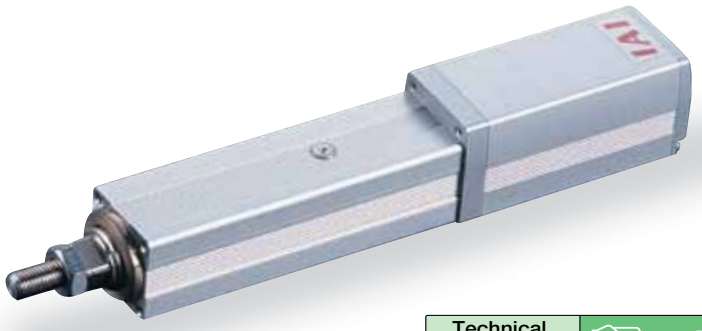
RCP2-RA3C ROBO Cylinder Rod Type 35mm Width Pulse Motor Straight Type

■ Configuration: RCP2 — RA3C — I — 28P — ☐ — ☐ — ☐ — ☐ — ☐ — ☐

Series	Type	Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
RCP2	RA3C	I: Incremental * The Simple absolute encoder is also considered type "I".	28P: Pulse motor 28 ☐ size	5 : 5mm 2.5 : 2.5mm	50: 50mm 〜 200: 200mm (50mm pitch increments)	P1: PCON RPCON PSEL P3: PMEC PSEP	N : None P : 1m S : 3m M : 5m X ☐☐: Custom R ☐☐: Robot cable	FL : Flange FT : Foot bracket NM: Reversed-home

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



Technical References P. A-5

POINT Notes on Selection

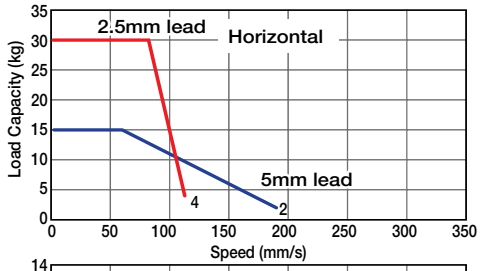
(1) When the stroke increases, the maximum speed will drop to prevent the ball screw from reaching the critical rotational speed. Use the actuator specification table below to check the maximum speed at the stroke you desire.

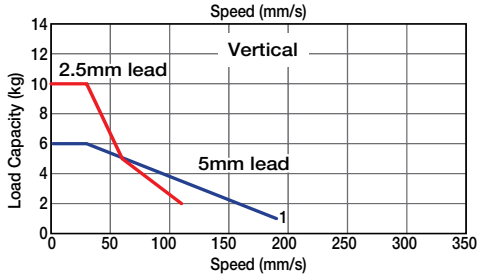
(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check in the Speed vs. Load Capacity graph to see if your desired speed and load capacity are supported.

(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. If an external force is exerted on the rod from a direction other than the motion of the rod, the detent may become damaged.

■ 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) Horizontal (kg)	Max. Load Capacity (Note 1) Vertical (kg)	Maximum Push Force (N)(Note 2)	Stroke (mm)
RCP2-RA3C-I-28P-5-①-②-③-④	5	〜15	〜6	73.5	50 〜 200 (50mm increments)
RCP2-RA3C-I-28P-2.5-①-②-③-④	2.5	〜30	〜10	156.8	

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

Lead \ Stroke	50 〜 200 (50mm increments)
5	187
2.5	114

(Unit: mm/s)

① Stroke List

Stroke (mm)	Standard Price
50	-
100	-
150	-
200	-

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
Flange	FL	→ A-27	-
Foot bracket	FT	→ A-29	-
Reversed-home	NM	→ A-33	-

Actuator Specifications

Item	Description
Drive System	Ball screw ø8mm C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1mm or less
Rod Diameter	ø22mm
Non-rotating accuracy of rod	±1.5 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

2D CAD 3D CAD

For Special Orders P. A-9

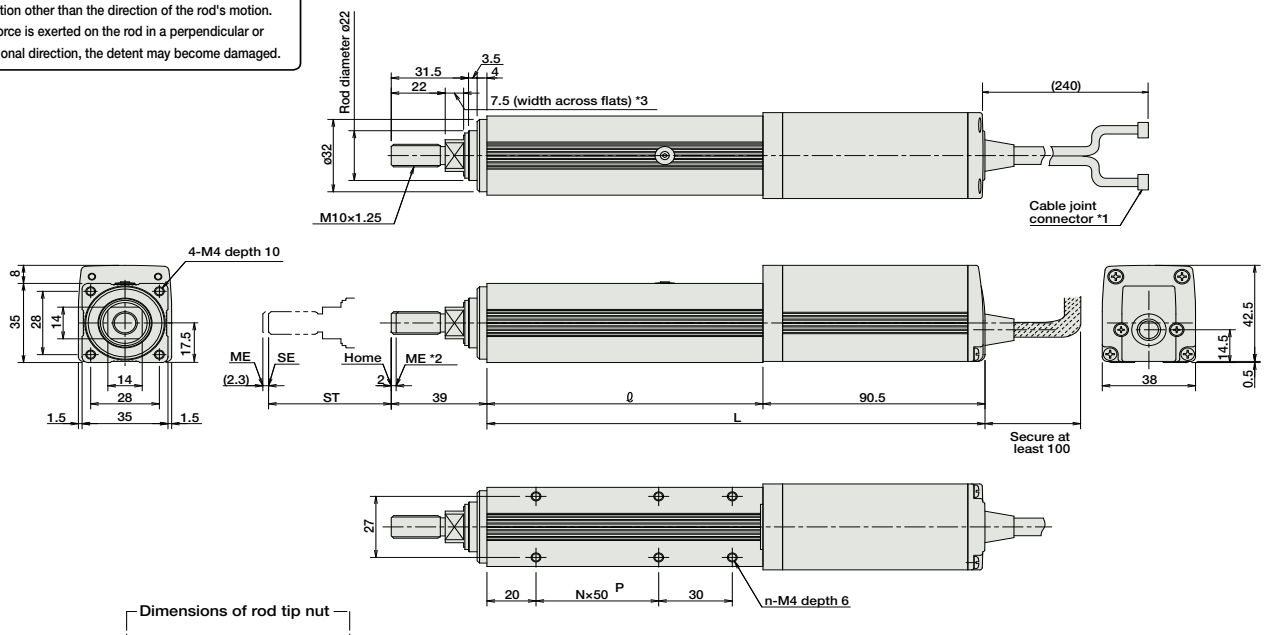
*1. The motor-encoder cable is connected here.
See page A-39 for details on cables.

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

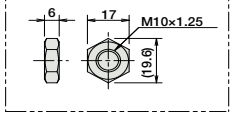
*3. The orientation of the bolt will vary depending on the product.

Note:

Do not apply any external force on the rod from any direction other than the direction of the rod's motion. If a force is exerted on the rod in a perpendicular or rotational direction, the detent may become damaged.



Dimensions of rod tip nut



■ Dimensions/Weight by Stroke

Stroke	50	100	150	200
R	112.5	162.5	212.5	262.5
L	203	253	303	353
N	1	2	3	4
n	6	8	10	12
Weight (kg)	0.8	0.95	1.1	1.25

②Compatible 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-28SPI-NP-2-①	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	See P481	–	→ P477
		PSEP-C-28SPI-NP-2-0	Operable with same signal as solenoid valve. Supports both single and double solenoid types. No homing necessary with simple absolute type.		DC24V	2A max.	–	→ P487
Splash-Proof Solenoid Valve Type		PSEP-CW-28SPI-NP-2-0					–	
Positioner Type		PCON-C-28SPI-NP-2-0	Positioning is possible for up to 512 points	512 points			–	→ P525
Safety-Compliant Positioner Type		PCON-CG-28SPI-NP-2-0					–	
Pulse Train Input Type (Differential Line Driver)		PCON-PL-28SPI-NP-2-0	Pulse train input type with differential line driver support	(–)			–	
Pulse Train Input Type (Open Collector)		PCON-PO-28SPI-NP-2-0	Pulse train input type with open collector support				–	
Serial Communication Type		PCON-SE-28SPI-N-0-0	Dedicated to serial communication	64 points			–	
Field Network Type		RPCON-28SP	Dedicated to field network	768 points			–	→ P503
Program Control Type		PSEL-C-1-28SPI-NP-2-0	Programmed operation is possible Operation is possible on 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, or 2: 100～240V).