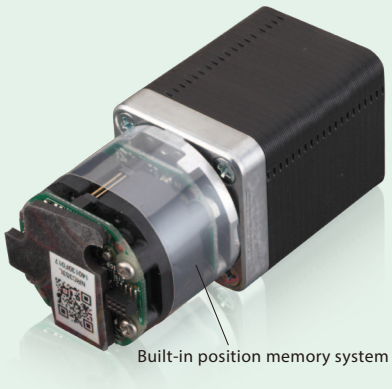
(3) Removal of workpieces is not necessary, even after an emergency stop.

(4) The troublesome creation of home-return programs is not necessary even when stopping inside of a complex machine.

The advantages of battery-less.

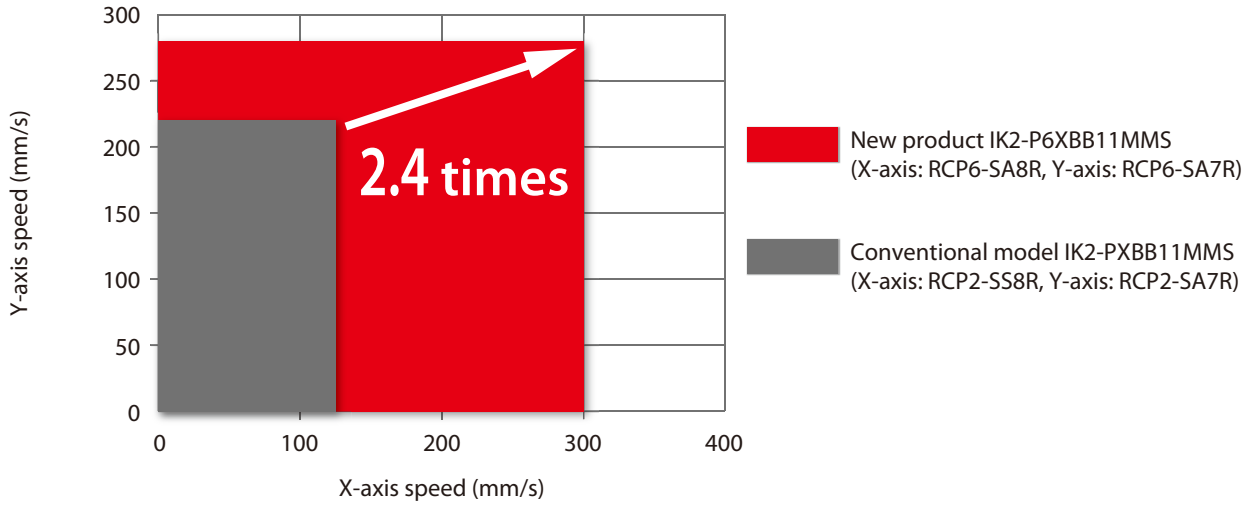
(1) No battery maintenance required.

(2) No installation space for battery required.



3 Higher Speed

Compatible with PowerCON® which is equipped with a high-output driver.
The maximum speed has been increased with the use of PowerCON®.
This can reduce cycle time and help improve productivity.



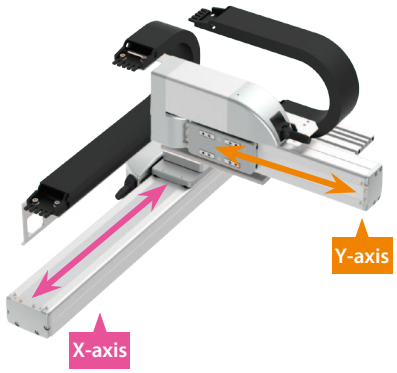
2-axis configurations

Robot Type Descriptions

Each configuration pattern is available with an extensive range of sizes from light load to heavy load and short stroke to long stroke. Select the optimal model for your application.

XYB (Y-axis base mount) type

→ 2-axis configurations IK2-P6XB: p5~34



A basic configuration type in which the base of the Y-axis is fixed to the X-axis slider. It is operated by fixing equipment or a Z-axis on the Y-axis slider.

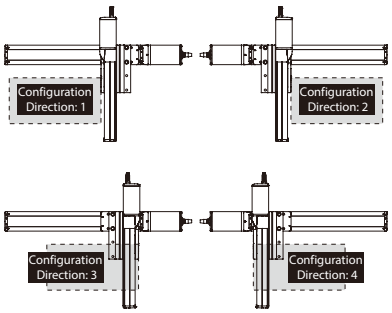
Point 1

Select from 4 patterns of Y-axis configuration directions. (See the figure at right)

Point 2

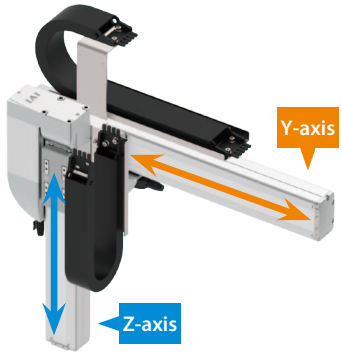
A cable track can be selected for Y-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

Configuration Direction



YZB (Z-axis base mount) type

→ 2-axis configurations IK2-P6YB: p35~52



For this type, the base of the Z-axis (vertical axis) is fixed to the Y-axis slider with the Y-axis side-mounted. The Z-axis slider moves vertically, allowing mounting of jigs or chucks for transport, raising, or lowering of workpieces.

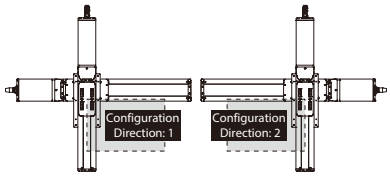
Point 1

Select from 2 patterns of Z-axis configuration directions. (See the figure at right)

Point 2

A cable track can be selected for Z-axis wiring. Select the cable track size from a maximum of 4 different sizes. You can also select a cable track for wiring by the user.

Configuration Direction



Cartesian Robot

ROBO Cylinder 2-axis Configurations

IK2
Stepper Motor

IK2-P6XBD1☐☐S	5	
IK2-P6XBD2☐☐S	7	
IK2-P6XBD3☐☐S	9	
IK2-P6XBC1☐☐S	11	
IK2-P6XBC2☐☐S	13	
IK2-P6XBC3☐☐S	15	
IK2-P6XBB1☐☐S	17	
IK2-P6XBB2☐☐S	19	
IK2-P6XBB3☐☐S	21	
IK2-P6XBF1☐☐S	23	
IK2-P6XBF2☐☐S	25	
IK2-P6XBF3☐☐S	27	
IK2-P6XBE1☐☐S	29	
IK2-P6XBE2☐☐S	31	
IK2-P6XBE3☐☐S	33	
IK2-P6YBD1☐☐S	35	
IK2-P6YBD2☐☐S	37	
IK2-P6YBD3☐☐S	39	
IK2-P6YBC1☐☐S	41	
IK2-P6YBC2☐☐S	43	
IK2-P6YBC3☐☐S	45	
IK2-P6YBB1☐☐S	47	
IK2-P6YBB2☐☐S	49	
IK2-P6YBB3☐☐S	51	

Options 83

IK2-P6XBD1□□S

RCP6 2-axis configurations

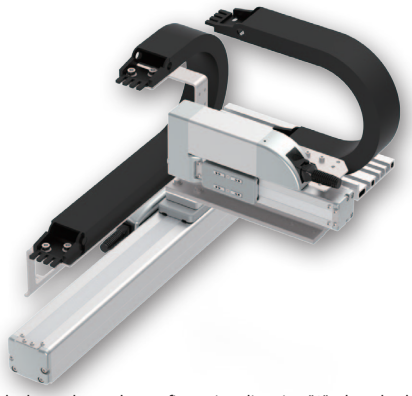
X-axis: SA6R (side-mounted)
Y-axis: SA4R (side-mounted)

■ Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBD1□□S	WA	□	□	□	□	PM1	□	□	□

- Configuration Direction: 1 to 4. Refer to Robot Type Descriptions on page 3
- Speed Type: SS: X Ultra High Speed/ Y Ultra High Speed
- Encoder Type: WA: Battery-less Absolute
- Stroke: 5: 50mm ~ (Every 50mm)
- Options: Refer to Options table below.
- Controller: Refer to Applicable Controllers table below.
- Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- First Wiring / Second Wiring: Refer to Cable Track table below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SS type: X ultra high speed/Y ultra high speed (Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~150 (Every 50mm)
0.1	3
0.3	3
0.5	2
0.7	1

* When both X and Y axes have the same acceleration/deceleration.
When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

☐ X-axis: SA6R, Y-axis: SA4R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis model	RCP6-SA6R	RCP6-SA4R
Stroke (Every 50mm)	50~800mm	50~150mm
Max. speed *	640mm/s	560mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	16mm
Drive system	Ball screw ϕ10mm rolled C10	Ball screw ϕ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

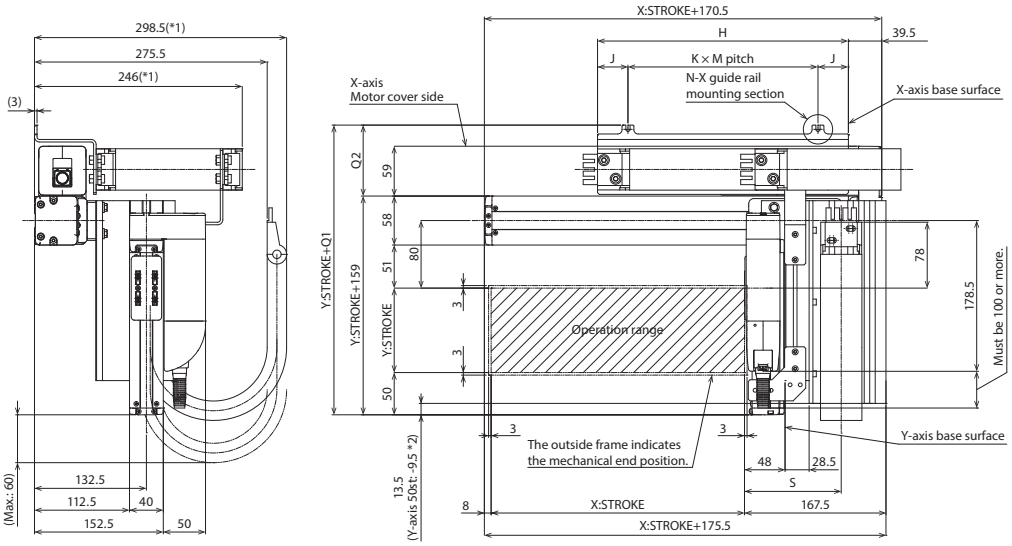
Options

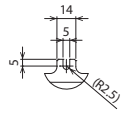
Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

Dimensions

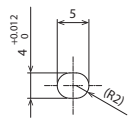
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

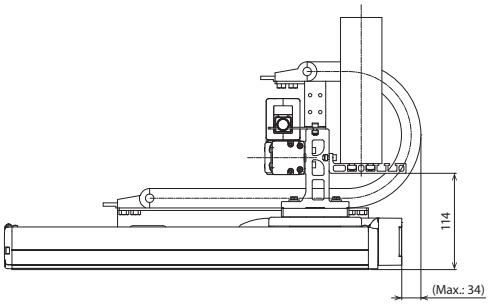




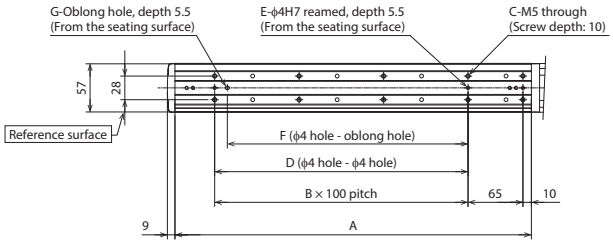
X guide rail mounting section detailed view



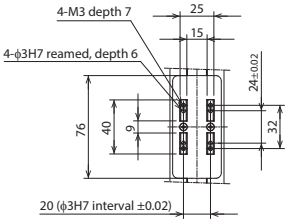
X-axis base oblong hole detailed view



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: When the Y-axis is 50st, the Y guide rail overhangs the actuator tip.



Base mounting dimensions



Y-axis slider detailed view

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	172	197	222	247	272	297	322	347	372	397	422	447	472	497	522	547
J	23.5	36	23.5	36	23.5	36	61	23.5	36	48.5	26	23.5	36	48.5	61	48.5
K	1	1	1	1	1	1	1	3	3	2	2	2	2	2	2	3
M	125	125	175	175	225	225	200	100	100	150	185	200	200	200	200	150
N	2	2	2	2	2	2	2	4	4	3	3	3	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	243	256	269	286
Q2	84	97	110	127
S	114.5	121	127.5	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBD2□□S

RCP6 2-axis configurations

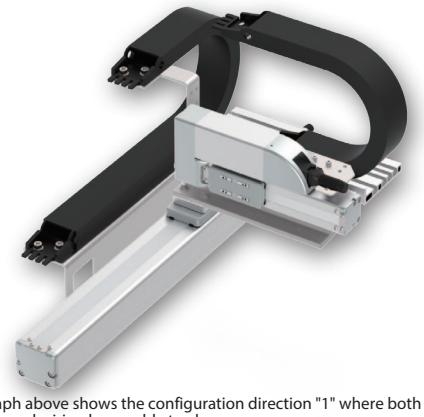
X-axis: SA6C (straight)
Y-axis: SA4R (side-mounted)

■ Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable			Options
IK2	P6XBD2□ □S	WA	□	□	□	□	PM1	□	□	□	□

- Type — Configuration Direction: 1 to 4. Refer to Robot Type Descriptions on page 3
- Type — Speed Type: SS: X Ultra High Speed/ Y Ultra High Speed
- Encoder Type: WA: Battery-less Absolute
- First Axis (X-axis) / Second Axis (Y-axis) — Stroke: 5: 50mm … (Every 50mm)
- Second Axis (Y-axis) — Options: Refer to Options table (1) below.
- Controller: Refer to Applicable Controllers table below.
- Cable — Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- Cable — First Wiring / Second Wiring: Refer to Cable Track table below.
- Options: Refer to Options table (2) below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ **SS type: X ultra high speed/Y ultra high speed** (Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~150 (Every 50mm)
0.1	3
0.3	3
0.5	2
0.7	1

* When both X and Y axes have the same acceleration/deceleration.
When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

☐ **X-axis: SA6C, Y-axis: SA4R**

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis model	RCP6-SA6C	RCP6-SA4R
Stroke (Every 50mm)	50~800mm	50~150mm
Max. speed *	640mm/s	560mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	16mm
Drive system	Ball screw ϕ10mm rolled C10	Ball screw ϕ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

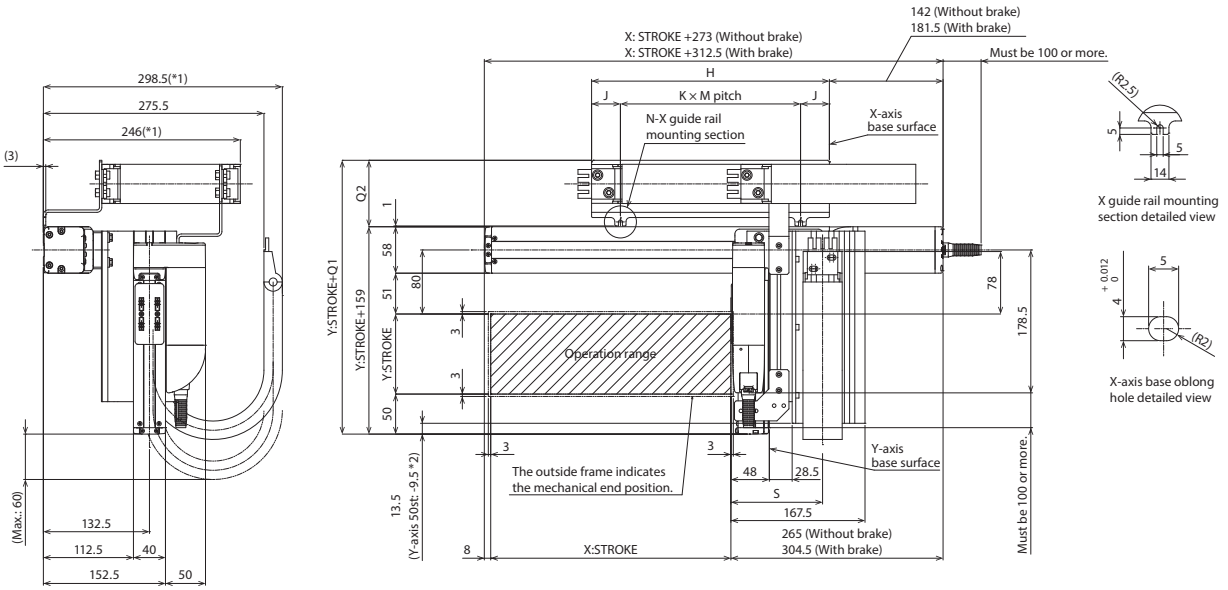
Options (2)

Type	Option code	Reference page
Foot plate	FTP	See P.83

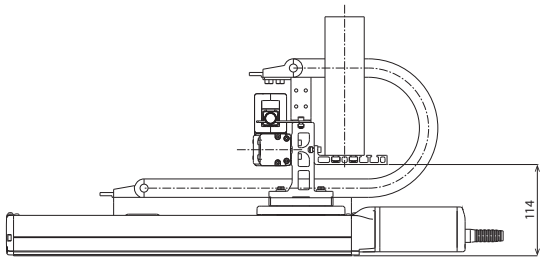
Dimensions

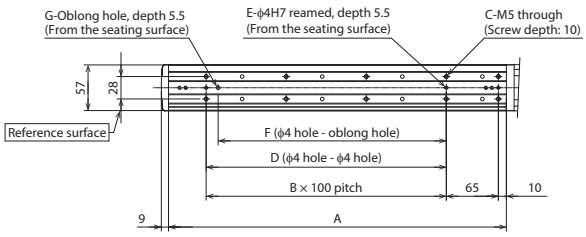
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

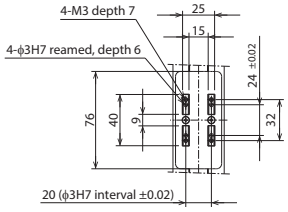


*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: When the Y-axis is 50st, the Y guide rail overhangs the actuator tip.





Base mounting dimensions



Y-axis slider detailed view

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.83)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	172	197	222	247	272	297	322	347	372	397	422	447	472	497	522	547
J	23.5	36	23.5	36	23.5	36	61	23.5	36	48.5	26	23.5	36	48.5	61	48.5
K	1	1	1	1	1	1	1	3	3	2	2	2	2	2	2	3
M	125	125	175	175	225	225	200	100	100	150	185	200	200	200	200	150
N	2	2	2	2	2	2	2	4	4	3	3	3	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	242	255	268	285
Q2	83	96	109	126
S	114.5	121	127.5	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBD3□□S

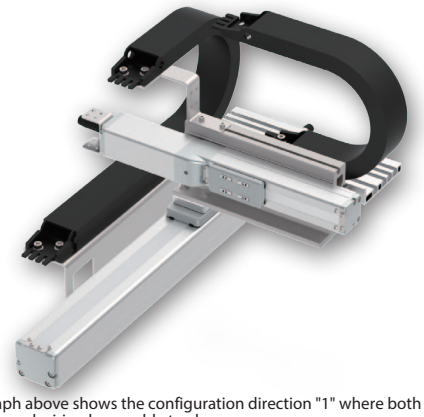
RCP6 2-axis configurations

X-axis: SA6C (straight)
Y-axis: SA4C (straight)

■ Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable			Options
IK2	P6XBD3□	WA	□	□	□	□	PM1	□	□	□	□
	Configuration Direction: 1 to 4. Refer to Robot Type Descriptions on page 3		Stroke: 5: 50mm ~ (Every 50mm)		Options: Refer to Options table (1) below.		Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring	Options: Refer to Options table (2) below.
	Speed Type: SS: X Ultra High Speed/ Y Ultra High Speed								Refer to Cable Track table below.		
		Encoder Type: WA: Battery-less Absolute									

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SS type: X ultra high speed/Y ultra high speed (Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~150 (Every 50mm)
0.1	3
0.3	3
0.5	2
0.7	1

* When both X and Y axes have the same acceleration/deceleration.
When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

☐ X-axis: SA6C, Y-axis: SA4C

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item	X-axis	Y-axis
Axis model	RCP6-SA6C	RCP6-SA4C
Stroke (Every 50mm)	50~800mm	50~150mm
Max. speed *	640mm/s	560mm/s
Motor size	42□ Stepper motor	35□ Stepper motor
Ball screw lead	20mm	16mm
Drive system	Ball screw ϕ10mm rolled C10	Ball screw ϕ8mm rolled C10
Positioning repeatability	±0.01mm	
Base material	Aluminum	
Ambient operating temperature, humidity	0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

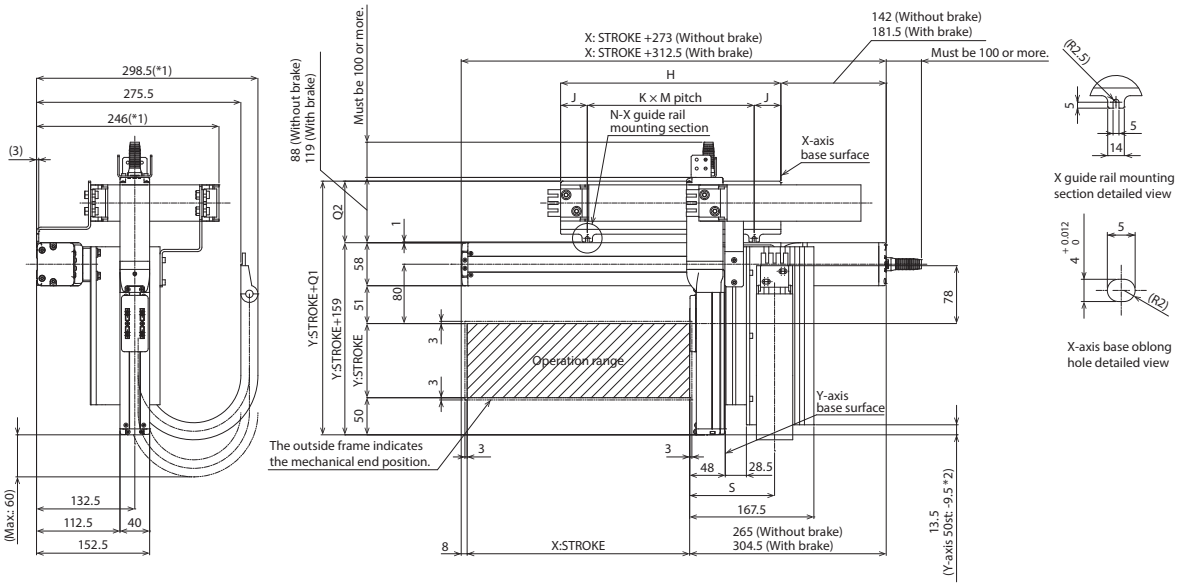
Options (2)

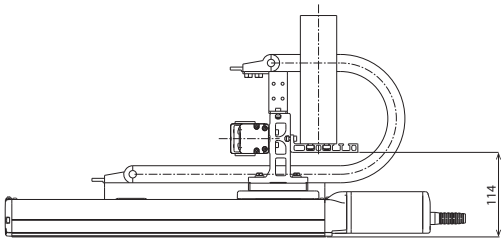
Type	Option code	Reference page
Foot plate	FTP	See P.83

Dimensions

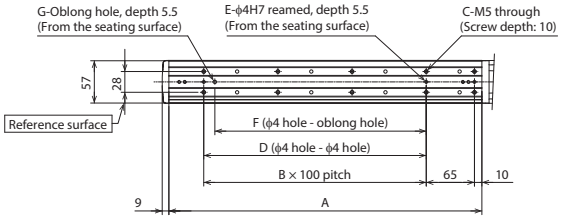
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

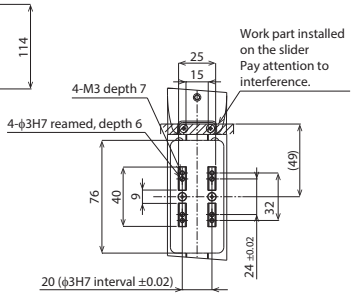




*1: The cable track may swell, becoming slightly larger than the indicated dimensions.
*2: When the Y-axis is 50st, the Y guide rail overhangs the actuator tip.



Base mounting dimensions



Y-axis slider detailed view

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.83)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	172	197	222	247	272	297	322	347	372	397	422	447	472	497	522	547
J	23.5	36	23.5	36	23.5	36	61	23.5	36	48.5	26	23.5	36	48.5	61	48.5
K	1	1	1	1	1	1	1	3	3	2	2	2	2	2	2	3
M	125	125	175	175	225	225	200	100	100	150	185	200	200	200	200	150
N	2	2	2	2	2	2	2	4	4	3	3	3	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	242	255	268	285
Q2	83	96	109	126
S	114.5	121	127.5	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBC1□□S

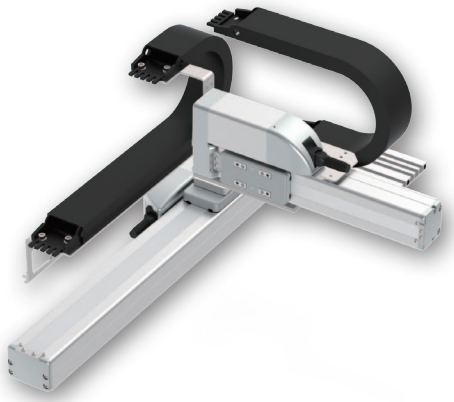
RCP6 2-axis configurations

X-axis: SA7R (side-mounted)
Y-axis: SA6R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBC1□□S	WA	□	□	□	□	PM1	□	□	□
	Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3) / Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm ~ (Every 50mm)		Options: Refer to Options table below.		Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring: Refer to Cable Track table below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150	200
0.1	9	8	6
0.3	9	8	6
0.5	7		6
0.7	6		
1	4		

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~200 (Every 50mm)
0.1	5
0.3	5
0.5	4
0.7	2

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50	100~200 (Every 50mm)
0.1	4	
0.3	4	
0.5	3	2.5
0.7	2	1.5
1	1	

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200
50	○	○	○	○
100	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○
450	○	○	○	○
500	○	○	○	○
550	○	○	○	○
600	○	○	○	○
650	○	○	○	○
700	○	○	○	○
750	○	○	○	○
800	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: SA7R, Y-axis: SA6R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	**1L**	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	**N**	See P.85	○	○
Cable track S size (inner width: 38mm)	**CT**		○	○
Cable track M size (inner width: 50mm)	**CTM**		○	○
Cable track L size (inner width: 63mm)	**CTL**		○	○
Cable track XL size (inner width: 80mm) *	**CTXL**		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)		50~800mm	50~200mm
Max. speed *	MM	280mm/s	400mm/s
	HH	560mm/s	680mm/s
	SS	640mm/s	800mm/s
Motor size		56□ Stepper motor	42□ Stepper motor
Ball screw lead	MM	8mm	6mm
	HH	16mm	12mm
	SS	24mm	20mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ10mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

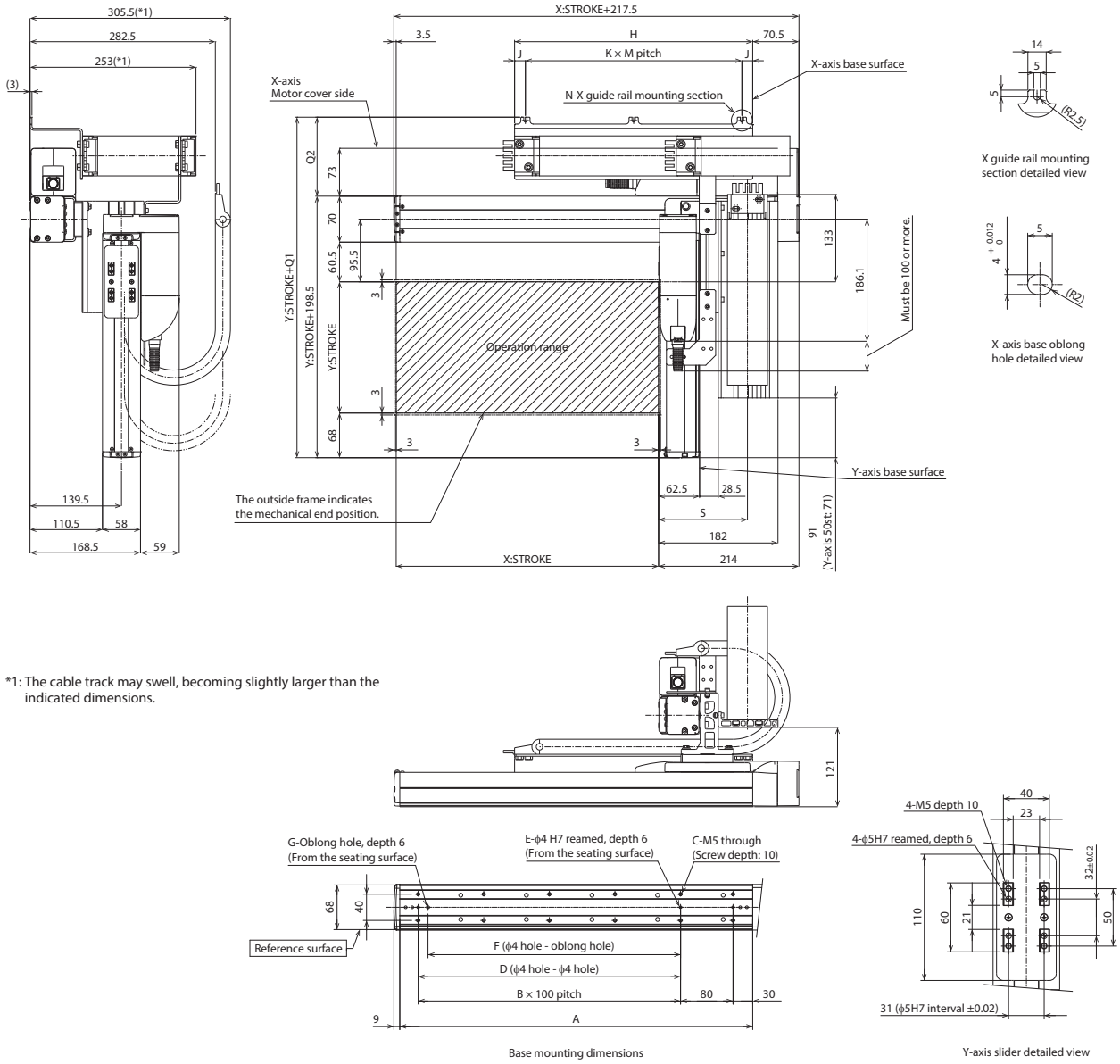
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	**B**	See P.83	○	○
Non-motor end specification	**NM**	See P.84	○	○
Slider section roller specification	**SR**	See P.84	○	○

Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	306	319	332	349
Q2	107.5	120.5	133.5	150.5
S	129	135.5	142	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBC2□□S

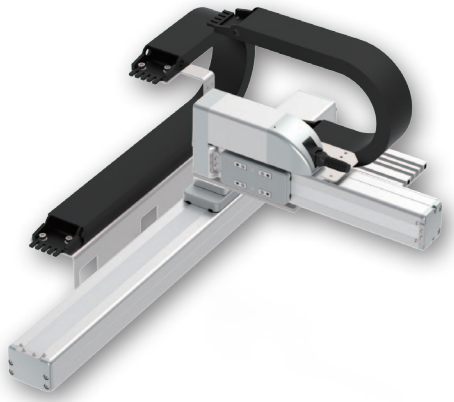
RCP6 2-axis configurations

X-axis: SA7C (straight)
Y-axis: SA6R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable			Options
IK2	P6XBC2□ □S	WA	□	□	□	□	PM1	□	□	□	□
	Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3) / Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm ~ (Every 50mm)		Options: Refer to Options table (1) below.		Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring: Refer to Cable Track table below.	Options: Refer to Options table (2) below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150	200
0.1	9	8	6
0.3	9	8	6
0.5	7		6
0.7	6		
1	4		

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~200 (Every 50mm)
0.1	5
0.3	5
0.5	4
0.7	2

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50	100~200 (Every 50mm)
0.1	4	
0.3	4	
0.5	3	2.5
0.7	2	1.5
1	1	

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200
50	○	○	○	○
100	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○
450	○	○	○	○
500	○	○	○	○
550	○	○	○	○
600	○	○	○	○
650	○	○	○	○
700	○	○	○	○
750	○	○	○	○
800	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: SA7C, Y-axis: SA6R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-SA7C	RCP6-SA6R
Stroke (Every 50mm)		50~800mm	50~200mm
Max. speed *	MM	280mm/s	400mm/s
	HH	560mm/s	680mm/s
	SS	640mm/s	800mm/s
Motor size		56□ Stepper motor	42□ Stepper motor
Ball screw lead	MM	8mm	6mm
	HH	16mm	12mm
	SS	24mm	20mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ10mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

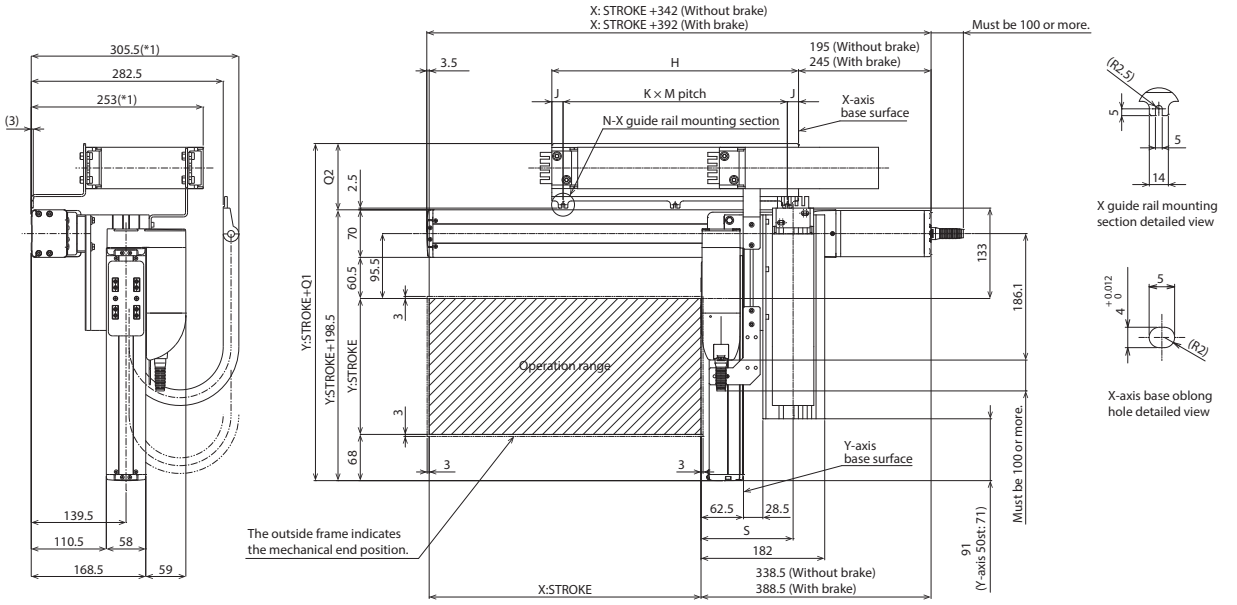
Options (2)

Type	Option code	Reference page
Foot plate	FTP	See P.83

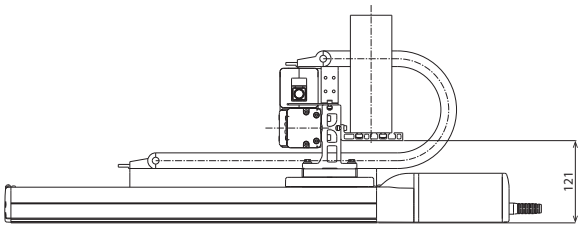
Dimensions

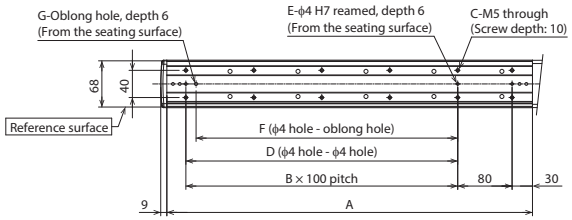
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

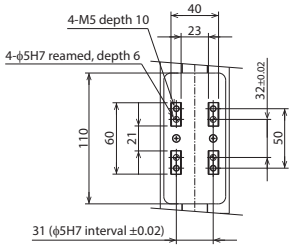


*1: The cable track may swell, becoming slightly larger than the indicated dimensions.





Base mounting dimensions



Y-axis slider detailed view

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.83)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S	129	135.5	142	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBC3□□S

RCP6 2-axis configurations

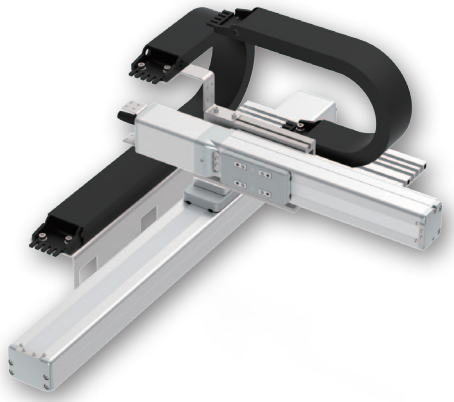
X-axis: SA7C (straight)
Y-axis: SA6C (straight)

■ Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)	Second Axis (Y-axis)	Controller	Cable			Options
IK2	P6XBC3□□S	WA	□□	□□	PM1	□	□	□	□

- Type — Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3); Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed
- Encoder Type: WA: Battery-less Absolute
- First Axis (X-axis) — Stroke: 5: 50mm ~ (Every 50mm)
- Second Axis (Y-axis) — Options: Refer to Options table (1) below.
- Controller: Refer to Applicable Controllers table below.
- Cable — Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- Cable — First Wiring / Second Wiring: Refer to Cable Track table below.
- Options: Refer to Options table (2) below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150	200
0.1	9	8	6
0.3	9	8	6
0.5	7		6
0.7	6		
1	4		

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~200 (Every 50mm)
0.1	5
0.3	5
0.5	4
0.7	2

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50	100~200 (Every 50mm)
0.1	4	
0.3	4	
0.5	3	2.5
0.7	2	1.5
1	1	

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200
50	○	○	○	○
100	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○
450	○	○	○	○
500	○	○	○	○
550	○	○	○	○
600	○	○	○	○
650	○	○	○	○
700	○	○	○	○
750	○	○	○	○
800	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: SA7C, Y-axis: SA6C

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-SA7C	RCP6-SA6C
Stroke (Every 50mm)		50~800mm	50~200mm
Max. speed *	MM	280mm/s	400mm/s
	HH	560mm/s	680mm/s
	SS	640mm/s	800mm/s
Motor size		56□ Stepper motor	42□ Stepper motor
Ball screw lead	MM	8mm	6mm
	HH	16mm	12mm
	SS	24mm	20mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ10mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

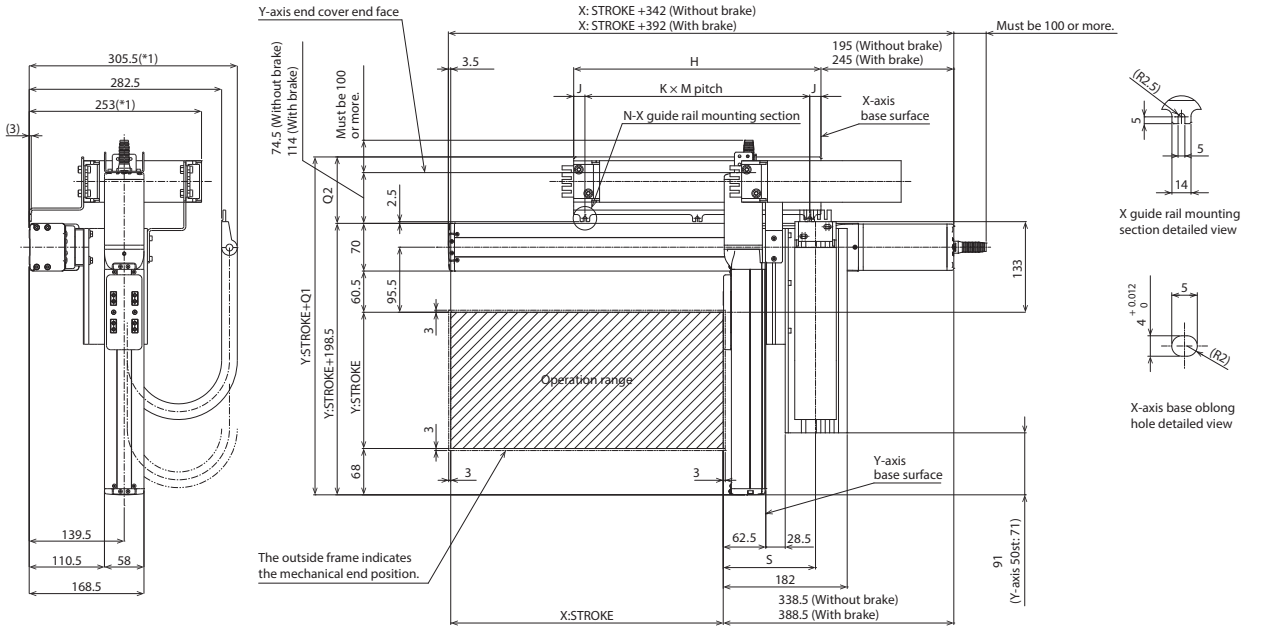
Options (2)

Type	Option code	Reference page
Foot plate	FTP	See P.83

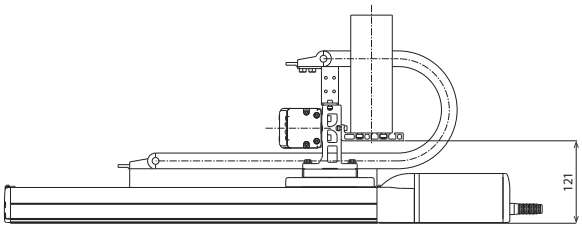
Dimensions

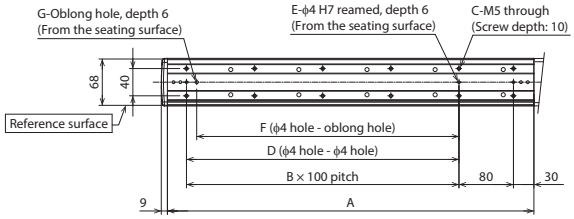
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

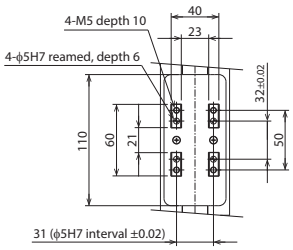


*1: The cable track may swell, becoming slightly larger than the indicated dimensions.





Base mounting dimensions



Y-axis slider detailed view

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.83)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	188	213	238	263	288	313	338	363	388	413	438	463	488	513	538	563
J	16.5	16.5	14	16.5	16.5	16.5	14	16.5	14	16	15	66.5	44	56.5	69	16
K	1	1	1	2	2	2	2	2	2	3	3	3	2	2	2	3
M	155	180	210	115	127.5	140	155	165	180	127	136	110	200	200	200	177
N	2	2	2	3	3	3	3	3	3	4	4	4	3	3	3	4

Cable track size	CT	CTM	CTL	CTXL
Q1	283	296	309	326
Q2	84.5	97.5	110.5	127.5
S	129	135.5	142	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBB1□□S

RCP6 2-axis configurations

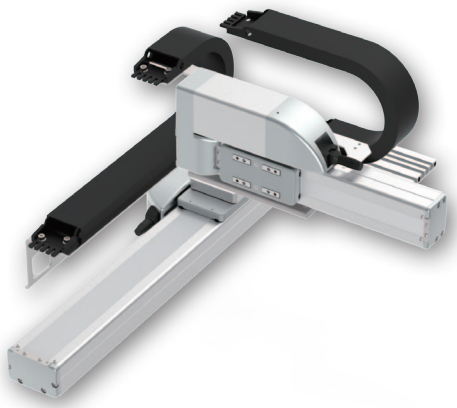
X-axis: SA8R (side-mounted)
Y-axis: SA7R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBB1□□S	WA	□	□	□	□	PM1	□	□	□

- **Configuration Direction**: 1 to 4 (Refer to Robot Type Descriptions on page 3)
- **Speed Type**: MM: X Medium Speed/Y Medium Speed; HH: X High Speed/Y High Speed; SS: X Ultra High Speed/Y Ultra High Speed
- **Encoder Type**: WA: Battery-less Absolute
- **Stroke**: 5: 50mm ~ (Every 50mm)
- **Options**: Refer to Options table below.
- **Controller**: Refer to Applicable Controllers table below.
- **Cable Length**: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- **First Wiring**: Refer to Cable Track table below.
- **Second Wiring**

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150	200	250
0.1	16	15	12.5	9
0.3	16	15	12.5	9
0.5	10			9
0.7	6		5.5	
1	6		5.5	

HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~150 (Every 50mm)	200	250
0.1	11	10.5	9
0.3	8		
0.5	5		
0.7	4		

SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~250 (Every 50mm)
0.1	3
0.3	1.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250
50	○	○	○	○	○
100	○	○	○	○	○
150	○	○	○	○	○
200	○	○	○	○	○
250	○	○	○	○	○
300	○	○	○	○	○
350	○	○	○	○	○
400	○	○	○	○	○
450	○	○	○	○	○
500	○	○	○	○	○
550	○	○	○	○	○
600	○	○	○	○	○
650	○	○	○	○	○
700	○	○	○	○	○
750	○	○	○	○	○
800	○	○	○	○	○
850	○	○	○	○	○
900	○	○	○	○	○
950	○	○	○	○	○
1000	○	○	○	○	○
1050	○	○	○	○	○
1100	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: SA8R

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

□ Y-axis: SA7R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	–	–
Cable track S size (inner width: 38mm)	CT		–	–
Cable track M size (inner width: 50mm)	CTM		–	–
Cable track L size (inner width: 63mm)	CTL		–	–
Cable track XL size (inner width: 80mm) *	CTXL		–	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-SA8R	RCP6-SA7R
Stroke (Every 50mm)		50~1100mm	50~250mm
Max. speed *	MM	300mm/s	280mm/s
	HH	400mm/s	560mm/s
	SS	650mm/s	640mm/s
Motor size		56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	MM	10mm	8mm
	HH	20mm	16mm
	SS	30mm	24mm
Drive system		Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

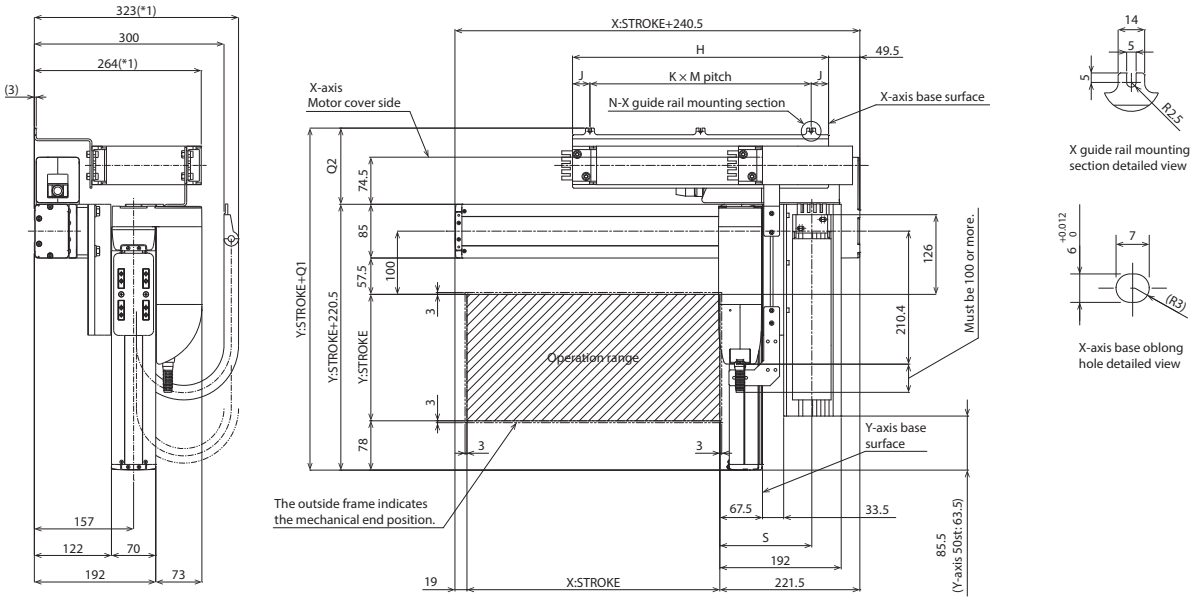
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	–	–
Non-motor end specification	NM	See P.84	–	–
Slider section roller specification	SR	See P.84	–	–

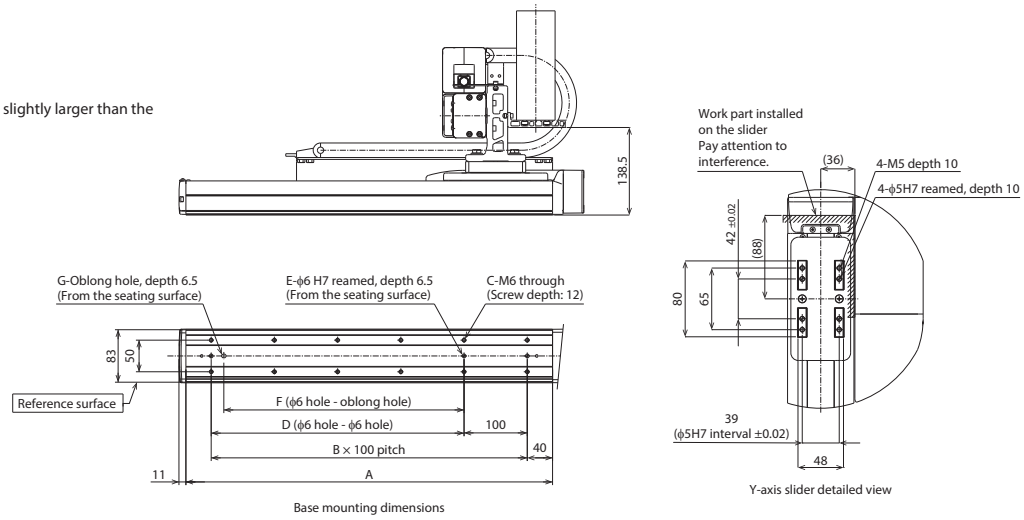
Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	77.5	52.5	65	77.5	52.5	27.5	77.5	22.5	55	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	328	341	354	371
Q2	107.5	120.5	133.5	150.5
S	139	145.5	152	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBB2□□S

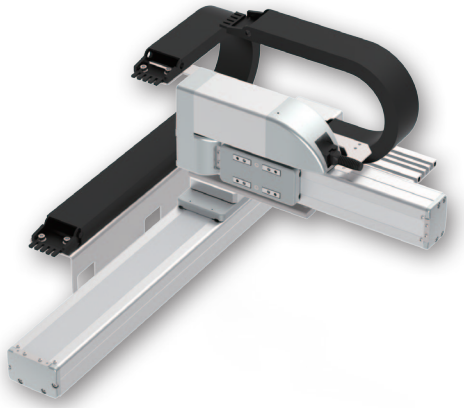
RCP6 2-axis configurations

X-axis: SA8C (straight)
Y-axis: SA7R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable			Options
IK2	P6XBB2□ □S	WA	□	□	□	□	PM1	□	□	□	□
	Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3) / Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 50: 50mm ~ (Every 50mm)		Options: Refer to Options table (1) below.		Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring: Refer to Cable Track table below.	Options: Refer to Options table (2) below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150	200	250
0.1	16	15	12.5	9
0.3	16	15	12.5	9
0.5	10			9
0.7	6		5.5	
1	6		5.5	

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~150 (Every 50mm)	200	250
0.1	11	10.5	9
0.3	8		
0.5	5		
0.7	4		

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~250 (Every 50mm)
0.1	3
0.3	1.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250
50	○	○	○	○	○
100	○	○	○	○	○
150	○	○	○	○	○
200	○	○	○	○	○
250	○	○	○	○	○
300	○	○	○	○	○
350	○	○	○	○	○
400	○	○	○	○	○
450	○	○	○	○	○
500	○	○	○	○	○
550	○	○	○	○	○
600	○	○	○	○	○
650	○	○	○	○	○
700	○	○	○	○	○
750	○	○	○	○	○
800	○	○	○	○	○
850	○	○	○	○	○
900	○	○	○	○	○
950	○	○	○	○	○
1000	○	○	○	○	○
1050	○	○	○	○	○
1100	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: SA8C

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

□ Y-axis: SA7R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-SA8C	RCP6-SA7R
Stroke (Every 50mm)		50~1100mm	50~250mm
Max. speed *	MM	300mm/s	280mm/s
	HH	400mm/s	560mm/s
	SS	650mm/s	640mm/s
Motor size		56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	MM	10mm	8mm
	HH	20mm	16mm
	SS	30mm	24mm
Drive system		Ball screw φ16mm rolled C10	Ball screw φ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

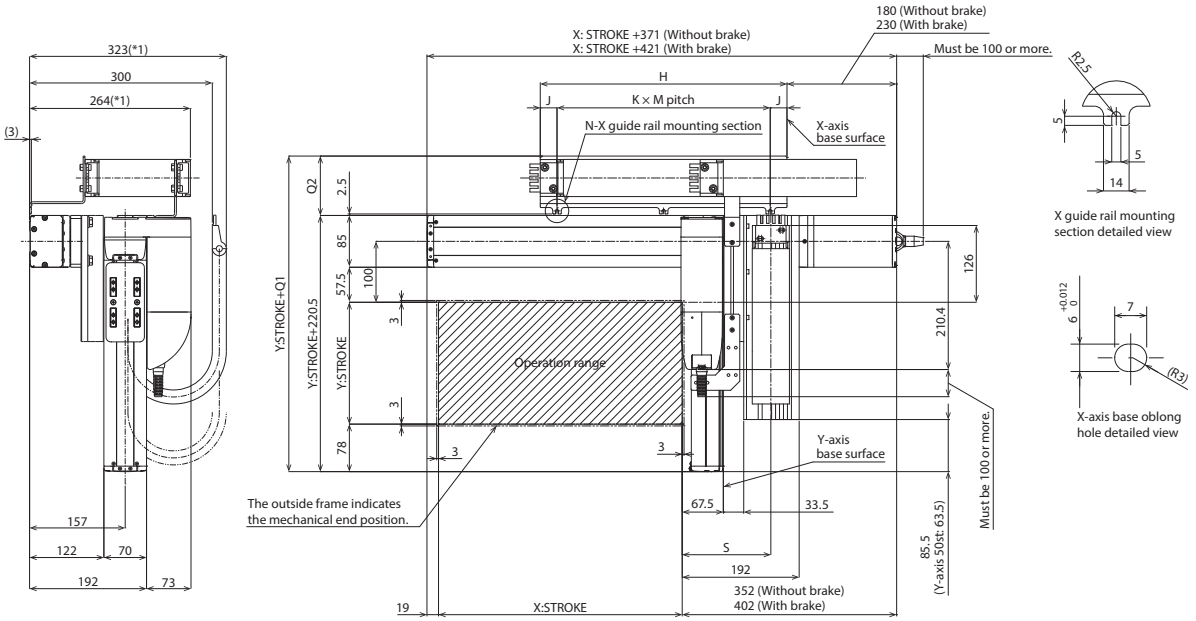
Options (2)

Type	Option code	Reference page
Foot plate	FTP	See P.83

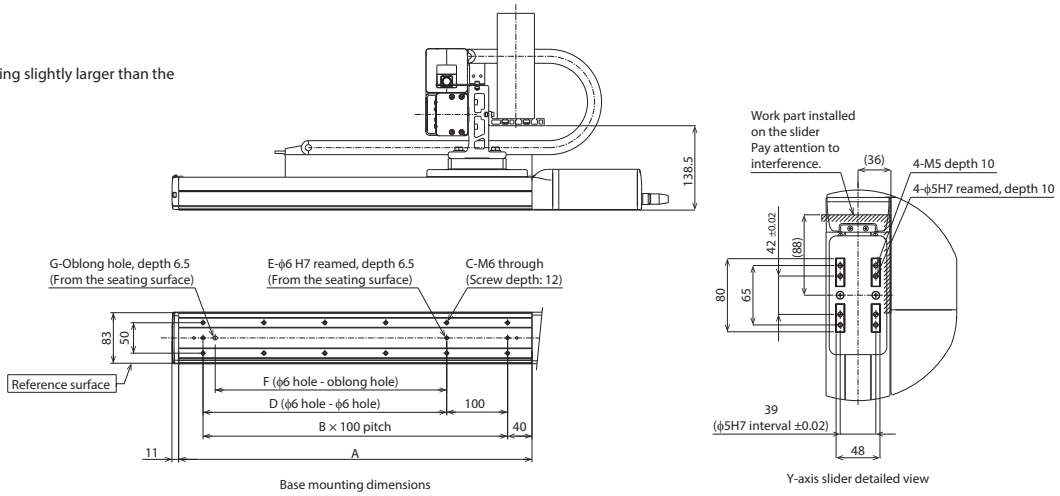
Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.83)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	77.5	52.5	65	77.5	52.5	27.5	77.5	22.5	55	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S	139	145.5	152	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBB3□□S

RCP6 2-axis configurations

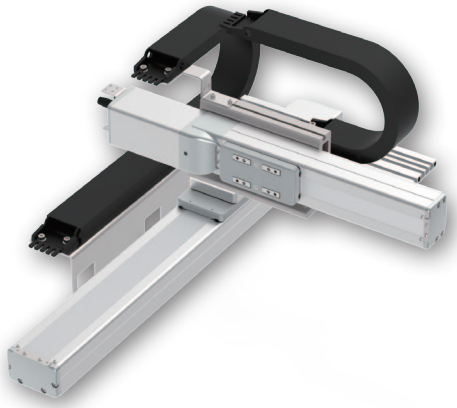
X-axis: SA8C (straight)
Y-axis: SA7C (straight)

■ Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable			Options
IK2	P6XBB3□ □S	WA	□	□	□	□	PM1	□	□	□	□

- Type: Configuration Direction — 1 to 4 (Refer to Robot Type Descriptions on page 3); Speed Type — MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed
- Encoder Type: WA: Battery-less Absolute
- First Axis (X-axis) / Second Axis (Y-axis): Stroke — 5: 50mm ~ (Every 50mm)
- Second Axis (Y-axis): Options — Refer to Options table (1) below.
- Controller: PM1 — Refer to Applicable Controllers table below.
- Cable: Cable Length — 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- Cable: First Wiring / Second Wiring — Refer to Cable Track table below.
- Options — Refer to Options table (2) below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150	200	250
0.1	16	15	12.5	9
0.3	16	15	12.5	9
0.5	10			9
0.7	6		5.5	
1	6		5.5	

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~150 (Every 50mm)	200	250
0.1	11	10.5	9
0.3	8		
0.5	5		
0.7	4		

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~250 (Every 50mm)
0.1	3
0.3	1.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250
50	○	○	○	○	○
100	○	○	○	○	○
150	○	○	○	○	○
200	○	○	○	○	○
250	○	○	○	○	○
300	○	○	○	○	○
350	○	○	○	○	○
400	○	○	○	○	○
450	○	○	○	○	○
500	○	○	○	○	○
550	○	○	○	○	○
600	○	○	○	○	○
650	○	○	○	○	○
700	○	○	○	○	○
750	○	○	○	○	○
800	○	○	○	○	○
850	○	○	○	○	○
900	○	○	○	○	○
950	○	○	○	○	○
1000	○	○	○	○	○
1050	○	○	○	○	○
1100	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: SA8C

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

□ Y-axis: SA7C

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-SA8C	RCP6-SA7C
Stroke (Every 50mm)		50~1100mm	50~250mm
Max. speed *	MM	300mm/s	280mm/s
	HH	400mm/s	560mm/s
	SS	650mm/s	640mm/s
Motor size		56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	MM	10mm	8mm
	HH	20mm	16mm
	SS	30mm	24mm
Drive system		Ball screw ϕ16mm rolled C10	Ball screw ϕ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options (1)

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

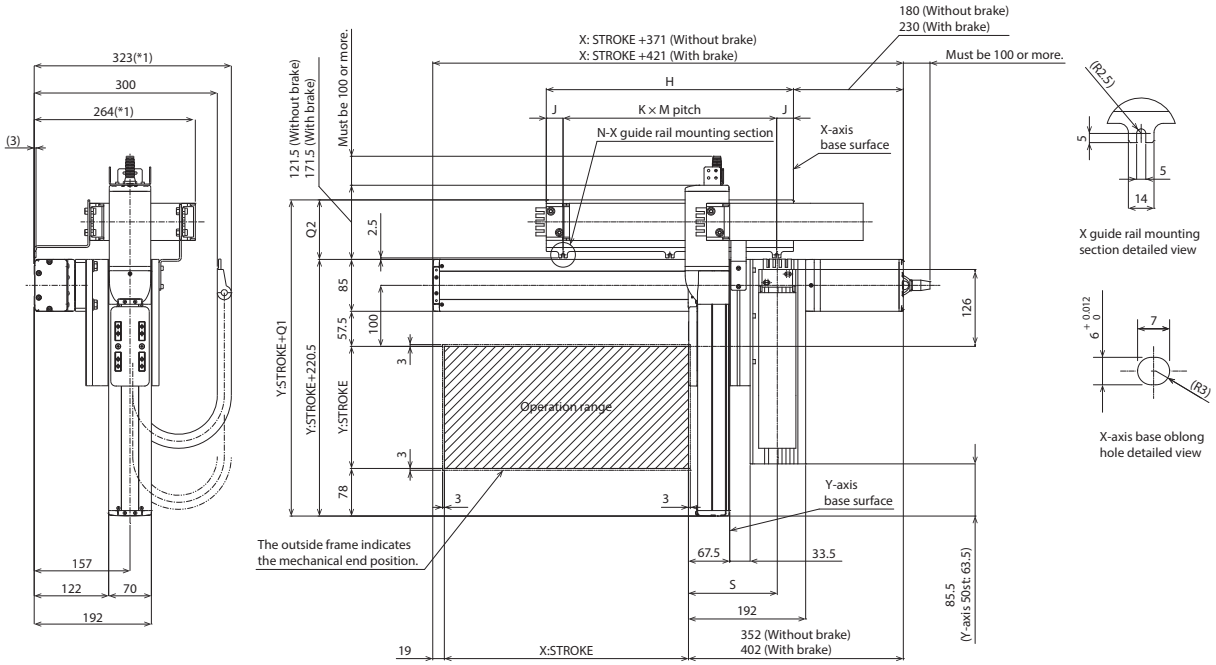
Options (2)

Type	Option code	Reference page
Foot plate	FTP	See P.83

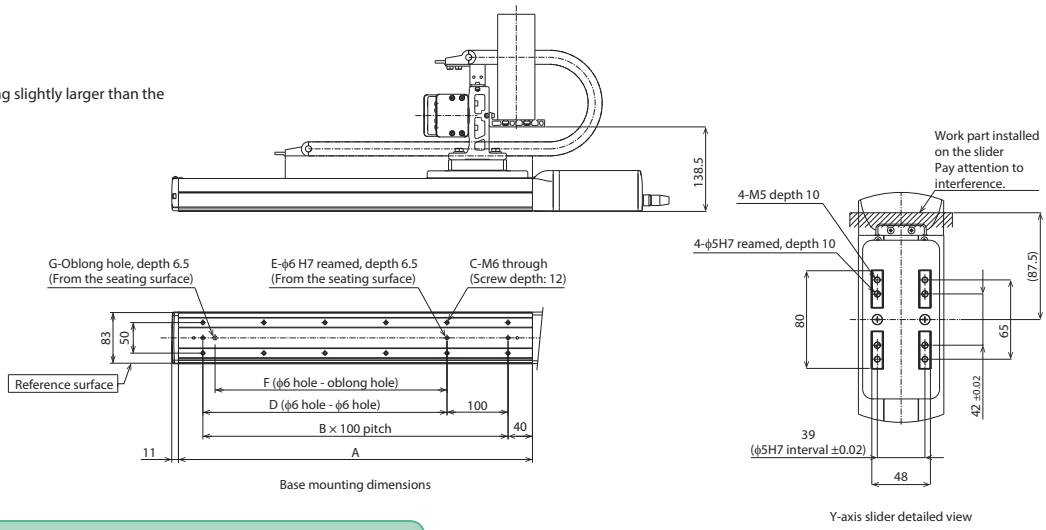
Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
When the foot plate option is selected, the unit will be shipped fixed on the foot plate. (See P.83)
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	230	255	280	305	330	355	380	405	430	455	480	505	530	555	580	605	630	655	680	705	730	755
J	30	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	27.5	22.5	27.5	77.5	52.5	65	77.5	52.5	27.5	77.5	22.5	55	27.5
K	1	1	1	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4
M	170	200	225	125	137.5	150	162.5	175	187.5	200	145	150	125	150	150	150	175	200	175	165	155	175
N	2	2	2	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	305	318	331	348
Q2	84.5	97.5	110.5	127.5
S	139	145.5	152	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

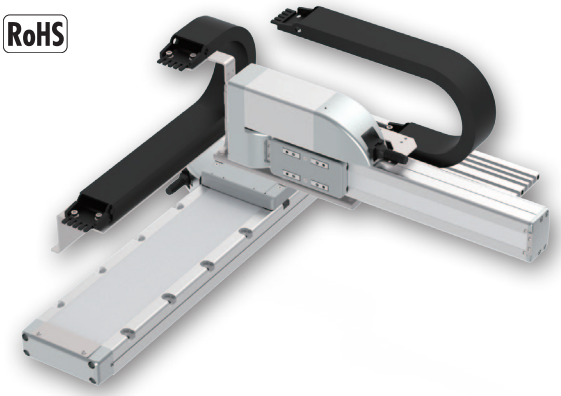
IK2-P6XBF1□□S

RCP6 2-axis configurations

X-axis: WSA14R (side-mounted)
Y-axis: SA7R (side-mounted)

■ Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBF1□□S	WA	□	□	□	□	PM1	□	□	□
	Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3) / Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm to (Every 50mm)		Options: Refer to Options table below.		Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring: Refer to Cable Track table below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed (Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350	400
0.1	16	15	12.5	12	10.5
0.3	16	15	12.5	12	10.5
0.5	12				10.5
0.7	9.5				

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~300 (Every 50mm)	350~400 (Every 50mm)
0.1	8		7.5
0.3	8		7.5
0.5	5	4.5	4
0.7	3	2.5	2

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~300 (Every 50mm)	350~400 (Every 50mm)
0.1	6	5.5	5
0.3	5.5	5	4.5
0.5	3	2.5	2

* When both X and Y axes have the same acceleration/deceleration.
When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: WSA14R, Y-axis: SA7R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-WSA14R	RCP6-SA7R
Stroke (Every 50mm)		50~800mm	50~400mm
Max. speed *	MM	210mm/s	280mm/s
	HH	420mm/s	560mm/s
	SS	560mm/s	640mm/s
Motor size		56□ Stepper motor	56□ Stepper motor
Ball screw lead	MM	8mm	8mm
	HH	16mm	16mm
	SS	24mm	24mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

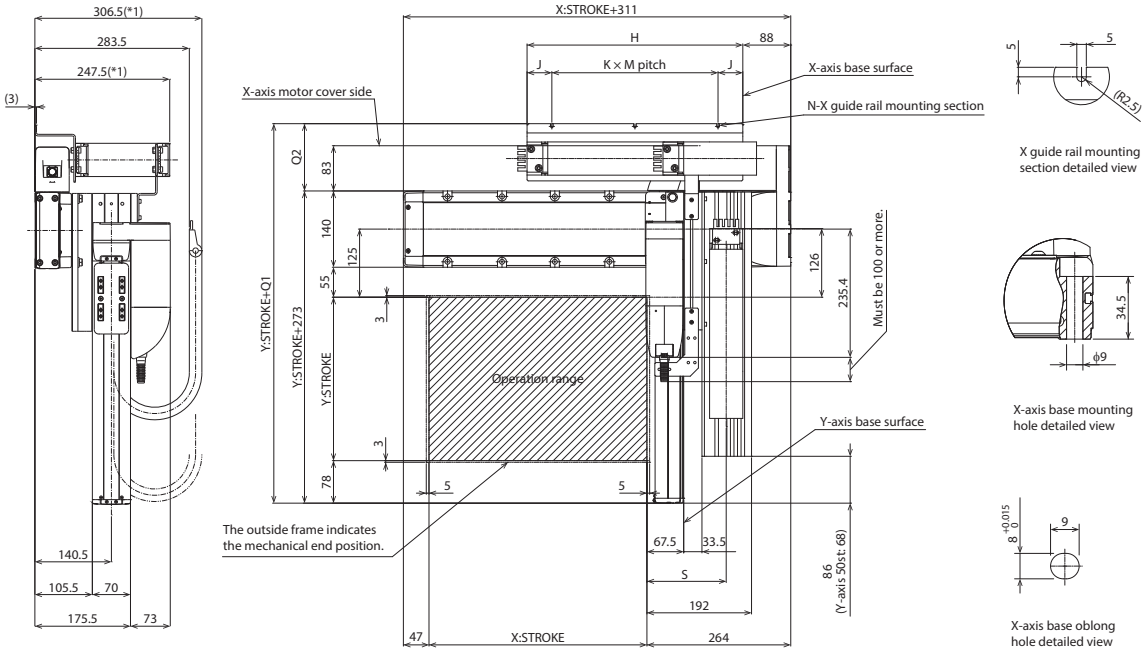
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

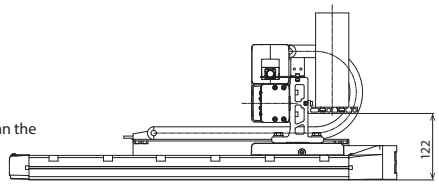
Dimensions

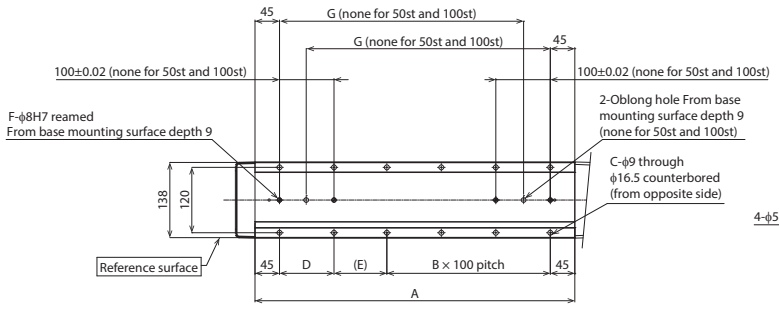
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

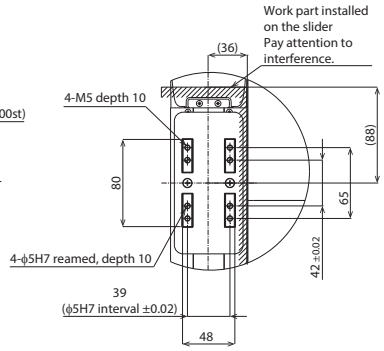


*1: The cable track may swell, becoming slightly larger than the indicated dimensions.





Base mounting dimensions



Y-axis slider detailed view

(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596
J	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	45.5	43	48	45.5	43	43	45.5	43
K	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4
M	130	155	90	102.5	115	127.5	140	152.5	110	120	125	135	145	115	120	127.5
N	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5

Cable track size	CT	CTM	CTL	CTXL
Q1	383.5	396.5	409.5	426.5
Q2	110.5	123.5	136.5	153.5
S	139	145.5	152	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBF2□□S

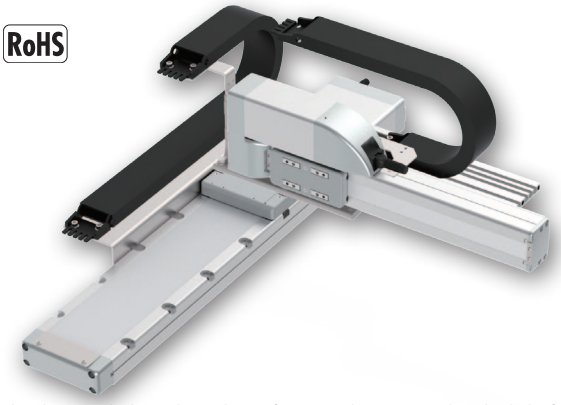
RCP6 2-axis configurations

X-axis: WSA14C (straight)
Y-axis: SA7R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBF2□ □S	WA	□	□	□	□	PM1	□	□	□
	Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3) / Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm ~ (Every 50mm)		Options: Refer to Options table below.		Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring: Refer to Cable Track table below.	Second Wiring

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350	400
0.1	16	15	12.5	12	10.5
0.3	16	15	12.5	12	10.5
0.5	12				10.5
0.7	9.5				

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~300 (Every 50mm)	350~400 (Every 50mm)
0.1	8		7.5
0.3	8		7.5
0.5	5	4.5	4
0.7	3	2.5	2

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~300 (Every 50mm)	350~400 (Every 50mm)
0.1	6	5.5	5
0.3	5.5	5	4.5
0.5	3	2.5	2

* When both X and Y axes have the same acceleration/deceleration.
When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: WSA14C, Y-axis: SA7R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-WSA14C	RCP6-SA7R
Stroke (Every 50mm)		50~800mm	50~400mm
Max. speed *	MM	210mm/s	280mm/s
	HH	420mm/s	560mm/s
	SS	560mm/s	640mm/s
Motor size		56□ Stepper motor	56□ Stepper motor
Ball screw lead	MM	8mm	8mm
	HH	16mm	16mm
	SS	24mm	24mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

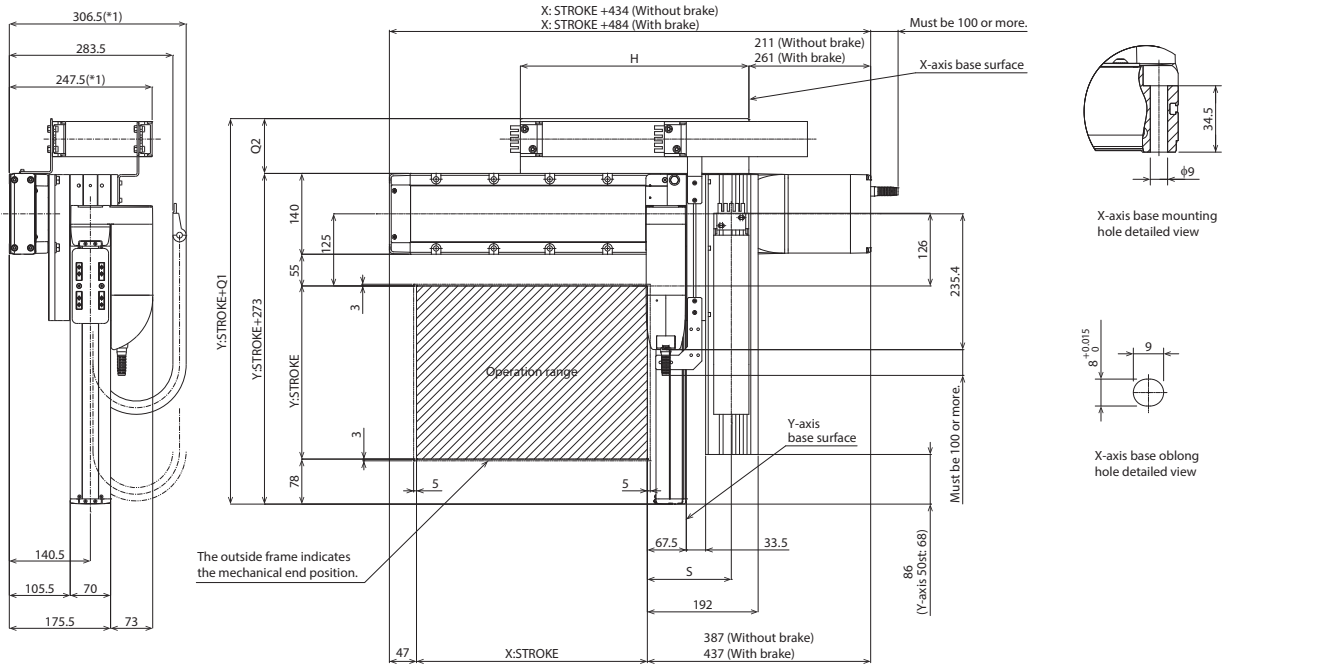
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

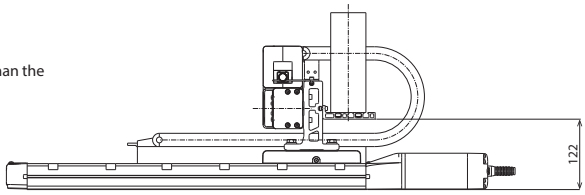
Dimensions

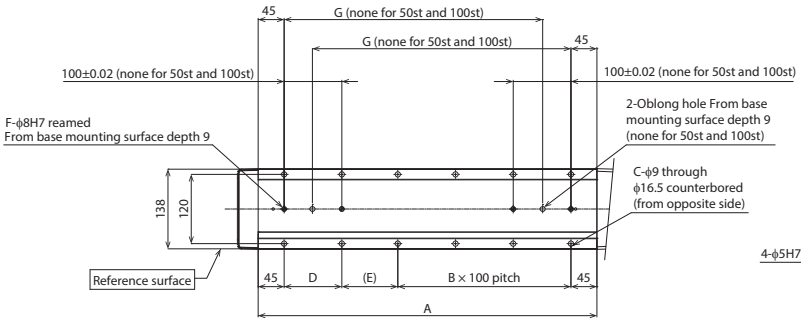
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

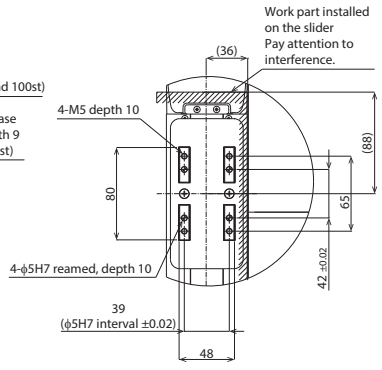


*1: The cable track may swell, becoming slightly larger than the indicated dimensions.





Base mounting dimensions



Y-axis slider detailed view

(*) Notes

**The X-axis cable track guide rail is fixed on the X-axis body.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)**

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	356	368	383	401
Q2	83	95	110	128
S	139	145.5	152	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBF3□□S

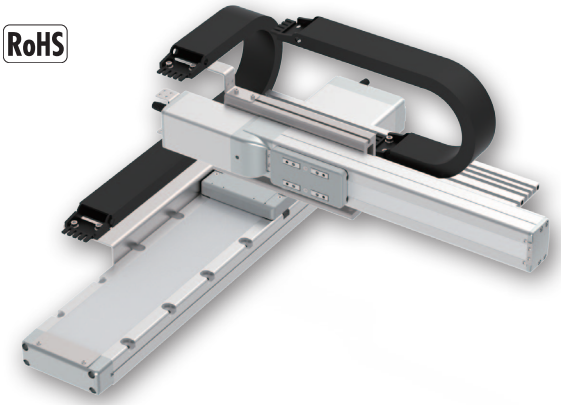
RCP6 2-axis configurations

X-axis: WSA14C (straight)
Y-axis: SA7C (straight)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)	Second Axis (Y-axis)	Controller	Cable		
IK2	P6XBF3□□S	WA	□□	□□	PM1	□	□	□
	Configuration Direction: 1 to 4 (Refer to Robot Type Descriptions on page 3) / Speed Type: MM: X Medium Speed/Y Medium Speed, HH: X High Speed/Y High Speed, SS: X Ultra High Speed/Y Ultra High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm ~ (Every 50mm)	Options: Refer to Options table below.	Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring: Refer to Cable Track table below.	Second Wiring

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MM type: X medium speed/Y medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350	400
0.1	16	15	12.5	12	10.5
0.3	16	15	12.5	12	10.5
0.5	12				10.5
0.7	9.5				

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~300 (Every 50mm)	350~400 (Every 50mm)
0.1	8		7.5
0.3	8		7.5
0.5	5	4.5	4
0.7	3	2.5	2

■ SS type: X ultra high speed/Y ultra high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~300 (Every 50mm)	350~400 (Every 50mm)
0.1	6	5.5	5
0.3	5.5	5	4.5
0.5	3	2.5	2

* When both X and Y axes have the same acceleration/deceleration.
When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250	300	350	400
50	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: WSA14C, Y-axis: SA7C

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-WSA14C	RCP6-SA7C
Stroke (Every 50mm)		50~800mm	50~400mm
Max. speed *	MM	210mm/s	280mm/s
	HH	420mm/s	560mm/s
	SS	560mm/s	640mm/s
Motor size		56□ Stepper motor	56□ Stepper motor
Ball screw lead	MM	8mm	8mm
	HH	16mm	16mm
	SS	24mm	24mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

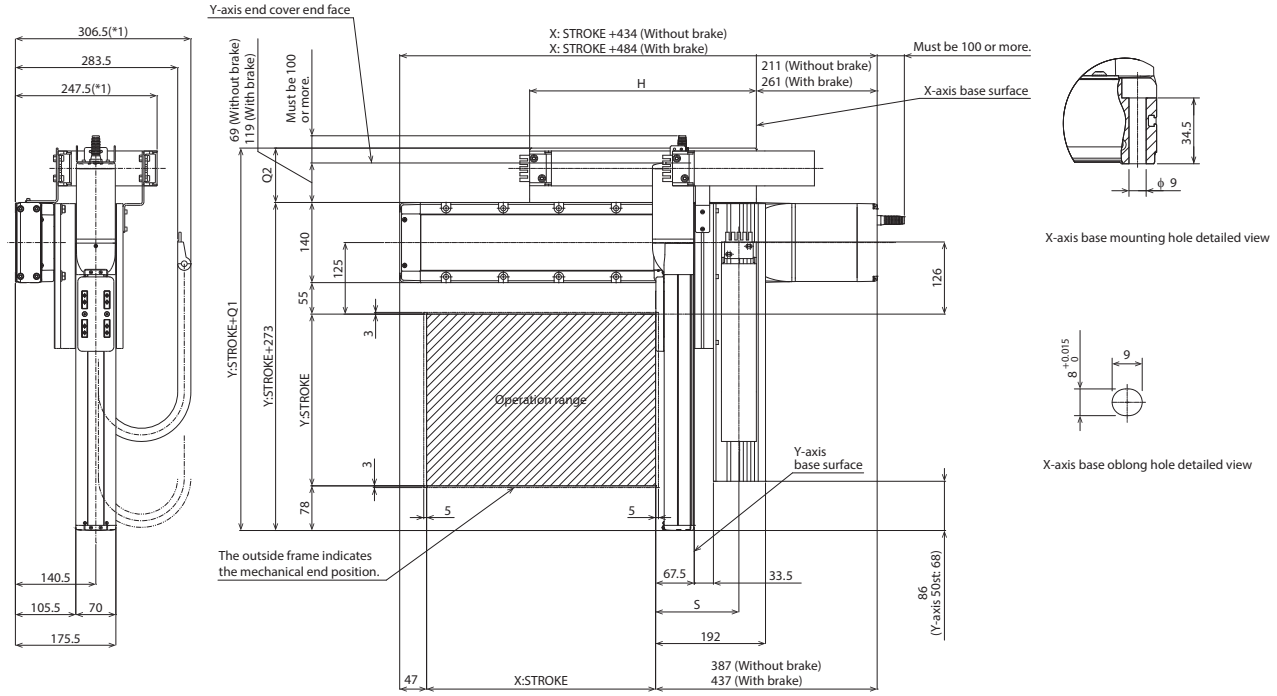
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

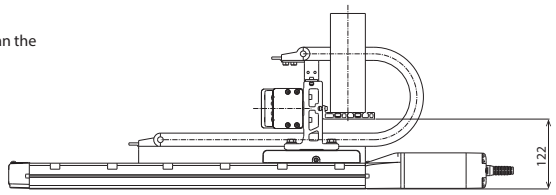
Dimensions

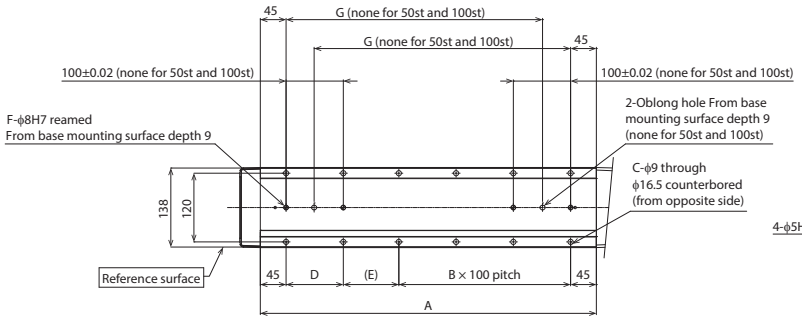
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.

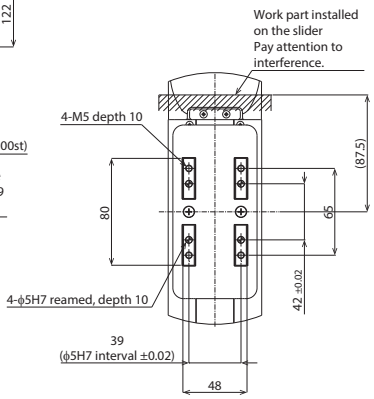


*1: The cable track may swell, becoming slightly larger than the indicated dimensions.





Base mounting dimensions



Y-axis slider detailed view

(*) Notes

**The X-axis cable track guide rail is fixed on the X-axis body.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)**

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20
D	–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	147	197	47	97	47	97	47	97	47	97	47	97	47	97	47	97
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	–	–	198	248	298	348	398	448	498	548	598	648	698	748	798	848
H	221	246	271	296	321	346	371	396	421	446	471	496	521	546	571	596

Cable track size	CT	CTM	CTL	CTXL
Q1	356	368	383	401
Q2	83	95	110	128
S	139	145.5	152	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

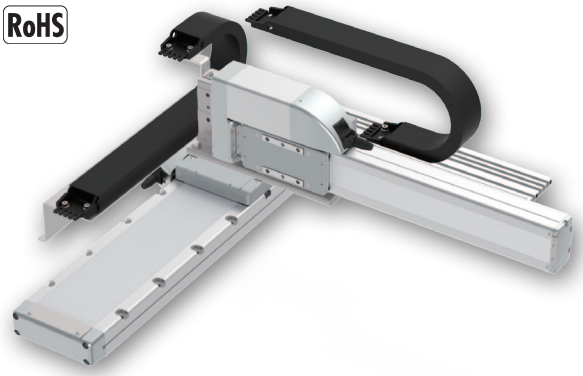
IK2-P6XBE1□□S

RCP6 2-axis configurations

X-axis: WSA16R (side-mounted)
Y-axis: SA8R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBE1□□S	WA	□	□	□	□	PM1	□	□	□
	Configuration Direction: 1 to 4 Refer to Robot Type Descriptions on page 3 / Speed Type: MH: X Medium Speed/Y High Speed HH: X High Speed/Y High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm ↓ (Every 50mm)		Options: Refer to Options table below.		Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m 3L : 3m 5L : 5m □L : □m	First Wiring	Second Wiring: Refer to Cable Track table below.



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MH type: X medium speed/Y high speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350~400 (Every 50mm)	450	500
0.1	17	16	15	14	12	10
0.3	17	16	15	14	12	10
0.5	11		10.5		10	

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~250 (Every 50mm)	300~400 (Every 50mm)	450~500 (Every 50mm)
0.1	10	9.5	9	8.5
0.3	9	8.5	8	7.5
0.5	4	3.5	3	2.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500
50	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: WSA16R, Y-axis: SA8R

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-WSA16R	RCP6-SA8R
Stroke (Every 50mm)		50~1100mm	50~500mm
Max. speed *	MH	210mm/s	400mm/s
	HH	365mm/s	650mm/s
Motor size		56□ High thrust stepper motor	56□ High thrust stepper motor
Ball screw lead	MH	10mm	20mm
	HH	20mm	
Drive system		Ball screw ϕ16mm rolled C10	Ball screw ϕ16mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

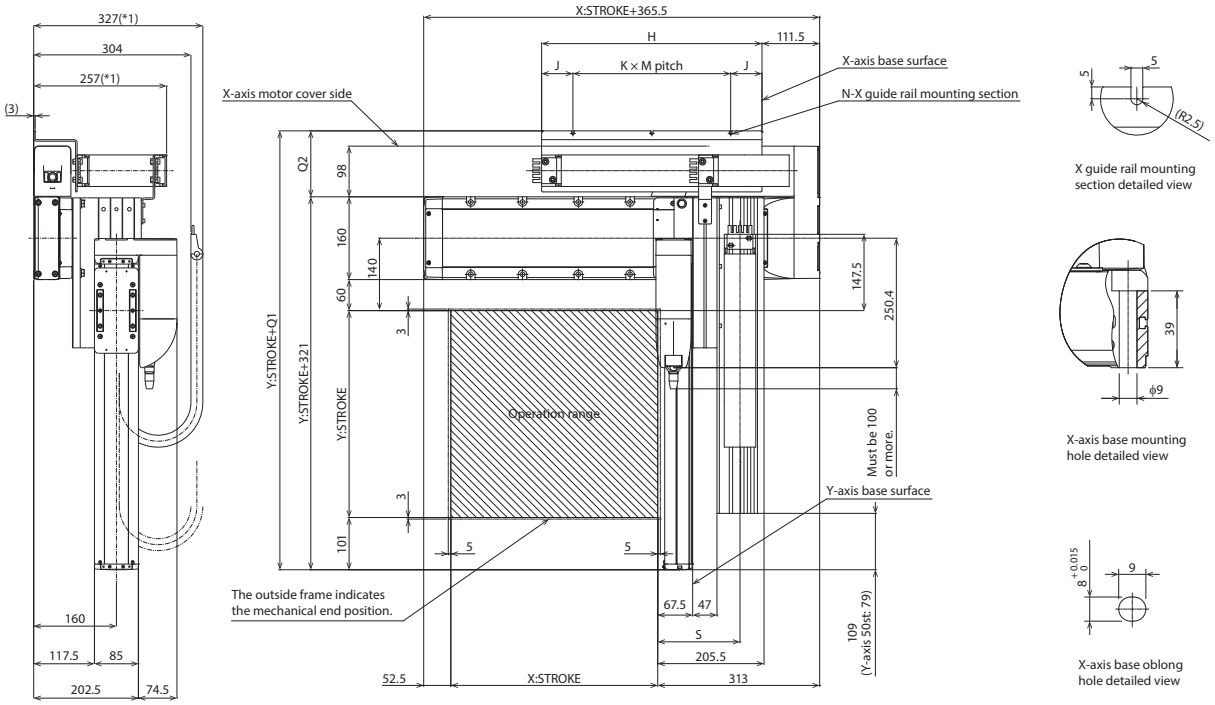
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

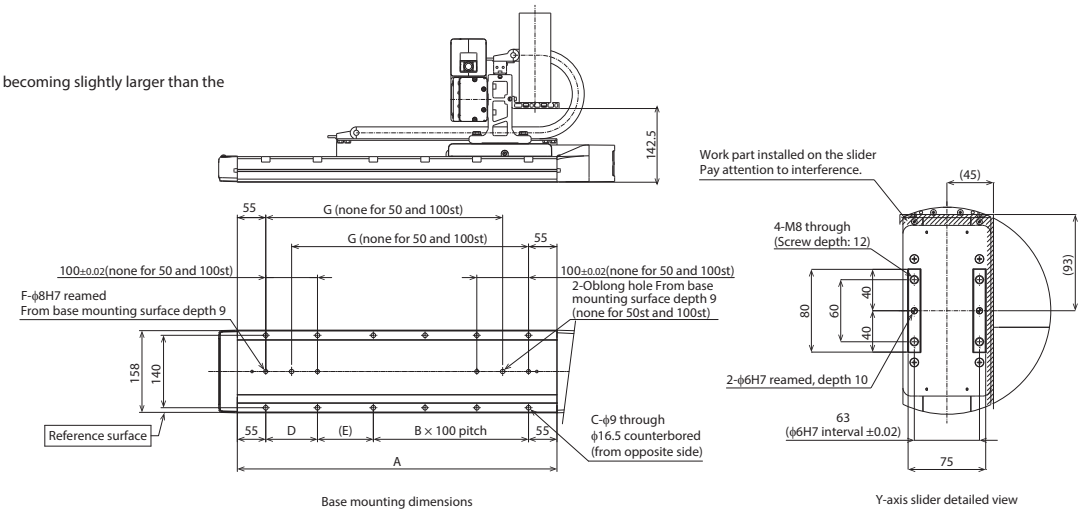
Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The X-axis cable track guide rail is to be fixed to the surface on which the X-axis is installed by the customer.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
D	–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776
J	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	58	63	60.5	58	58	60.5	58	60.5	58	60.5	63	63	63
K	1	1	2	2	2	2	2	2	3	3	3	3	3	4	4	4	4	4	4	5	5	5
M	130	155	90	102.5	115	127.5	140	152.5	110	120	125	135	145	115	120	127.5	132.5	140	145	120	125	130
N	2	2	3	3	3	3	3	3	4	4	4	4	4	5	5	5	5	5	5	6	6	6

Cable track size	CT	CTM	CTL	CTXL
Q1	448.5	448.5	448.5	465.5
Q2	127.5	127.5	127.5	144.5
S	152.5	159	165.5	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBE2□□S

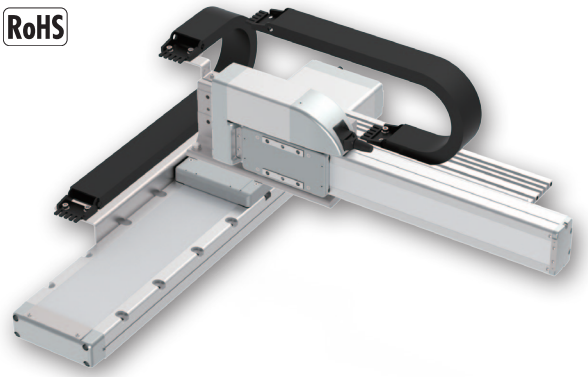
RCP6 2-axis configurations

X-axis: WSA16C (straight)
Y-axis: SA8R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBE2□ □S	WA	□	□	□	□	PM1	□	□	□
	Configuration Direction: 1 to 4. Refer to Robot Type Descriptions on page 3	Speed Type: MH: X Medium Speed/Y High Speed, HH: X High Speed/Y High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm, (Every 50mm)		Options: Refer to Options table below.	Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring: Refer to Cable Track table below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ MH type: X medium speed/Y high speed

(Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350~400 (Every 50mm)	450	500
0.1	17	16	15	14	12	10
0.3	17	16	15	14	12	10
0.5	11		10.5		10	

■ HH type: X high speed/Y high speed

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~250 (Every 50mm)	300~400 (Every 50mm)	450~500 (Every 50mm)
0.1	10	9.5	9	8.5
0.3	9	8.5	8	7.5
0.5	4	3.5	3	2.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500
50	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ X-axis: WSA16C, Y-axis: SA8R

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-WSA16C	RCP6-SA8R
Stroke (Every 50mm)		50~1100mm	50~500mm
Max. speed *	MH	210mm/s	400mm/s
	HH	365mm/s	650mm/s
Motor size		56□ High thrust stepper motor	56□ High thrust stepper motor
Ball screw lead	MH	10mm	20mm
	HH	20mm	
Drive system		Ball screw ϕ16mm rolled C10	Ball screw ϕ16mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

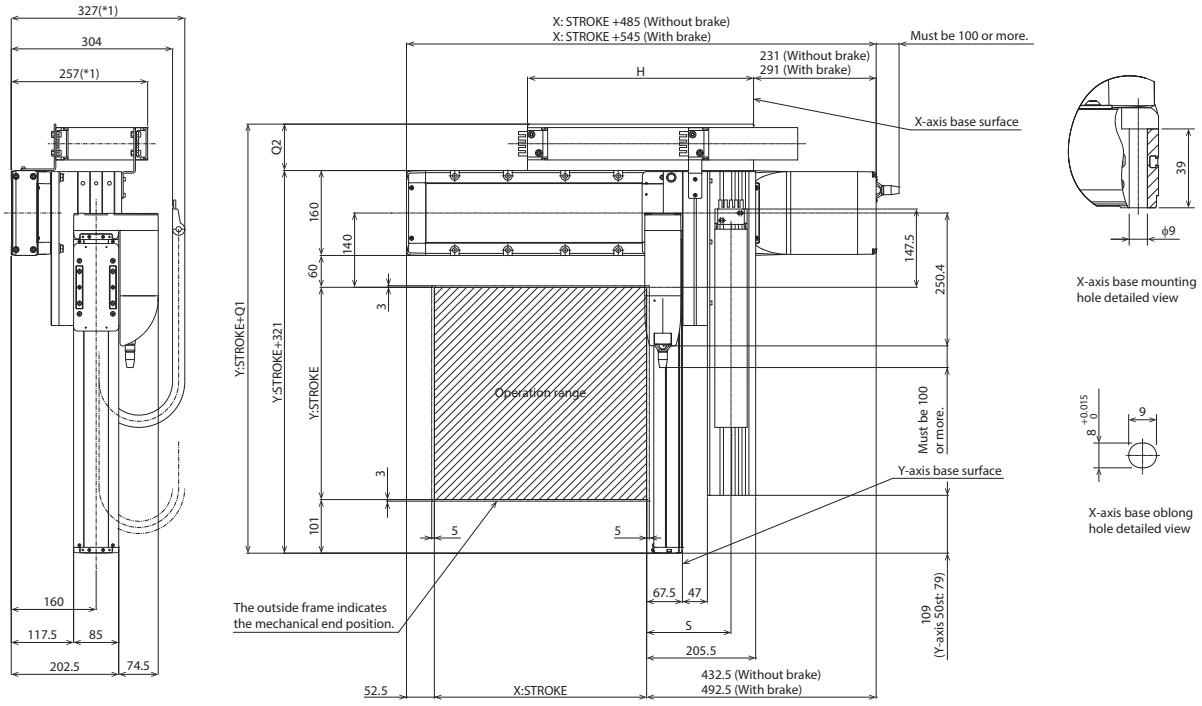
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	B	See P.83	○	○
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

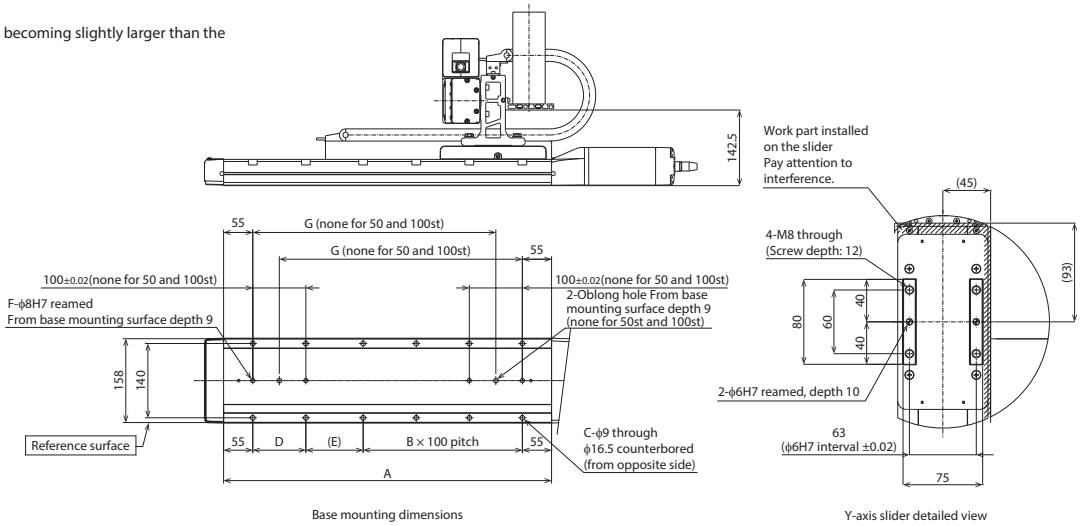
Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

**The X-axis cable track guide rail is fixed on the X-axis body.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)**

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
D	–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776

Cable track size	CT	CTM	CTL	CTXL
Q1	396.5	408.5	423.5	441.5
Q2	75.5	87.5	102.5	120.5
S	152.5	159	165.5	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6XBE3□□S

RCP6 2-axis configurations

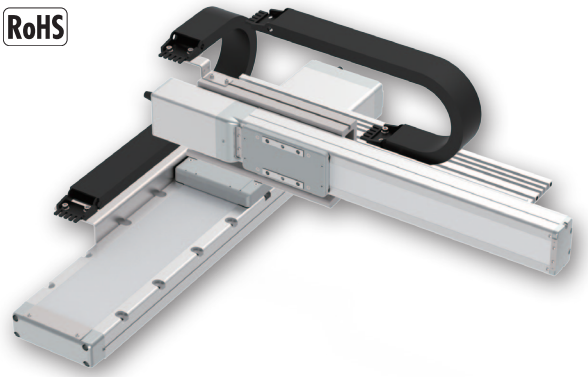
X-axis: WSA16C (straight)
Y-axis: SA8C (straight)

■ Model Specification Items

Series	Type	Encoder Type	First Axis (X-axis)		Second Axis (Y-axis)		Controller	Cable		
IK2	P6XBE3□ □S	WA	□	□	□	□	PM1	□	□	□

- Configuration Direction: 1 to 4. Refer to Robot Type Descriptions on page 3
- Speed Type: MH: X Medium Speed/Y High Speed; HH: X High Speed/Y High Speed
- Encoder Type: WA: Battery-less Absolute
- Stroke: 5: 50mm ~ (Every 50mm)
- Options: Refer to Options table below.
- Controller: Refer to Applicable Controllers table below.
- Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- First Wiring / Second Wiring: Refer to Cable Track table below.

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ **MH type: X medium speed/Y high speed** (Unit: kg)

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~200 (Every 50mm)	250~300 (Every 50mm)	350~400 (Every 50mm)	450	500
0.1	17	16	15	14	12	10
0.3	17	16	15	14	12	10
0.5	11		10.5		10	

■ **HH type: X high speed/Y high speed**

Acceleration/deceleration (G) \ Y-axis stroke (mm)	50~100 (Every 50mm)	150~250 (Every 50mm)	300~400 (Every 50mm)	450~500 (Every 50mm)
0.1	10	9.5	9	8.5
0.3	9	8.5	8	7.5
0.5	4	3.5	3	2.5

* When both X and Y axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

X-axis stroke (mm) \ Y-axis stroke (mm)	50	100	150	200	250	300	350	400	450	500
50	○	○	○	○	○	○	○	○	○	○
100	○	○	○	○	○	○	○	○	○	○
150	○	○	○	○	○	○	○	○	○	○
200	○	○	○	○	○	○	○	○	○	○
250	○	○	○	○	○	○	○	○	○	○
300	○	○	○	○	○	○	○	○	○	○
350	○	○	○	○	○	○	○	○	○	○
400	○	○	○	○	○	○	○	○	○	○
450	○	○	○	○	○	○	○	○	○	○
500	○	○	○	○	○	○	○	○	○	○
550	○	○	○	○	○	○	○	○	○	○
600	○	○	○	○	○	○	○	○	○	○
650	○	○	○	○	○	○	○	○	○	○
700	○	○	○	○	○	○	○	○	○	○
750	○	○	○	○	○	○	○	○	○	○
800	○	○	○	○	○	○	○	○	○	○
850	○	○	○	○	○	○	○	○	○	○
900	○	○	○	○	○	○	○	○	○	○
950	○	○	○	○	○	○	○	○	○	○
1000	○	○	○	○	○	○	○	○	○	○
1050	○	○	○	○	○	○	○	○	○	○
1100	○	○	○	○	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ **X-axis: WSA16C, Y-axis: SA8C**

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

Cable Length

Type	Cable code	Length
Standard type	**1L**	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (X-axis lateral)	Second wiring (Y-axis lateral)
Without cable track (cable only)	**N**	See P.85	○	○
Cable track S size (inner width: 38mm)	**CT**		○	○
Cable track M size (inner width: 50mm)	**CTM**		○	○
Cable track L size (inner width: 63mm)	**CTL**		○	○
Cable track XL size (inner width: 80mm) *	**CTXL**		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		X-axis	Y-axis
Axis model		RCP6-WSA16C	RCP6-SA8C
Stroke (Every 50mm)		50~1100mm	50~500mm
Max. speed *	MH	210mm/s	400mm/s
	HH	365mm/s	650mm/s
Motor size		56□ High thrust stepper motor	56□ High thrust stepper motor
Ball screw lead	MH	10mm	20mm
	HH	20mm	
Drive system		Ball screw ϕ16mm rolled C10	Ball screw ϕ16mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

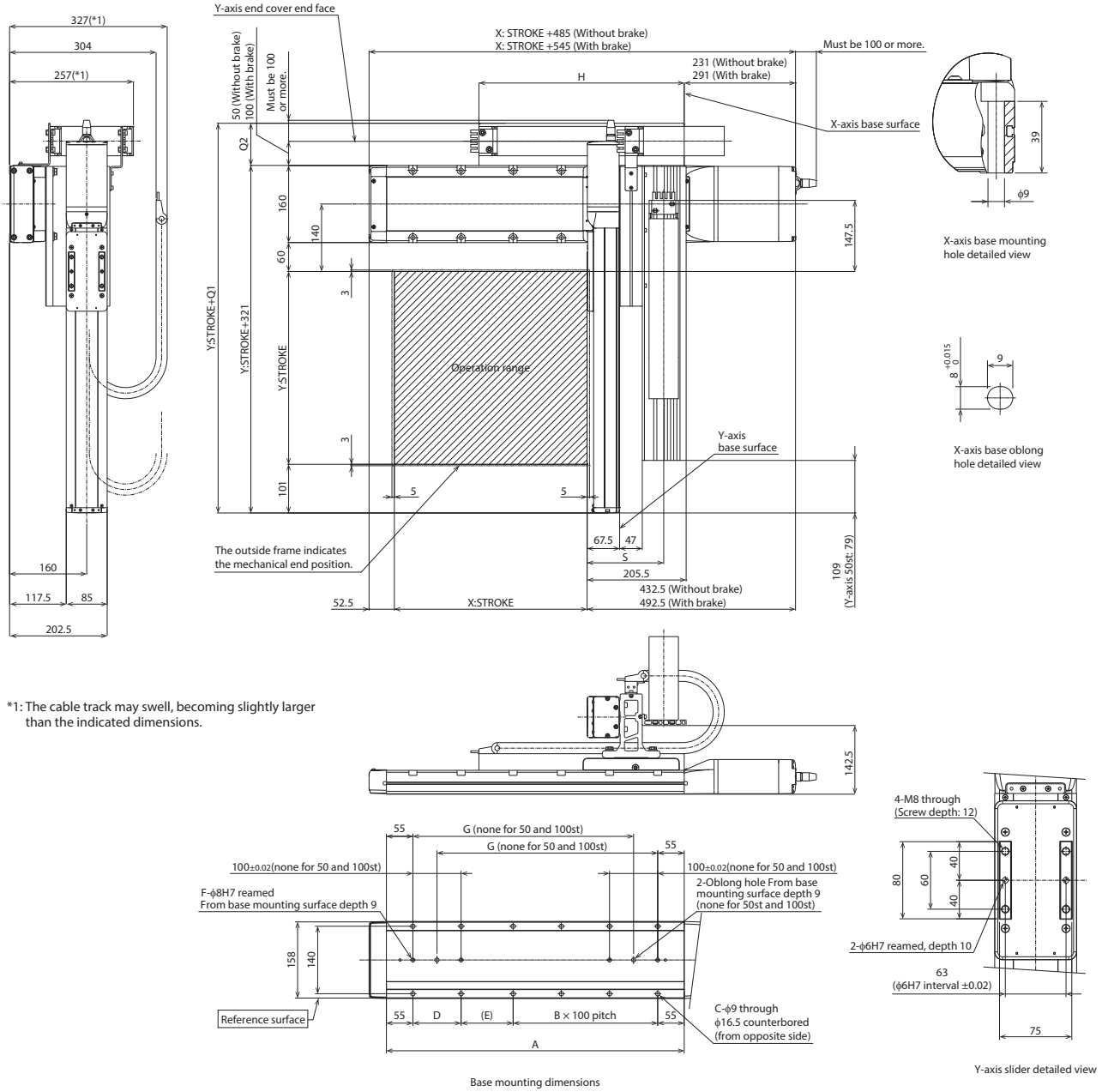
Options

Type	Option code	Reference page	X-axis	Y-axis
Brake	**B**	See P.83	○	○
Cable exit direction (Top)	**CJT**	See P.83	○	Cannot be selected
Cable exit direction (Right)	**CJR**	See P.83	○	
Cable exit direction (Left)	**CJL**	See P.83	○	
Cable exit direction (Bottom)	**CJB**	See P.83	○	
Non-motor end specification	**NM**	See P.84	○	○
Slider section roller specification	**SR**	See P.84	○	○

Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes

**The X-axis cable track guide rail is fixed on the X-axis body.
Also, the moving end of the Y-axis cable track is to be fixed to a plate or the like mounted on the Y-axis slider by the customer. (See P.85)**

■ Dimensions by Stroke

X: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968	1018	1068	1118	1168	1218	1268	1318
B	0	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10
C	4	4	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26	26
D	–	–	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
E	158	208	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108	58	108
F	2	2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
G	–	–	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958	1008	1058	1108	1158
H	251	276	301	326	351	376	401	426	451	476	501	526	551	576	601	626	651	676	701	726	751	776

Cable track size	CT	CTM	CTL	CTXL
Q1	396.5	408.5	423.5	441.5
Q2	75.5	87.5	102.5	120.5
S	152.5	159	165.5	–

* Dimensions Q1, Q2 and S change depending on the size of the cable track.

IK2-P6YBD1□□S

RCP6 2-axis configurations

Y-axis: SA6R (side-mounted)
Z-axis: SA4R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First axis (Y-axis)		Second axis (Z-axis)	Controller	Cable		
IK2	P6YBD1□	WA	□	□	□B□	PM1	□	□	□

- **Configuration Direction**: 1 to 2 — Refer to Robot Type Descriptions on page 3
- **Speed Type**: SM: Y Ultra High Speed/Z Medium Speed; SH: Y Ultra High Speed/Z High Speed
- **Encoder Type**: WA: Battery-less Absolute
- **Stroke**: 5: 50mm ~ (Every 50mm)
- **Options**: Refer to Options table below.
- **Controller**: Refer to Applicable Controllers table below.
- **Cable Length**: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- **First Wiring**: Refer to Cable Track table below.
- **Second Wiring**

RoHS

The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SM type: Y ultra high speed/Z medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~150 (Every 50mm)
0.1	1.5
0.3	1.5
0.5	1.5

■ SH type: Y ultra high speed/Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~150 (Every 50mm)
0.1	1
0.3	1
0.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ Y-axis: SA6R, Z-axis: SA4R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA6R	RCP6-SA4R
Stroke (Every 50mm)		50~800mm	50~150mm
Max. speed *	SM	800mm/s	350mm/s
	SH		610mm/s
Motor size		42□ Stepper motor	35□ Stepper motor
Ball screw lead	SM	20mm	5mm
	SH		10mm
Drive system		Ball screw ϕ10mm rolled C10	Ball screw ϕ8mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

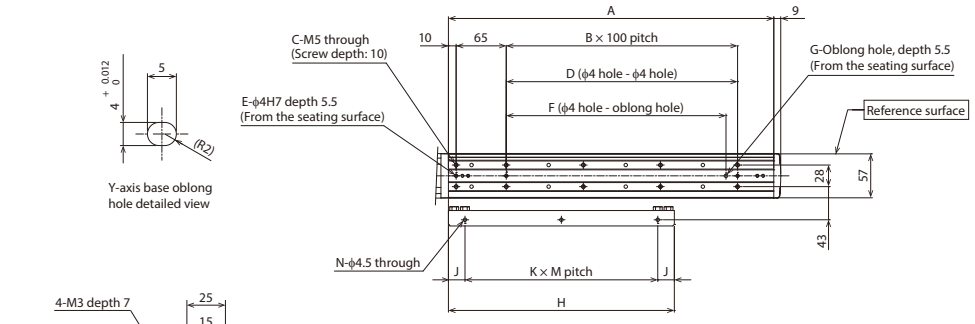
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.83	○	Cannot be selected
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

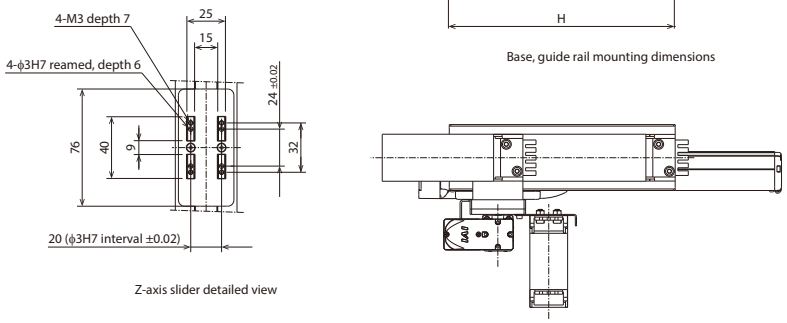
* Be sure to specify.

Dimensions

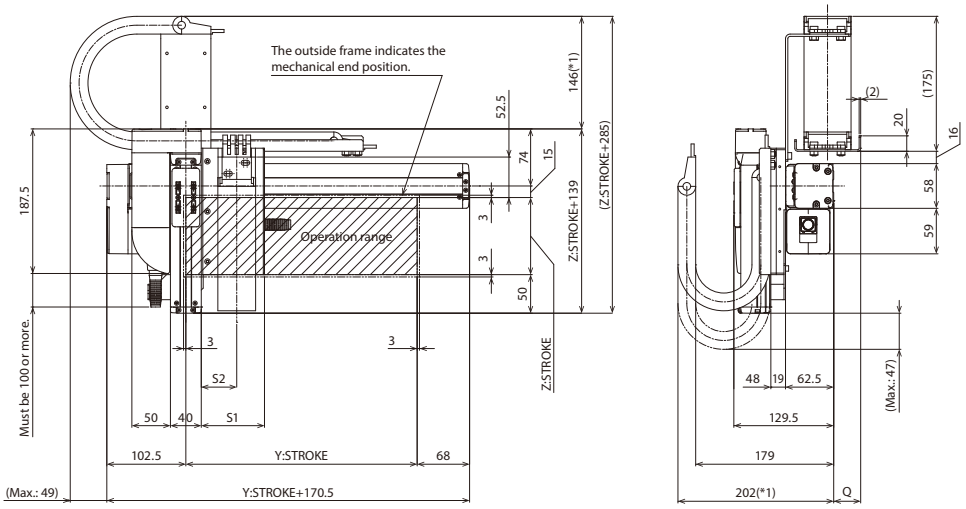
CAD drawings can be downloaded from our website.
www.intelligentactuator.com

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.





*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	23	35	50	68
S1	82	94	107	–
S2	46	52.5	59	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBD2□□S

RCP6 2-axis configurations

Y-axis: SA6C (straight)
Z-axis: SA4R (side-mounted)

■ Model Specification Items

Series	Type	Encoder Type	First axis (Y-axis)		Second axis (Z-axis)	Controller	Cable		
IK2	P6YBD2□ □S	WA	□	□	□B□	PM1	□	□	□

- Configuration Direction: 1 to 2. Refer to Robot Type Descriptions on page 3
- Speed Type: SM: Y Ultra High Speed/Z Medium Speed; SH: Y Ultra High Speed/Z High Speed
- Encoder Type: WA: Battery-less Absolute
- Stroke: 5: 50mm … (Every 50mm)
- Options: Refer to Options table below.
- Controller: Refer to Applicable Controllers table below.
- Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- First Wiring / Second Wiring: Refer to Cable Track table below.

RoHS

The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ **SM type: Y ultra high speed/Z medium speed** (Unit: kg)

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~150 (Every 50mm)
0.1	1.5
0.3	1.5
0.5	1.5

■ **SH type: Y ultra high speed/Z high speed**

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~150 (Every 50mm)
0.1	1
0.3	1
0.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ **Y-axis: SA6C, Z-axis: SA4R**

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA6C	RCP6-SA4R
Stroke (Every 50mm)		50~800mm	50~150mm
Max. speed *	SM	800mm/s	350mm/s
	SH		610mm/s
Motor size		42□ Stepper motor	35□ Stepper motor
Ball screw lead	SM	20mm	5mm
	SH		10mm
Drive system		Ball screw ϕ10mm rolled C10	Ball screw ϕ8mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

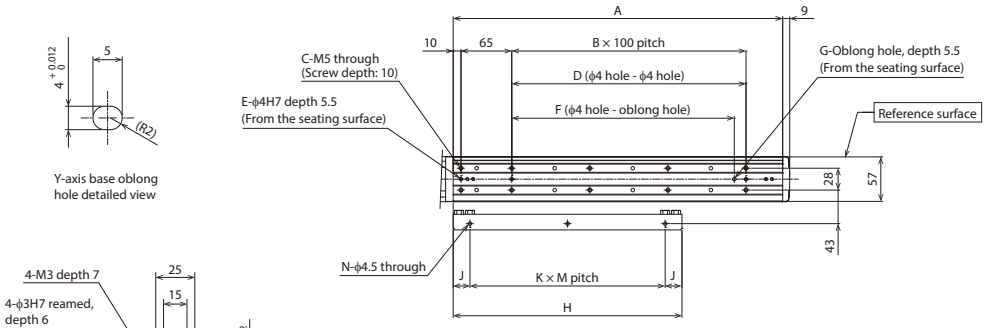
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

* Be sure to specify.

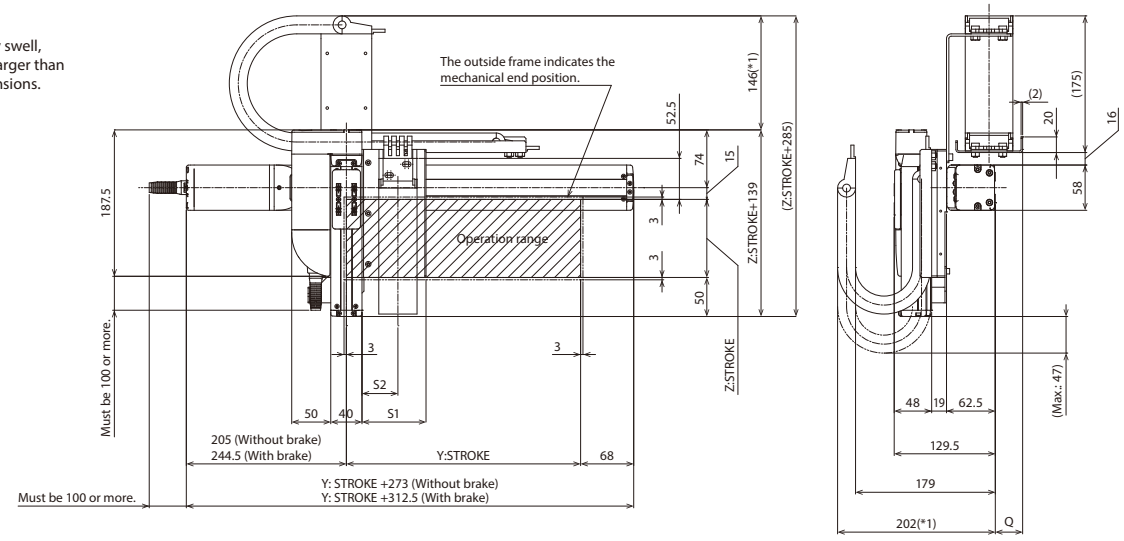
Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	23	35	50	68
S1	82	94	107	–
S2	46	52.5	59	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBD3□□S

RCP6 2-axis configurations

Y-axis: SA6C (straight)
Z-axis: SA4C (straight)

■ Model Specification Items

Series	Type	Encoder Type	First axis (Y-axis)		Second axis (Z-axis)	Controller	Cable		
IK2	P6YBD3□ □S	WA	□	□	□B□	PM1	□	□	□
	Configuration Direction: 1 to 2 (Refer to Robot Type Descriptions on page 3) / Speed Type: SM: Y Ultra High Speed/Z Medium Speed, SH: Y Ultra High Speed/Z High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 50: 50mm to (Every 50mm)		Options: Refer to Options table below.	Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring: Refer to Cable Track table below.

RoHS

The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

■ SM type: Y ultra high speed/Z medium speed

(Unit: kg)

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~150 (Every 50mm)
0.1	1.5
0.3	1.5
0.5	1.5

■ SH type: Y ultra high speed/Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~150 (Every 50mm)
0.1	1
0.3	1
0.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150
50	○	○	○
100	○	○	○
150	○	○	○
200	○	○	○
250	○	○	○
300	○	○	○
350	○	○	○
400	○	○	○
450	○	○	○
500	○	○	○
550	○	○	○
600	○	○	○
650	○	○	○
700	○	○	○
750	○	○	○
800	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ Y-axis: SA6C, Z-axis: SA4C

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA6C	RCP6-SA4C
Stroke (Every 50mm)		50~800mm	50~150mm
Max. speed *	SM	800mm/s	350mm/s
	SH		610mm/s
Motor size		42□ Stepper motor	35□ Stepper motor
Ball screw lead	SM	20mm	5mm
	SH		10mm
Drive system		Ball screw ϕ10mm rolled C10	Ball screw ϕ8mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

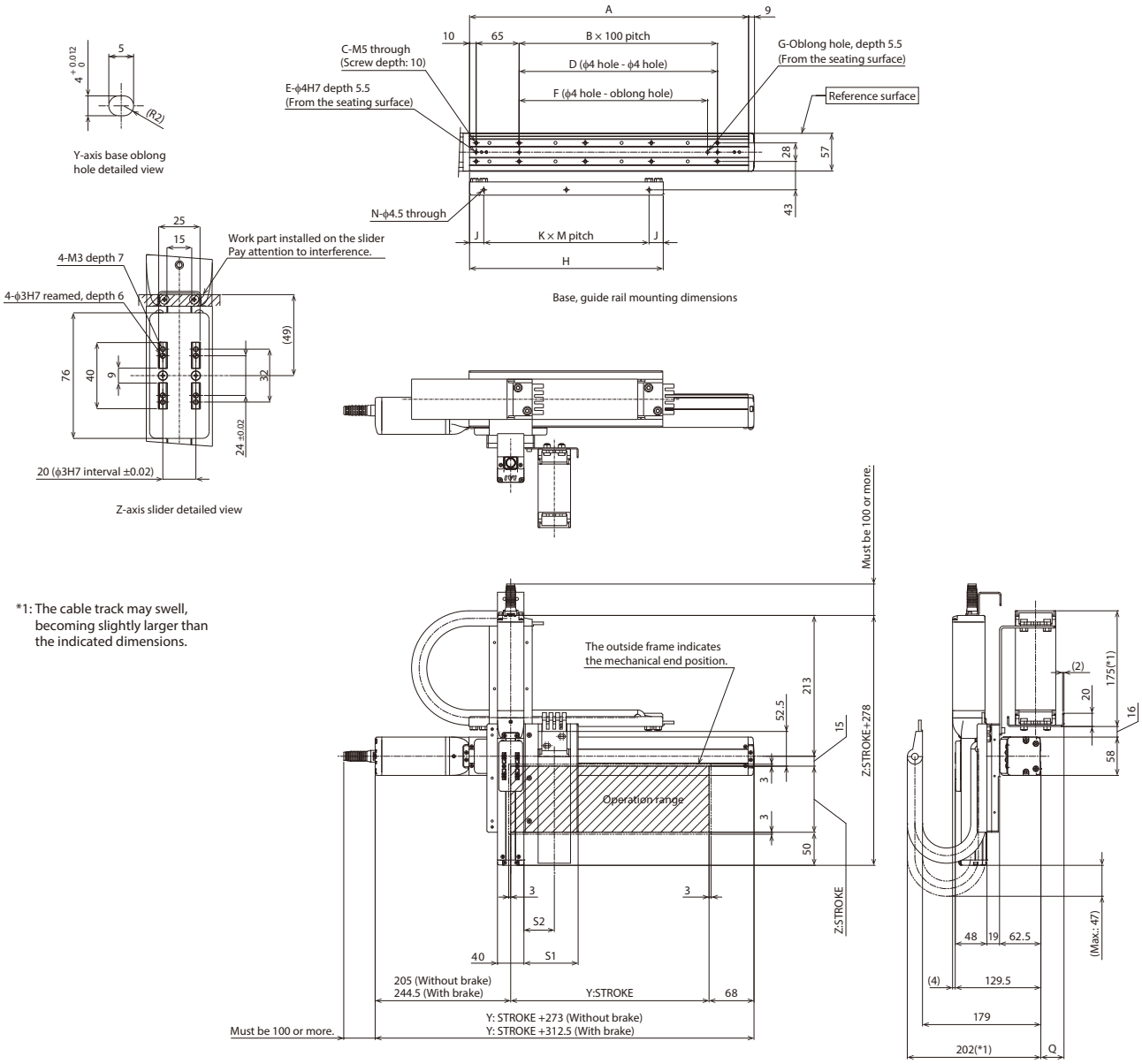
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

* Be sure to specify.

Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	168	193	218	243	268	293	318	343	368	393	418	443	468	493	518	543
J	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	9	21.5	34	9
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	23	35	50	68
S1	82	94	107	–
S2	46	52.5	59	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBC1□□S

RCP6 2-axis configurations

Y-axis: SA7R (side-mounted)
Z-axis: SA6R (side-mounted)

Model Specification Items

IK2 — P6YBC1□□S — WA — □□ — □B□ — PM1 — □ — □ — □

Series	Type	Encoder Type	First axis (Y-axis)	Second axis (Z-axis)	Controller	Cable		
IK2	P6YBC1□□S	WA	□□	□B□	PM1	□	□	□

- **Configuration Direction**: 1 to 2 — Refer to Robot Type Descriptions on page 3
- **Speed Type**: SL: Y Ultra High Speed/Z Low Speed; SM: Y Ultra High Speed/Z Medium Speed; SH: Y Ultra High Speed/Z High Speed; SS: Y Ultra High Speed/Z Ultra High Speed
- **Encoder Type**: WA: Battery-less Absolute
- **Stroke**: 5: 50mm ~ (Every 50mm)
- **Options**: Refer to Options table below.
- **Controller**: Refer to Applicable Controllers table below.
- **Cable Length**: 1L : 1m; 3L : 3m; 5L : 5m; □L : □m
- **First Wiring**: Refer to Cable Track table below.
- **Second Wiring**

RoHS

The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

(Unit: kg)

■ SL type: Y ultra high speed/ Z low speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	3
0.3	3
0.5	2.5

■ SM type: Y ultra high speed/ Z medium speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	2
0.3	2
0.5	2

■ SH type: Y ultra high speed/ Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	1
0.3	1
0.5	1

■ SS type: Y ultra high speed/ Z ultra high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	0.5
0.3	0.5
0.5	0.5

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150	200
50	○	○	○	○
100	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○
450	○	○	○	○
500	○	○	○	○
550	○	○	○	○
600	○	○	○	○
650	○	○	○	○
700	○	○	○	○
750	○	○	○	○
800	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ Y-axis: SA7R, Z-axis: SA6R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA7R	RCP6-SA6R
Stroke (Every 50mm)		50~800mm	50~200mm
Max. speed *	SL	640mm/s	170mm/s
	SM		340mm/s
	SH		680mm/s
	SS		800mm/s
Motor size		56□ Stepper motor	42□ Stepper motor
Ball screw lead	SL	24mm	3mm
	SM		6mm
	SH		12mm
	SS		20mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ10mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

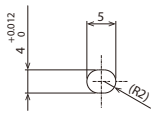
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.83	○	Cannot be selected
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

* Be sure to specify.

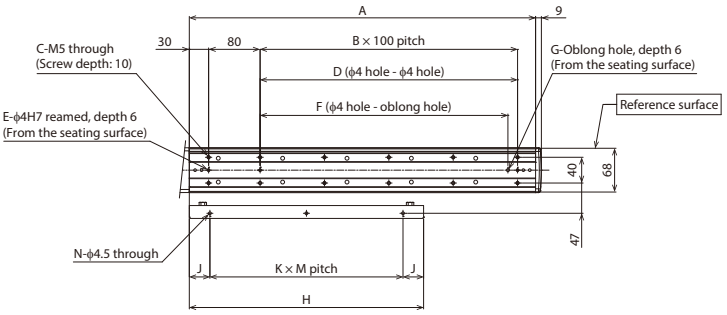
Dimensions

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

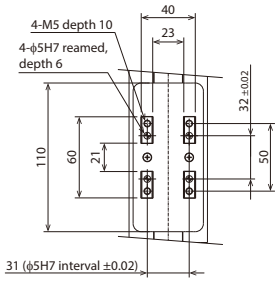
Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



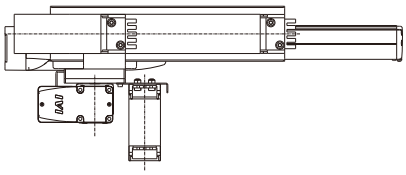
Y-axis base oblong hole detailed view



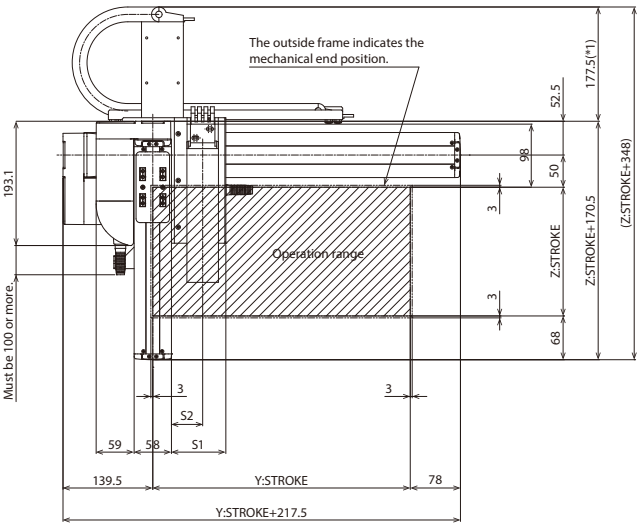
Base, guide rail mounting dimensions

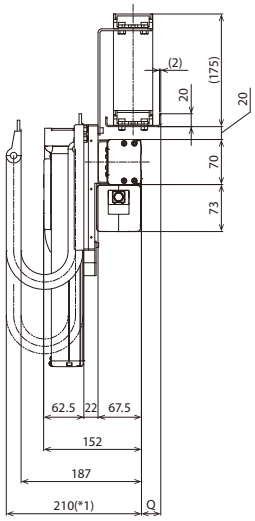


Z-axis slider detailed view



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.





(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	–
S2	48.5	55	61.5	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBC2□□S

RCP6 2-axis configurations

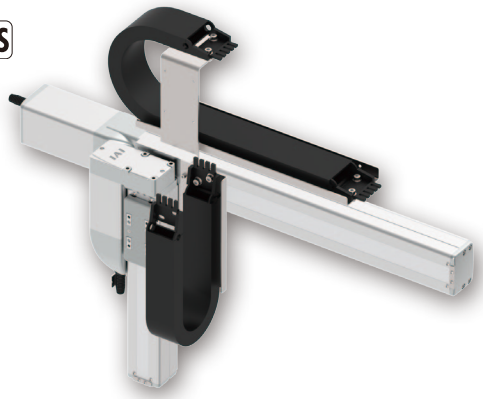
Y-axis: SA7C (straight)
Z-axis: SA6R (side-mounted)

■ Model Specification Items

IK2 — P6YBC2□ □S — WA — □ □ — □B□ — PM1 — □ — □ — □

- Series: IK2
- Type: P6YBC2□ □S
  - Configuration Direction: 1 to 2 (Refer to Robot Type Descriptions on page 3)
  - Speed Type: SL: Y Ultra High Speed/Z Low Speed; SM: Y Ultra High Speed/Z Medium Speed; SH: Y Ultra High Speed/Z High Speed; SS: Y Ultra High Speed/Z Ultra High Speed
- Encoder Type: WA (WA: Battery-less Absolute)
- First axis (Y-axis): Stroke (5: 50mm, (Every 50mm))
- Second axis (Z-axis): Options (Refer to Options table below.)
- Controller: PM1 (Refer to Applicable Controllers table below.)
- Cable: Cable Length (1L : 1m, 3L : 3m, 5L : 5m, □L : □m); First Wiring; Second Wiring (Refer to Cable Track table below.)

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

(Unit: kg)

■ SL type: Y ultra high speed/ Z low speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	3
0.3	3
0.5	2.5

■ SM type: Y ultra high speed/ Z medium speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	2
0.3	2
0.5	2

■ SH type: Y ultra high speed/ Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	1
0.3	1
0.5	1

■ SS type: Y ultra high speed/ Z ultra high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	0.5
0.3	0.5
0.5	0.5

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150	200
50	○	○	○	○
100	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○
450	○	○	○	○
500	○	○	○	○
550	○	○	○	○
600	○	○	○	○
650	○	○	○	○
700	○	○	○	○
750	○	○	○	○
800	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ Y-axis: SA7C, Z-axis: SA6R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA7C	RCP6-SA6R
Stroke (Every 50mm)		50~800mm	50~200mm
Max. speed *	SL	640mm/s	170mm/s
	SM		340mm/s
	SH		680mm/s
	SS		800mm/s
Motor size		56□ Stepper motor	42□ Stepper motor
Ball screw lead	SL	24mm	3mm
	SM		6mm
	SH		12mm
	SS		20mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ10mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

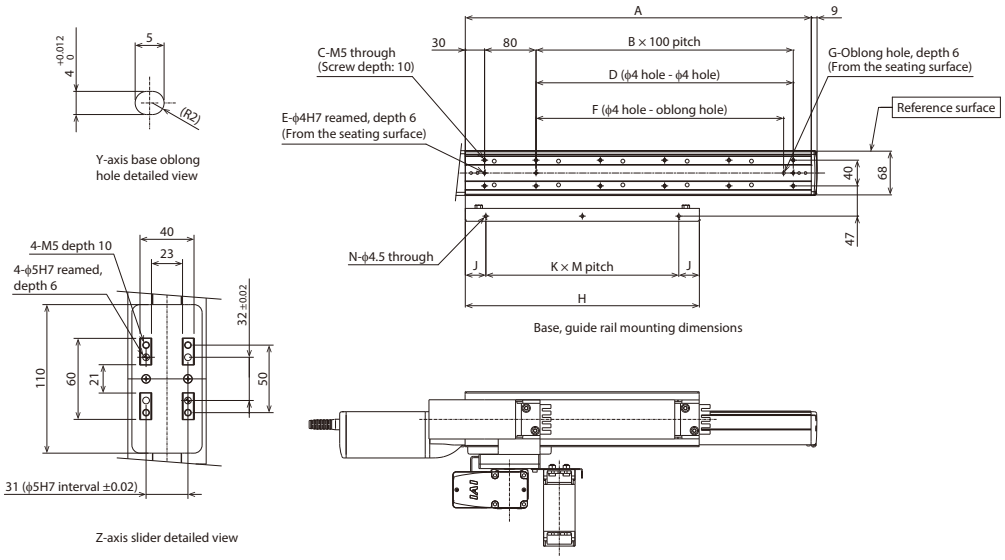
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

* Be sure to specify.

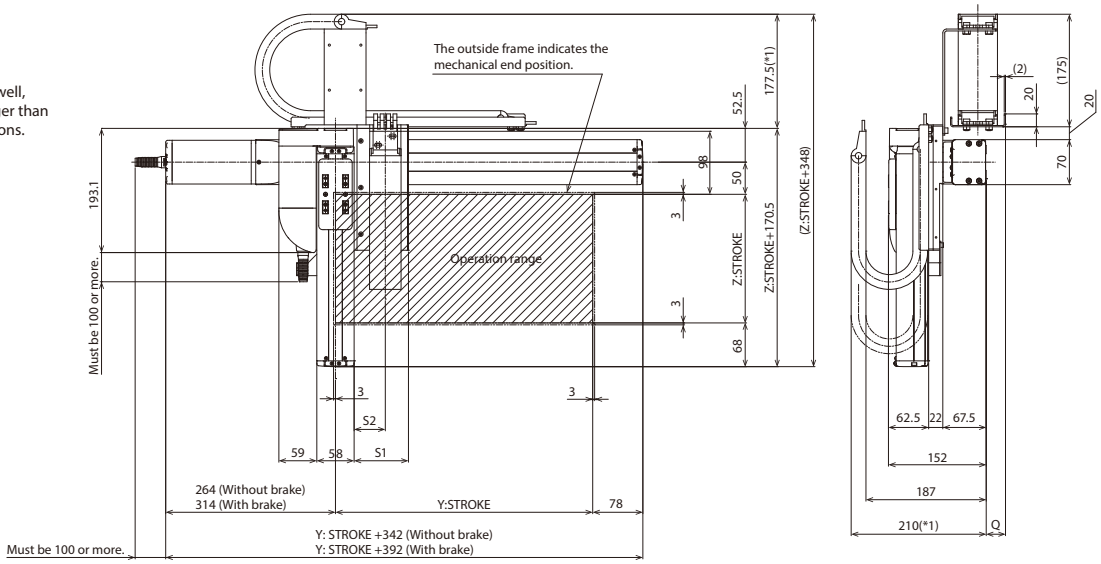
Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	–
S2	48.5	55	61.5	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBC3□□S

RCP6 2-axis configurations

Y-axis: SA7C (straight)
Z-axis: SA6C (straight)

Model Specification Items

IK2 — P6YBC3□ □S — WA — □ □ — □B□ — PM1 — □ — □ — □

Series	Type	Encoder Type	First axis (Y-axis)	Second axis (Z-axis)	Controller	Cable		
IK2	P6YBC3□ □S	WA	□ □	□B□	PM1	□	□	□

Configuration Direction
1 to 2
Refer to Robot Type Descriptions on page 3

Speed Type
SL: Y Ultra High Speed/Z Low Speed
SM: Y Ultra High Speed/Z Medium Speed
SH: Y Ultra High Speed/Z High Speed
SS: Y Ultra High Speed/Z Ultra High Speed

Encoder Type
WA: Battery-less Absolute

Stroke
5: 50mm
↓
(Every 50mm)

Options
Refer to Options table below.

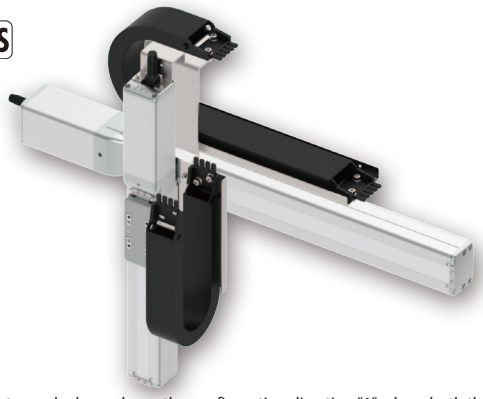
Controller
Refer to Applicable Controllers table below.

Cable Length
1L : 1m
3L : 3m
5L : 5m
□L : □m

First Wiring
Refer to Cable Track table below.

Second Wiring

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

(Unit: kg)

■ SL type: Y ultra high speed/ Z low speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	3
0.3	3
0.5	2.5

■ SM type: Y ultra high speed/ Z medium speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	2
0.3	2
0.5	2

■ SH type: Y ultra high speed/ Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	1
0.3	1
0.5	1

■ SS type: Y ultra high speed/ Z ultra high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)
0.1	0.5
0.3	0.5
0.5	0.5

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150	200
50	○	○	○	○
100	○	○	○	○
150	○	○	○	○
200	○	○	○	○
250	○	○	○	○
300	○	○	○	○
350	○	○	○	○
400	○	○	○	○
450	○	○	○	○
500	○	○	○	○
550	○	○	○	○
600	○	○	○	○
650	○	○	○	○
700	○	○	○	○
750	○	○	○	○
800	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ Y-axis: SA7C, Z-axis: SA6C

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected. Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA7C	RCP6-SA6C
Stroke (Every 50mm)		50~800mm	50~200mm
Max. speed *	SL	640mm/s	170mm/s
	SM		340mm/s
	SH		680mm/s
	SS		800mm/s
Motor size		56□ Stepper motor	42□ Stepper motor
Ball screw lead	SL	24mm	3mm
	SM		6mm
	SH		12mm
	SS		20mm
Drive system		Ball screw ϕ12mm rolled C10	Ball screw ϕ10mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

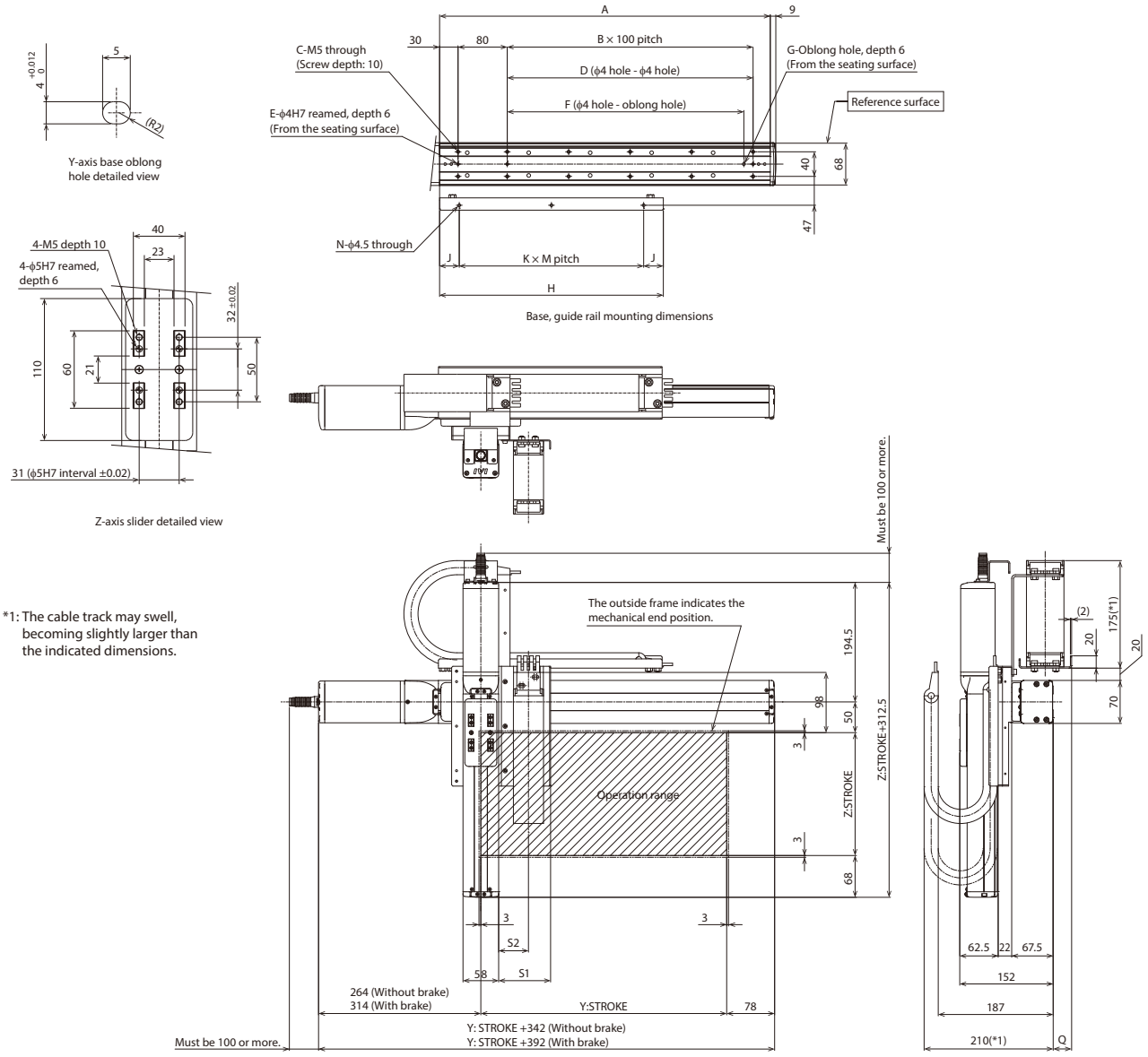
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

* Be sure to specify.

Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
A	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938
B	0	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20
D	0	0	100	200	200	300	300	400	400	500	500	600	600	700	700	800
E	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	85	85	185	185	285	285	385	385	485	485	585	585	685	685	785
G	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	189	214	239	264	289	314	339	364	389	414	439	464	489	514	539	564
J	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	19.5	32	44.5	19.5
K	1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3
M	150	150	200	200	250	250	150	150	175	175	200	200	150	150	150	175
N	2	2	2	2	2	2	3	3	3	3	3	3	4	4	4	4

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	84.5	96.5	109.5	–
S2	48.5	55	61.5	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBB1□□S

RCP6 2-axis configurations

Y-axis: SA8R (side-mounted)
Z-axis: SA7R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First axis (Y-axis)		Second axis (Z-axis)	Controller	Cable		
IK2	P6YBB1□□S	WA	□	□	□B□	PM1	□	□	□

- **Configuration Direction**: 1 to 2 — Refer to Robot Type Descriptions on page 3
- **Speed Type**: HL: Y High Speed/Z Low Speed; HM: Y High Speed/Z Medium Speed; SH: Y Ultra High Speed/Z High Speed; SS: Y Ultra High Speed/Z Ultra High Speed
- **Encoder Type**: WA: Battery-less Absolute
- **Stroke**: 5: 50mm ~ (Every 50mm)
- **Options**: Refer to Options table below.
- **Controller**: Refer to Applicable Controllers table below.
- **Cable Length**: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m
- **First Wiring**: Refer to Cable Track table below.
- **Second Wiring**

RoHS

The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

(Unit: kg)

HL type: Y high speed/ Z low speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	9
0.3	8
0.5	7

HM type: Y high speed/ Z medium speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	4.5
0.3	4
0.5	3.5

SH type: Y ultra high speed/ Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	3
0.3	2
0.5	1.5

SS type: Y ultra high speed/ Z ultra high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)	250~300 (Every 50mm)
0.1	1.5	
0.3	1.5	
0.5	1.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150	200	250	300
50	○	○	○	○	○	○
100	○	○	○	○	○	○
150	○	○	○	○	○	○
200	○	○	○	○	○	○
250	○	○	○	○	○	○
300	○	○	○	○	○	○
350	○	○	○	○	○	○
400	○	○	○	○	○	○
450	○	○	○	○	○	○
500	○	○	○	○	○	○
550	○	○	○	○	○	○
600	○	○	○	○	○	○
650	○	○	○	○	○	○
700	○	○	○	○	○	○
750	○	○	○	○	○	○
800	○	○	○	○	○	○
850	○	○	○	○	○	○
900	○	○	○	○	○	○
950	○	○	○	○	○	○
1000	○	○	○	○	○	○
1050	○	○	○	○	○	○
1100	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ Y-axis: SA8R

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

□ Z-axis: SA7R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected.
Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA8R	RCP6-SA7R
Stroke (Every 50mm)		50~1100mm	50~300mm
Max. speed *	HL	400mm/s	105mm/s
	HM		280mm/s
	SH	650mm/s	560mm/s
	SS		640mm/s
Motor size		56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	20mm	4mm
	HM		8mm
	SH	30mm	16mm
	SS		24mm
Drive system		Ball screw ϕ16mm rolled C10	Ball screw ϕ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

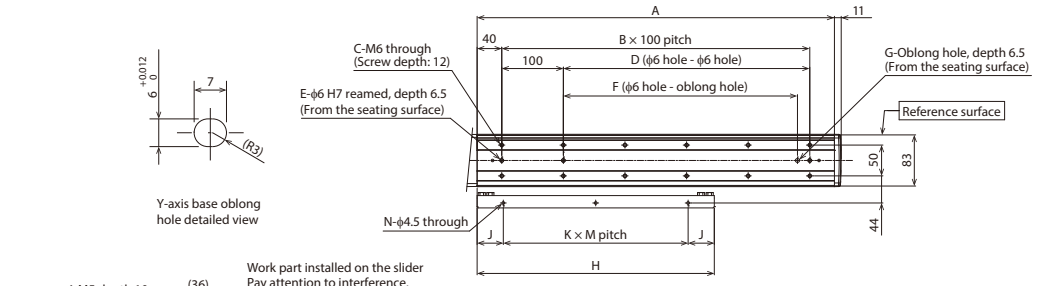
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Outside)	CJO	See P.83	○	Cannot be selected
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

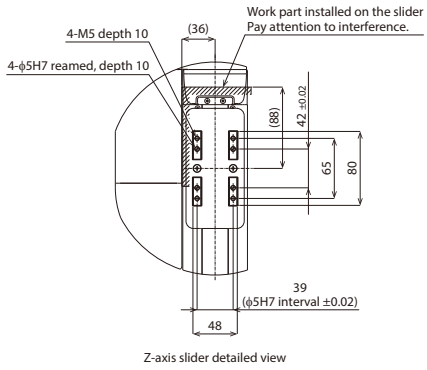
* Be sure to specify.

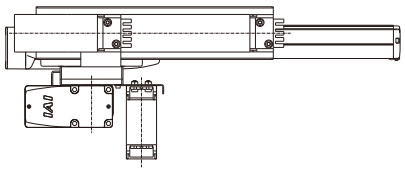
Dimensions

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

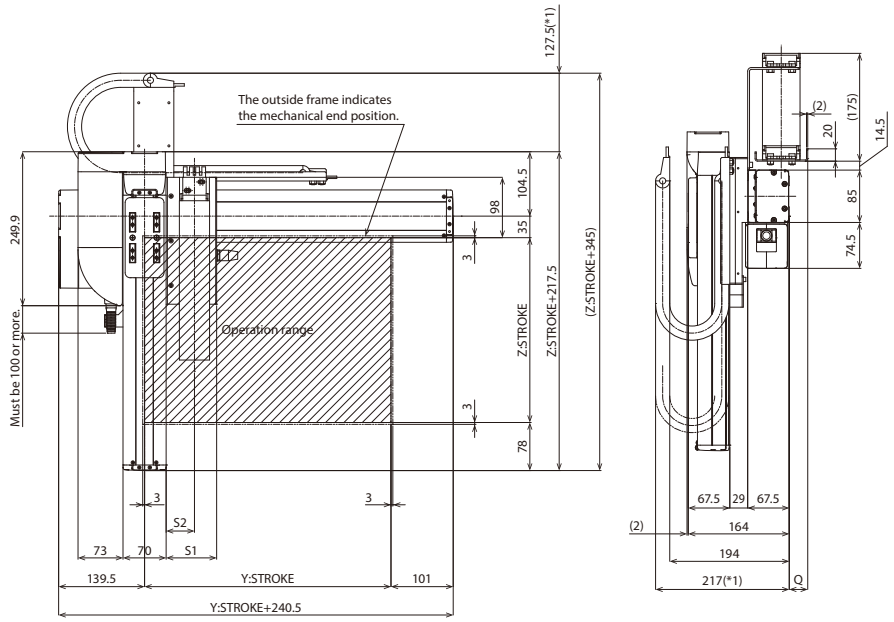
Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.







*1: The cable track may swell, becoming slightly larger than the indicated dimensions.



(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	82	94	107	–
S2	46	52.5	59	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBB2□□S

RCP6 2-axis configurations

Y-axis: SA8C (straight)
Z-axis: SA7R (side-mounted)

Model Specification Items

Series	Type	Encoder Type	First axis (Y-axis)		Second axis (Z-axis)	Controller	Cable		
IK2	P6YBB2□ □S	WA	□	□	□B□	PM1	□	□	□
	Configuration Direction / Speed Type	Encoder Type	Stroke		Options	Controller	Cable Length	First Wiring	Second Wiring
	1 to 2 Refer to Robot Type Descriptions on page 3 / HL: Y High Speed/Z Low Speed HM: Y High Speed/Z Medium Speed SH: Y Ultra High Speed/Z High Speed SS: Y Ultra High Speed/Z Ultra High Speed	WA: Battery-less Absolute	5: 50mm ↓ (Every 50mm)		Refer to Options table below.	Refer to Applicable Controllers table below.	1L : 1m 3L : 3m 5L : 5m □L : □m	Refer to Cable Track table below.	

RoHS

The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

(Unit: kg)

■ HL type: Y high speed/ Z low speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	9
0.3	8
0.5	7

■ HM type: Y high speed/ Z medium speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	4.5
0.3	4
0.5	3.5

■ SH type: Y ultra high speed/ Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	3
0.3	2
0.5	1.5

■ SS type: Y ultra high speed/ Z ultra high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)	250~300 (Every 50mm)
0.1	1.5	
0.3	1.5	
0.5	1.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150	200	250	300
50	○	○	○	○	○	○
100	○	○	○	○	○	○
150	○	○	○	○	○	○
200	○	○	○	○	○	○
250	○	○	○	○	○	○
300	○	○	○	○	○	○
350	○	○	○	○	○	○
400	○	○	○	○	○	○
450	○	○	○	○	○	○
500	○	○	○	○	○	○
550	○	○	○	○	○	○
600	○	○	○	○	○	○
650	○	○	○	○	○	○
700	○	○	○	○	○	○
750	○	○	○	○	○	○
800	○	○	○	○	○	○
850	○	○	○	○	○	○
900	○	○	○	○	○	○
950	○	○	○	○	○	○
1000	○	○	○	○	○	○
1050	○	○	○	○	○	○
1100	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

□ Y-axis: SA8C

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

□ Z-axis: SA7R

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected.
Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA8C	RCP6-SA7R
Stroke (Every 50mm)		50~1100mm	50~300mm
Max. speed *	HL	400mm/s	105mm/s
	HM		280mm/s
	SH	650mm/s	560mm/s
	SS		640mm/s
Motor size		56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	20mm	4mm
	HM		8mm
	SH	30mm	16mm
	SS		24mm
Drive system		Ball screw ϕ16mm rolled C10	Ball screw ϕ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

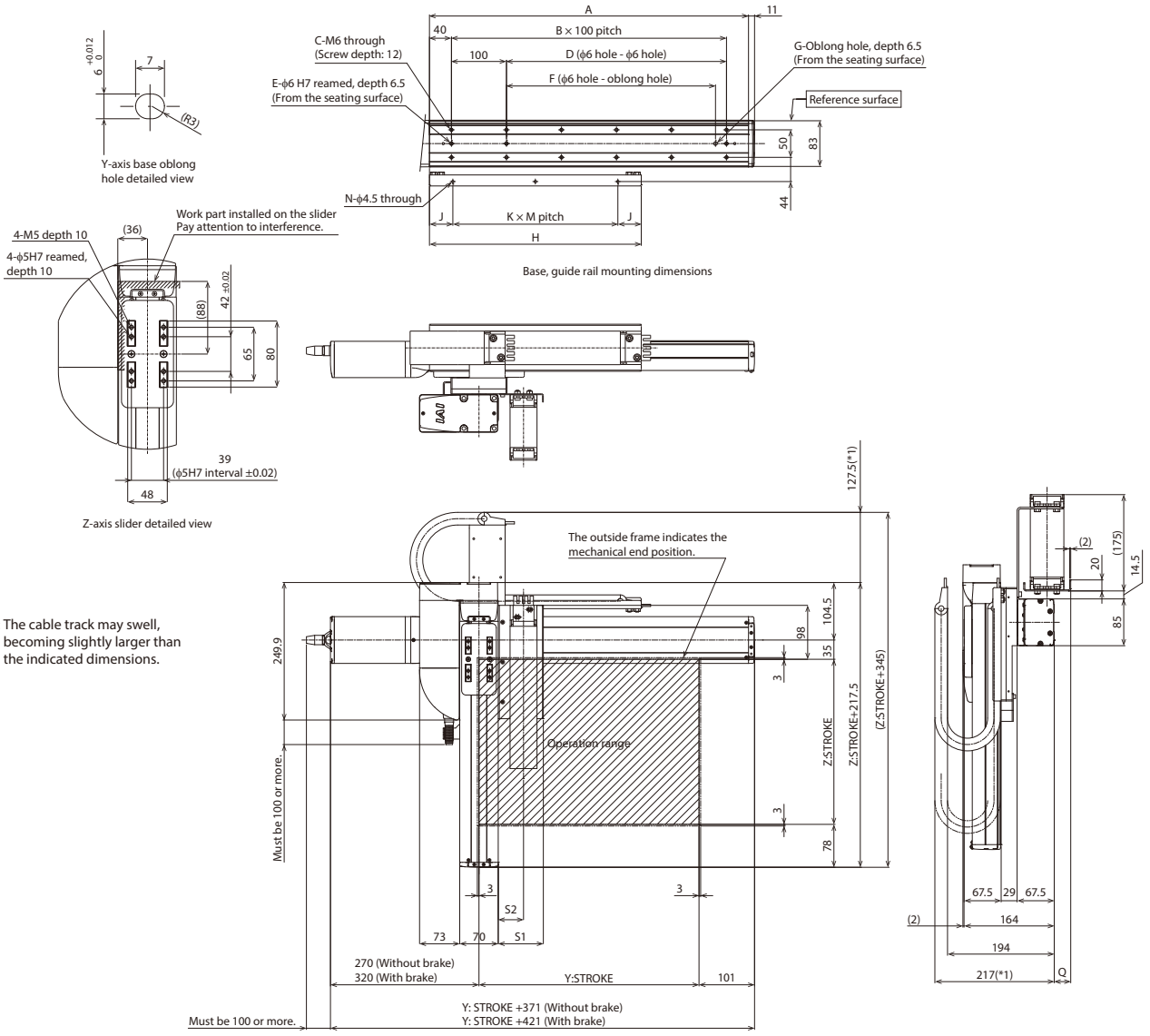
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

* Be sure to specify.

Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	82	94	107	–
S2	46	52.5	59	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

IK2-P6YBB3□□S

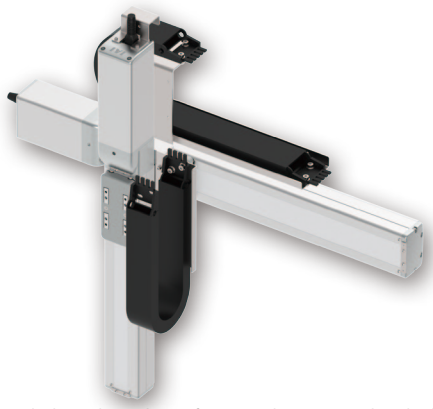
RCP6 2-axis configurations

Y-axis: SA8C (straight)
Z-axis: SA7C (straight)

Model Specification Items

Series	Type	Encoder Type	First axis (Y-axis)	Second axis (Z-axis)	Controller	Cable		
IK2	P6YBB3□ □S	WA	□ □	□B□	PM1	□	□	□
	Configuration Direction: 1 to 2 (Refer to Robot Type Descriptions on page 3) / Speed Type: HL: Y High Speed/Z Low Speed, HM: Y High Speed/Z Medium Speed, SH: Y Ultra High Speed/Z High Speed, SS: Y Ultra High Speed/Z Ultra High Speed	Encoder Type: WA: Battery-less Absolute	Stroke: 5: 50mm ~ (Every 50mm)	Options: Refer to Options table below.	Controller: Refer to Applicable Controllers table below.	Cable Length: 1L : 1m, 3L : 3m, 5L : 5m, □L : □m	First Wiring	Second Wiring
							Refer to Cable Track table below.	

RoHS



The photograph above shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Please refer to P.3 for other configuration directions.

Payload by Acceleration

(Unit: kg)

■ HL type: Y high speed/ Z low speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	9
0.3	8
0.5	7

■ HM type: Y high speed/ Z medium speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	4.5
0.3	4
0.5	3.5

■ SH type: Y ultra high speed/ Z high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~300 (Every 50mm)
0.1	3
0.3	2
0.5	1.5

■ SS type: Y ultra high speed/ Z ultra high speed

Acceleration/deceleration (G) \ Z-axis stroke (mm)	50~200 (Every 50mm)	250~300 (Every 50mm)
0.1	1.5	
0.3	1.5	
0.5	1.5	1

* When both Y and Z axes have the same acceleration/deceleration. When there is significant vibration, decrease the speed and acceleration/deceleration as required.

Stroke

Y-axis stroke (mm) \ Z-axis stroke (mm)	50	100	150	200	250	300
50	○	○	○	○	○	○
100	○	○	○	○	○	○
150	○	○	○	○	○	○
200	○	○	○	○	○	○
250	○	○	○	○	○	○
300	○	○	○	○	○	○
350	○	○	○	○	○	○
400	○	○	○	○	○	○
450	○	○	○	○	○	○
500	○	○	○	○	○	○
550	○	○	○	○	○	○
600	○	○	○	○	○	○
650	○	○	○	○	○	○
700	○	○	○	○	○	○
750	○	○	○	○	○	○
800	○	○	○	○	○	○
850	○	○	○	○	○	○
900	○	○	○	○	○	○
950	○	○	○	○	○	○
1000	○	○	○	○	○	○
1050	○	○	○	○	○	○
1100	○	○	○	○	○	○

Applicable Controllers

Controllers are sold separately.
Please contact IAI for more information.

☐ Y-axis: SA8C

Type	Reference page in the General Catalog 2016
PCON-CFB/CGFB	See M-113

☐ Z-axis: SA7C

Type	Reference page in the General Catalog 2016
PCON-CB/CGB	See M-113
PCON-CYB/PLB/POB	See M-129
MCON-C/CG	See M-91
MCON-LC/LCG	
MSEL-PC/PG	See M-245

* Operation is possible with the high output setting specification. When connecting to the MCON controller, "High-output setting specification" must be selected.
Please contact IAI regarding use with the high-output setting disabled.

Cable Length

Type	Cable code	Length
Standard type	1L	1m
	3L	3m
	5L	5m
	□L	Specified length (15m max.)

Note 1. All-axis standard cable is used.
Note 2. The length of the second axis cable is from the exit of the cable track. A separate cable is included for wiring inside the cable track.
Note 3. The standard lengths are 1m, 3m and 5m, but other lengths can be specified in 1m increments up to 15m.

Cable Track

Type	Model	Reference page	First wiring (Y-axis lateral)	Second wiring (Z-axis lateral)
Without cable track (cable only)	N	See P.85	○	○
Cable track S size (inner width: 38mm)	CT		○	○
Cable track M size (inner width: 50mm)	CTM		○	○
Cable track L size (inner width: 63mm)	CTL		○	○
Cable track XL size (inner width: 80mm) *	CTXL		○	Cannot be selected *

* Only the first wiring can be selected

Specifications

Item		Y-axis	Z-axis
Axis model		RCP6-SA8C	RCP6-SA7C
Stroke (Every 50mm)		50~1100mm	50~300mm
Max. speed *	HL	400mm/s	105mm/s
	HM		280mm/s
	SH	650mm/s	560mm/s
	SS		640mm/s
Motor size		56□ High thrust stepper motor	56□ Stepper motor
Ball screw lead	HL	20mm	4mm
	HM		8mm
	SH	30mm	16mm
	SS		24mm
Drive system		Ball screw ϕ16mm rolled C10	Ball screw ϕ12mm rolled C10
Positioning repeatability		±0.01mm	
Base material		Aluminum	
Ambient operating temperature, humidity		0~40°C, 85% RH or less (non-condensing)	

* The maximum speed may not be reached if the travel distance is short or acceleration is low. Maximum speed may change depending on the stroke. For details, refer to the Maximum Speed by Stroke table on P.86.

Options

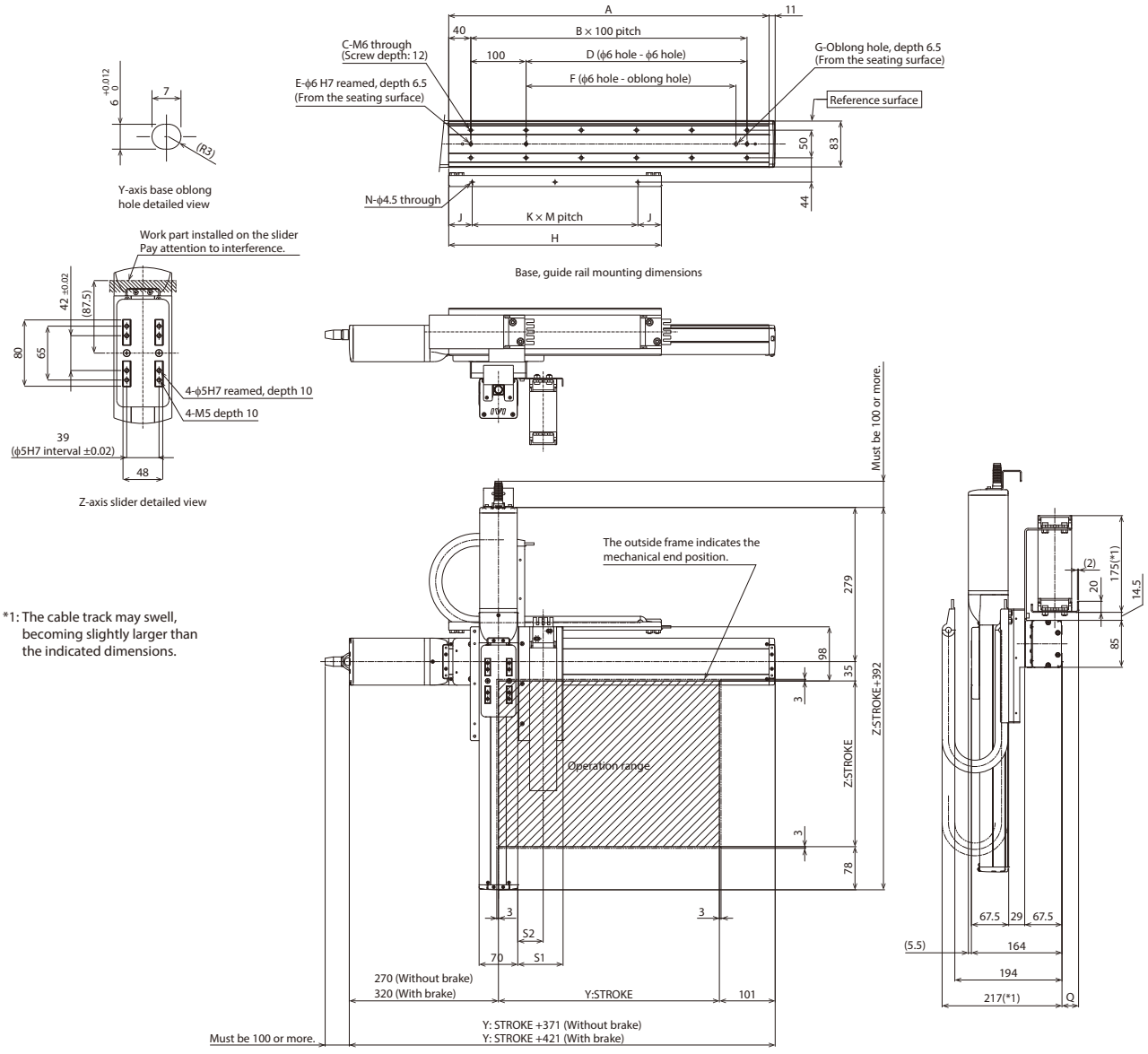
Type	Option code	Reference page	Y-axis	Z-axis
Brake	B	See P.83	○	Standard equipment *
Cable exit direction (Top)	CJT	See P.83	○	Cannot be selected
Cable exit direction (Right)	CJR	See P.83	○	
Cable exit direction (Left)	CJL	See P.83	○	
Cable exit direction (Bottom)	CJB	See P.83	○	
Non-motor end specification	NM	See P.84	○	○
Slider section roller specification	SR	See P.84	○	○

* Be sure to specify.

Dimensions

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

Note 1. The configuration position in the figure is home.
Note 2. The diagram shows the configuration direction "1" where both the first wiring and second wiring have cable tracks.
Note 3. For details on the cable track and cable track moving end bracket, refer to P.85.



*1: The cable track may swell, becoming slightly larger than the indicated dimensions.

(*) Notes

The Y-axis cable track guide rail is to be fixed to the Y-axis mounting surface by the customer. Please note that there will be an overhang outside the Y-axis mounting surface. Also, the moving end of the Z-axis cable track is to be fixed to a plate or the like mounted on the Z-axis slider by the customer.

■ Dimensions by Stroke

Y: Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050	1100
A	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230	1280
B	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12
C	4	6	6	8	8	10	10	12	12	14	14	16	16	18	18	20	20	22	22	24	24	26
D	0	100	100	200	200	300	300	400	400	500	500	600	600	700	700	800	800	900	900	1000	1000	1100
E	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
F	0	0	80	180	180	280	280	380	380	480	480	580	580	680	680	780	780	880	880	980	980	1080
G	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
H	210	235	260	285	310	335	360	385	410	435	460	485	510	535	560	585	610	635	660	685	710	735
J	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	30	42.5	55	30	42.5	55	30	42.5	55	17.5
K	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4
M	150	150	200	200	125	125	150	150	175	175	200	200	150	150	150	175	175	175	200	200	200	175
N	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	5

Cable track size	CT	CTM	CTL	CTXL
Q	18	30	45	63
S1	82	94	107	–
S2	46	52.5	59	–

* Dimensions Q, S1 and S2 change depending on the size of the cable track.

Cartesian Robot Options

Brake

Option Code **B**

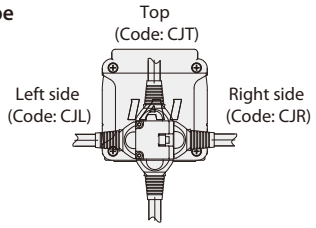
Description This is a holding mechanism that prevents the slider from falling and damaging any attached fittings when the power or servo is turned off.

Cable Exit Direction

Option Code **CJT / CJR / CJL / CJB / CJO**

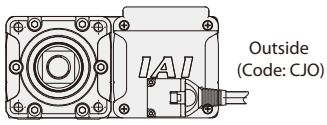
Description This option allows you to change the exit direction of the motor-encoder cable to top, bottom, left, or right.

Straight motor type



* When viewed from the actuator rear side (motor side).

Side-mounted motor type



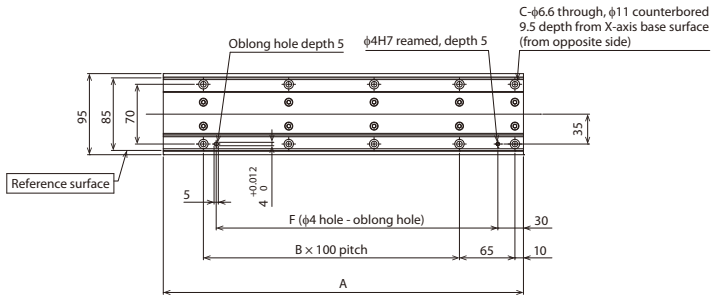
* When viewed from the actuator front side.

Foot Plate

Option Code **FTP**

Description X-axis can be installed from the top with this Foot Plate.

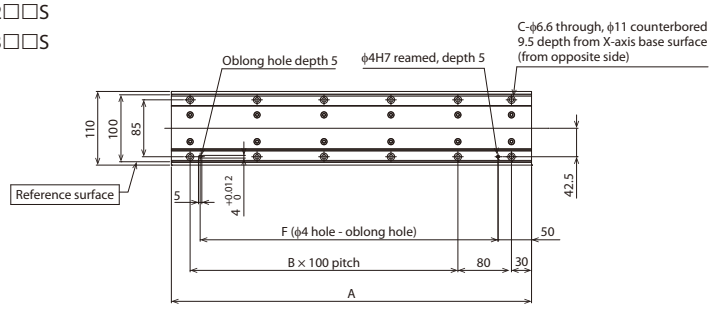
IK2-P6XBD2□□S
IK2-P6XBD3□□S



Foot Plate mounting dimensions

X-axis stroke	A	B	C	F
50	172	0	4	30
100	222	1	6	130
150	272	1	6	130
200	322	2	8	230
250	372	2	8	230
300	422	3	10	330
350	472	3	10	330
400	522	4	12	430
450	572	4	12	430
500	622	5	14	530
550	672	5	14	530
600	722	6	16	630
650	772	6	16	630
700	822	7	18	730
750	872	7	18	730
800	922	8	20	830

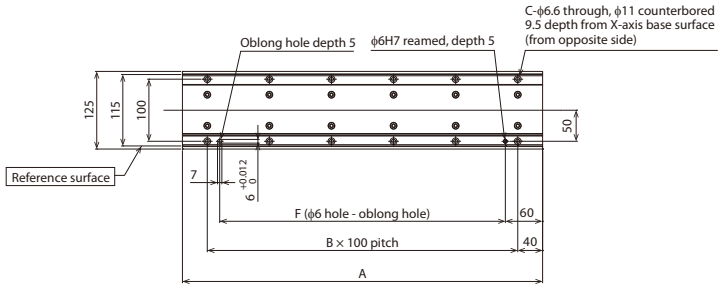
IK2-P6XBC2□□S
IK2-P6XBC3□□S
IK3-P6BBC2□□S
IK3-P6BBC3□□S



Foot Plate mounting dimensions

X-axis stroke	A	B	C	F
50	188	0	4	45
100	238	1	6	145
150	288	1	6	145
200	338	2	8	245
250	388	2	8	245
300	438	3	10	345
350	488	3	10	345
400	538	4	12	445
450	588	4	12	445
500	638	5	14	545
550	688	5	14	545
600	738	6	16	645
650	788	6	16	645
700	838	7	18	745
750	888	7	18	745
800	938	8	20	845

IK2-P6XBB2□□S
IK2-P6XBB3□□S
IK3-P6BBB2□□S
IK3-P6BBB3□□S

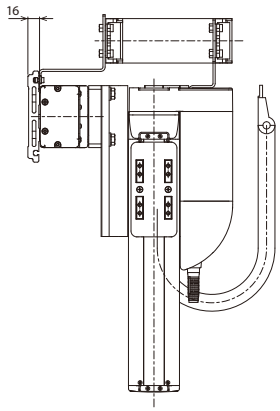


Foot Plate mounting dimensions

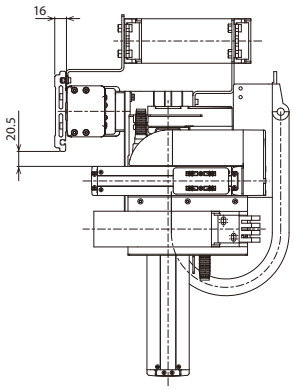
X-axis stroke	A	B	C	F
50	230	1	4	60
100	280	2	6	160
150	330	2	6	160
200	380	3	8	260
250	430	3	8	260
300	480	4	10	360
350	530	4	10	360
400	580	5	12	460
450	630	5	12	460
500	680	6	14	560
550	730	6	14	560
600	780	7	16	660
650	830	7	16	660
700	880	8	18	760
750	930	8	18	760
800	980	9	20	860
850	1030	9	20	860
900	1080	10	22	960
950	1130	10	22	960
1000	1180	11	24	1060
1050	1230	11	24	1060
1100	1280	12	26	1160

* Please refer to the dimensions below when mounting.

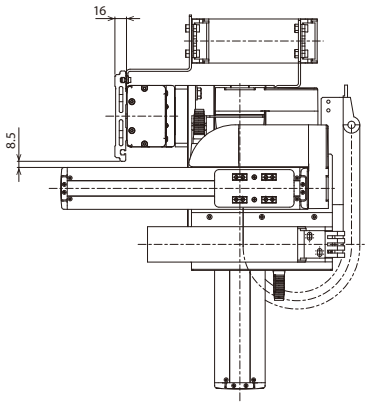
■IK2-P6XBD2□□S
IK2-P6XBD3□□S
IK2-P6XBC2□□S
IK2-P6XBC3□□S
IK2-P6XBB2□□S
IK2-P6XBB3□□S



■IK3-P6BBC2□□S
IK3-P6BBC3□□S



■IK3-P6BBB2□□S
IK3-P6BBB3□□S



Non-motor End Specification

Option Code **NM**

Description The normal home position is set by the slider and rod on the motor side, however there is the option for the home position to be on the other side to accommodate variations in equipment layout, etc. (Please note that changing the home position after the actuators are shipped may require the products to be sent back to IAI for re-setting.)

Slider Roller Specification

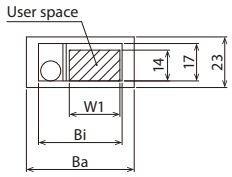
Option Code **SR**

Description The slider of the standard slider type specification is changed to the same roller structure as the cleanroom type. When using the slider roller spec., the appearance and dimensions of the slider cover will be the same as the cleanroom type.
Changing to roller specification will make the external view and dimensions of the slider cover the same as the cleanroom type.

Appendix

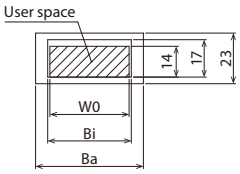
●Cable Track

2-axis configurations | Cable storage | Detailed view

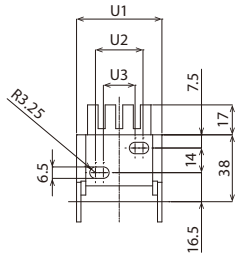


X-Y cable track sectional view

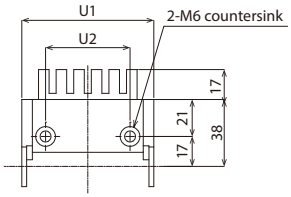
Cable track size	CT	CTM	CTL	CTXL
U1	48.5	60.5	75	–
U2	27	39.5	48	–
U3	18	30.5	–	–
Ba	49	61	76	94
Bi	38	50	63	80
W0	36	48	61	78
W1	23	35	48	65



Y-Y cable track sectional view

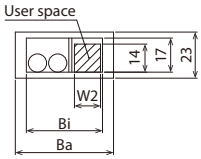


Y-Y cable track moving end detailed view (CT,CTM)



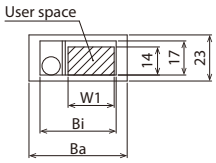
Y-Y cable track moving end detailed view (CTL)

3-axis configurations | Cable storage | Detailed view

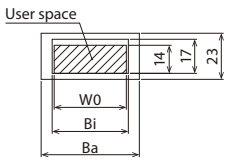


X-Y cable track sectional view

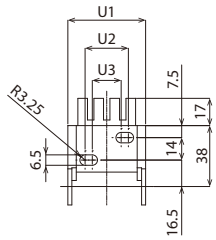
Cable track size	CT	CTM	CTL	CTXL
U1	48.5	60.5	–	–
U2	27	39.5	–	–
U3	18	30.5	–	–
Ba	49	61	76	94
Bi	38	50	63	80
W0	36	48	61	78
W1	23	35	48	65
W2	13	25	38	55



Y-Z cable track sectional view



Z-Z cable track sectional view



Z-Z cable track moving end detailed view

Bigger user space is available by ordering as a special specification, if it is insufficient. *Please contact IAI for more information.

●Cable Length

Cable code	Length	RCP6 2-axis IK2-P6	RCP6 3-axis IK3-P6
1L	1m	○	○
2L	2m	○	○
3L	3m	○	○
4L	4m	○	○
5L	5m	○	○
6L	6m	○	○
7L	7m	○	○
8L	8m	○	○
9L	9m	○	○
10L	10m	○	○
11L	11m	○	○
12L	12m	○	○
13L	13m	○	○
14L	14m	○	○
15L	15m	○	○

Table of Maximum Speed by Stroke

Only models and axes whose maximum speed varies depending on the stroke are listed.
For models and axes not listed below, the maximum speed is as stated on the product page for full stroke.

■ **IK2-P6XBD1□□S X-axis: SA6R**
■ **IK2-P6XBD2□□S X-axis: SA6C**
■ **IK2-P6XBD3□□S X-axis: SA6C**

(Unit: mm/s)

Speed type \ Stroke	50~750 (Every 50mm)	800 (mm)
SS	640	575

■ **IK2-P6XBC1□□S X-axis: SA7R**
■ **IK2-P6XBC2□□S X-axis: SA7C**
■ **IK2-P6XBC3□□S X-axis: SA7C**

(Unit: mm/s)

Speed type \ Stroke	50~700 (Every 50mm)	750 (mm)	800 (mm)
MM	280	275	245
HH	560		500
SS	640		

■ **IK2-P6XBB1□□S X-axis: SA8R**
■ **IK2-P6XBB2□□S X-axis: SA8C**
■ **IK2-P6XBB3□□S X-axis: SA8C**

(Unit: mm/s)

Speed type \ Stroke	50~900 (Every 50mm)	950 (mm)	1000 (mm)	1050 (mm)	1100 (mm)
MM	300	285	260	235	220
HH	400				
SS	650				

■ **IK2-P6XBE1□□S X-axis: WSA16R**
■ **IK2-P6XBE2□□S X-axis: WSA16C**
■ **IK2-P6XBE3□□S X-axis: WSA16C**

(Unit: mm/s)

Speed type \ Stroke	50~1050 (Every 50mm)	1100 (mm)
MH	210	205
HH	365	

■ **IK2-P6YBD1□□S Y-axis: SA6R**
■ **IK2-P6YBD2□□S Y-axis: SA6C**
■ **IK2-P6YBD3□□S Y-axis: SA6C**

(Unit: mm/s)

Speed type \ Stroke	50~650 (Every 50mm)	700 (mm)	750 (mm)	800 (mm)
SM	800	735	650	575
SH				

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