SR03 Rod type

### Ordering method

**SR03**

- **Model**
  - SR03-S
  - SR03-R
- **Load (kg)**
  - 30

### Basic specifications

- **Motor**
  - 42/1 Step motor
- **Resolution (Pulse/rotation)**
  - 2000
- **Repeatability (mm)**
  - +/-0.02
- **Deceleration mechanism**
  - Ball screw pitch
- **Max. screw lead (mm)**
  - 100
- **Max. speed (mm/sec)**
  - 500
- **Max. payload (kg)**
  - 10
- **Max. stroke (mm)**
  - 200
- **Lost motion**
  - 0.1mm or less
- **Max. pressure force (N)**
  - 75
- **Cable length (m)**
  - 50 to 200 (Optional)

### Motor installation (Space-saving model)

- **4 type**
  - Motor installed on right
- **L type**
  - Motor installed on left

### Speed vs. payload

- **Horizontal**
  - Load 6
  - Load 12
- **Vertical**
  - Load 6
  - Load 12

### Running life

5000 km on models other than shown below. Running life of only the model shown below becomes shorter than 5000 km depending on the payload, so check the running life curve.

### Controller

- **Controller**
  - TS-S2
  - TS-SH
  - TS-SD
- **Operation method**
  - Remote command
  - Pulse train control

---

Note 1. See P.153 for grease gun nozzles.

Note 2. If changing from the origin position at the time of purchase, the machine reference amount must be reset. For details, refer to the manual.

Note 3. The robot cable is flexible and resists bending. For details, see P.66.

Note 4. See P.522 for DIN rail mounting bracket.

Note 5. Select this selection when using the gateway function. For details, refer to the manual.

Note 6. The robot cable is flexible and resists bending. For details, see P.66.

Note 7.  Models with a brake will be 0.2kg heavier.

Note 8. Distance to mechanical stopper.

---

**Controller**

- **TS-S2**
  - 514
- **TS-SH**
  - 514
- **TS-SD**
  - 524

---

**Effective stroke**

<table>
<thead>
<tr>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>161</td>
<td>211</td>
<td>261</td>
</tr>
<tr>
<td>L</td>
<td>249</td>
<td>299</td>
<td>349</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>K</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>
| Weight (kg)**
  - 1.1
  - 1.3
  - 1.4
  - 1.6

---

**Controller I/O board**: Note 3. Use the support guide together so that any radial load is not applied to the rod.

**Controller I/O board**: Note 4. The orientation of the width across flat is undefined to the base surface.

**Controller I/O board**: Note 5. The support guide together so that the maximum speed needs to be changed in payload. For details, see P.152.
SR03  Space-saving model (motor installed on right)

- **Option: Horizontal installation plate (foot)**
  - Contents of option: Plate, 2 pcs.
  - Hex. socket cap bolt (M3×0.5), Length under head 15

- **Option: Vertical installation plate (Range)**
  - Contents of option: Plate, 2 pcs.
  - Hex. socket cap bolt (M3×0.5), Length under head 14

SR03  Space-saving model (motor installed on left)

- **Option: Horizontal installation plate (foot)**
  - Contents of option: Plate, 2 pcs.
  - Hex. socket cap bolt (M3×0.5), Length under head 15

- **Option: Vertical installation plate (Range)**
  - Contents of option: Plate, 2 pcs.
  - Hex. socket cap bolt (M3×0.5), Length under head 14

---

Notes:
1. It is possible to apply only the axial load.
2. Use the external guide together so that any radial load is not applied to the rod.
3. The orientation of the width across flat part is undefined to the base surface.
4. Use the support guide together to maintain the straightness.
5. When running the cables, secure cables so that any load is not applied to them.
6. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
7. Models with a brake will be 0.2kg heavier.
8. Distance to mechanical stopper.
**SRD03**

**Rod type (With support guide)**

**Ordering method**

**Basic specifications**

**Motor**
- 42 Step motor

**Resolution (Pulse/rotation)**
- 20480

**Repeatability (mm)**
- +/-0.02

**Deceleration mechanism**
- Ball screw φ8

**Ball screw lead (mm)**
- 12

**Maximum speed (mm/sec)**
- 500

**Maximum Payload (kg)**
- 10

**Effective stroke (mm)**
- 50 to 200

**Bracket plate**
- Vertical: 3.5
- Horizontal: 7.5

**Max. pressing force (N)**
- 75

**Stroke (mm)**
- 50 to 200

**Lost motion**
- 0.1mm or less

**Overall length (mm)**
- Horizontal: Stroke+236.5
- Vertical: Stroke+276.5

**Maximum outside dimension of body cross-section (mm)**
- W48 x H55.5

**Cable length (m)**
- Standard: 1
- Other options: 3, 5, 10

**Controller**
- Remote command

**Running life**

- 5000 km on models other than shown below.

**Speed vs. payload**

**Controller**
- Operation method: I/O point trace / Remote command

**Effective stroke**

<table>
<thead>
<tr>
<th>Stroke (mm)</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>L1</td>
<td>L1</td>
<td>L1</td>
<td>L1</td>
</tr>
<tr>
<td>L2</td>
<td>L2</td>
<td>L2</td>
<td>L2</td>
<td>L2</td>
</tr>
<tr>
<td>L3</td>
<td>L3</td>
<td>L3</td>
<td>L3</td>
<td>L3</td>
</tr>
<tr>
<td>K</td>
<td>K</td>
<td>K</td>
<td>K</td>
<td>K</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>1.5</td>
<td>1.7</td>
<td>1.9</td>
<td>2.1</td>
</tr>
</tbody>
</table>

**Battery**
- (Standard: 3K: 3m)

**Ordering method**

Note 1. It is possible to apply only the axial load.

Note 2. The minimum bend radius is R30.

Note 3. Use the external guide together so that any radial load is not applied to the rod.

Note 4. When running the cables, secure cables so that any load is not applied to them.

Note 5. When removing the M4 hex. socket head cap set bolts and using them to secure the cables, use the external guide together so that any radial load is not applied to the rod.

Note 6. Always use a 0.7 drill-through.

**Controller**
- Operation method: Pulse train control

**Weight (kg)**
- 1.5, 1.7, 1.9, 2.1

**Effective stroke**
- 50, 100, 150, 200

**Motor**
- Step motor

**Resolution (Pulse/rotation)**
- 20480

**Repeatability (mm)**
- +/-0.02

**Deceleration mechanism**
- Ball screw φ8

**Ball screw lead (mm)**
- 12

**Maximum speed (mm/sec)**
- 500

**Maximum Payload (kg)**
- 10

**Effective stroke (mm)**
- 50 to 200

**Bracket plate**
- Vertical: 3.5
- Horizontal: 7.5

**Max. pressing force (N)**
- 75

**Stroke (mm)**
- 50 to 200

**Lost motion**
- 0.1mm or less

**Overall length (mm)**
- Horizontal: Stroke+236.5
- Vertical: Stroke+276.5

**Maximum outside dimension of body cross-section (mm)**
- W48 x H55.5

**Cable length (m)**
- Standard: 1
- Other options: 3, 5, 10
SRD03  Space-saving model (motor installed on top)

**Option**: Horizontal installation plate (foot)

* Contents of option: Plate, 2 pcs. See our robot manuals for additional settings.

**Hex. socket head cap bolt (M3×0.5), Length under head 10**

* Two bolts are required for one plate.

**2-Ø6.5 drill-through**

See the bottom installation tap position.

**Effective stroke**

<table>
<thead>
<tr>
<th>L (mm)</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>161</td>
<td>211</td>
<td>261</td>
<td>311</td>
</tr>
<tr>
<td>L</td>
<td>204</td>
<td>254</td>
<td>304</td>
<td>354</td>
</tr>
<tr>
<td>H</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>K</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td>12</td>
</tr>
</tbody>
</table>

**Weight (kg)**

|  |  |  |  | |
|---|---|---|---|
| 1.7 | 1.9 | 2.1 | 2.3 |

**Note 1.** It is possible to apply only the axial load.

**Note 2.** Use the external guide together so that any radial load is not applied to the rod.

**Note 3.** The orientation of the width across flat part is undefined to the base surface.

**Note 4.** When running the cables, secure cables so that any load is not applied to them.

**Note 5.** Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth: 5)

**Note 6.** The cable’s minimum bend radius is R30.

**Note 7.** Models with a brake will be 0.2 kg heavier.

**Note 8.** Distance to mechanical stopper.
SR04 Rod type

Ordering method

SR04

Model | Lead | Model | Brake | Origin position | Braketed plate | Stroke | Cable length | Motor installation (Space-saving model)
---|---|---|---|---|---|---|---|---
| | | | | | | | | |

Motor
- 42*1 Step motor
- Resolution/Pulse(Rotation) 20480
- Deceleration mechanism (mm) +/-0.02
- Repeatability (mm) 0.005
- Ball screw lead (mm) 12 12.5 2
- Maximum speed (mm/sec) 500 250 50
- Maximum payload (kg) Vertical 10 12 25
- Max. pressing force (N) 180 300 500
- Lost motion 0.1mm or less
- Rotating backlash(deg) 0.005
- Overall length (Horizontal) 270 170 45
- Overall length (Vertical) 240 300 40
- Maximum outer diameter of body cross-section (mm) 28.5
- Cable length (m) Standard: 1 Option: 3, 5, 10

Note 1. The maximum speed needs to be changed in accordance with the payload. See the "Speed vs. payload" graph shown on the right. For details, see P. 152. Additionally, when the stroke is long, the maximum speed is decreased due to the critical speed of the ball screw. See the maximum speed table shown at the lower portion of the drawing.

SR04 Straight model

4.667 524

Motor installation (Space-saving model)

- Motor installed on right
- Motor installed on left

Motor (for securing cable)
- M4 x 0.7 Depth 5 (For securing cable)
- M4 x 0.7 Depth 5 (For securing cable)
- M6 x 0.7 Depth 5 (For securing cable)
- M6 x 0.7 Depth 5 (For securing cable)

Options:
- Horizontal installation plate (foot)
- Vertical installation plate (flange)

Effective stroke
- 50 100 150 200 250 300
- Weight (Kg)
- Maximum speed (mm/sec) Lead 2 500 280 220 160
- Maximum speed (mm/sec) Lead 6 250 220 160
- Maximum speed (mm/sec) Lead 12 100 72 53

Controller
- TS-S2 I/O point trace / Remote command
- TS-SH Pulse train control

Running life

5000 km on models other than shown below. Running life of only the model shown below becomes shorter than 5000 km depending on the payload, so check the running life curve.

Note 1. It is possible to apply only the axial load. Use the external guide together so that any radial load is not applied to the rod.
Note 2. The orientation of the width across flat part is undefined to the base surface.
Note 3. Use the support pulse together to maintain the straightness.
Note 4. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 5. When running the cables, secure cables so that any load is not applied to them.
Note 6. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
Note 7. The cable’s minimum bend radius is R30.
Note 8. The cable’s minimum bend radius is R30.
Note 9. Distance to mechanical stopper.
SRD04

Ordering method

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead</th>
<th>Brake</th>
<th>Drive position</th>
<th>Shaft motor</th>
</tr>
</thead>
<tbody>
<tr>
<td>YA</td>
<td>22mm</td>
<td>W</td>
<td>38.0-250</td>
<td>22</td>
</tr>
<tr>
<td>LCM100</td>
<td>20mm</td>
<td>W</td>
<td>38.0-250</td>
<td>22</td>
</tr>
<tr>
<td>TRANSERVO</td>
<td></td>
<td></td>
<td>38.0-250</td>
<td>22</td>
</tr>
</tbody>
</table>

### Basic specifications

- **Motor**: 42[1] Step motor
- **Resolution (Pulse/rotation)**: 42
- **Maximum outside dimension of body cross-section (mm)**: W48 × H58
- **Cable length (m)**: 514

### Speed vs. payload

#### Horizontal

<table>
<thead>
<tr>
<th>Payload (kg)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed (mm/s)</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
</tr>
</tbody>
</table>

#### Vertical

<table>
<thead>
<tr>
<th>Payload (kg)</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed (mm/s)</td>
<td>0</td>
<td>10</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>70</td>
<td>80</td>
</tr>
</tbody>
</table>

### Running life

5000 km on models other than shown below. Running life of only the model shown below becomes shorter than 5000 km depending on the payload, so check the running life curve.

#### Controller

- **Controller**: TS-S2
- **Operation method**: Remote command

### Notes

1. See P.153 for grease gun nozzles.
2. When “2mm lead” is selected, the origin position must be reset. For details, refer to the manual.
3. If changing from the origin position at the time of reset. For details, refer to the manual.
4. The robot cable is flexible and resists bending.
5. Select this selection when using the gateway.
6. Select this selection when using the gateway.
7. Distance to mechanical stopper.
**SRD04**  Space-saving model (motor installed on top)

<table>
<thead>
<tr>
<th>Option: Horizontal installation plate (foot)</th>
</tr>
</thead>
</table>
| * Contents of option: Plate, 2 pcs., Nut, 12 pcs.  
  See our robot manual for additional settings. |

### SRD04 Effective stroke

<table>
<thead>
<tr>
<th>Effective stroke</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>192.5</td>
<td>212.5</td>
<td>232.5</td>
<td>252.5</td>
<td>272.5</td>
<td>292.5</td>
</tr>
<tr>
<td>L2</td>
<td>209.5</td>
<td>229.5</td>
<td>249.5</td>
<td>269.5</td>
<td>289.5</td>
<td>309.5</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>2.2</td>
<td>2.6</td>
<td>2.9</td>
<td>3.2</td>
<td>3.5</td>
<td>3.9</td>
</tr>
</tbody>
</table>

### Maximum speed for each stroke (mm/sec)

| Lead 12 | 500 | 440 | 320 |
| Lead 6  | 250 | 220 | 160 |
| Lead 2  | 80  | 72  | 53  |

### Notes

1. It is possible to apply only the axial load. Use the external guide to maintain the straightness.
2. When running the cables, secure cables so that any load is not applied to them. (Effective screw thread depth 5)
3. Maximum stroke of 1mm specifications, the origin on the non-motor side cannot be set.

---

**Controller**

- **TS-S2**: 514
- **TS-SH**: 514
- **TS-SD**: 524
**SR05**

Rod type

**Basic specifications**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead</th>
<th>Motor installation (Space-saving model)</th>
<th>Speed vs. payload</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR05</td>
<td>S</td>
<td>R-type Motor installed on right</td>
<td>Horizontal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>L-type Motor installed on left</td>
<td>Vertical</td>
</tr>
</tbody>
</table>

**Motor installation (Space-saving model)**

- **R type**: Motor installed on right
- **L type**: Motor installed on left

**Speed vs. payload**

- **Horizontal**
- **Vertical**

**Motor installation (Space-saving model)**

- **R type**: Motor installed on right
- **L type**: Motor installed on left

**Ordering method**

- **SR05**
- **Lead**: 6, 12
- **Brake**: Without brake
- **Origin position**: Non-standard motor side (motor installed on right)
- **Bracket plate**: Non-standard motor side (motor installed on left)
- **Stroke**: 200 to 300 (mm/pulse)
- **Cable length**: 500 (mm/pulse)

**Speed vs. payload**

- **Horizontal**
- **Vertical**

**Running life**

5000 km on models other than shown below.

Running life of only the model shown below becomes shorter than 5000 km depending on the payload, so check the running life curve.

**Controller**

- **Controller**: TS-S2, TS-SH
- **Operation method**: I/O point trace / Remote command

**SR05 Straight model S**

- **View A**
- **Dimensions of attached square nut for T-slot (6 pcs.)**
- **Details of T-slot**
- **Dimensions of attached nut**

**Effective stroke**

<table>
<thead>
<tr>
<th>Length (L)</th>
<th>50</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>100</td>
<td>233</td>
<td>333</td>
<td>433</td>
<td>533</td>
<td>633</td>
</tr>
<tr>
<td>10</td>
<td>183</td>
<td>383</td>
<td>583</td>
<td>783</td>
<td>983</td>
<td>1183</td>
</tr>
</tbody>
</table>

**Weight**

<table>
<thead>
<tr>
<th>Weight (kg)</th>
<th>2.2</th>
<th>2.5</th>
<th>3.3</th>
<th>3.7</th>
<th>4.1</th>
</tr>
</thead>
</table>

**Note 1**: The robot cable is flexible and resistant to bending.

**Note 2**: Select this setting when using the gateway function. For details, see P.66.

**Note 3**: If changing from the origin position at the time of purchase, the machine reference amount must be reset. For details, refer to the manual.
SR05 Space-saving model (motor installed on right)

Option: Vertical Installation plate (Range)

* Contents of option: Plate, 2 pcs., Nut, 8 pcs. See our robot manuals for additional settings.

SR05 Space-saving model (motor installed on left)

Option: Horizontal Installation plate (foot)

* Contents of option: Plate, 2 pcs., Nut, 8 pcs. See our robot manuals for additional settings.

Controller

<table>
<thead>
<tr>
<th>TS-S2</th>
<th>TS-SH</th>
<th>TS-SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>514</td>
<td>514</td>
<td>524</td>
</tr>
</tbody>
</table>
### SRD05

**Ordering method**

**SRD05**

<table>
<thead>
<tr>
<th>Model</th>
<th>Lead</th>
<th>Motor</th>
<th>Resolution (Pulse/Rotation)</th>
<th>Repeatability (mm)</th>
<th>Deceleration mechanism</th>
<th>Ball screw lead (mm)</th>
<th>Maximum speed (mm/sec)</th>
<th>Maximumpreload (kg)</th>
<th>Horizontal Stroke (mm)</th>
<th>Vertical Stroke (mm)</th>
<th>Max. pressing force (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>20480</td>
<td>+/-0.02</td>
<td>Ball screw φ12</td>
<td>12 6 2</td>
<td>300 150 50</td>
<td>50 55 60</td>
<td>40 4.5</td>
<td>52 5.2</td>
<td>7.3 52</td>
</tr>
</tbody>
</table>

**Basic specifications**

- **Motor**: 56 Step motor
- **Resolution (Pulse/Rotation)**: 20480
- **Repeatability (mm)**: +/-0.02
- **Deceleration mechanism**: Ball screw φ12
- **Ball screw lead (mm)**: 12 6 2
- **Maximum speed (mm/sec)**: 300 150 50
- **Maximumpreload (kg)**: 50 55 60
- **Horizontal Stroke (mm)**: 40 4.5
- **Vertical Stroke (mm)**: 52 5.2
- **Max. pressing force (N)**: 7.3 52

**Speed vs. payload**

**Running life**

5000 km on models other than shown below. Running life of only the model shown below becomes shorter than 5000 km depending on the payload, so check the running life curve.

**Controller**

- **Controller**: TS-S2, TS-SH
- **Operation method**: I/O point trace / Remote command

### SRD05 Straight model S

- **Effective stroke**: 107
- **Ball screw greasing port**: 6
- **Motor side**: M4×0.7 Depth 5 (For securing cable)
- **Non-motor side**: M4×0.7 Depth 5 (For securing cable)

**Dimensions of attached square not for T-slot (8 pcs.)**

**Note 1**: It is possible to apply only the axial load.

**Note 2**: Use the external guide together so that any radial load is not applied to the rod.

**Note 3**: Note 2 for lead 2mm specifications, the origin on the non-motor side cannot be set.

**Note 4**: When "2mm lead" is selected, the origin position cannot be changed to (non-motor side).

**Note 5**: If changing from the origin position at the time of installation, see Note 5.

**Note 6**: The cable’s minimum bend radius is R30.

**Note 7**: Take great care as the outer case of the motor projects from the bottom of the main unit.

**Note 8**: Models with a brake will be 0.2kg heavier.
SRD05 Space-saving model (motor installed on top)