

RCS3CR-SS8C

Cleanroom Robo Cylinder, Slider Type, Actuator Width 80mm, 200V Servo Motor, Steel Base, Coupled

RCS3PCR-SS8C

Cleanroom Robo Cylinder, Slider Type, Actuator Width 80mm, 200V Servo Motor, Steel Base, Coupled **High-precision specification**

Model Specification Items	Series	Type	Encoder type	Motor type	Lead	Stroke	Applicable controller	Cable length	Options
RCS3CR : Standard specification RCS3PCR: High-precision specification	SS8C		I: Incremental A: Absolute	100: Servo motor, 100W 150: Servo motor, 150W	30: 30mm 20: 20mm 10: 10mm 5: 5mm	50: 50mm ? 1000: 1000mm (50mm pitch increments)	T1: XSEL-J/K T2: SCON MCON SSEL XSEL-P/Q XSEL-R/S	N: None P: 1m S: 3m M: 5m X□□: Custom length R□□: Robot cable	See Options below. *Be sure to specify a code indicating your desired cable exit direction.

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



*CE compliance is optional.



Technical References Appendix P.5

- POINT** Notes on selection
- (1) When the stroke is increased, the maximum speed will drop to prevent reaching dangerous speeds of ball screws. Confirm the maximum speed at the desired stroke by referring to the table of strokes and maximum speeds below.
 - (2) The payload represents a value when the actuator is operated at a horizontal acceleration of 0.3G (0.2G for the 5mm-lead model) and vertical acceleration of 0.2G.
 - (3) The payload drops when the acceleration is raised. For details, refer to the list of payloads by acceleration provided on page A-108.

Actuator Specifications

Lead and Payload

Model number	Motor output (W)	Lead (mm)	Maximum payload		Rated thrust (N)	Stroke (mm)	
			Horizontal (kg)	Vertical (kg)			
RCS3CR[RCS3PCR]-SS8C-①-100-30-②-③-④-⑤	100	30	8	2	56.6	50 ~ 1000 (every 50mm)	
RCS3CR[RCS3PCR]-SS8C-①-100-20-②-③-④-⑤		20	20	4	84.9		
RCS3CR[RCS3PCR]-SS8C-①-100-10-②-③-④-⑤		10	40	8	169.8		
RCS3CR[RCS3PCR]-SS8C-①-100-5-②-③-④-⑤		5	80	16	339.7		
RCS3CR[RCS3PCR]-SS8C-①-150-30-②-③-④-⑤		150	30	12	3		85.1
RCS3CR[RCS3PCR]-SS8C-①-150-20-②-③-④-⑤			20	30	6		127.6
RCS3CR[RCS3PCR]-SS8C-①-150-10-②-③-④-⑤	10		60	12	255.3		

Stroke and Max. Speed/Suction Volume by Lead (Unit: mm/s)

Stroke Lead	50 to 600 (every 50mm)										Suction Rate N _Z /min
	650	700	750	800	850	900	950	1000	1050	1100	
30	1800	1660	1460	1295	1155	1035	935	850	775	160 (190)*	
20	1200	1105	970	860	770	690	625	565	515	120	
10	600	550	485	430	385	345	310	280	255	80	
5	300	275	240	215	190	170	150	140	125	30	

Code explanation ① Encoder type ② Stroke ③ Applicable Controller ④ Cable length ⑤ Options

(* 160N_Z/min if the speed is 1,500mm/s or below, or 190N_Z/min if the speed exceeds 1,500mm/s.

① Encoder Type / ② Stroke

② Stroke (mm)	Standard Prices							
	RCS3CR-SS8C				RCS3PCR-SS8C			
	① Encoder Type							
	Incremental		Absolute		Incremental		Absolute	
	Motor wattage	Motor wattage	Motor wattage	Motor wattage	Motor wattage	Motor wattage	Motor wattage	
	100W	150W	100W	150W	100W	150W	100W	150W
50/100	—	—	—	—	—	—	—	—
150/200	—	—	—	—	—	—	—	—
250/300	—	—	—	—	—	—	—	—
350/400	—	—	—	—	—	—	—	—
450/500	—	—	—	—	—	—	—	—
550/600	—	—	—	—	—	—	—	—
650/700	—	—	—	—	—	—	—	—
750/800	—	—	—	—	—	—	—	—
850/900	—	—	—	—	—	—	—	—
950/1000	—	—	—	—	—	—	—	—

④ Cable Length

Type	Cable symbol	Standard price
Standard type	P (1m)	—
	S (3m)	—
	M (5m)	—
Special length	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)	—
	R20 (20m)	—

* See page A-59 for cables for maintenance.

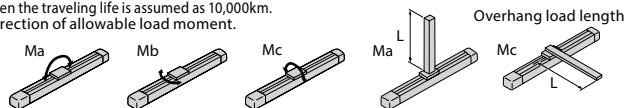
⑤ Options

Name	Option code	Page	Standard Price
Cables exit from back left	A1E	→ A-41	—
Cables exit from left side	A1S	→ A-41	—
Cables exit from back right	A3E	→ A-41	—
Cables exit from right side	A3S	→ A-41	—
Brake	B	→ A-42	—
CE compliance	CE	→ A-42	—
Non-motor end specification	NM	→ A-52	—
L-shaped suction joint specification	VL	→ A-58	—

Actuator Specifications RCS3PCR specifications are shown in []. (Other items are the same.)

Item	Description
Drive method	Ball screw, ø16mm, rolled C10 [rolled C5]
Positioning repeatability	±0.02mm [±0.01mm]
Lost motion	0.1mm [0.05mm] or less
Base	Material: Dedicated 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
Grease	Low dust-raising grease is used (for both the ball screw and guide)
Cleanliness class	Class 10 (0.1µm)
Ambient operating temperature/humidity	0 to 40°C, 85% RH max. (Non-condensing)

(*) When the traveling life is assumed as 10,000km. Direction of allowable load moment.



Dimensional Drawings

CAD drawings can be downloaded from the website.

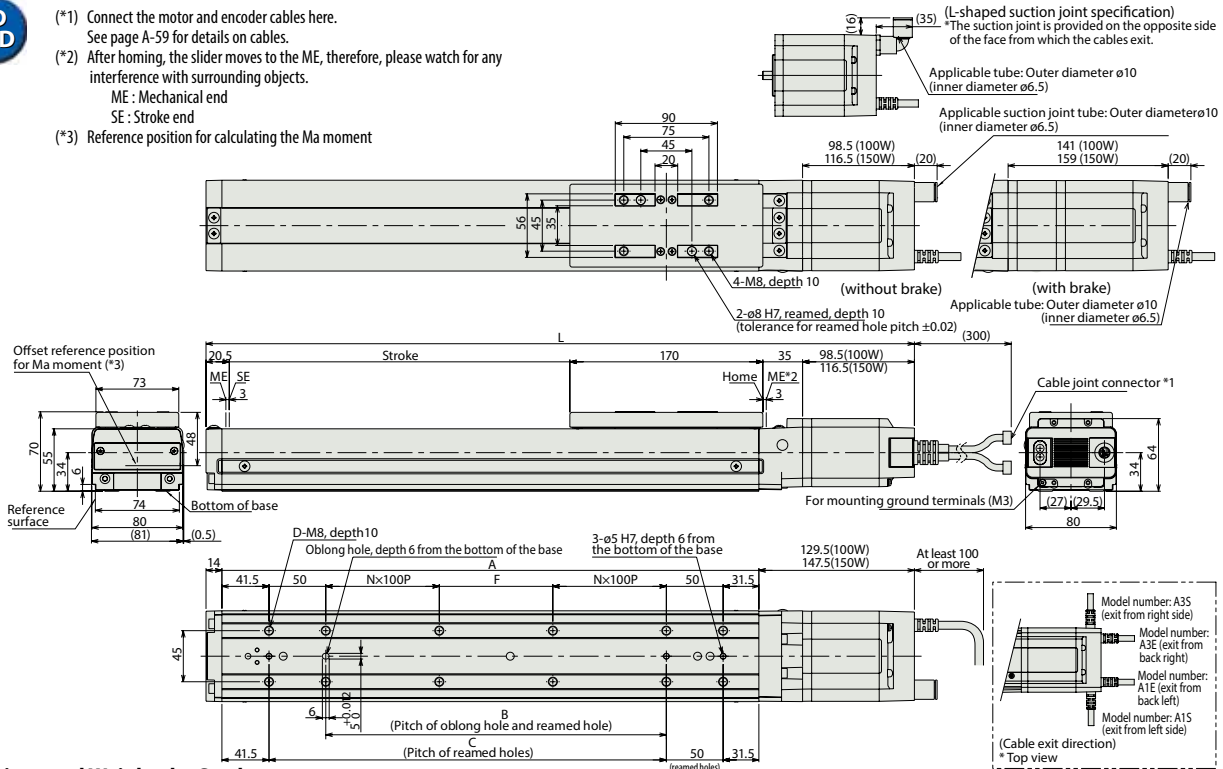
www.intelligentactuator.com



- (*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 Ma moment

For Special Orders

Appendix P.15



Dimensions and Weights by Stroke

L	Stroke	Stroke (mm)																			
		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
100W	without brake	374	424	474	524	574	624	674	724	774	824	874	924	974	1024	1074	1124	1174	1224	1274	1324
	with brake	416.5	466.5	516.5	566.5	616.5	666.5	716.5	766.5	816.5	866.5	916.5	966.5	1016.5	1066.5	1116.5	1166.5	1216.5	1266.5	1316.5	1366.5
150W	without brake	392	442	492	542	592	642	692	742	792	842	892	942	992	1042	1092	1142	1192	1242	1292	1342
	with brake	434.5	484.5	534.5	584.5	634.5	684.5	734.5	784.5	834.5	884.5	934.5	984.5	1034.5	1084.5	1134.5	1184.5	1234.5	1284.5	1334.5	1384.5
A		223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973	1023	1073	1123	1173
B		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
C		100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	1050
D		8	8	8	10	12	12	14	16	16	18	20	20	22	24	24	24	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		0	0	0	1	1	1	1	2	2	2	2	3	3	3	4	4	4	4	4	5
Weight (kg)	100W	5.3	5.8	6.4	6.9	7.5	8.0	8.6	9.1	9.7	10.2	10.8	11.3	11.9	12.4	13.0	13.5	14.1	14.6	15.2	15.7
	150W	5.3	5.9	6.4	7.0	7.5	8.1	8.6	9.2	9.7	10.3	10.8	11.4	11.9	12.5	13.0	13.6	14.1	14.7	15.2	15.8
	with brake	5.8	6.3	6.9	7.4	8.0	8.5	9.1	9.6	10.2	10.7	11.3	11.8	12.4	12.9	13.5	14.0	14.6	15.1	15.7	16.2

③ Applicable Controllers

RCS3CR-series actuators can be operated with the following controllers. Select an appropriate controller type according to your application.

Name	External view	Model number	Features	Maximum number of positioning points	Input power	Power supply capacity	Standard price	Reference page
Positioner mode		SCON-CA-100①-NP-2-① SCON-CA-150①-NP-2-①	Up to 512 positioning points are supported.	512 points	Single-phase 100VAC Single-phase 200VAC 3-phase 200VAC (XSEL-P/Q/R/S ONLY)	388 VA max. * 1-axis specification operated at 150W	—	→ P643
Solenoid valve mode			Actuators can be operated through the same control used for solenoid valves.	7 points				
Field network type			Movement by numerical specification is supported.	768 points				
Pulse-train input control type			Dedicated pulse-train input type	(—)				
Positioner multi-axis, network type		MSCON-C-1-100①-④-0-①① MSCON-C-1-150①-④-0-①①	Up to 6 axes can be operated. Movement by numerical specification is supported.	256 points			—	→ P655
Program control type, 1 to 2 axes		SSEL-CS-1-100①-NP-2-①① SSEL-CS-1-150①-NP-2-①①	Program operation is supported. Up to 2 axes can be operated.	20,000 points			—	→ P685
Program control type, 1 to 8 axes		XSEL-①①-1-100①-N1-EEE-2-④④ XSEL-①①-1-150①-N1-EEE-2-④④	Program operation is supported. Up to 8 axes can be operated.	Varies depending on the number of axes connected			—	→ P695

* This is for the single-axis MSCON, SSEL, and XSEL.
 * ① indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V).
 * ④ indicates the power-supply voltage type (1: 100V / 2: Single-phase 200V / 3: Three-phase 200V).
 * ① indicates the encoder type (I: Incremental / A: Absolute).
 * ④ indicates the XSEL type (J / K / P / Q / R / S).
 * ④ indicates field network specification symbol.

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