

RCP6(S)-TA7C <Single Block Specifications>

Battery-less
Absolute

Motor
Unit
Type

Coupled
Motor

Body Width
70
mm

24v
Stepper
Motor

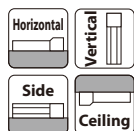
| | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---------------------------|---|--------------------------------|---|--|---|------------------------|---|---|---|---|---|--|---|-------------|---|-------------|
| ■ Model Specification Items | <div></div> | — | TA7C | — | WA | — | 56P | — | <div></div> | — | <div></div> | — | <div></div> | — | <div></div> | — | <div></div> | — | <div></div> |
| | Series | — | Type | — | Encoder Type | — | Motor Type | — | Lead | — | Stroke | — | Applicable Controller/I/O Type | — | Cable Length | — | Options | | |
| | RCP6: Separate Controller RCP6S: Built-in Controller | | WA: Battery-less Absolute | | 56P: Stepper Motor 56□ Size | | 24: 24mm 16: 16mm 8: 8mm 4: 4mm | | 25: 25mm 300: 300mm | | [RCP6] P3: PCON MCON MSEL P5: RCM-P6PC [RCP6S] SE: SIO Type | | N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable | | Please refer to the options table below. | | | | |

* RCP6 does not include a controller. RCP6S includes a built-in controller.

* Please refer to P.17 for more information about the model specification items.

* RCP6 does not include a controller. RCP6S includes a built-in controller.

* Please refer to P.17 for more information about the model specification items.



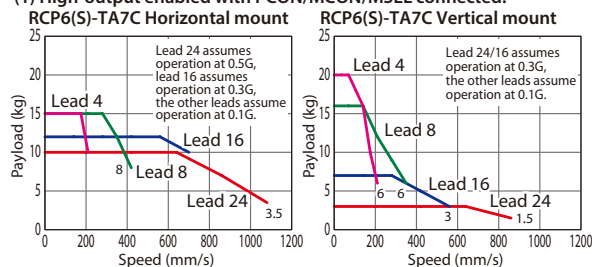
*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.



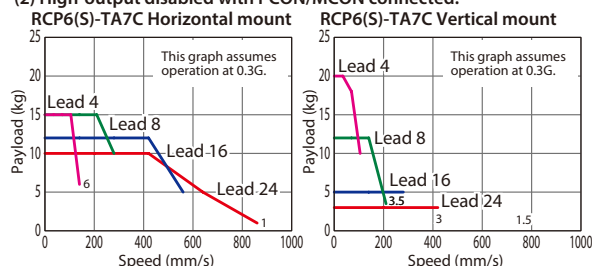
| | |
|-----------------------------|--|
| POINT Selection Notes | (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use. |
| | (2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.227 for more details. |
| | (3) Please refer to P205 for performing push-motion operation. |
| | (4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information. |

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/MCON/MSEL connected.



(2) High-output disabled with PCON/MCON connected.



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

| Model Number | Lead (mm) | Connected Controller | Max. Payload Horizontal (kg) | Max. Payload Vertical (kg) | Max. Push Force (N)* | Stroke (mm) |
|-----------------------------|-----------|---|------------------------------|----------------------------|----------------------|-------------|
| RCP6(S)-TA7C-WA-56P-24-①②③④ | 24 | High-output Enabled High-output Disabled | 10 | 3 | 112 | 25~300 |
| RCP6(S)-TA7C-WA-56P-16-①②③④ | 16 | High-output Enabled High-output Disabled | 12 | 7 5 | 168 | |
| RCP6(S)-TA7C-WA-56P-8-①②③④ | 8 | High-output Enabled High-output Disabled | 15 | 16 12 | 336 | |
| RCP6(S)-TA7C-WA-56P-4-①②③④ | 4 | High-output Enabled High-output Disabled | 15 | 20 | 673 | |

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Stroke and Max. Speed

(Unit: mm/s)

| Lead (mm) | Connected Controller | 25~300 (mm) |
|-----------|----------------------|-------------|
| 24 | High-output Enabled | 1,080 <860> |
| | High-output Disabled | 860 <420> |
| 16 | High-output Enabled | 700 <560> |
| | High-output Disabled | 560 <280> |
| 8 | High-output Enabled | 420 <350> |
| | High-output Disabled | 280 <210> |
| 4 | High-output Enabled | 210 |
| | High-output Disabled | 140 <105> |

Values in brackets < > are for vertical use.

① Stroke

| Stroke (mm) | RCP6 | RCP6S |
|-------------|------|-------|
| 25 | ○ | ○ |
| 50 | ○ | ○ |
| 75 | ○ | ○ |
| 100 | ○ | ○ |
| 125 | ○ | ○ |
| 150 | ○ | ○ |
| 175 | ○ | ○ |
| 200 | ○ | ○ |
| 250 | ○ | ○ |
| 300 | ○ | ○ |

④ Options

| Name | Option Code | Reference Page |
|-------------------------------|-------------|----------------|
| Brake | B | See P.189 |
| Cable exit direction (Top) | CJT | See P.189 |
| Cable exit direction (Right) | CJR | See P.189 |
| Cable exit direction (Left) | CJL | See P.189 |
| Cable exit direction (Bottom) | CJB | See P.189 |
| Non-motor end specification | NM | See P.194 |

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

③ Cable Length

| Cable Type | Cable Code | RCP6 | | RCP6S |
|------------------|----------------------|------|----|-------|
| | | P3 | P5 | SE |
| Standard | P (1m) | ○ | ○ | ○ |
| | S (3m) | ○ | ○ | ○ |
| | M (5m) | ○ | ○ | ○ |
| | X10 (10m) | ○ | ○ | ○ |
| Specified Length | X11 (11m) ~X15 (15m) | ○ | ○ | ○ |
| | X16 (16m) ~X20 (20m) | ○ | ○ | ○ |
| | R01 (1m) ~R03 (3m) | ○ | ○ | ○ |
| | R04 (4m) ~R05 (5m) | ○ | ○ | ○ |
| Robot Cable | R06 (6m) ~R10 (10m) | ○ | ○ | ○ |
| | R11 (11m) ~R15 (15m) | ○ | ○ | ○ |
| | R16 (16m) ~R20 (20m) | ○ | ○ | ○ |
| | R21 (21m) ~R25 (25m) | ○ | ○ | ○ |

* Please refer to P.267 and 283 for more information regarding the maintenance cables.

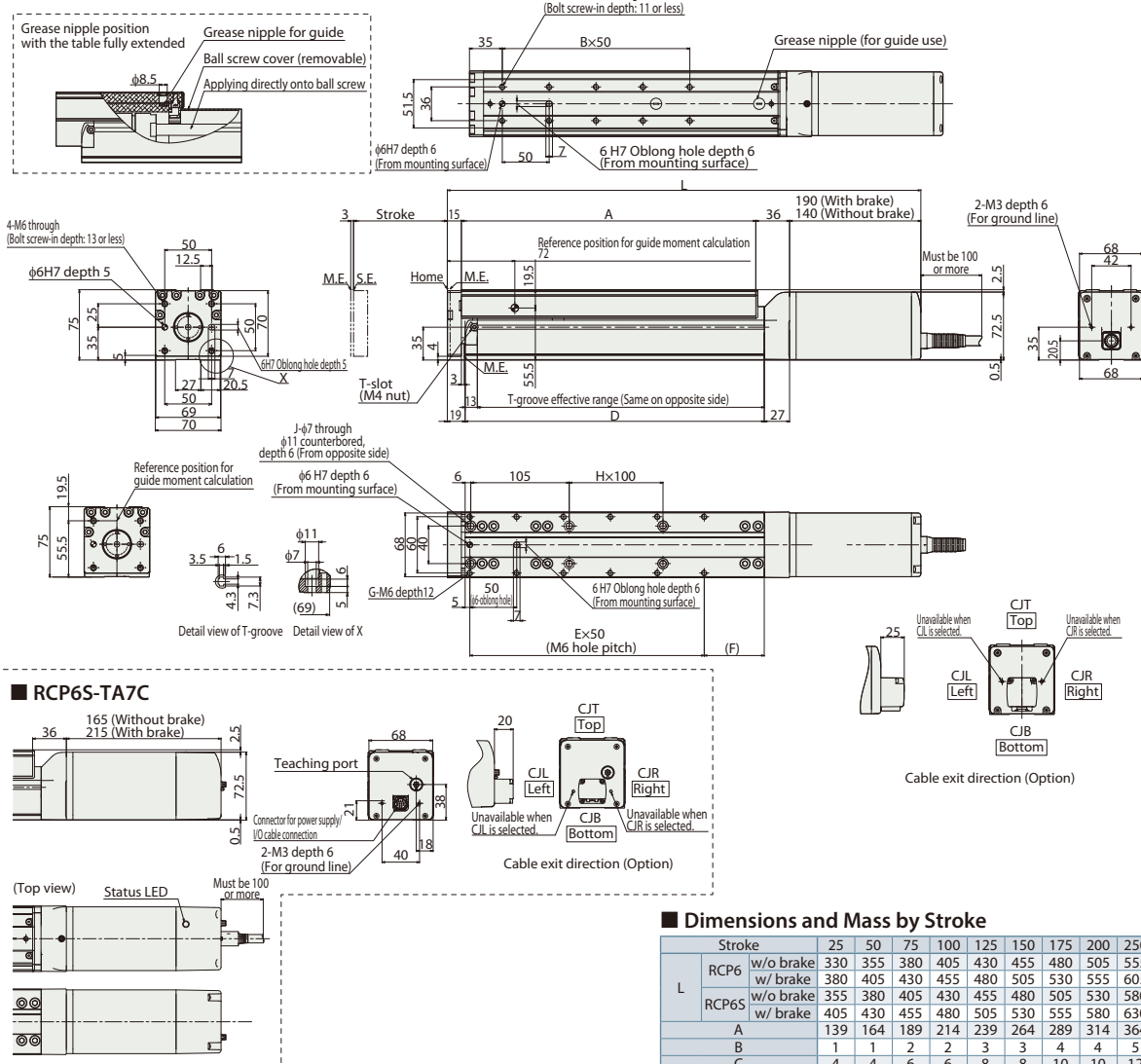
Actuator Specifications

| Item | Description |
|------------------------------------|---|
| Drive system | Ball screw φ12mm, rolled C10 |
| Positioning repeatability | ±0.01mm |
| Lost motion | 0.1mm or less |
| Base | Material: Aluminum with white alumite treatment |
| Static allowable moment | Ma: 115N·m, Mb: 115N·m, Mc: 229N·m |
| Dynamic allowable moment (*) | Ma: 44.7N·m, Mb: 44.7N·m, Mc: 89.1N·m |
| Ambient operating temp. & humidity | 0~40°C, 85% RH or less (Non-condensing) |

(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

Please refer to RCP6 instruction manual regarding the displacement of the table.









■ Dimensions and Mass by Stroke

| | | Stroke | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 250 | 300 | |
|-----------|-------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L | RCP6 | w/o brake | 330 | 355 | 380 | 405 | 430 | 455 | 480 | 505 | 555 | 605 | |
| | | w/ brake | 380 | 405 | 430 | 455 | 480 | 505 | 530 | 555 | 605 | 655 | |
| | RCP6S | w/o brake | 355 | 380 | 405 | 430 | 455 | 480 | 505 | 530 | 580 | 630 | |
| | | w/ brake | 405 | 430 | 455 | 480 | 505 | 530 | 555 | 580 | 630 | 680 | |
| | A | | 139 | 164 | 189 | 214 | 239 | 264 | 289 | 314 | 364 | 414 | |
| | B | | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 6 | |
| | C | | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 14 | |
| | D | | 144 | 169 | 194 | 219 | 244 | 269 | 294 | 319 | 369 | 419 | |
| | E | | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | |
| | F | | 39 | 64 | 39 | 64 | 39 | 64 | 39 | 64 | 64 | 64 | |
| G | | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 16 | | |
| H | | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | | |
| J | | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | | |
| Mass (kg) | RCP6 | w/o brake | 3.9 | 4.1 | 4.3 | 4.5 | 5.0 | 5.2 | 5.4 | 5.2 | 5.4 | 5.8 | 6.3 |
| | | w/ brake | 4.3 | 4.5 | 4.7 | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | 6.3 | 6.7 | |
| | RCP6S | w/o brake | 4.0 | 4.3 | 4.5 | 4.7 | 4.9 | 5.1 | 5.3 | 5.6 | 6.0 | 6.4 | |
| | | w/ brake | 4.5 | 4.7 | 4.9 | 5.1 | 5.3 | 5.6 | 5.8 | 6.0 | 6.4 | 6.9 | |

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

| Name | External view | Max. number of controlled axes | Input power | Control method | | | Maximum number of positioning points | Reference page | |
|------------------|---|--------------------------------|---|--|---------------|---------|--|-------------------------|--|
| | | | | Positioner | Pulse train | Program | Network * Option | | |
| PCON-CYB/PLB/POB |  | 1 | DC24V | ● * Option | ● * Option | — | Network cannot be selected | 64 | Please contact IAI for more information. |
| PCON-CB/CGB |  | 1 | | ● * Option | ● * Option | — | <div>DeviceNet</div> <div>MECHATROLINK</div> <div>CC-Link</div> <div>EtherCAT</div> <div>EtherNet/IP</div> <div>CompoNet</div> <div>SSCNET III/H</div> | (768 for network spec.) | Please see P.255 |
| MCON-C/CG |  | 8 | | This model is network-compatible only. | | | | 256 | Please contact IAI for more information. |
| MCON-LC/LCG |  | 6 | | — | — | ● | | 256 | Please contact IAI for more information. |
| MSEL-PC/PG |  | 4 | Single-phase 100 ~ 230 VAC | — | — | ● | Note: The type of compatible networks will vary depending on the controller. Please refer to reference page for more information. | 30,000 | Please contact IAI for more information. |
| RCM-P6PC |  | 1 | Usable within the RCP6S Gateway system. | | | | | 768 | Please see P.279 |

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA7C <Double Block Specification>

Battery-less Absolute

Motor Unit Type

Coupled Motor

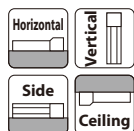
Body Width 70 mm

24v Stepper Motor

| Model Specification Items | Series | Type | Encoder Type | Motor Type | Lead | Stroke | Applicable Controller/I/O Type | Cable Length | Options |
|---------------------------|---|------|---------------------------|--------------------------------|------------------------------|------------------------|---|---|---|
| | RCP6: Separate Controller RCP6S: Built-in Controller | TA7C | WA: Battery-less Absolute | 56P: Stepper Motor 56□ Size | 16: 16mm 8: 8mm 4: 4mm | 40: 40mm 390: 390mm | [RCP6] P3: PCON MCON MSEL P5: RCM-P6PC [RCP6S] SE: SIO Type | N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable | Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB". |

* RCP6 does not include a controller. RCP6S includes a built-in controller.

* Please refer to P.17 for more information about the model specification items.

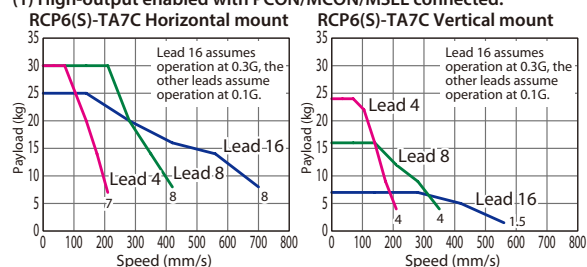


*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

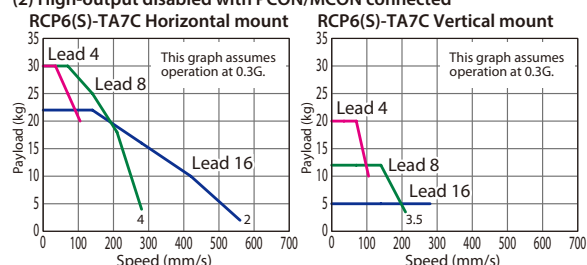


Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/MCON/MSEL connected.



(2) High-output disabled with PCON/MCON connected



| | |
|--------------------------|---|
| POINT Selection Notes | (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use. |
| | (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.228 for more details. |
| | (3) Please refer to P.205 for performing push-motion operation. |
| | (4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information. |

Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

| Model Number | Lead (mm) | Connected Controller | Max. Payload | | Max. Push Force (N)* | Stroke (mm) |
|-----------------------------------|-----------|----------------------|-----------------|---------------|----------------------|-------------|
| | | | Horizontal (kg) | Vertical (kg) | | |
| RCP6(S)-TA7C-WA-56P-16-①-②-③-DB-④ | 16 | High-output Enabled | 25 | 7 | 168 | 40~390 |
| | | High-output Disabled | 22 | 5 | | |
| RCP6(S)-TA7C-WA-56P-8-①-②-③-DB-④ | 8 | High-output Enabled | 30 | 16 | 336 | |
| | | High-output Disabled | | 12 | | |
| RCP6(S)-TA7C-WA-56P-4-①-②-③-DB-④ | 4 | High-output Enabled | 30 | 24 | 673 | |
| | | High-output Disabled | | 20 | | |

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed

(Unit: mm/s)

| Lead (mm) | Connected Controller | 40~290 (mm) | 340 (mm) | 390 (mm) |
|-----------|----------------------|-------------|----------|----------|
| 16 | High-output Enabled | 700<560> | | 600<560> |
| | High-output Disabled | | 560<280> | |
| 8 | High-output Enabled | 420<350> | 365<350> | 300 |
| | High-output Disabled | | 280<210> | |
| 4 | High-output Enabled | 210 | 180 | 150 |
| | High-output Disabled | | 105 | |

Values in brackets < > are for vertical use.

① Stroke

| Stroke (mm) | RCP6 | RCP6S |
|-------------|------|-------|
| 40 | ○ | ○ |
| 65 | ○ | ○ |
| 90 | ○ | ○ |
| 140 | ○ | ○ |
| 190 | ○ | ○ |
| 240 | ○ | ○ |
| 290 | ○ | ○ |
| 340 | ○ | ○ |
| 390 | ○ | ○ |

③ Cable Length

| Cable Type | Cable Code | RCP6 | | RCP6S |
|------------------|----------------------|------|----|-------|
| | | P3 | P5 | SE |
| Standard | P(1m) | ○ | ○ | ○ |
| | S(3m) | ○ | ○ | ○ |
| | M(5m) | ○ | ○ | ○ |
| Specified 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) | ○ | ○ | ○ |

* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

④ Options

| Name | Option Code | Reference Page |
|-------------------------------|-------------|----------------|
| Brake | B | See P.189 |
| Cable exit direction (Top) | CJT | See P.189 |
| Cable exit direction (Right) | CJR | See P.189 |
| Cable exit direction (Left) | CJL | See P.189 |
| Cable exit direction (Bottom) | CJB | See P.189 |
| Non-motor end specification | NM | See P.194 |

Actuator Specifications

| Item | Description |
|------------------------------------|---|
| Drive system | Ball screw φ12mm, rolled C10 |
| Positioning repeatability | ±0.01mm |
| Lost motion | 0.1mm or less |
| Base | Material: Aluminum with white alumite treatment |
| Static allowable moment | Ma: 620N·m, Mb: 620N·m, Mc: 458N·m |
| Dynamic allowable moment (*) | Ma: 196N·m, Mb: 196N·m, Mc: 145N·m |
| Ambient operating temp. & humidity | 0~40°C, 85% RH or less (Non-condensing) |

(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

Please refer to RCP6 instruction manual regarding the displacement of the table.

RCP6(S)-TA7R <Single Block Specifications>

Battery-less Absolute

Motor Unit Type

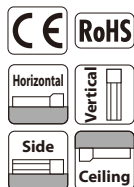
Side-mounted Motor

Body Width 70mm

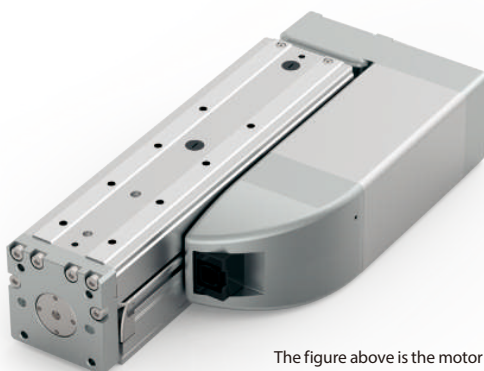
24v Stepper Motor

| Model Specification Items | Series | Type | Encoder Type | Motor Type | Lead | Stroke | Applicable Controller / I/O Type | Cable Length | Options |
|---------------------------|---|------|---------------------------|--------------------------------|--|------------------------|---|---|---|
| | RCP6: Separate Controller RCP6S: Built-in Controller | TA7R | WA: Battery-less Absolute | 56P: Stepper Motor 56□ Size | 24: 24mm 16: 16mm 8: 8mm 4: 4mm | 25: 25mm 300: 300mm | [RCP6] P3: PCON MCON MSEL P5: RCM-P6PC [RCP6S] SE: SIO Type | N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable | Please refer to the options table below. *Please make sure to specify either ML or MR when ordering the side-mounted motor type. |

* RCP6 does not include a controller. RCP6S includes a built-in controller.
* Please refer to P.17 for more information about the model specification items.



*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

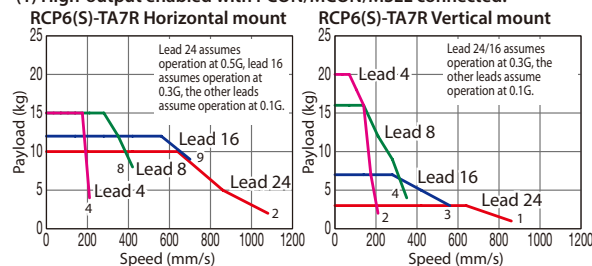


The figure above is the motor side-mounted to the left (ML).

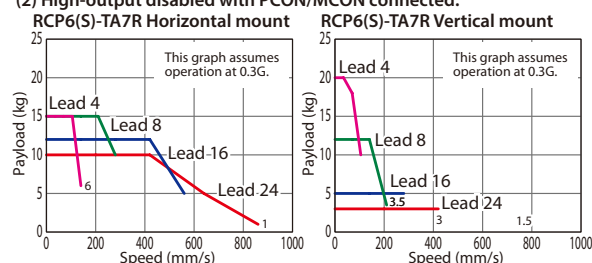
| | |
|-----------------------|--|
| POINT Selection Notes | (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use. |
| | (2) The actuator specification displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.229 for more details. |
| | (3) Please refer to P.205 for performing push-motion operation. |
| | (4) Depending on the ambient operational temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information. |

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/MCON/MSEL connected.



(2) High-output disabled with PCON/MCON connected.



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

Stroke and Max. Speed

(Unit: mm/s)

| Model Number | Lead (mm) | Connected Controller | Max. Payload Horizontal (kg) Vertical (kg) | Max. Push Force (N)* | Stroke (mm) | Lead (mm) | Connected Controller | 25~300 (mm) |
|--------------------------------|-----------|----------------------|---|----------------------|-------------|-----------|----------------------|-------------|
| RCP6(S)-TA7R-WA-56P-24-①-②-③-④ | 24 | High-output Enabled | 10 | 3 | 112 | 24 | High-output Enabled | 1,080 <860> |
| | | High-output Disabled | | | | | High-output Disabled | 860 <420> |
| RCP6(S)-TA7R-WA-56P-16-①-②-③-④ | 16 | High-output Enabled | 12 | 7 | 168 | 16 | High-output Enabled | 700 <560> |
| | | High-output Disabled | | 5 | | | High-output Disabled | 560 <280> |
| RCP6(S)-TA7R-WA-56P-8-①-②-③-④ | 8 | High-output Enabled | 15 | 16 | 336 | 8 | High-output Enabled | 420 <350> |
| | | High-output Disabled | | 12 | | | High-output Disabled | 280 <210> |
| RCP6(S)-TA7R-WA-56P-4-①-②-③-④ | 4 | High-output Enabled | 15 | 20 | 673 | 4 | High-output Enabled | 210 |
| | | High-output Disabled | | | | | High-output Disabled | 140 <105> |

Legend: ① Stroke ② Applicable controller/I/O type ③ Cable length ④ Options

Values in brackets < > are for vertical use.

① Stroke

| Stroke (mm) | RCP6 | RCP6S |
|-------------|------|-------|
| 25 | ○ | ○ |
| 50 | ○ | ○ |
| 75 | ○ | ○ |
| 100 | ○ | ○ |
| 125 | ○ | ○ |
| 150 | ○ | ○ |
| 175 | ○ | ○ |
| 200 | ○ | ○ |
| 250 | ○ | ○ |
| 300 | ○ | ○ |

③ Cable Length

| Cable Type | Cable Code | P3 | P5 | SE |
|------------------|----------------------|----|----|----|
| Standard | P (1m) | ○ | ○ | ○ |
| | S (3m) | ○ | ○ | ○ |
| | M (5m) | ○ | ○ | ○ |
| Specified 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) | ○ | ○ | ○ |
| | | ○ | ○ | ○ |

* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

④ Options

| Name | Option Code | Reference Page |
|---------------------------------|-------------|----------------|
| Brake | B | See P.189 |
| Cable exit direction (Outside) | CJO | See P.189 |
| Motor side-mounted to the left | ML | See P.193 |
| Motor side-mounted to the right | MR | See P.193 |
| Non-motor end specification | NM | See P.194 |

When selecting multiple options, please list them in alphabetical order. (e.g. B-CJB-NM)

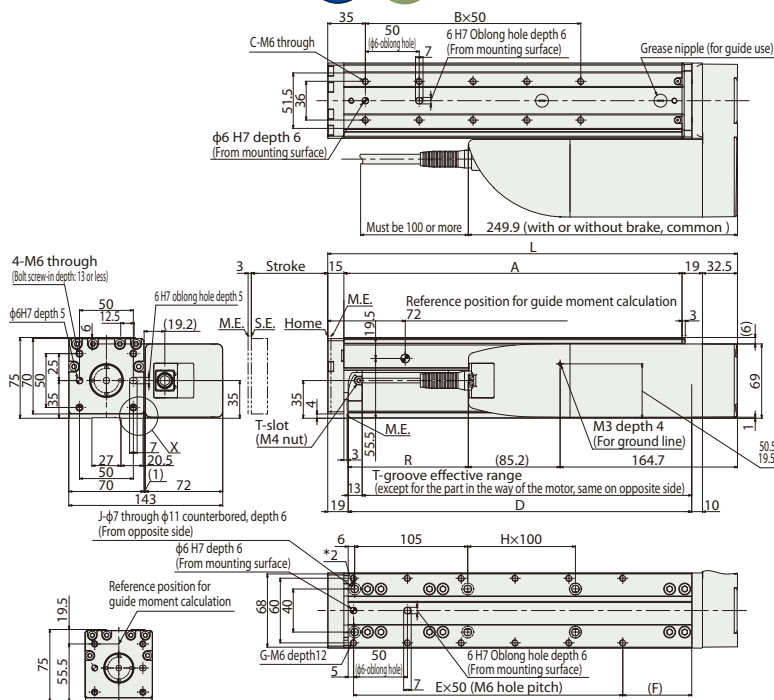
Actuator Specifications

| Item | Description |
|------------------------------------|---|
| Drive system | Ball screw φ12mm, rolled C10 |
| Positioning repeatability | ±0.01mm |
| Lost motion | 0.1mm or less |
| Base | Material: Aluminum with white alumite treatment |
| Static allowable moment | Ma: 115N·m, Mb: 115N·m, Mc: 229N·m |
| Dynamic allowable moment (*) | Ma: 44.7N·m, Mb: 44.7N·m, Mc: 89.1N·m |
| Ambient operating temp. & humidity | 0~40°C, 85% RH or less (Non-condensing) |

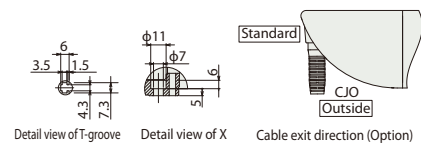
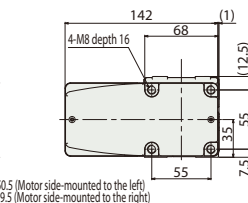
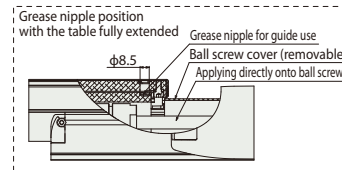
(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

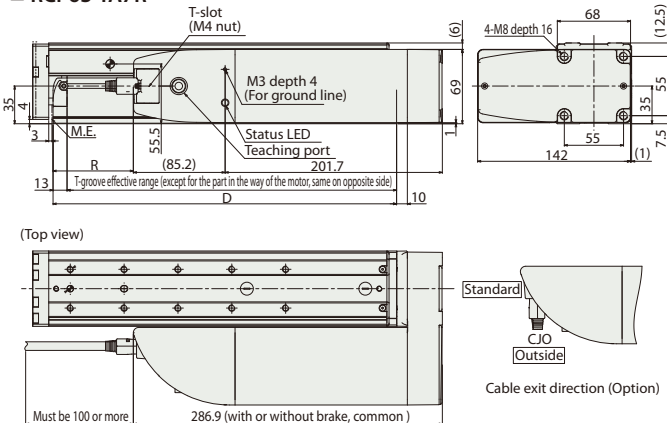
Please refer to RCP6 instruction manual regarding the displacement of the table.



- *1 When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end
- *2 For the single block type with 25~75mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the φ7 front mounting holes on the top surface because the motor unit interferes.
Please use the mounting screw holes on the bottom surface.



■ RCP6S-TA7R









■ Dimensions and Mass by Stroke

| Stroke | | 25 | 50 | 75 | 100 | 125 | 150 | 175 | 200 | 250 | 300 | |
|--------------|-------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| A | | 205.5 | 230.5 | 255.5 | 280.5 | 305.5 | 330.5 | 355.5 | 380.5 | 430.5 | 480.5 | |
| L | | 139 | 164 | 189 | 214 | 239 | 264 | 289 | 314 | 364 | 414 | |
| B | | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 6 | |
| C | | 4 | 4 | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 14 | |
| D | | 144 | 169 | 194 | 219 | 244 | 269 | 294 | 319 | 369 | 419 | |
| E | | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | |
| F | | 39 | 64 | 39 | 64 | 39 | 64 | 39 | 64 | 64 | 64 | |
| G | | 6 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 14 | 16 | |
| H | | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | |
| J | | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 8 | 8 | |
| R * | RCP6 | -63.4 | -38.4 | -13.4 | 11.6 | 36.6 | 61.6 | 86.6 | 111.6 | 161.6 | 211.6 | |
| | RCP6S | -100.4 | -75.4 | -50.4 | -25.4 | -0.4 | 24.6 | 49.6 | 74.6 | 124.6 | 174.6 | |
| Mass (kg) | RCP6 | w/o brake | 4.4 | 4.6 | 4.9 | 5.1 | 5.3 | 5.5 | 5.7 | 5.9 | 6.4 | 6.8 |
| | | w/ brake | 4.5 | 4.8 | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 | 6.5 | 6.9 |
| | RCP6S | w/o brake | 4.5 | 4.8 | 5.0 | 5.2 | 5.4 | 5.6 | 5.8 | 6.1 | 6.5 | 6.9 |
| | | w/ brake | 4.6 | 4.9 | 5.1 | 5.3 | 5.5 | 5.7 | 5.9 | 6.2 | 6.6 | 7.0 |

* If the length for R is negative in the table below, the length of the actuator body is shorter than the motor unit.

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

| Name | External view | Max. number of controlled axes | Input power | Control method | | | Maximum number of positioning points | Reference page | |
|------------------|---|--------------------------------|---|--|---------------|---------|--|--------------------------------|--|
| | | | | Positioner | Pulse train | Program | | | Network * Option |
| PCON-CYB/PLB/POB |  | 1 | DC24V | ● * Option | ● * Option | — | Network cannot be selected | 64 | Please contact IAI for more information. |
| PCON-CB/CGB |  | 1 | | ● * Option | ● * Option | — | DeviceNet CC-Link EtherCAT EtherNet/IP | 512 (768 for network spec.) | Please see P.255 |
| MCON-C/CG |  | 8 | | This model is network-compatible only. | | | CompoNet | 256 | Please contact IAI for more information. |
| MCON-LC/LCG |  | 6 | | — | — | ● | SSCNET/IIH | 256 | Please contact IAI for more information. |
| MSEL-PC/PG |  | 4 | Single-phase 100 ~ 230 VAC | — | — | ● | Note: - The type of compatible networks will vary depending on the controller. Please refer to reference page for more information. | 30,000 | Please contact IAI for more information. |
| RCM-P6PC |  | 1 | Usable within the RCP6S Gateway system. | | | | | 768 | Please see P.279 |

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.

RCP6(S)-TA7R <Double Block Specification>

Battery-less Absolute

Motor Unit Type

Side-mounted Motor

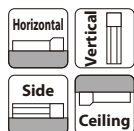
Body Width 70mm

24v Stepper Motor

| Model Specification Items | Series | Type | Encoder Type | Motor Type | Lead | Stroke | Applicable Controller/I/O Type | Cable Length | Options |
|---------------------------|---|------|---------------------------|--------------------------------|------------------------------|--------------------------------------|---|---|---|
| | RCP6: Separate Controller RCP6S: Built-in Controller | TA7R | WA: Battery-less Absolute | 56P: Stepper Motor 56□ Size | 16: 16mm 8: 8mm 4: 4mm | 40: 40mm 160: 160mm 390: 390mm | [RCP6] P3: PCON MCON MSEL P5: RCM-P6PC [RCP6S] SE: SIO Type | N: None P: 1m S: 3m M: 5m X□□: Specified Length R□□: Robot Cable | Please refer to the options table below. * Model number symbols should be written in alphabetical order, including "DB". |

* RCP6 does not include a controller. RCP6S includes a built-in controller.

* Please refer to P.17 for more information about the model specification items.



*Some limitations may apply to horizontal/side/ceiling mountings depending on the model. See page 204. Please contact IAI for more information.

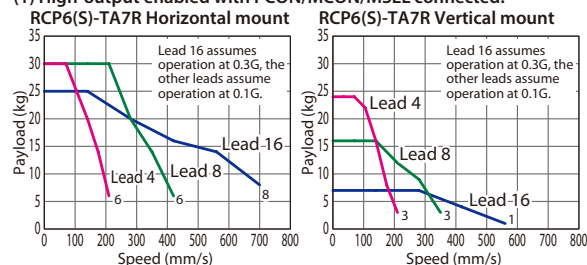


The figure above is the motor side-mounted to left (ML).

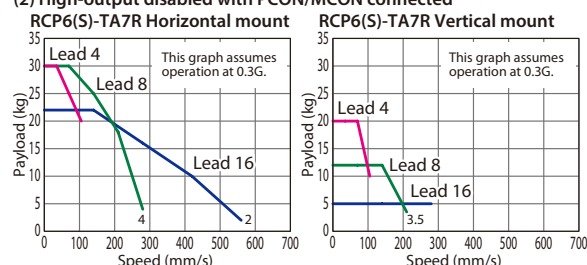
| | |
|--------------------------|---|
| POINT Selection Notes | (1) The maximum acceleration/deceleration is 1G for horizontal, and 0.5G for vertical use. |
| | (2) The actuator specifications displays the payload's maximum value, but it will vary depending on the acceleration and speed. Please refer to the "Selection Guidelines" (Tables of Payload by Speed/Acceleration) on P.230 for more details. |
| | (3) Please refer to P205 for performing push-motion operation. |
| | (4) Depending on the ambient operating temperature, duty control is necessary for the RCP6S (built-in controller type) with lead 4/8/16. Please refer to P.247 for more information. |

Correlation Diagrams of Speed and Payload

(1) High-output enabled with PCON/MCON/MSEL connected.



(2) High-output disabled with PCON/MCON connected



Actuator Specifications

Lead and Payload

* Push force only available during push mode w / limited speed.

| Lead and Payload | | | | | | |
|-----------------------------------|-----------|----------------------|-----------------|---------------|----------------------|-------------|
| Model Number | Lead (mm) | Connected Controller | Max. Payload | | Max. Push Force (N)* | Stroke (mm) |
| | | | Horizontal (kg) | Vertical (kg) | | |
| RCP6(S)-TA7R-WA-56P-16-①-②-③-DB-④ | 16 | High-output Enabled | 25 | 7 | 168 | 40~390 |
| | | High-output Disabled | 22 | 5 | | |
| RCP6(S)-TA7R-WA-56P-8-①-②-③-DB-④ | 8 | High-output Enabled | 30 | 16 | 336 | |
| | | High-output Disabled | | 12 | | |
| RCP6(S)-TA7R-WA-56P-4-①-②-③-DB-④ | 4 | High-output Enabled | 30 | 24 | 673 | |
| | | High-output Disabled | | 20 | | |

Legend: ① Stroke ② Applicable controllers/I/O type ③ Cable length ④ Options

Stroke and Max Speed

(Unit: mm/s)

| Lead (mm) | Connected Controller | 40~290 (mm) | 340 (mm) | 390 (mm) |
|-----------|----------------------|-------------|----------|----------|
| 16 | High-output Enabled | 700<560> | | 600<560> |
| | High-output Disabled | | 560<280> | |
| 8 | High-output Enabled | 420<350> | 365<350> | 300 |
| | High-output Disabled | | 280<210> | |
| 4 | High-output Enabled | 210 | 180 | 150 |
| | High-output Disabled | | 105 | |

Values in brackets <> are for vertical use.

① Stroke

| Stroke (mm) | RCP6 | RCP6S |
|-------------|------|-------|
| 40 | ○ | ○ |
| 65 | ○ | ○ |
| 90 | ○ | ○ |
| 140 | ○ | ○ |
| 190 | ○ | ○ |
| 240 | ○ | ○ |
| 290 | ○ | ○ |
| 340 | ○ | ○ |
| 390 | ○ | ○ |

④ Options

| Name | Option Code | Reference Page |
|---------------------------------|-------------|----------------|
| Brake | B | See P.189 |
| Cable exit direction (Outside) | CJO | See P.189 |
| Motor side-mounted to the left | ML | See P.193 |
| Motor side-mounted to the right | MR | See P.193 |
| Non-motor end specification | NM | See P.194 |

③ Cable Length

| Cable Type | Cable Code | RCP6 | | RCP6S |
|------------------|----------------------|------|----|-------|
| | | P3 | P5 | SE |
| Standard | P(1m) | ○ | ○ | ○ |
| | S(3m) | ○ | ○ | ○ |
| | M(5m) | ○ | ○ | ○ |
| | | ○ | ○ | ○ |
| Specified 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) | ○ | ○ | ○ |
| | | ○ | ○ | ○ |

* Please refer to P. 267 and 283 for more information regarding the maintenance cables.

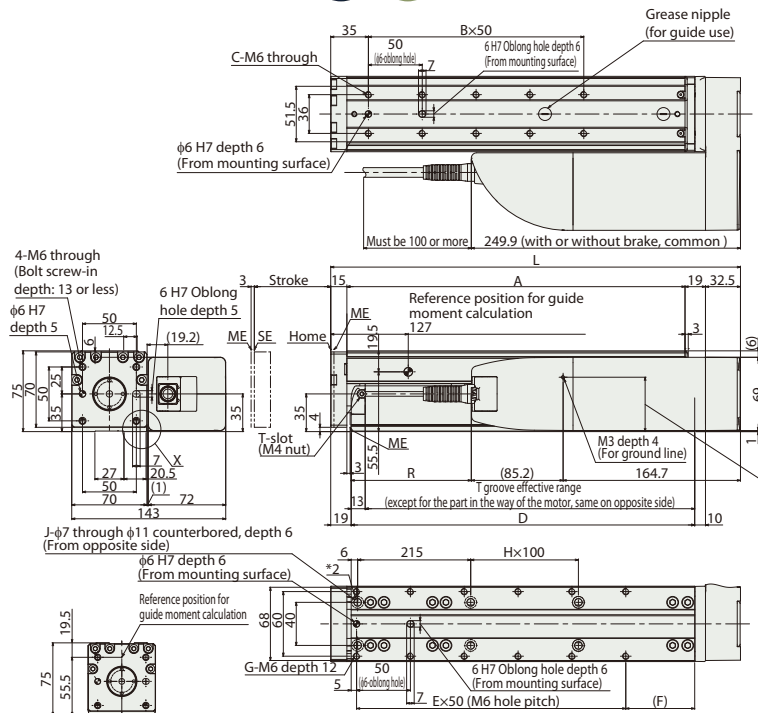
Actuator Specifications

| Item | Description |
|------------------------------------|---|
| Drive system | Ball screw φ12mm, rolled C10 |
| Positioning repeatability | ±0.01mm |
| Lost motion | 0.1mm or less |
| Base | Material: Aluminum with white alumite treatment |
| Static allowable moment | Ma: 620N-m, Mb: 620N-m, Mc: 458N-m |
| Dynamic allowable moment (*) | Ma: 196N-m, Mb: 196N-m, Mc: 145N-m |
| Ambient operating temp. & humidity | 0~40°C, 85% RH or less (Non-condensing) |

(*) Assumes a standard rated life of 5,000km. The service life will vary depending on operation and installation conditions.

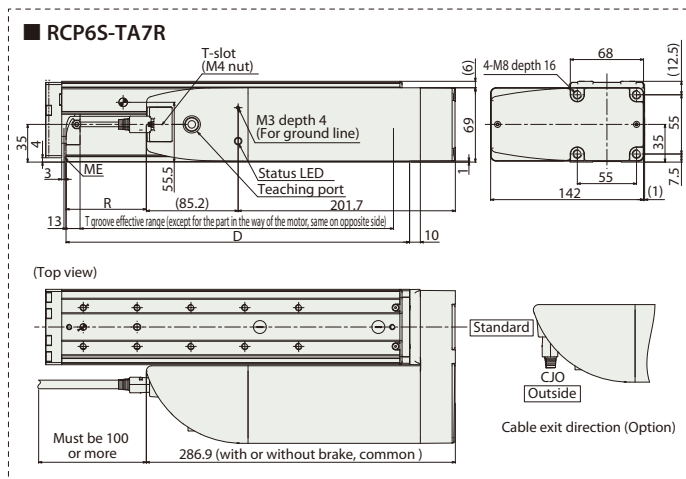
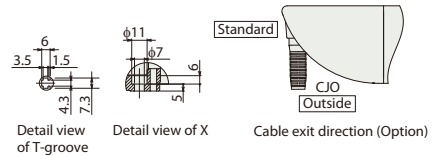
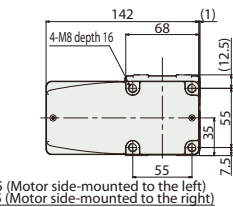
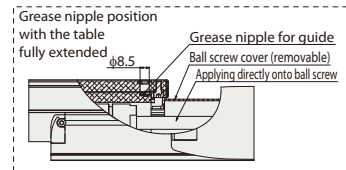
Please refer to our website for more information regarding the directions of the allowable moment and overhang load length.

Please refer to RCP6 instruction manual regarding the displacement of the table.



*1 When the table is returning to its home position, please be careful of interference from surrounding objects, as it will travel until it reaches the M.E.
M.E: Mechanical end S.E: Stroke end

*2 For the single block type with 25/50/75mm (RCP6) and 25~125mm (RCP6S) strokes, tools cannot be used on the $\phi 7$ front mounting holes on the top surface because the motor unit interferes. Please use the mounting screw holes on the bottom surface.















■ Dimensions and Mass by Stroke

| | Stroke | 40 | 65 | 90 | 140 | 190 | 240 | 290 | 340 | 390 | |
|--------------|--------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-----|
| | L | 330.5 | 355.5 | 380.5 | 430.5 | 480.5 | 530.5 | 580.5 | 630.5 | 680.5 | |
| | A | 264 | 289 | 314 | 364 | 414 | 464 | 514 | 564 | 614 | |
| | B | 3 | 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| | C | 8 | 10 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | |
| | D | 269 | 294 | 319 | 369 | 419 | 469 | 519 | 569 | 619 | |
| | E | 4 | 5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| | F | 64 | 39 | 64 | 64 | 64 | 64 | 64 | 64 | 64 | |
| | G | 10 | 12 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | |
| | H | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | |
| | J | 4 | 4 | 4 | 4 | 6 | 8 | 8 | 10 | 10 | |
| R | RCP6 | 61.6 | 86.6 | 111.6 | 161.6 | 211.6 | 261.6 | 311.6 | 361.6 | 411.6 | |
| | RCP6S | 24.6 | 49.6 | 74.6 | 124.6 | 174.6 | 224.6 | 274.6 | 324.6 | 374.6 | |
| Mass (kg) | RCP6 | w/o brake | 6.0 | 6.2 | 6.4 | 6.9 | 7.3 | 7.7 | 8.2 | 8.6 | 9.1 |
| | | w/ brake | 6.1 | 6.3 | 6.5 | 7.0 | 7.4 | 7.8 | 8.3 | 8.7 | 9.2 |
| | RCP6S | w/o brake | 6.1 | 6.3 | 6.5 | 7.0 | 7.4 | 7.8 | 8.3 | 8.7 | 9.2 |
| | | w/ brake | 6.2 | 6.4 | 6.6 | 7.1 | 7.5 | 8.0 | 8.4 | 8.8 | 9.3 |

② Applicable Controllers

The RCP6 series actuators can be operated by the controllers indicated below. Please select the type depending on your intended use. * Please refer to P.271 for more information about the built-in controller of RCP6S series.

| Name | External view | Max. number of controlled axes | Input power | Control method | | | Maximum number of positioning points | Reference page | |
|------------------|---|--------------------------------|---|--|---------------|---------|---|--------------------------------|--|
| | | | | Positioner | Pulse train | Program | | | |
| PCON-CYB/PLB/POB |  | 1 | DC24V | ● * Option | ● * Option | — | Network cannot be selected | 64 | Please contact IAI for more information. |
| PCON-CB/CGB |  | 1 | | ● * Option | ● * Option | — |     | 512 (768 for network spec.) | Please see P.255 |
| MCON-C/CG |  | 8 | | This model is network-compatible only. | | | ● | 256 | Please contact IAI for more information. |
| MCON-LC/LCG |  | 6 | | — | — | ● |   | 256 | Please contact IAI for more information. |
| MSEL-PC/PG |  | 4 | Single-phase 100 ~ 230 VAC | — | — | ● | Note: - The type of compatible networks will vary depending on the controller. Please refer to reference page for more information. | 30,000 | Please contact IAI for more information. |
| RCM-P6PC |  | 1 | Usable within the RCP65 Gateway system. | | | | | 768 | Please see P.279 |

* For the MCON controller, high-output enabled operation is only available if "high-output setting" is selected as an option. The maximum connectable axes with high-output enabled are C: 4 and LC: 3.