

# RCP2CR-SS8C

Cleanroom ROBO Cylinder, Slider Type, Coupled, Actuator Width 80mm, Pulse Motor, Steel Base

Model Specification Items	<b>RCP2CR-SS8C</b>	<b>I</b>	<b>56P</b>						
Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options	
		I: Incremental * The Simple absolute encoder is also considered type "I".	56P: Pulse motor, 56□ size	20: 20mm 10: 10mm 5: 5mm	50: 50mm ? 1000: 1000mm (50mm pitch increments)	P1: PCON-PL/PO/SE PSEL P3: PCON-CA PMEC/PSEP MSEP	N: None P: 1m S: 3m M: 5m X□: Custom R□: Robot cable	See Options below.	

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



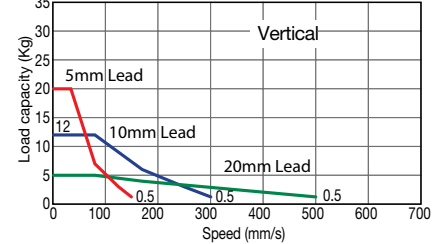
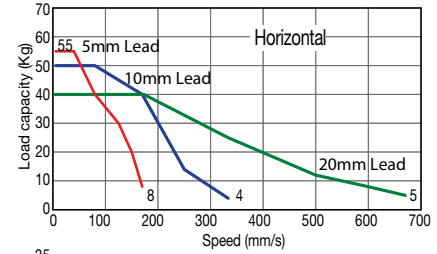
Technical References Appendix P.5



- (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 the pulse motor, the load capacity decreases at high speeds. In the Speed vs. Load Capacity graph on the right, see if your desired speed and load capacity are supported.
- (3) The load capacity is based on operation at an acceleration of 0.3G (0.2G for the 5mm-lead model, or when used vertically). This is the upper limit of the acceleration.
- (4) 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 Payload

(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)	
RCP2CR-SS8C-I-56P-20-①-②-③-④	20	~40	~5	50~1000 (every 50mm)
RCP2CR-SS8C-I-56P-10-①-②-③-④	10	~50	~12	
RCP2CR-SS8C-I-56P-5-①-②-③-④	5	~55	~20	

#### Stroke and Max. Speed/Suction Volume by Lead

(Unit: mm/s)

Lead	Stroke	50~800 (every 50mm)	~900 (mm)	~1000 (mm)	Suction Volume (N <sub>2</sub> /min)
		20	666 <500>	625 <500>	
10	333 <300>	310 <300>	255	40	
5	165 <150>	155 <150>	125	20	

Code explanation ① Stroke ② Applicable Controller ③ Cable length ④ Options \*See page A-71 for details on push motion. \*The values enclosed in < > apply to vertical settings.

#### 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	—

#### ④ Options

Name	Option code	See page	Standard price
Brake	<b>B</b>	→ A-42	—
Non-motor end specification	<b>NM</b>	→ A-52	—
Vacuum port on opposite side	<b>VR</b>	→ A-58	—

#### ③ Cable Length

Type	Cable symbol	Standard price
Standard	<b>P</b> (1m)	—
	<b>S</b> (3m)	—
	<b>M</b> (5m)	—
Special length	<b>X06</b> (6m) ~ <b>X10</b> (10m)	—
	<b>X11</b> (11m) ~ <b>X15</b> (15m)	—
	<b>X16</b> (16m) ~ <b>X20</b> (20m)	—
Robot Cable	<b>R01</b> (1m) ~ <b>R03</b> (3m)	—
	<b>R04</b> (4m) ~ <b>R05</b> (5m)	—
	<b>R06</b> (6m) ~ <b>R10</b> (10m)	—
	<b>R11</b> (11m) ~ <b>R15</b> (15m)	—
	<b>R16</b> (16m) ~ <b>R20</b> (20m)	—

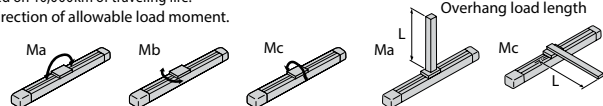
\* See page A-59 for cables for maintenance.

### Actuator Specifications

Item	Description
Drive method	Ball screw, ø16mm, rolled C10
Positioning repeatability	±0.02mm
Lost motion	0.1mm or less
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
Overhang load length	Ma direction: 450mm or less Mb/Mc directions: 450mm or less
Grease type	Low dust generation grease (both ball screw and guide)
Cleanliness	Class 10 (0.1µm)
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

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

Direction of allowable load moment.



- Slider Type
- Mini
- Standard
- Controllers Integrated
- Rod Type
- Mini
- Standard
- Controllers Integrated
- Table/ Arm/ Flat Type
- Mini
- Standard
- Gripper/ Rotary Type
- Linear Servo Type
- Clean-room Type
- Splash-Proof Type
- Pulse Motor
- Servo Motor (24V)
- Servo Motor (200V)
- Linear Servo Motor

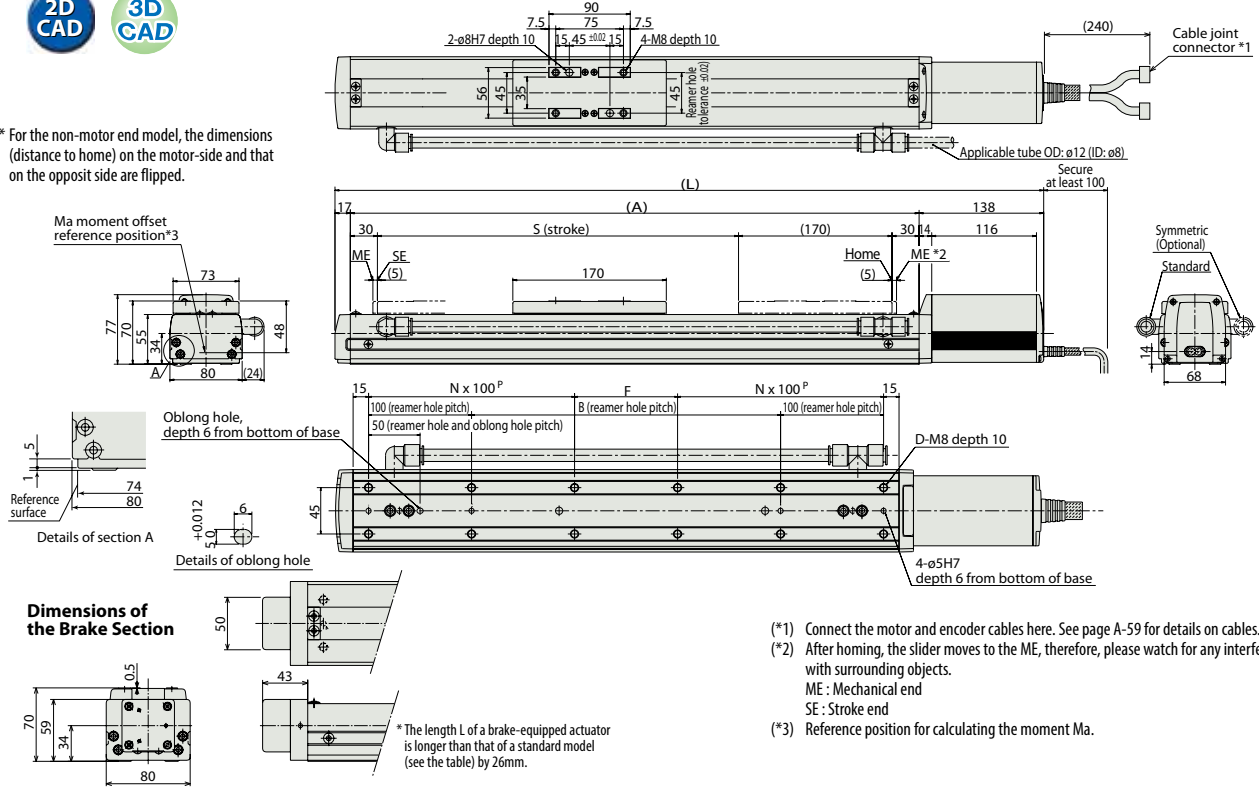
**Dimensional Drawings**

CAD drawings can be downloaded from the website. [www.intelligentactuator.com](http://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.



- (\*1) Connect the motor and encoder cables here. See page A-59 for details on cables.
- (\*2) After homing, the slider moves to the ME, therefore, please watch for any interference with surrounding objects.  
ME : Mechanical end  
SE : Stroke end
- (\*3) Reference position for calculating the moment Ma.

**Dimensions and Weight by Stroke**

Stroke	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
L	435	485	535	585	635	685	735	785	835	885	935	985	1035	1085	1135	1185	1235	1285	1335	1385
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	3	3	3	3	4	4	4	4	5	5	5	5	5	6
Weight (kg)	7.0	7.5	8.0	8.5	9.0	9.6	10.1	10.6	11.2	11.7	12.3	12.7	13.3	13.8	14.4	14.9	15.4	15.9	16.5	17.0

**Applicable Controllers**

RCP2CR series actuators can be operated with the controllers indicated below. Select the type according to your intended application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power-supply capacity	Standard price	Reference page
Solenoid Valve Type		PMEC-C-56PI-①-2-②	Easy-to-use controller, even for beginners	3 points	AC100V AC200V	Refer to P541	—	→ P537
		PSEP-C-56PI-①-2-0	Simple controller operable with the same signal as a solenoid valve					→ P547
Solenoid valve multi-axis type PIO specification		MSEP-C-③-④-①-2-0	Positioner type based on PIO control, allowing up to 8 axes to be connected	256 points	DC24V	Refer to P572	—	→ P563
Solenoid valve multi-axis type Network specification		MSEP-C-③-④-④-0-0	Field network-ready positioner type, allowing up to 8 axes to be connected					→ P607
Positioner type High-output specification		PCON-CA-56PI-①-2-0	Equipped with a high-output driver Positioner type based on PIO control	512 points	DC24V	Refer to P618	—	→ P623
Pulse-train type High-output specification		PCON-CA-56PI-PL□-2-0	Equipped with a high-output driver Pulse-train input type	(—)				
Field network type High-output specification		PCON-CA-56PI-④-0-0	Equipped with a high-output driver Supporting 7 major field networks	768 points				
Pulse Train Input Type (Differential Line Driver)		PCON-PL-56PI-①-2-0	Pulse train input type with differential line driver support	(—)	DC24V	Refer to P628	—	→ P623
Pulse Train Input Type (Open Collector)		PCON-PO-56PI-①-2-0	Pulse train input type with open collector support					
Serial Communication Type		PCON-SE-56PI-N-0-0	Dedicated Serial Communication	64 points	DC24V	Refer to P671	—	→ P665
Program Control Type		PSEL-CS-1-56PI-①-2-0	Programmed operation is possible. Can operate up to 2 axes	1,500 points	DC24V	Refer to P671	—	→ P665

\* This is for the single-axis PSEL. \* ① indicates I/O type (NP/PN). \* ② indicates power supply voltage (1: 100V / 2: 100~240V). \* ③ indicates number of axes (1 to 8). \* ④ indicates field network specification symbol. \* □ indicates N (NPN specification) or P (PNP specification) symbol.