

RCP2-HS8R

ROBO Cylinder, High-Speed Slider Type, 80mm Width, Pulse Motor, Side-mounted Motor, Steel Base

Model Specification Items	RCP2 — HS8R — I — 86P — 30 — — P4 — —
Series — Type	Series — Type
Encoder type	I: Incremental
Motor type	86P: Pulse motor, 56□ size high-output
Lead	30: 30mm
Stroke	50: 50mm ? (50mm pitch increments) 1000: 1000mm
Applicable controller	P4: PCON-CFA
Cable length	N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable
Options	B : Brake NM : Non-motor end ML : Left-mounted motor (Standard) MR : Right-mounted motor SR : Slider roller

* See page Pre-47 for details on the model descriptions.



Photo above shows specification with motor side-mounted to the left (ML Option).

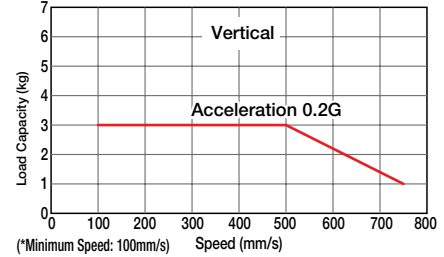
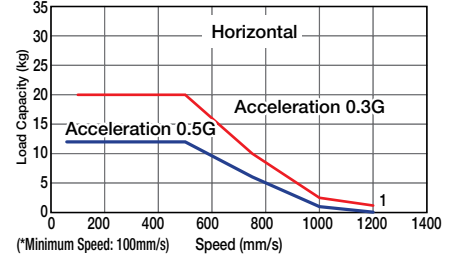
Technical References Appendix P.5



- Due to the large head of the ball screw in high-speed actuators, operating at low speeds may cause vibration and/or noise. Therefore, use the actuator at speeds over 100mm/s.
- 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 when used vertically). The upper limit for the acceleration is 0.5G for horizontal use and 0.2G for vertical use.
- See page A-71 for details on push motion.

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 Payloads

(Note 1) Please note that the maximum load capacity decreases as the speed increases.

Model number	Lead (mm)	Max. Load Capacity (Note 1)		Stroke (mm)
		Horizontal (kg)	Vertical (kg)	
RCP2-HS8R-I-86P-30-①-P4-②-③	30	~20	~3	50~1000 (every 50mm)

Code explanation ① Stroke ② Cable length ③ Options *See page A-71 for details on push motion.

Stroke and Maximum Speed

Stroke Lead	50~800 (every 50mm)	~900 (mm)	~1000 (mm)
30	1200 <750>	1000 <750>	800 <750>

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

① Stroke

① Stroke (mm)	Standard price
50/100	—
150/200	—
250/300	—
350/400	—
450/500	—
550/600	—
650/700	—
750/800	—
850/900	—
950/1000	—

② Cable Length

Type	Cable symbol	Standard Price
Standard	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	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-59 for cables for maintenance.

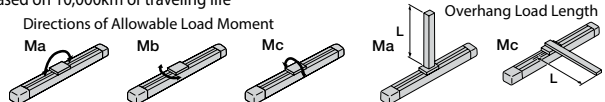
③ Options

Name	Option code	See page	Standard price
Brake	B	→ A-42	—
Non-motor end specification	NM	→ A-52	—
Left-mounted motor (standard)	ML	→ A-52	—
Right-mounted motor	MR	→ A-52	—
Slider roller specification	SR	→ A-55	—

Actuator Specifications

Item	Description
Drive System	Ball screw, ϕ 16mm, rolled C10
Positioning repeatability	\pm 0.02mm
Lost Motion	0.1mm or less
Base	Material: Special alloy steel
Allowable static moment	Ma: 198.9 N·m, Mb: 198.9 N·m, Mc: 416.7 N·m
Allowable dynamic moment (*)	Ma: 36.3 N·m, Mb: 36.3 N·m, Mc: 77.4 N·m
Allowable overhang	450mm or less in Ma, Mb and Mc directions
Ambient operating temperature, humidity	0 to 40°C, 85% RH or less (Non-condensing)

(*) Based on 10,000km of traveling life



Dimensional Drawings

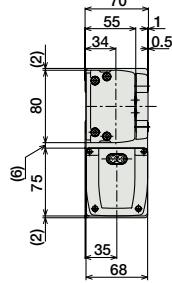
CAD drawings can be downloaded from the website. www.intelligentactuator.com

For Special Orders Appendix P.15



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

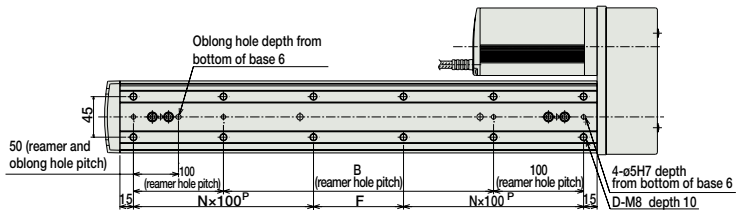
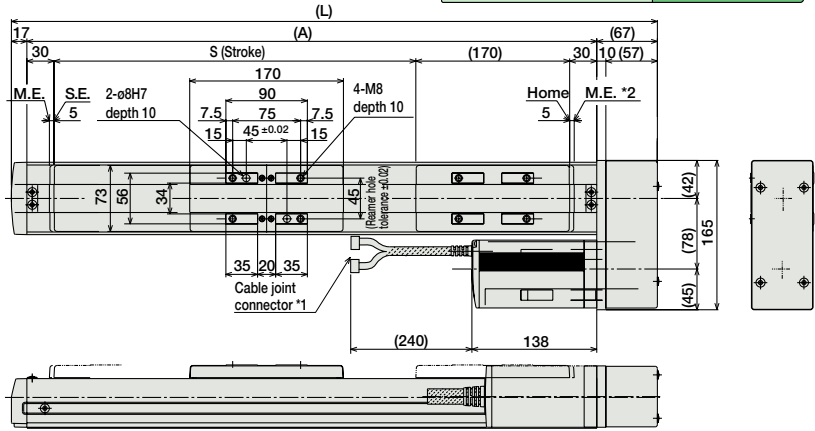
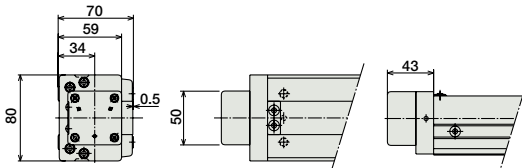
- * The reference surface is the same as the HS8C type. (See P44)
- * The offset reference position for the Ma moment is the same as the HS8C type. (See P44)



- *1: Connect the motor and encoder cables here. See page A-59 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.

Dimensions of the brake section

* Adding a brake will increase the actuator's overall length by 26mm, and its weight by 0.5kg.



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

Dimensions and Mass by Stroke

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	364	414	464	514	564	614	664	714	764	814	864	914	964	1014	1064	1114	1164	1214	1264	1314
A	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980	1030	1080	1130	1180	1230
B	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
D	8	8	8	10	12	12	12	14	16	16	16	18	20	20	20	22	24	24	24	26
F	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0	50	100	150	0
N	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6
Weight (kg)	7.4	7.9	8.5	9.0	9.5	10	10.5	11.1	11.6	12.1	12.7	13.2	13.7	14.3	14.8	15.3	15.8	16.4	16.9	17.4

Applicable Controllers

The controller for the RCP2-HS8R type is a dedicated controller.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner Type		PCON-CFA-86PI-①-2-0	Positioning is possible for up to 512 points	512 points	DC24V	6A max.	—	→ P607

* ① indicates I/O type.

Note: • Please note that the encoder cable is a dedicated CFA-type cable. (See page A-59.)
• Note that a simple absolute unit cannot be used.