

RCP2-RGD6C

ROBO Cylinder Rod Type with Double Guide 64mm Width Pulse Motor Straight Type

■ Configuration: **RCP2** — **RGD6C** — **I** — **56P** — — — — —

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

I: Incremental
* The Simple absolute encoder is also considered type "I".

56P: Pulse motor
56 □ size

16 : 16mm
8 : 8mm
4 : 4mm

50: 50mm
300: 300mm (50mm pitch increments)

P1: PCON
RPCON
PSEL
P3: PMEC
PSEP

N : None
P : 1m
S : 3m
M : 5m
X □ □ : Custom
R □ □ : Robot cable

B : Brake
FT : Foot bracket
NM: Reversed-home

* See page Pre-35 for an explanation of the naming convention.

* Pictured: RGD4C



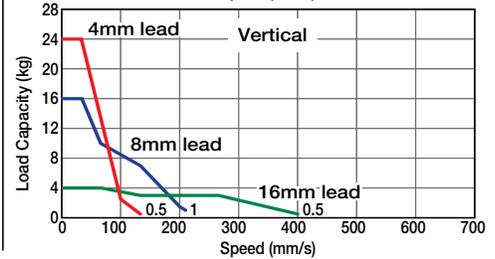
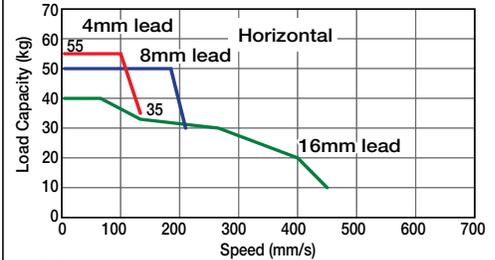
Technical References P. A-5



- (1) 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.
- (2) 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.
- (3) The load capacity is based on operation at an acceleration of 0.2G. 0.2G is the upper limit of the acceleration. In addition, the horizontal load capacity is based on the use of an external guide. See the technical resources (page A-83) for the allowable weight using the supplied guide alone.

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)		Maximum Push Force (N)(Note 2)	Stroke (mm)
		Horizontal (kg)	Vertical (kg)		
RCP2-RGD6C-I-56P-16-①-②-③-④	16	~ 40	~ 4	240	50 ~ 300 (50mm increments)
RCP2-RGD6C-I-56P-8-①-②-③-④	8	~ 50	~ 16	470	
RCP2-RGD6C-I-56P-4-①-②-③-④	4	~ 55	~ 24	800	

Legend: ① Stroke ② Compatible controller ③ Cable length ④ Options

(Note 2) See page A-69 for the pushing force graphs.

Stroke and Maximum Speed

Stroke Lead	50 ~ 300 (50mm increments)	
	50 ~ 300	450 <400>
16	50 ~ 300	450 <400>
8	210	
4	130	

* The values enclosed in < > apply for vertical usage. (Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
50	—
100	—
150	—
200	—
250	—
300	—

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)	—
	R01 (1m) ~ R03 (3m)	—
Robot Cable	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	—
Foot bracket	FT	→ A-29	—
Reversed-home	NM	→ A-33	—

Actuator Specifications

Item	Description
Drive System	Ball screw ø12mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Guide	Double guide Guide rod diameter ø12mm Ball bush type
Rod Diameter	ø22mm
Non-rotating accuracy of rod	±0.05 deg
Ambient Operating Temp./Humidity	0 ~ 40°C, 85% RH or less (non-condensing)

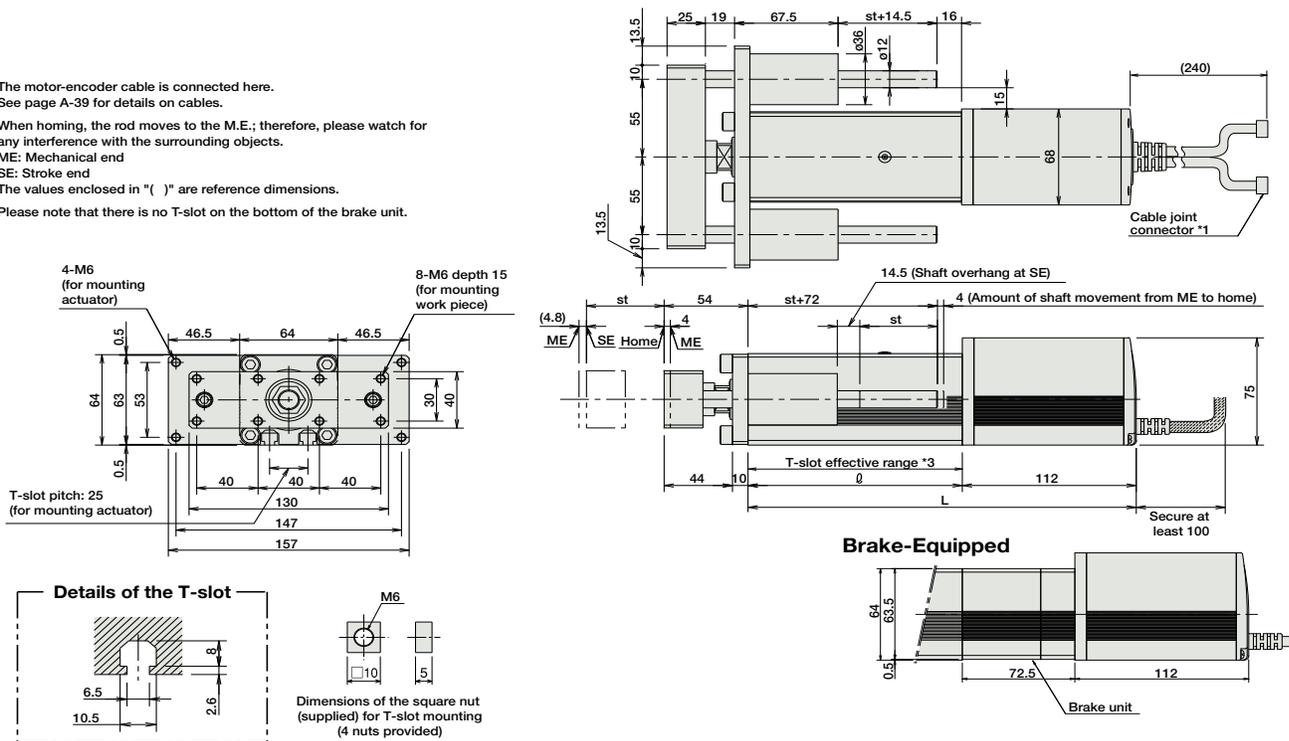
Dimensions

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

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- *1. The motor-encoder cable is connected here. See page A-39 for details on cables.
- *2. When homing, the rod moves to the M.E.; therefore, please watch for any interference with the surrounding objects.
ME: Mechanical end
SE: Stroke end
The values enclosed in "()" are reference dimensions.
- *3. Please note that there is no T-slot on the bottom of the brake unit.



* Compared to the standard model, the brake-equipped model is longer by 72.5mm and heavier by 0.9kg.

■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
ℓ	138	188	238	288	338	388
L	250	300	350	400	450	500
Weight (kg)	4.4	5.0	5.5	6.1	6.7	7.3

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-56PI-NP-2-①	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	See P481	-	→ P477
Splash-Proof Solenoid Valve Type		PSEP-C-56PI-NP-2-0 PSEP-CW-56PI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.					
Positioner Type		PCON-C-56PI-NP-2-0	Positioning is possible for up to 512 points	512 points	DC24V	2A max.	-	→ P525
Safety-Compliant Positioner Type		PCON-CG-56PI-NP-2-0						
Pulse Train Input Type (Differential Line Driver)		PCON-PL-56PI-NP-2-0	Pulse train input type with differential line driver support	(-)	DC24V	2A max.	-	→ P525
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-NP-2-0	Pulse train input type with open collector support					
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated to serial communication	64 points	DC24V	2A max.	-	
Field Network Type		RPCON-56P	Dedicated to field network	768 points	DC24V	2A max.	-	→ P503
Program Control Type		PSEL-C-1-56PI-NP-2-0	Programmed operation is possible. Operation is possible on up to 2 axes	1500 points	DC24V	2A max.	-	→ P557

* This is for the single-axis PSEL.

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