

RCP4 Stopper Cylinder

First Step Guide Fourth Edition

Thank you for purchasing our product.
Make sure to read the Safety Guide and detailed Instruction Manual (DVD) included with the product in addition to this First Step Guide to ensure correct use.
This Instruction Manual is original.

Warning : Operation of this equipment requires detailed installation and operation instructions which are provided on the DVD Manual included in the box this device was packaged in. It should be retained with this device at all times.
A hardcopy of the Manual can be requested by contacting your nearest IAI Sales Office listed at the back cover of the Instruction Manual or on the First Step Guide.

- Using or copying all or part of this Instruction Manual without permission is prohibited.
- The company names, names of products and trademarks of each company shown in the sentences are registered trademarks.

Product Check

This product is comprised of the following parts if it is of standard configuration.
If you find any fault in the contained model or any missing parts, contact us or our distributor.

1. Parts (The option is excluded.)

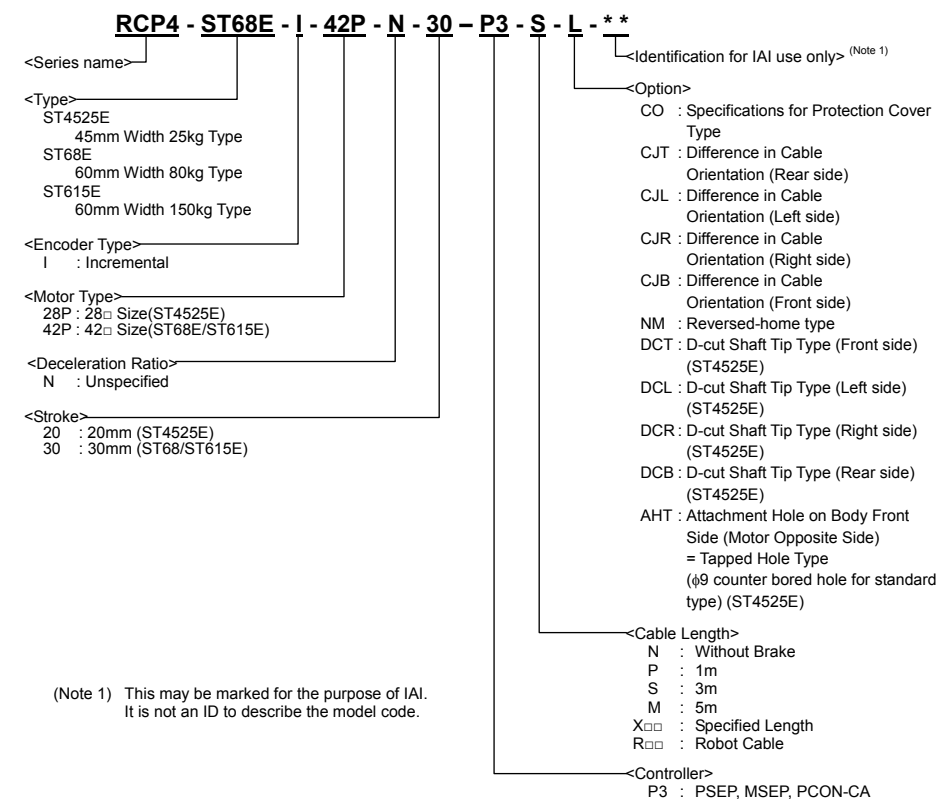
No.	Part Name	Model	Quantity	Remarks
1	Stopper Cylinder Main Body	Refer to "How to read the model plate", "How to read the model No."	1	
Accessories				
2	Motor • Encoder Cables	CB-CA-MPA□□□□ CB-CA-MPA□□□□-RB	1	For ST68E, ST615E □□□ shows the cable length (Example) □□□ : 020 = 2 [m]
		CB-CAN-MPA□□□□ CB-CAN-MPA□□□□-RB		For ST4525E □□□ shows the cable length (Example) □□□ : 020 = 2 [m]
3	First Step Guide		1	
4	Operation Manual (DVD)		1	
5	Safety Guide		1	

*1 Please refer to the wiring layout for the enclosed power supply and I/O cable.

2. How to read the model plate



3. How to read the model No.



Precautions in Handling

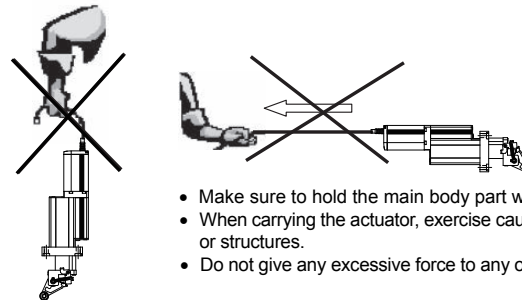
1. Handling of the Packed Product

Please concern the handling of the unit so you would not hit or drop it while carrying.

- If the shipping box is to be left standing, it should be in a horizontal position.
- Do not step or sit on the package.
- Do not place on the carton any heavy object that may cause the carton to deform, or an article whose shape allows a load to be concentrated at one point.

2. Handling of the Unpacked Product

Do not attempt to hold the cable when carrying the actuator, or pull the cables to move the unit.



- Make sure to hold the main body part when handling the unpackaged actuator.
- When carrying the actuator, exercise caution not to bump it against nearby objects or structures.
- Do not give any excessive force to any of the sections in the actuator.

Installation and Storage • Preservation Environment

1. Installation Environment

Do not use this product in the following environment.

Generally speaking, it should be an environment where a worker can work without any protective gear. Also make sure to keep enough work space necessary for maintenance.

- Location exposed to radiant heat from a huge heat source such as the heat treatment
- Location where the surrounding air temperature exceeds the range of 0 to 40°C
- Location where condensation occurs due to abrupt temperature changes
- Location where relative humidity exceeds 85%RH
- Location exposed to direct sunlight
- Location exposed to corrosive gases or combustible gases
- Location exposed to significant amount of dust, salt or iron powder (Outside of ordinary assembly plant)
- Location where water, oil (includes oil mist and cutting fluid) or chemical is splashed
- Location where the product main body receives vibration or hit impact

When using the product in any of the locations specified below, provide a sufficient shield.

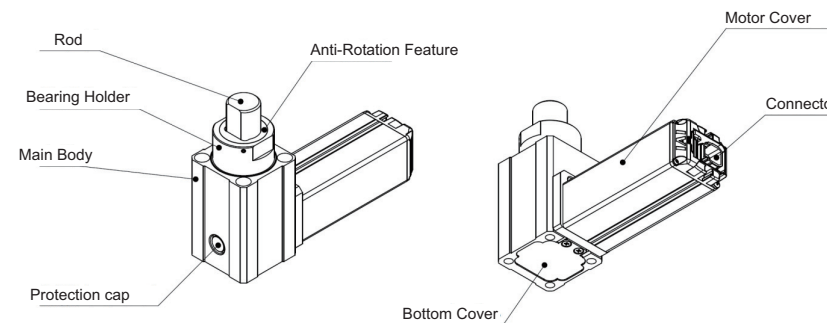
- Place subject to electrostatic noise
- Location where exposed to the influence of strong electric or magnetic field
- Location where exposed to the influence of ultraviolet or radiant rays

2. Storage and Preservation Environment

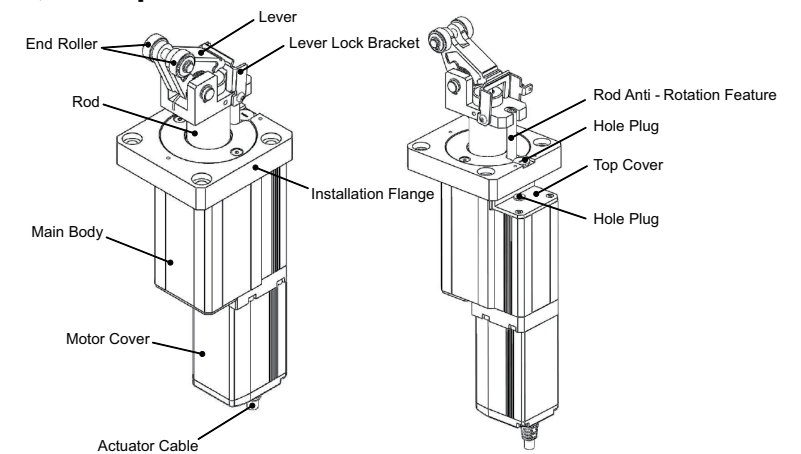
- The storage and preservation environment should comply with the same standards as those for the installation environment.
- In particular, when the machine is to be stored for a long time, pay close attention to environmental conditions so that no dew condensation forms. Unless specially specified, moisture absorbency protection is not included in the package when the machine is delivered. In the case that the machine is to be stored and preserved in an environment where dew condensation is anticipated, take the condensation preventive measures from outside of the entire package, or directly after opening the package.
- For storage and preservation temperature, the machine withstands temperatures up to 60°C for a short time, but in the case of the storage and preservation period of 1 month or more, control the temperature to 50°C or less.
- Storage and preservation should be performed in the horizontal condition. In the case it is stored in the packaged condition, follow the posture instruction if any displayed on the package.

Names of the Parts

[ST4525E]



[ST68E, ST615E]



Please refer to the Catalog or the Instruction Manual (DVD) for the dimensions and profile.

Attachment

Refer to the Instruction Manual (DVD) for the attachments of the actuator and loads.

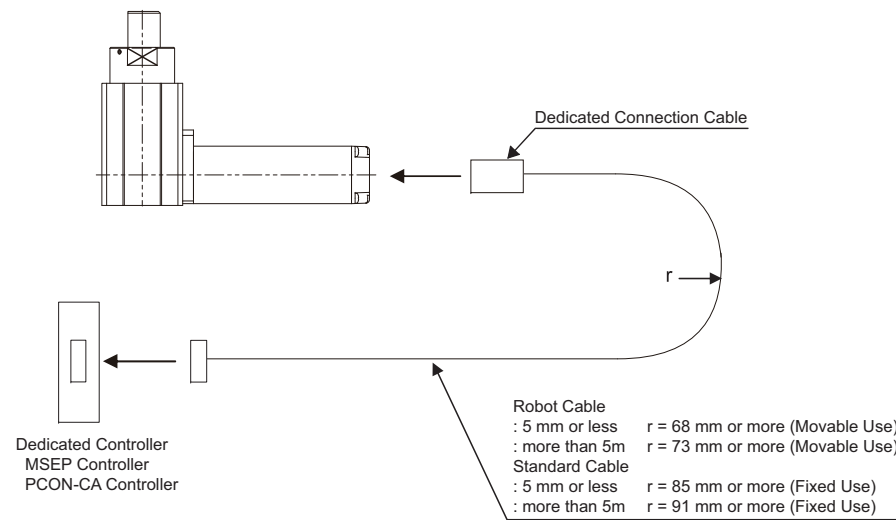
[Precautions for Attachments]

No.	Item	Precautions
1	Attachment	<ul style="list-style-type: none"> • In installation posture, only vertical mount is available. Cannot be mounted vertically, horizontally oriented on the wall or on the ceiling. • Utilize the attachment holes provided on the attachment plate for the attachment of the unit. For the size of tightening screws, use M5 for counterbore type, M6 for tapped type (option) of ST4525E, and M8 screws for ST68E and ST615E. • For installation of the main body of ST4525E, it is available to mount from the top for the counterbore type and from the top and bottom, two ways, for tapped type (option). For installation, make sure to have the distance from the bottom side of the pallet to the top side of the bearing holder 3mm or more as shown in the figures below. Distance less than 3mm may cause problems in stopping pallet or smooth control of transportation. • The ST68E and ST615E units can be mounted in 2 ways, one from the top surface of the attachment plate while the other is from the bottom. However, make sure the dimension from the bottom surface of the pallet to the top of the attachment plate is as shown in the figure on the right. Not following this may cause the pallet to stop or the transportation may not be carried out smoothly (by causing the pallet to overrun or to be pushed up). • Ensure a room for maintenance work.
2	Screws to be used	<ul style="list-style-type: none"> • For the bolts to be used, a high-tensile bolt complying with ISO-10.9 or more is • Make sure to have the effective length of screw engagement described below or more for the tightening of a bolt and a female screw. If female screw in steel → thread length same as nominal diameter If female screw in aluminum → thread length 1.8 times longer than nominal diameter

Connection Diagram

For the controller, only the dedicated controller manufactured by our company can be used.
Using other controllers may cause a problem such as burning the product, ignition or generating heat.
Use the dedicated cable enclosed in the package when connecting the actuator and the controller.

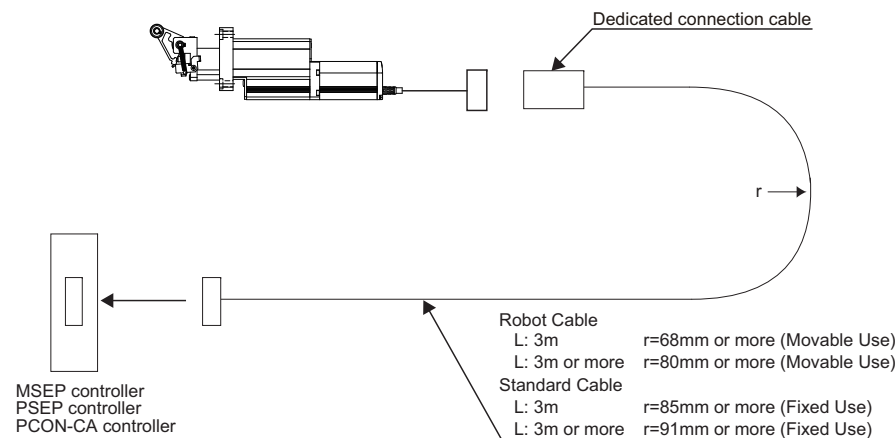
[ST4525E]



Dedicated connection cable
Motor encoder cable CB-CAN-MPA□□□,
Motor encoder robot cable CB-CAN-MPA□□□-RB

*) □□□ indicates the cable length. Up to 20m can be specified.
Example) 080 = 8m

[ST68E, ST615E]

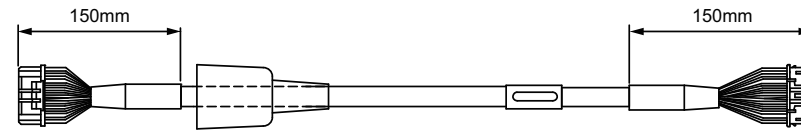


Dedicated connection cable
Power supply I/O cable : Standard cable CB-CA-MPA□□□
Robot cable CB-CA-MPA□□□-RB

*) □□□ indicates the cable length. Up to 20m can be specified.
Example) 080 = 8m

[Prohibited Items in the Cable Processing]

- Do not pull or bend forcibly the cable so as not to give any extra load or tension to the cable.
- Do not process the cable for extension or shortening by means of cutting out, combination or connecting with another cable.
- Do not bend the cable in the area from the connector end inward to 150mm on both ends.
Standard cable : CB-CA-MPA□□□, CB-CAN-MPA□□□
Robot cable : CB-CA-MPA□□□-RB, CB-CAN-MPA□□□-RB



- Do not let the cable flex at a single point.
- Do not let the cable bend, kink or twist.
- Do not pull the cable with a strong force.
- Do not let the cable receive a turning force at a single point.
- Do not pinch, drop a heavy object onto or cut the cable.
- When fixing the cable, provide a moderate slack and do not tension it too tight.
- Do not use spiral tube in any position where cables are bent frequently.

- Separate the I/O line, communication line and power line from each other. Arrange so that such lines are independently routed in the duct.
- Follow the instructions below when using a cable track.
 - If there is an indication to the cable for the space factor in a cable track, refer to the wiring instruction given by the supplier when storing the cable in the cable track.
 - Avoid the cables to get twined or twisted in the cable track, and also to have the cables move freely and do not tie them up. (Avoid tension being applied when the cables are bent.) Do not pile up cables. It may cause faster abrasion of the sheaths or cable breakage..

- Note:**
- When the cable is connected or disconnected, make sure to turn off the power to the controller. When the cable is connected or disconnected with the controller power turned ON, it might cause a malfunction of the actuator and result in a serious injury or damage to the machinery.
 - When the connector connection is not correct, it would be dangerous because of a malfunction of the actuator. Make sure to confirm that the connector is connected correctly.

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