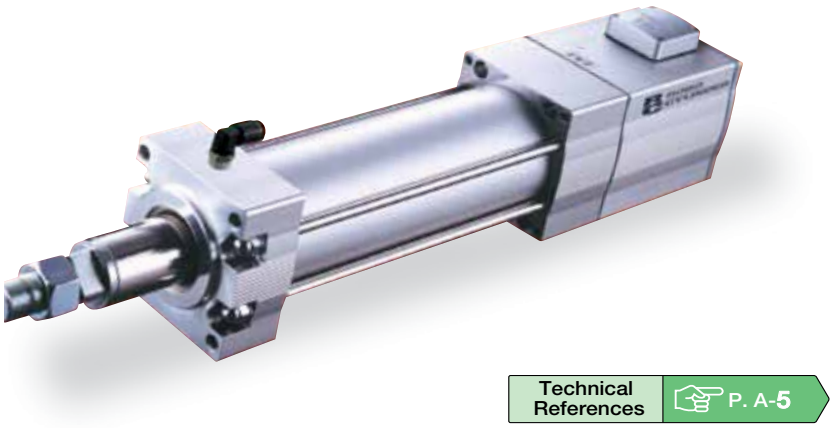
RCP2W-RA10C

ROBO Cylinder High-thrust Dust-proof Rod Type 100mm Width Pulse Motor Coupled

■ Configuration: RCP2W — RA10C — I — 86P — ☐ — ☐ — P2 — ☐ — ☐

Series	Type	Encoder	Motor	Lead	Stroke	Compatible Controllers	Cable Length	Option
		I: Incremental Type	86P: Pulse motor 86 ☐ size	10 : 10mm 5 : 5mm 2.5 : 2.5mm	50: 50mm 〈 300: 300mm (50mm pitch increments)	P2 : PCON-CF	N : None P : 1m S : 3m M : 5m X ☐☐ : Custom Length R ☐☐ : Robot Cable	A1~A3 : Connector cable Cable outlet direction changed B : Brake-Equipped FL : With Flange FT : With Foot bracket

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



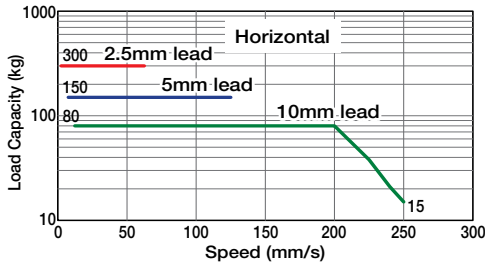
Technical References P. A-5

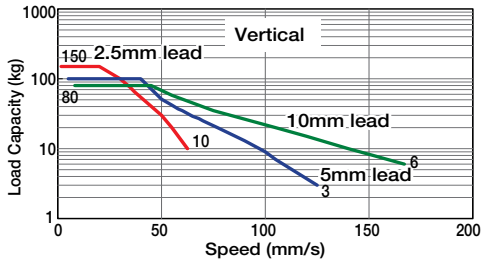
POINT Notes on Selection

(1) Minimum speed is set for each lead. (Lead 10: 10mm/s, Lead 5: 5mm/s, Lead 2.5: 1mm/s) Please note that vibration etc. may occur when operated at minimum speed.
(2) Since the RCP2 series use a pulse motor, the load capacity decreases at high speeds. Check the Speed vs. Load Capacity on the right hand graph to see if your desired speed and load capacity are supported.
(3) The load capacity is based on operation at lead 10: 0.04G, lead 5: 0.02G and lead 2.5: 0.01G. These values are the upper limits for the acceleration. Also, this is when the load capacity is attached to the external guide. The rotation stopper may break if an external force coming from a direction other than that of rod's advance is applied.
(4) The cable joint connector is not splash-proof; secure it in a place that is not prone to water spills.

■ 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)
RCP2W-RA10C-I-86P-10-①-P2-②-③	10	~80	~80	1500	50~300 (50mm increments)
RCP2W-RA10C-I-86P-5-①-P2-②-③	5	150	~100	3000	
RCP2W-RA10C-I-86P-2.5-①-P2-②-③	2.5	300	~150	6000	

Legend ① Stroke ② Cable length ③ Options

(Note 2) See page A-70 for push force graph.

■ Stroke and Maximum Speed

Lead \ Stroke	50~300 (50mm increments)
10	250 〈167〉
5	125
2.5	63

* The value inside < > applies to vertical setting. (Unit: mm/s)

① Stroke List

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

② 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.

③ Option List

Name	Option Code	See Page	Standard Price
Connector cable outlet direction changed	A1~A3	→ A-25	–
Brake	B	→ A-25	–
Flange	FL	→ A-27	–
Foot bracket	FT	→ A-29	–

Actuator Specifications

Item	Description
Drive System	Ball screw C10 grade
Positioning Repeatability	±0.02mm
Lost Motion	0.1 mm or less
Rod diameter	ø40mm
Rod non-rotational accuracy	±1.0 degrees
Protection Structure	IP54
Ambient Operating Temp./Humidity	0~40°C, 85%RH or less (Non-condensing)

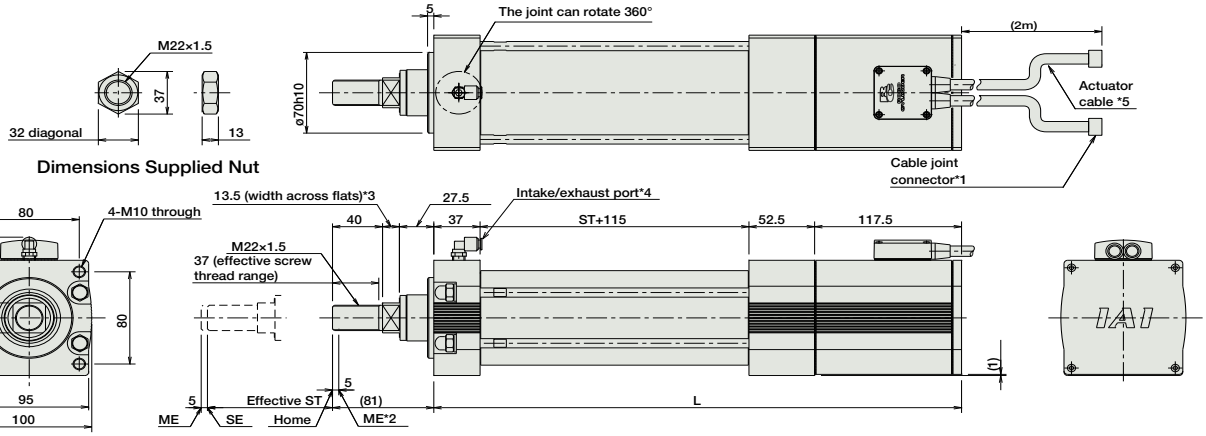
Dimensions

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

For Special Orders P. A-9

2D CAD 3D CAD

* Please note that reversed home position is unavailable for the RA10C type for structural reasons.



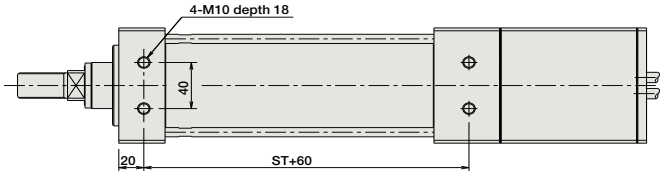
*1. A motor-encoder cable is connected here.
Please note that motor cable is the same as the one in the RCP2 series, but that the encoder cable is a dedicated type.
See page A-39 for details on cables.
The cable joint connector is not splash-proof; therefore, please secure it in a place that is not prone to water spills.

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

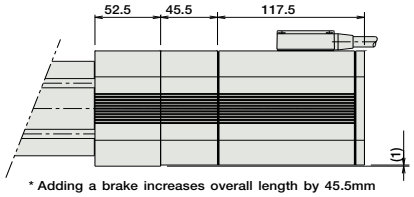
*3. The direction of across-flats will vary depending on the product.

*4. Intake/exhaust port is the air exhaust tube in the main body.

*5. The actuator cable is not a robot cable (flex resistant cable); therefore, please don't use it for movable parts such as cable track.



Dimensions of the Brake Section



* Adding a brake increases overall length by 45.5mm and its weight by 1.5kg.

■ Dimensions/Weight by Stroke

Stroke	50	100	150	200	250	300
L	372	422	472	522	572	622
Weight (kg)	9	9.5	10	10.5	11	11.5

Compatible Controllers

The controller for the RCP2W-RA10C type is a dedicated controller.

Name	External View	Model	Description	Max. Positioning Points	Input Voltage	Power Supply Capacity	Standard Price	See Page
Positioner Type		PCON-CF-86PI-NP-2-0	Positioning possible for up to 512 points	512 points	DC24V	6A max.	–	→ P525

Note: Please note that the encoder cable is a dedicated CF-type cable that is different from the PCON-C/CG/CY/PL/PO/SE controllers.