

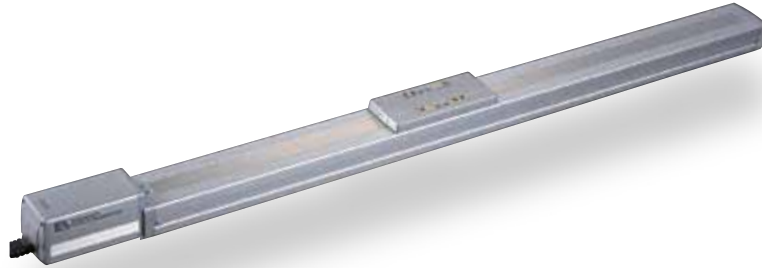
RCP2-SS7C ROBO Cylinder Slider Type 60mm Width Pulse Motor Straight Type Coupled

■ Configuration: **RCP2** — **SS7C** — **I** — **42P** — [] — [] — [] — [] — []

Series — Type — Encoder — Motor — Lead — Stroke — Compatible Controllers — Cable Length — Option

I: Incremental * The Simple absolute encoder models are labeled as "I".
 42P: Pulse motor 42□ size
 12: 12mm
 6: 6mm
 3: 3mm
 50: 50mm
 600: 600mm (50mm pitch increments)
 P1: PCON
 RPCON
 PSEL
 P3: PMEC
 PSEP
 N: None
 P: 1m
 S: 3m
 M: 5m
 X□□: Custom Length
 R□□: Robot cable
 B: Brake
 NM: Reversed-home
 SR: Slider Roller

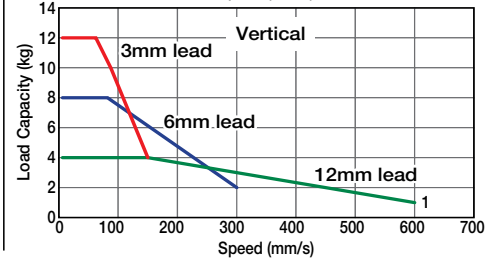
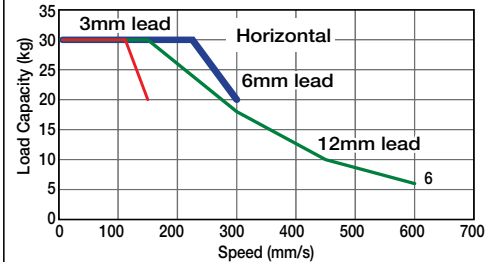
* See page Pre-35 for explanation of each code that makes up the configuration name.



Technical References A-5

- POINT** Notes on Selection
- When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.
 - Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.
 - The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 3mm-lead model, or when used vertically). These values are the upper limits for the acceleration.

■ Speed vs. Load Capacity
 Due to the characteristics of the pulse motor, the RCP2 series' load capacity decreases at high speeds. In the table below, check if your desired speed and load capacity are supported.



Actuator Specifications

■ Lead and Load Capacity (Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model	Lead (mm)	Max. Load Capacity (Note 1)		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-SS7C-I-42P-12-①-②-③-④	12	~ 30	~ 4	50 ~ 600 (50mm increments)
RCP2-SS7C-I-42P-6-①-②-③-④	6	~ 30	~ 8	
RCP2-SS7C-I-42P-3-①-②-③-④	3	~ 30	~ 12	

■ Stroke and Maximum Speed

Stroke / Lead	50 ~ 500 (50mm increments)	~ 600 (mm)
	12	600
6	300	230
3	150	115

(Unit: mm/s)

Legend ① Stroke ② Compatible controller ③ Cable length ④ Options

① Stroke List

Stroke (mm)	Standard Price
50/100	—
150/200	—
250/300	—
350/400	—
450/500	—
550/600	—

③ Cable List

Type	Cable Symbol	Standard Price
Standard	P (1m)	—
	S (3m)	—
	M (5m)	—
Special Lengths	X06 (6m) ~ X10 (10m)	—
	X11 (11m) ~ X15 (15m)	—
	X16 (16m) ~ X20 (20m)	—
Robot Cable	R01 (1m) ~ R03 (3m)	—
	R04 (4m) ~ R05 (5m)	—
	R06 (6m) ~ R10 (10m)	—
	R11 (11m) ~ R15 (15m)	—
	R16 (16m) ~ R20 (20m)	—

* See page A-39 for cables for maintenance.

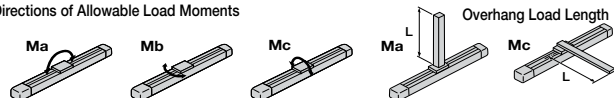
④ Option List

Name	Option Code	See Page	Standard Price
Brake	B	→ A-25	—
Reversed-home	NM	→ A-33	—
Slider Roller	SR	→ A-36	—

Actuator Specifications

Item	Description
Drive System	Ball screw Ø10mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable Static Moment	Ma: 79.4 N·m Mb: 79.4 N·m Mc: 172.9 N·m
Allowable Dynamic Moment (*)	Ma: 14.7 N·m Mb: 14.7 N·m Mc: 33.3 N·m
Overhang Load Length	Ma direction: 300mm or less; Mb-Mc direction: 300mm or less
Ambient Operating Temp./Humidity	0~40°C, 85% RH or less (Non-condensing)

(*) Based on 10,000km travel life.
 Directions of Allowable Load Moments



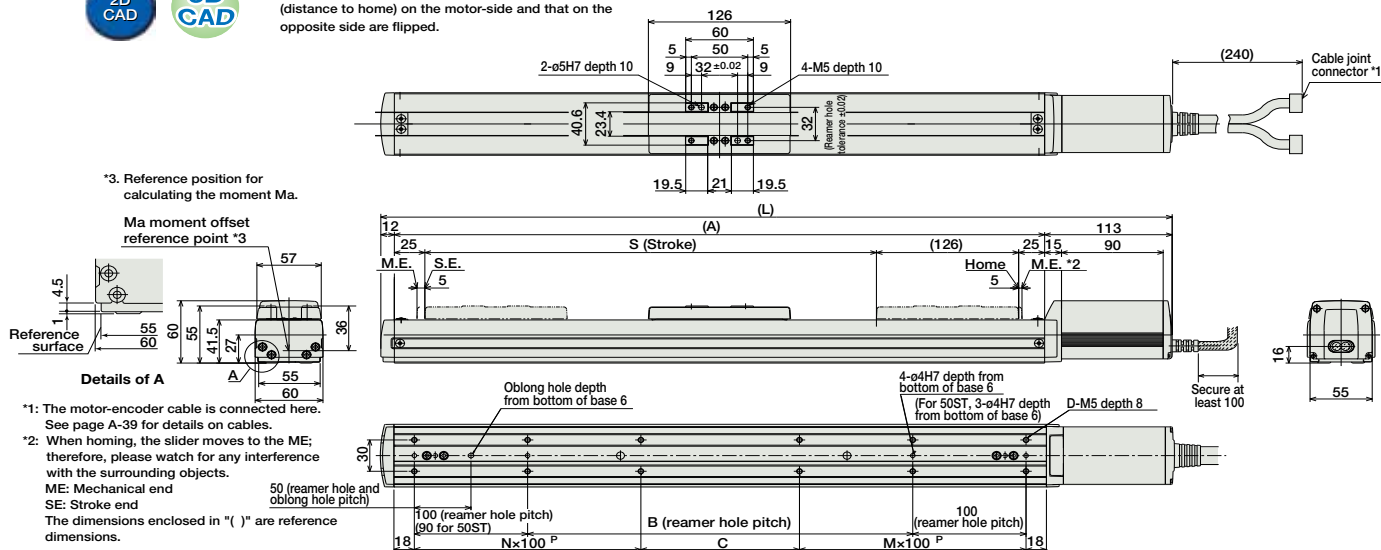
Dimensions

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

For Special Orders A-9

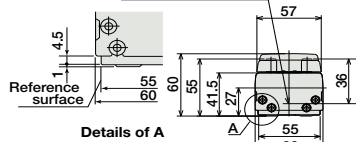


*For the Reversed-home model, the dimensions (distance to home) on the motor-side and that on the opposite side are flipped.



*3. Reference position for calculating the moment Ma.

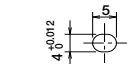
Ma moment offset reference point *3



*1: The motor-encoder cable is connected here. See page A-39 for details on cables.

*2: When homing, the slider moves to the ME; therefore, please watch for any interference with the surrounding objects. ME: Mechanical end SE: Stroke end

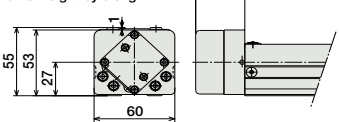
The dimensions enclosed in "()" are reference dimensions.



Details for Oblong Hole

Dimensions of the brake section

* Adding a brake will increase the actuator's overall length by 24.5mm, and its weight by 0.3kg.



* Brake cable is passed through the actuator body and connected to the motor cable.

■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600
L	351	401	451	501	551	601	651	701	751	801	851	901
A	226	276	326	376	426	476	526	576	626	676	726	776
B	0	40	90	140	190	240	290	340	390	440	490	540
C	90	40	90	140	190	40	90	140	190	40	90	140
D	6	8	8	8	8	12	12	12	12	16	16	16
M	1	1	1	1	1	2	2	2	2	3	3	3
N	0	1	1	1	1	2	2	2	2	3	3	3
Weight (kg)	3.1	3.4	3.7	4.0	4.3	4.7	5.0	5.4	5.7	6.1	6.4	6.7

② Compatible Controllers

The RCP2 series actuators can operate with the controllers below. Select the controller according to your usage.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Solenoid Valve Type		PMEC-C-42PI-NP-2-①	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	See P481	-	→ P477
		PSEP-C-42PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.					
Splash-Proof Solenoid Valve Type		PSEP-CW-42PI-NP-2-0						
Positioner Type		PCON-C-42PI-NP-2-0	Positioning is possible for up to 512 points	512 points			-	
Safety-Compliant Positioner Type		PCON-CG-42PI-NP-2-0						
Pulse Train Input Type (Differential Line Driver)		PCON-PL-42PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	-	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-42PI-NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		PCON-SE-42PI-N-0-0	Dedicated to serial communication	64 points				
Field Network Type		RPCON-42P	Dedicated to field network	768 points				→ P503
Program Control Type		PSEL-C-1-42PI-NP-2-0	Programmed operation is possible. Can operate up to 2 axes	1500 points				→ P557

* This is for the single-axis PSEL.

* ① is a placeholder for the power supply voltage (1: 100V / 2: 100~240V).