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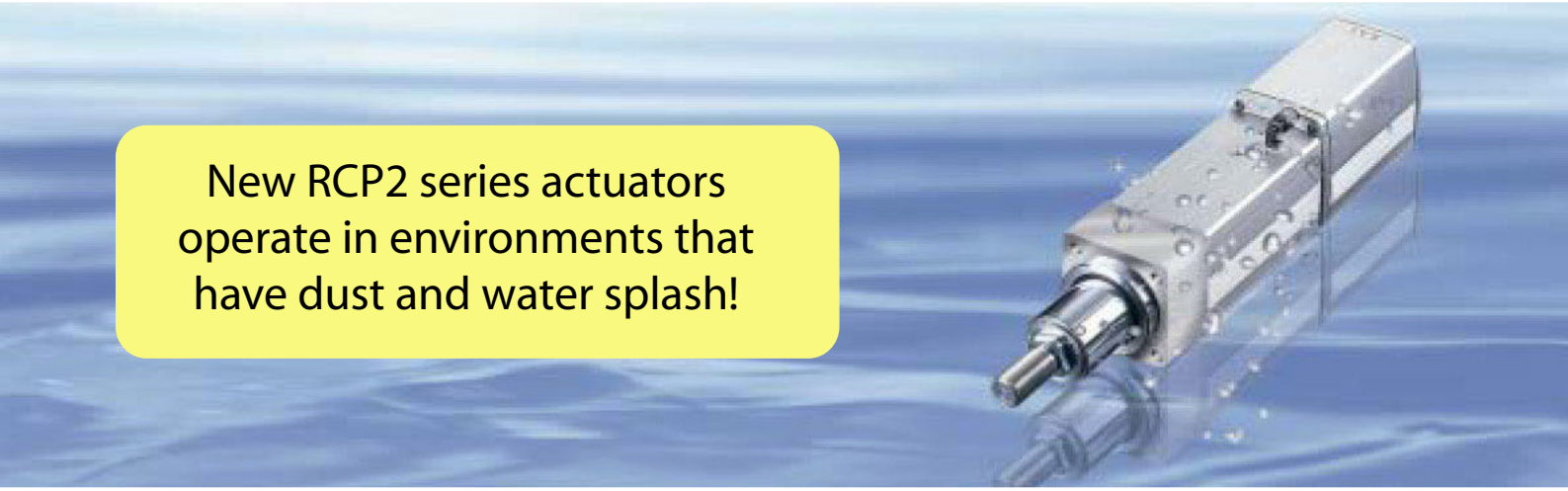
Schlüter
Automation und Sensorik GmbH

Dust-proof, splash-proof type RCP2 RSW/RMW



Feature

● IP65 Rating

The dust/splash-proof models of the RCP2 series are rated IP65 according to the IEC international classification system for the sealing effectiveness of electrical equipment against the intrusion of foreign objects and moisture.

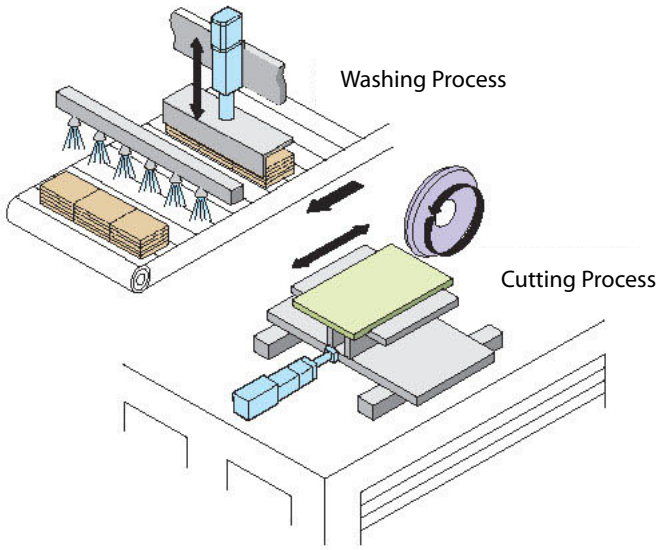
IP 6 5

- 5: Protection Against Moisture — 5: Protected against water jets from any direction
- 6: Protection Against Foreign Objects — 6: Completely dust-tight (maximum rating)
- IP: Ingress Protection

● RSW, RMW Types

There are **two** types of dust/splash-proof types to select from depending on your application needs: the **45mm wide RSW type** and the **64mm wide RMW type.**

Application Examples



Naming Convention

Actuator

RCP2 — RSW — I — PM — 10 — 300 — P1 — M — FT

- **Series**: RCP2
- **Type**: RSW: 45mm wide type; RMW: 64mm wide type
- **Encoder Type**: I: Incremental
- **Motor**: PM: Pulse motor
- **Lead (mm)**: 10, 5, 2.5 (RSW); 16, 8, 4 (RMW)
- **Stroke (mm)**: 50~300
- **Controller**: P1: RCP2-C; RCP2-CG
- **Cable Length**: N: No cable; P: 1m; S: 3m; M: 5m; X□□: Other length; R□□: Robot cable
- **Option**: B: Brake; FL: Flange; FT: Foot bracket

Controller

RCP2 — C — RSW — I — PM — 0 — P

- **Series**: RCP2
- **Type**: C: Internal drive power cutoff relay type; CG: External drive power cutoff relay type
- **Actuator Type**: RSW; RMW
- **Encoder Type**: I: Incremental
- **Motor**: PM: Pulse motor
- **Power**: 0: 24V DC
- **Signal Input Method**: (no letter): NPN; P: PNP

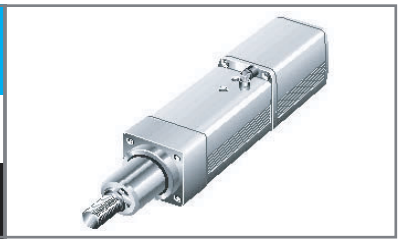
RCP2-RSW

ROBO Cylinder Rod Type: Unit Width 45mm, Pulse Motor, Dust-Proof / Water-Proof Specification

Type: Rod (45mm wide), standard | Stroke: 50~300mm | Load capacity: 40kg (horizontal)/19kg (vertical)

■ Model details — Series - Type - Encoder type - Motor - Lead - Stroke - Applicable controller - Cable length - Options

(Example) RCP2 - RSW - I - PM - 5 - 300 - P1 - S - B



Model/Specifications

* The maximum speed limit of the RCP2 Series will vary according to the weight of the load on the slider (rod). Refer to Correlation Diagrams of Speed and Load Capacity (last page).

Model	Encoder type	Lead (mm)	Stroke 50mm increments (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2) Horizontal (kg)	Load capacity (Note 2) Vertical (kg)	Maximum push force (N)	Positioning repeatability (mm)
RCP2-RSW-I-PM-10-✱✱✱-P1-△-□	Incremental	10	50~300	10~450<250>	25~5	4.5~2	150	±0.02
RCP2-RSW-I-PM-5-✱✱✱-P1-△-□		5		5~190	40	12~2.5	284	
RCP2-RSW-I-PM-2.5-✱✱✱-P1-△-□		2.5		1~125<115>	40	19~2.5	358	

* In the above model names, *** indicates the stroke, △ the cable length and □ the applicable options.

Options

Name	Model	Page(*)
Brake	B	→P24
With flange	FL	→P24
With foot bracket	FT	→P24

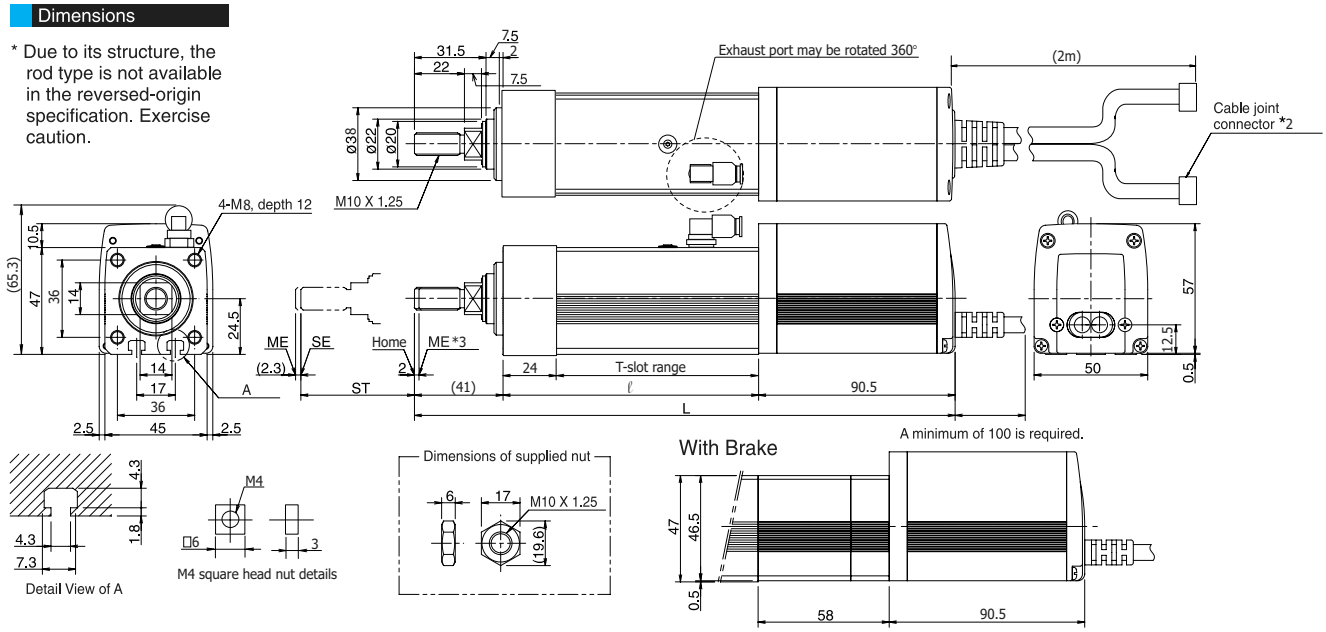
* Please refer to the RCP2 Catalog for more details.

Common Specifications

Drive system	Ball screw ø8mm, rolled C10
Backlash	0.05mm or less
Guide	——
Rod diameter	ø22mm
Rod non-rotative accuracy	±1.5°
Base	Material: Aluminum with white alumite treatment
Cable length (Note 3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, R□□: Robot cable

Dimensions

* Due to its structure, the rod type is not available in the reversed-origin specification. Exercise caution.



■ Dimensions, Weight and Maximum Speed by Stroke

* The figures in parentheses apply to the brake type, while those in < > apply to a vertical application.

Stroke		50	100	150	200	250	300
ℓ		132.5	182.5	232.5	282.5	332.5	382.5
L		223 (281)	273 (331)	323 (381)	373 (431)	423 (481)	473 (531)
Weight (kg)		1.9	2.1	2.2	2.5	2.9	3.1
Maximum speed (mm/s)	Lead 10	450 <250>				450 <250>	350 <250>
	Lead 5	190				190	175
	Lead 2.5	125 <115>				115	85

*1. Insert a tube with an outer diameter of ϕ6 into the exhaust port and extend the tube to a place where water does not reach.
*2. Connect the motor/encoder cables. Refer to page 37 of the RCP2 Catalog for details on the cables.
*3. During homing, the rod will move to the ME, so be careful to prevent contact with surrounding parts.
ME: Mechanical end
SE: Stroke end
Reference dimensions are shown in parentheses.

Applicable Controller Specifications

Applicable Controller	Maximum number of controlled axes	Compatible encoder type	Program operation	Positioner operation	Pulse-train control	Power-supply voltage	Page(*)
RCP2-C	1 axis	Incremental	X	O	X	24VDC	→P25
RCP2-CG	1 axis		X	O	X		→P25

* Please refer to the RCP2 Catalog for more details.

Caution

(Note1) The figures in parentheses apply to a vertical application.
(Note 2) Load capacity at the rated acceleration rate.
(Note 3) The maximum cable length is 20m. Specify the desired length in meters (e.g., X08 = 8m).

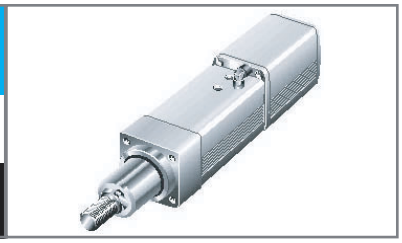
RCP2-RMW

ROBO Cylinder Rod Type: Unit Width 64 mm, Pulse Motor, Dust-Proof / Water-Proof Specification

Type	Stroke	Load capacity
Rod (64mm wide), standard	50~300mm	55kg (horizontal)/26kg (vertical)

■ Model details — Series — Type — Encoder type — Motor — Lead — Stroke — Applicable controller — Cable length — Options

(Example) RCP2 -RMW- I - PM - 8 - 300 - P1 - S - B



Model/Specifications

* The maximum speed limit of the RCP2 Series will vary according to the weight of the load on the slider (rod). Refer to Correlation Diagrams of Speed and Load Capacity (last page).

Model	Encoder type	Lead (mm)	Stroke 50mm increments (mm)	Speed (Note 1) (mm/s)	Load capacity (Note 2)		Maximum push force (N)	Positioning repeatability (mm)
					Horizontal (kg)	Vertical (kg)		
RCP2-RMW-I-PM-16-***-P1-△-□	Incremental	16	50~300	10~320<265>	40~20	5~1	240	±0.02
RCP2-RMW-I-PM-8-***-P1-△-□		8		5~200	50	17.5~2	470	
RCP2-RMW-I-PM-4-***-P1-△-□		4		1~100	55	26~5	800	

* In the above model names, *** indicates the stroke, △ the cable length and □ the applicable options.

Options

Name	Model	Page(*)
Brake	B	→P24
With flange	FL	→P24
With foot bracket	FT	→P24

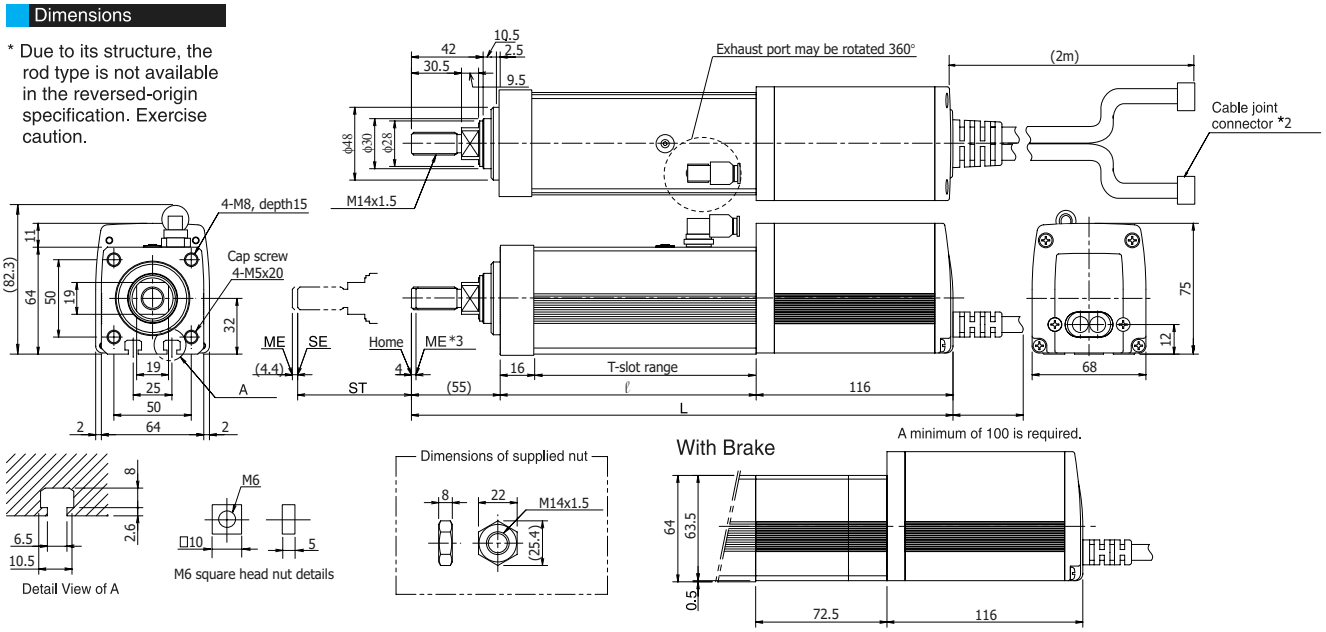
* Please refer to the RCP2 Catalog for more details.

Common Specifications

Drive system	Ball screw ϕ12mm, rolled C10
Backlash	0.05mm or less
Guide	——
Rod diameter	ϕ30mm
Rod non-rotative accuracy	±1.0°
Base	Material: Aluminum with white alumite treatment
Cable length (Note 3)	N: No cable, P: 1m, S: 3m, M: 5m, X□□: Length specification, R□□: Robot cable

Dimensions

* Due to its structure, the rod type is not available in the reversed-origin specification. Exercise caution.



■ Dimensions, Weight and Maximum Speed by Stroke

* The figures in parentheses apply to the brake type, while those in < > apply to a vertical application.

Stroke		50	100	150	200	250	300
ℓ		150	200	250	300	350	400
L		266 (338.5)	316 (338.5)	366 (438.5)	416 (488.5)	466 (538.5)	516 (588.5)
Weight (kg)		3.5	4.0	4.5	5.0	5.5	6.0
Maximum speed (mm/s)	Lead 16	320 <265>					
	Lead 8	200					
	Lead 4	100					

*1. Insert a tube with an outer diameter of ϕ6 into the exhaust port and extend the tu to a place where water does not reach.
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RCP2-CG	1 axis		X	O	X		→P25

* Please refer to the RCP2 Catalog for more details.

Caution

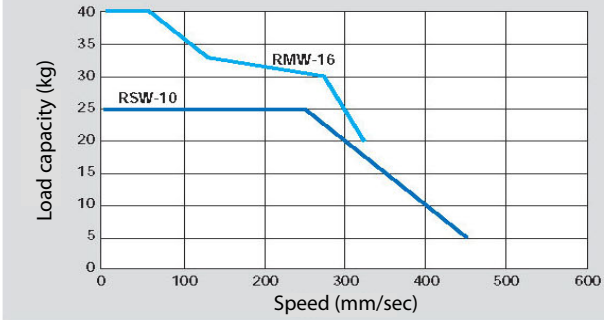
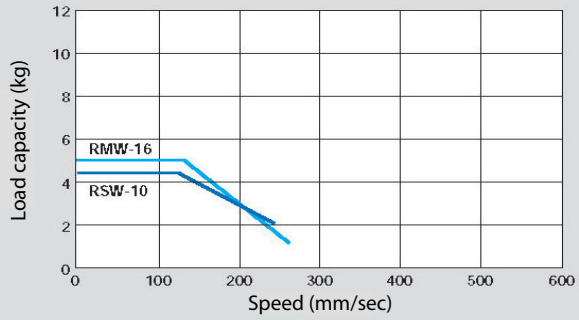
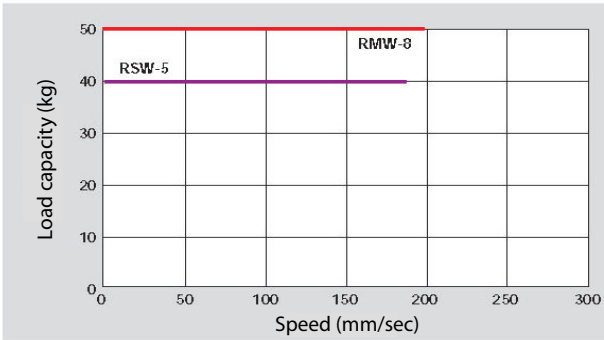
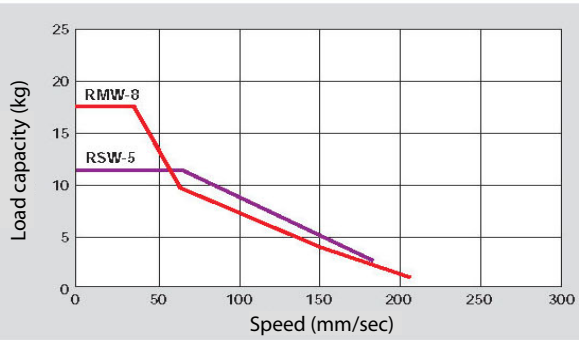
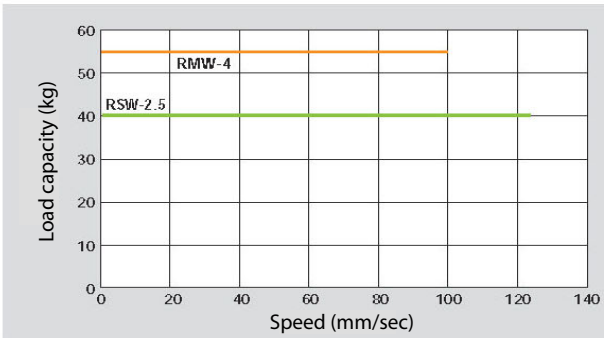
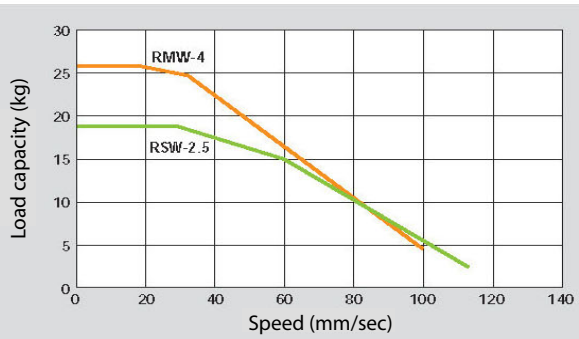
(Note 1) The figures in parentheses apply to a vertical application.
(Note 2) Load capacity at the rated acceleration rate.
(Note 3) The maximum cable length is 20m. Specify the desired length in meters (e.g., X08 = 8m).

Correlation Diagrams of Speed and Load Capacity

Max. Speed
450mm/sec

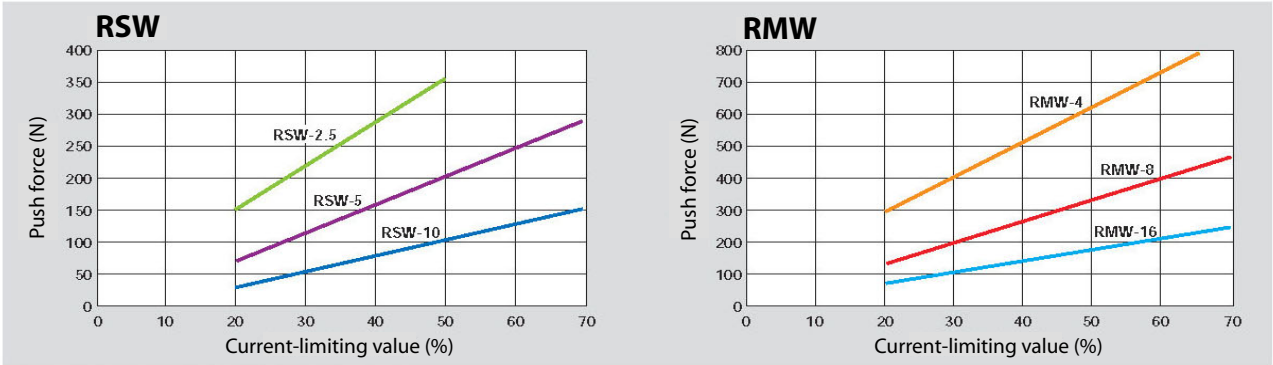
200mm/sec

125mm/sec

	Horizontal (Note 1)	Vertical (Note 2)
High Speed type		
Medium Speed type		
Low Speed type		

Note: The numbers shown after the type in the above graphs indicate the lead specification.
Note1: The horizontal application assumes the use of an external guide.
Note2: If operated under maximum load capacity, overshoot may occur. Therefore, please provide an allowance of approximately 70%.

Correlation Diagrams of Push Force and Current-Limiting Value



Note: The numbers shown after the type in the above graphs indicate the lead specification.

Controller

Please refer to the RCP2 Catalog for more details regarding the RCP2 controller.