# Actuator Specifications

## Lead and Payload

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Lead (mm)</th>
<th>Max. Payload (kg)</th>
<th>Stroke (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RCP6(S)-WSA16R- WA-56SP-20</td>
<td>20</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>RCP6(S)-WSA16R- WA-56SP-10</td>
<td>10</td>
<td>70</td>
<td>15</td>
</tr>
<tr>
<td>RCP6(S)-WSA16R- WA-56SP-5</td>
<td>5</td>
<td>100</td>
<td>45</td>
</tr>
</tbody>
</table>

## Stroke and Max. Speed

### (Unit: mm/s)

<table>
<thead>
<tr>
<th>Stroke (mm)</th>
<th>RCP6</th>
<th>RCP6S</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>20</td>
<td>600</td>
</tr>
<tr>
<td>100</td>
<td>65</td>
<td>800</td>
</tr>
<tr>
<td>150</td>
<td>70</td>
<td>850</td>
</tr>
<tr>
<td>200</td>
<td>75</td>
<td>900</td>
</tr>
<tr>
<td>250</td>
<td>80</td>
<td>950</td>
</tr>
<tr>
<td>300</td>
<td>85</td>
<td>1000</td>
</tr>
<tr>
<td>350</td>
<td>90</td>
<td>1050</td>
</tr>
<tr>
<td>400</td>
<td>95</td>
<td>1100</td>
</tr>
</tbody>
</table>

### Options

<table>
<thead>
<tr>
<th>Name</th>
<th>Option Code</th>
<th>Reference Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brake</td>
<td>B</td>
<td>See P.105</td>
</tr>
<tr>
<td>Cable exit direction (Outside)</td>
<td>CJ0</td>
<td>See P.105</td>
</tr>
<tr>
<td>Motor side-mounted to the left</td>
<td>ML</td>
<td>See P.109</td>
</tr>
<tr>
<td>Motor side-mounted to the right</td>
<td>MR</td>
<td>See P.109</td>
</tr>
</tbody>
</table>

# Actuator Specifications

### Cable Length

<table>
<thead>
<tr>
<th>Cable Type</th>
<th>Cable Code</th>
<th>RCP6</th>
<th>RCP6S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard</td>
<td>P (1m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S (3m)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M (10m)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Specified Length

- X06 (6m) ~ X10 (10m)
- X11 (11m) ~ X15 (15m)
- X16 (16m) ~ X20 (20m)
- R01 (1m) ~ R03 (3m)
- R04 (4m) ~ R06 (6m)
- R07 (7m) ~ R11 (11m)
- R11 (11m) ~ R15 (15m)
- R16 (16m) ~ R20 (20m)

### Robot Cable

- Please refer to P.144 for more information regarding the maintenance cables.

* Please refer to P.138 for more information about the model specification items.

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**Legend:**

- Stroke
- Applicable Controller/I/O type
- Cable length
- Options

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**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 payload when used vertically. Please refer to P.114 for more information.
3. When performing push-motion operation, please confirm the push force of each model by checking the "Correlation diagram of push force and current limit" on P.113.
4. The service life of an actuator with lead 5 varies depending on the payload when using vertically. Please refer to P.114 for more information.
5. The figure above is the motor side-mounted to the left (ML).

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**Actuator Specifications**

- **Series:** RCP6, Separate Controller
- **Type:** RCP6, Built-in Controller
- **Encoder Type:** WA: Battery-less Absolute
- **Motor Type:** 56SP: High-thrust Step Motor 56CFL
- **Lead:** 20 mm: 10mm
- **Stroke:** 50: 50mm (50mm increments)
- **Controller/I/O Type:** (RCP6: P6; PCON- CFB/CGB (RCP6S: SE: SIO Type)
- **Cable Length:** N: None
- **Options:** P: 1mm S: 3mm M: 5mm
- **Series:** Specified Length
- **Motor Unit Type:** Robot Cable
- **Side-motor Type:** Body width does not include the width of the side-motor model.

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**Cable Length**

- **Cable Type:** P (1m) S (3m) M (10m)
- **Specified Length:**
  - X06 (6m) ~ X10 (10m)
  - X11 (11m) ~ X15 (15m)
  - X16 (16m) ~ X20 (20m)
  - R01 (1m) ~ R03 (3m)
  - R04 (4m) ~ R06 (6m)
  - R07 (7m) ~ R11 (11m)
  - R11 (11m) ~ R15 (15m)
  - R16 (16m) ~ R20 (20m)

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**Options**

- **Name:**
  - Brake
  - Cable exit direction (Outside)
  - Motor side-mounted to the left
  - Motor side-mounted to the right

- **Option Code:**
  - B
  - CJ0
  - ML
  - MR

- **Reference Page:**
  - P.105
  - P.109

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**Actuator Specifications**

- **Item:** Drive system
- **Description:** Ball screw ø4mm, rolled ø10mm
- **Positioning repeatability:** ±0.01mm
- **Load motion:** 0.1mm or less
- **Base Material:** Aluminum with white anodizing treatment
- **Static allowable moment:** Ma: 642N·m, Mb: 642N·m, M: 1.59N·m
- **Ambient operating temp & humidity:** 0~40℃, 85% RH or less (Non-condensing)

* Reference for overhang load length: Ma: 650mm or less, Mb: 650mm or less

---

**Cable Type:** P (1m) S (3m) M (10m)

**Specified Length:**

- X06 (6m) ~ X10 (10m)
- X11 (11m) ~ X15 (15m)
- X16 (16m) ~ X20 (20m)
- R01 (1m) ~ R03 (3m)
- R04 (4m) ~ R06 (6m)
- R07 (7m) ~ R11 (11m)
- R11 (11m) ~ R15 (15m)
- R16 (16m) ~ R20 (20m)

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**Roller Motor**

**24V Stepper Motor**
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.147 for more information about the built-in controller of RCP6S series.

**Applicable Controllers**

<table>
<thead>
<tr>
<th>Name</th>
<th>External expansion</th>
<th>Input voltage</th>
<th>DC24V</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Positioning points</th>
<th>Control method</th>
<th>Network option</th>
<th>Maximum number</th>
<th>Reference page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCON-CFB/CGFB</td>
<td>1</td>
<td>1 DC24V</td>
<td></td>
<td>*Option 1</td>
<td>Option 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Please see P.131</td>
</tr>
</tbody>
</table>