

SR03 Rod type

- CE compliance
- Origin on the non-motor side is selectable



Ordering method

SR03

Model	Lead	Model	Brake	Origin position	Bracket plate	Stroke	Cable length ^{Note 3}
	12: 12mm 06: 6mm	S: Straight model R: Space-saving model ^{Note 1} (motor installed on right) L: Space-saving model ^{Note 1} (motor installed on left) U: Space-saving model ^{Note 1} (motor installed on top)	N: With no brake B: With brake	N: Standard ^{Note 2} Z: Non-motor side	N: No plate H: With plate V: With flange	50 to 200 (50mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

Note 1. See P.337 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.
Note 4. See P.600 for DIN rail mounting bracket.
Note 5. Select this selection when using the gateway function.

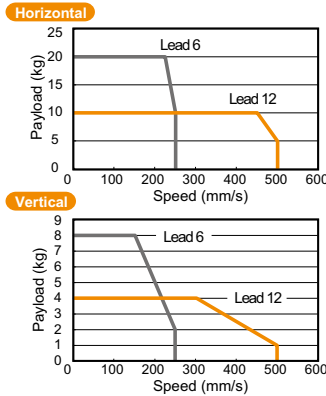
S2	I/O
Robot positioner S2: TS-S2 ^{Note 4}	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board ^{Note 5}
SH	Battery
Robot positioner SH: TS-SH	B: With battery (Absolute) N: None (Incremental)
SD	I/O cable
Robot driver SD: TS-SD	t: 1m

Basic specifications

Motor	42 □ Step motor
Resolution (Pulse/rotation)	20480
Repeatability (mm)	+/-0.02
Deceleration mechanism	Ball screw $\phi 8$
Ball screw lead (mm)	12 6
Maximum speed ^{Note 1} (mm/sec)	500 250
Maximum payload (kg)	Horizontal Vertical
	10 20 4 8
Max. pressing force (N)	75 100
Stroke (mm)	50 to 200 (50pitch)
Lost motion	0.1mm or less
Rotating backlash (°)	+/-1.0
Overall length (mm)	Horizontal Vertical
	Stroke+236.5 Stroke+276.5
Maximum outside dimension of body cross-section (mm)	W48 x H56.5
Cable length (m)	Standard: 1 / Option: 3, 5, 10

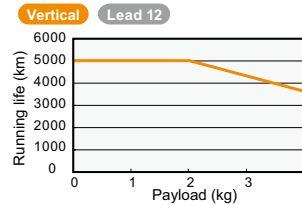
Note 1. The maximum speed needs to be changed in accordance with the payload.
See the "Speed vs. payload" graph shown on the right.
For details, see P. 336.

Speed vs. payload



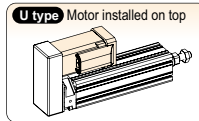
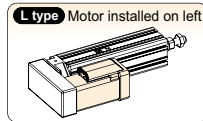
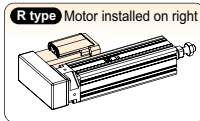
Running life

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.



Note. See P.337 for running life distance to life time conversion example.

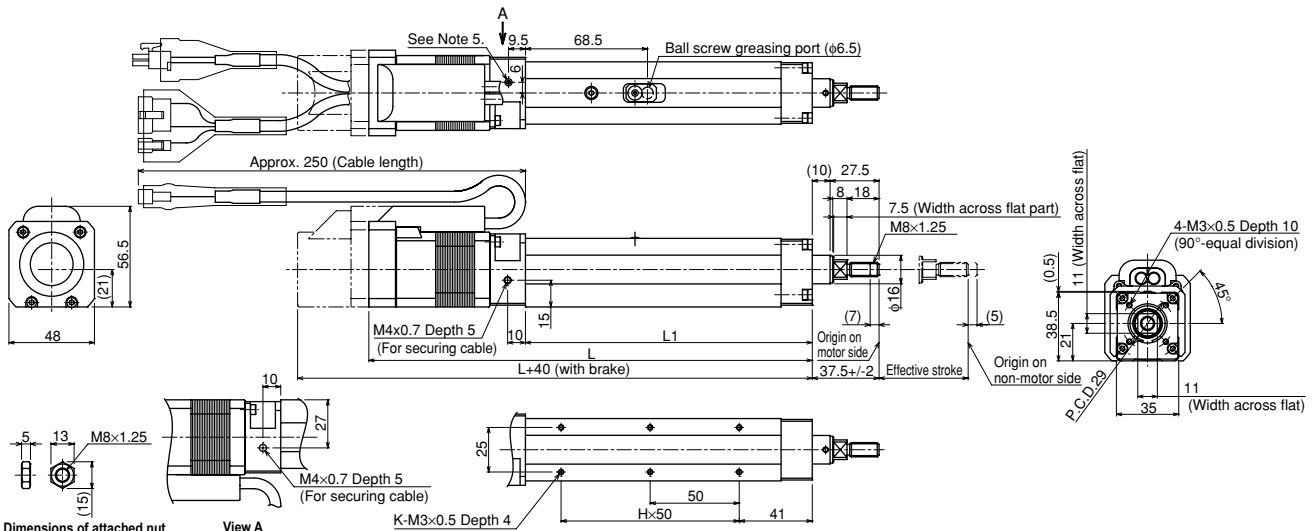
Motor installation (Space-saving model)



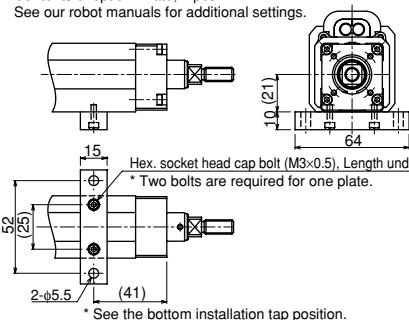
Controller

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

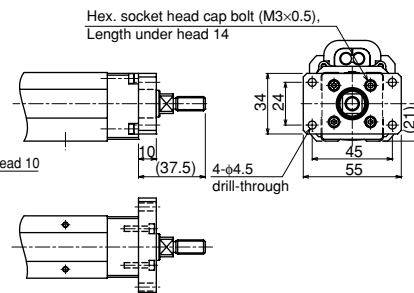
SR03 Straight model S



Option: Horizontal installation plate (foot)
* Contents of option: Plate, 2 pcs.
See our robot manuals for additional settings.



Option: Vertical installation plate (flange)



Effective stroke	50	100	150	200
L1	161	211	261	311
L	249	299	349	399
H	2	3	4	5
K	6	8	10	12
Weight (kg) ^{Note 7}	1.1	1.3	1.4	1.6

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 guide together to maintain the straightness.
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 0.2kg heavier.
Note 8. Distance to mechanical stopper.

SR03 Space-saving model (motor installed on top) **U**

View A

M4×0.7 Depth 5 (For securing cable) 10 27

Approx. 245 (Cable length)

111.5 L

Ball screw greasing port (φ6.5)

37.5±2 Effective stroke (5>Note 8)

Origin on motor side

Origin on non-motor side

M8×1.25 13 5

Dimensions of attached nut

15

128 (with brake) 88

94 42 1 40 (24) (31)

15

M4×0.7 Depth 5 (For securing cable) 10

M8×1.25 φ16 7.5

(10) 27.5

4-M3×0.5 Depth 10 (90°-equal division) 11 (Width across flat)

56.5 48 21 48 38.5 (0.5) 11 (Width across flat) 35

Option: Horizontal installation plate (foot)

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

10 (21)

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

* Two bolts are required for one plate.

2-φ5.5 drill-through (41)

* See the bottom installation tap position.

Option: Vertical installation plate (flange)

Hex. socket head cap bolt (M3×0.5), Length under head 14

4-φ4.5 drill-through (37.5)

34 24 45 55

M4×0.7 Depth 5 (For securing cable) 10

6 50 41

H×50 L1

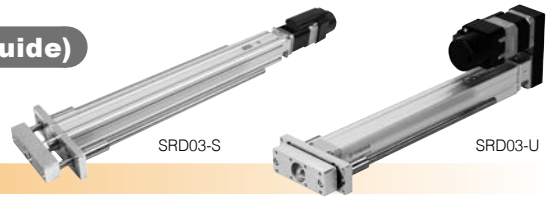
K-M3×0.5 Depth 4

Effective stroke	50	100	150	200
L1	161	211	261	311
L	204	254	304	354
H	2	3	4	5
K	6	8	10	12
Weight (kg) ^{Note 7}	1.3	1.5	1.6	1.8

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 guide together to maintain the straightness.
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 0.2kg heavier.
Note 8. Distance to mechanical stopper.

SRD03

Rod type (With support guide)



- CE compliance
- Origin on the non-motor side is selectable: Lead 6, 12

Ordering method

SRD03

Model	Lead	Model	Brake	Origin position	Bracket plate	Stroke	Cable length ^{Note 3}
	12: 12mm 06: 6mm	S: Straight model U: Space-saving model ^{Note 1} (motor installed on top)	N: With no brake B: With brake	N: Standard ^{Note 2} Z: Non-motor side	N: No plate H: With plate	50 to 200 (60mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

S2	I/O
Robot positioner S2: TS-S2 ^{Note 4}	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board ^{Note 5}
SH	Battery
Robot positioner SH: TS-SH	B: With battery (Absolute) N: None (Incremental)
SD	1
Robot driver SD: TS-SD	I/O cable 1: 1m

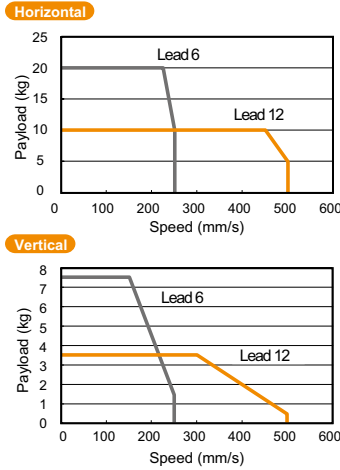
Note 1. See P.337 for grease gun nozzles.
 Note 2. If changing from the origin position at the time of purchase, the machine reference amount must be reset. For details, refer to the manual.
 Note 3. The robot cable is flexible and resists bending.
 Note 4. See P.600 for DIN rail mounting bracket.
 Note 5. Select this selection when using the gateway function.

Basic specifications

Motor	42 □ Step motor
Resolution (Pulse/rotation)	20480
Repeatability (mm)	+/-0.02
Deceleration mechanism	Ball screw φ8
Ball screw lead (mm)	12 6
Maximum speed ^{Note 1} (mm/sec)	500 250
Maximum payload (kg)	Horizontal: 10, 20 Vertical: 3.5, 7.5
Max. pressing force (N)	75 100
Stroke (mm)	50 to 200 (50pitch)
Lost motion	0.1mm or less
Rotating backlash (°)	+/-0.05
Overall length (mm)	Horizontal: Stroke+236.5 Vertical: Stroke+276.5
Maximum outside dimension of body cross-section (mm)	W48 × H56.5
Cable length (m)	Standard: 1 / Option: 3, 5, 10

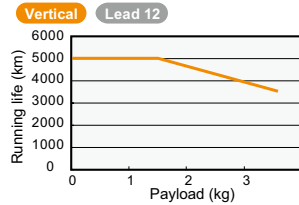
Note 1. The maximum speed needs to be changed in accordance with the payload.
 See the "Speed vs. payload" graph shown on the right.
 For details, see P. 336.

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.



Note. See P.337 for running life distance to life time conversion example.

Controller

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

SRD03 Straight model S

Option: Horizontal installation plate (foot)

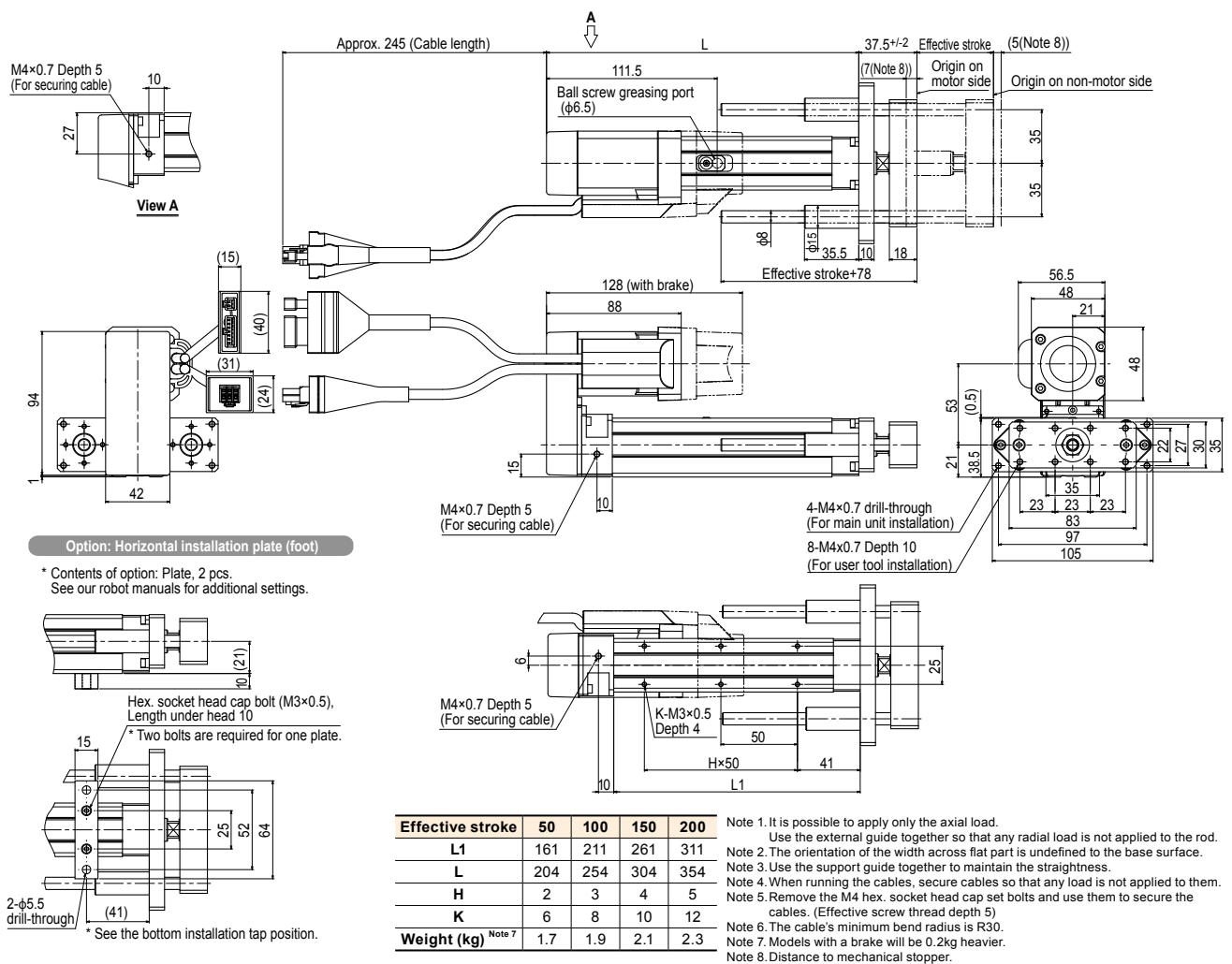
* Contents of option: Plate, 2 pcs.
 See our robot manuals for additional settings.

Hex. socket head cap bolt (M3×0.5). Length under head 10
 * Two bolts are required for one plate.
 * See the bottom installation tap position.

Effective stroke	50	100	150	200
L1	161	211	261	311
L	249	299	349	399
H	2	3	4	5
K	6	8	10	12
Weight (kg) ^{Note 5}	1.5	1.7	1.9	2.1

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. When running the cables, secure cables so that any load is not applied to them.
 Note 3. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
 Note 4. The cable's minimum bend radius is R30.
 Note 5. Models with a brake will be 0.2kg heavier.
 Note 6. Distance to mechanical stopper.

SRD03 Space-saving model (motor installed on top) **U**



SR04 Rod type

- CE compliance
- Origin on the non-motor side is selectable: Lead 6, 12



Ordering method

SR04

Model	Lead	Model	Brake	Origin position	Bracket plate	Stroke	Cable length
	12: 12mm 06: 6mm 02: 2mm	S: Straight model R: Space-saving model (motor installed on right) L: Space-saving model (motor installed on left)	N: With no brake B: With brake	N: Standard Z: Non-motor side	N: No plate H: With plate V: With flange	50 to 300 (50mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

S2

Robot positioner	I/O
S2: TS-S2	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board

SH

Robot positioner	I/O	Battery
SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	B: With battery (Absolute) N: None (Incremental)

SD

Robot driver	I/O cable
SD: TS-SD	1: 1m

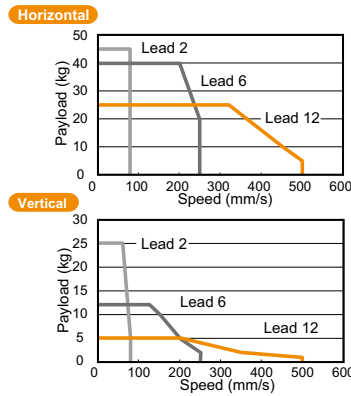
- Note 1. See P.337 for grease gun nozzles.
 Note 2. When "2mm lead" is selected, the origin position cannot be changed (to non-motor side).
 Note 3. If changing from the origin position at the time of purchase, the machine reference amount must be reset. For details, refer to the manual.
 Note 4. The robot cable is flexible and resists bending.
 Note 5. See P.600 for DIN rail mounting bracket.
 Note 6. Select this selection when using the gateway function.

Basic specifications

Motor	42 □ Step motor
Resolution (Pulse/rotation)	20480
Repeatability (mm)	+/-0.02
Deceleration mechanism	Ball screw φ8 Ball screw φ10
Ball screw lead (mm)	12 6 2
Maximum speed (mm/sec)	500 250 80
Maximum payload (kg)	Horizontal: 25 40 45 Vertical: 5 12 25
Max. pressing force (N)	150 300 600
Stroke (mm)	50 to 300 (50pitch)
Lost motion	0.1mm or less
Rotating backlash (°)	+/-1.0
Overall length (mm)	Horizontal: Stroke+263 Vertical: Stroke+303
Maximum outside dimension of body cross-section (mm)	W48 × H58
Cable length (m)	Standard: 1 / Option: 3, 5, 10

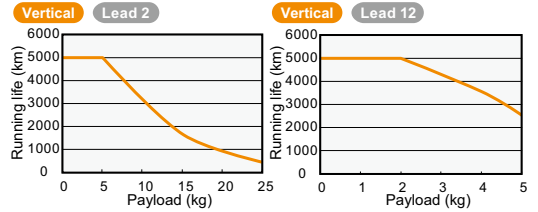
Note 1. The maximum speed needs to be changed in accordance with the payload. See the "Speed vs. payload" graph shown on the right. For details, see P. 336. Additionally, when the stroke is long, the maximum speed is decreased due to the critical speed of the ball screw. See the maximum speed table shown at the lower portion of the drawing.

Speed vs. payload



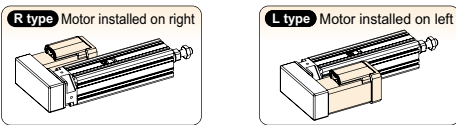
Running life

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.



Note. See P.337 for running life distance to life time conversion example.

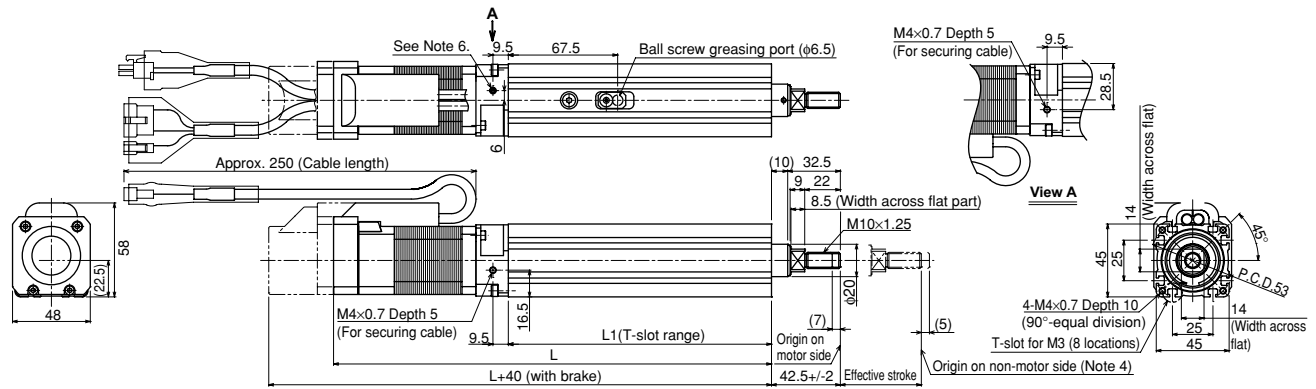
Motor installation (Space-saving model)



Controller

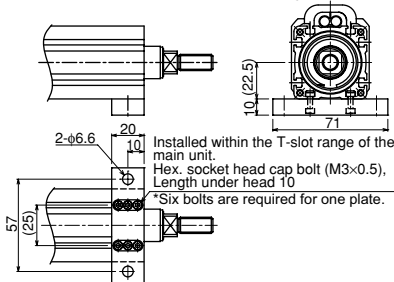
Controller	Operation method	Controller	Operation method
TS-S2	I/O point trace / Remote command	TS-SD	Pulse train control
TS-SH			

SR04 Straight model S



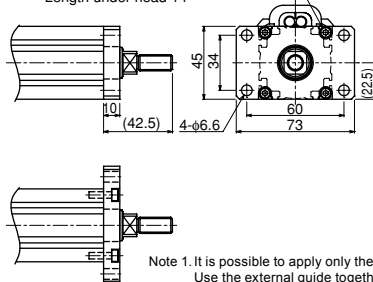
Option: Horizontal installation plate (foot)

* Contents of option: Plate, 2 pcs., Nut, 12 pcs. See our robot manuals for additional settings.



Option: Vertical installation plate (flange)

Hex. socket head cap bolt (M4x0.7), Length under head 14



Dimensions of attached square nut for T-slot (6 pcs.)

Effective stroke	50	100	150	200	250	300
L1	162.5	212.5	262.5	312.5	362.5	412.5
L	270.5	320.5	370.5	420.5	470.5	520.5

Details of T-slot

Weight (kg)	1.4	1.7	1.9	2.2	2.4	2.7
Maximum speed for each stroke (mm/sec)	Lead 12: 500	Lead 6: 250	Lead 2: 80	440	320	160

Dimensions of attached nut

Effective stroke	50	100	150	200	250	300
Weight (kg)	1.4	1.7	1.9	2.2	2.4	2.7

- 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. 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. Models with a brake will be 0.2kg heavier.
 Note 9. Distance to mechanical stopper.

SR04 Space-saving model (motor installed on right) **R**

Approx. 245 (Cable length)

Effective stroke (5)(Note 8)

42.5^{+/-2} (7)(Note 8)

152 (with brake)
112

Origin on motor side

Origin on non-motor side (Note 9)

5.8
3.3
1.5

M10x1.25
17
6

Detail of section B

Dimensions of attached nut

67.5

Ball screw greasing port (φ6.5)

L1(T-slot range)

9.5

16.5

M4×0.7 Depth 5 (For securing cable)

9.5

M10×1.25
φ20

8.5

9
22

10

32.5

14

Width across flat part

45

25

45

48

4-M4×0.7 Depth 10 (90°-equal division)

102.5

1.5

Option: Horizontal installation plate (foot)

* Contents of option: Plate, 2 pcs., Nut, 12 pcs.
See our robot manuals for additional settings.

Option: Vertical installation plate (flange)

Installed within the T-slot range of the main unit.
(Hex. socket head cap bolt (M3×0.5), Length under head 10)
* Six bolts are required for one plate.

2-φ6.6 drill-through

20

10

10 (22.5)

42.5

Hex. socket head cap bolt (M4×0.7), Length under head 14

73

4-φ6.6 drill-through

60

45

34

45

Dimensions of attached square nut for T-slot (6 pcs.)

Effective stroke	50	100	150	200	250	300
L1	162.5	212.5	262.5	312.5	362.5	412.5
L	209.5	259.5	309.5	359.5	409.5	459.5
Weight (kg) ^{Note 7}	1.6	1.9	2.1	2.4	2.6	2.9
Maximum speed for each stroke (mm/sec)	Lead 12	500		440		320
	Lead 6	250		220		160
	Lead 2	80		72		53

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 guide together to maintain the straightness.
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 0.2kg heavier.
Note 8. Distance to mechanical stopper.
Note 9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).

SR04 Space-saving model (motor installed on left) **L**

Approx. 245 (Cable length)

Effective stroke (5)(Note 8)

42.5^{+/-2} (7)(Note 8)

Origin on motor side

Origin on non-motor side (Note 9)

5.8
3.3
1.5

M10x1.25
17
6

Detail of section B

Dimensions of attached nut

67.5

Ball screw greasing port (φ6.5)

L1(T-slot range)

9.5

16.5

M4×0.7 Depth 5 (For securing cable)

9.5

M10×1.25
φ20

8.5

9
22

10

32.5

14

Width across flat part

45

25

45

48

4-M4×0.7 Depth 10 (90°-equal division)

102.5

1.5

Option: Horizontal installation plate (foot)

* Contents of option: Plate, 2 pcs., Nut, 12 pcs.
See our robot manuals for additional settings.

Option: Vertical installation plate (flange)

Installed within the T-slot range of the main unit.
(Hex. socket head cap bolt (M3×0.5), Length under head 10)
* Six bolts are required for one plate.

2-φ6.6 drill-through

20

10

10 (22.5)

42.5

Hex. socket head cap bolt (M4×0.7), Length under head 14

73

4-φ6.6 drill-through

60

45

34

45

Dimensions of attached square nut for T-slot (6 pcs.)

Effective stroke	50	100	150	200	250	300
L1	162.5	212.5	262.5	312.5	362.5	412.5
L	209.5	259.5	309.5	359.5	409.5	459.5
Weight (kg) ^{Note 7}	1.6	1.9	2.1	2.4	2.6	2.9
Maximum speed for each stroke (mm/sec)	Lead 12	500		440		320
	Lead 6	250		220		160
	Lead 2	80		72		53

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 guide together to maintain the straightness.
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 0.2kg heavier.
Note 8. Distance to mechanical stopper.
Note 9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).

SRD04

Rod type (With support guide)



- CE compliance
- Origin on the non-motor side is selectable: Lead 6, 12

Ordering method

SRD04

Model	Lead	Model	Brake	Origin position <small>Note 2</small>	Bracket plate	Stroke	Cable length <small>Note 4</small>
	12: 12mm 06: 6mm 02: 2mm	S: Straight model J: Space-saving model <small>Note 1</small> (motor installed on top)	N: With no brake B: With brake	N: Standard <small>Note 3</small> Z: Non-motor side	N: No plate H: With plate	50 to 300 (60mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

S2

Robot positioner	I/O
S2: TS-S2 <small>Note 5</small>	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <small>Note 6</small>

SH

Robot positioner	I/O	Battery
SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board <small>Note 6</small>	B: With battery (Absolute) N: None (Incremental)

SD

Robot driver	I/O cable
SD: TS-SD	f: 1m

Note 1. See P.337 for grease gun nozzles.
 Note 2. When "2mm lead" is selected, the origin position cannot be changed (to non-motor side).
 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.

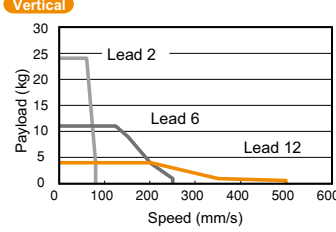
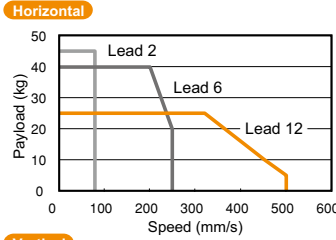
Note 4. The robot cable is flexible and resists bending.
 Note 5. See P.600 for DIN rail mounting bracket.
 Note 6. Select this selection when using the gateway function.

Basic specifications

Motor	42 □ Step motor	
Resolution (Pulse/rotation)	20480	
Repeatability (mm)	+/-0.02	
Deceleration mechanism	Ball screw φ8	Ball screw φ10
Ball screw lead (mm)	12 6 2	
Maximum speed <small>Note 1</small> (mm/sec)	500 250 80	
Maximum payload (kg)	Horizontal	Vertical
	25 40 45	4 11 24
Max. pressing force (N)	150 300 600	
Stroke (mm)	50 to 300 (50pitch)	
Lost motion	0.1mm or less	
Rotating backlash (°)	+/-0.05	
Overall length	Horizontal	Vertical
	Stroke+263	Stroke+303
Maximum outside dimension of body cross-section (mm)	W48 × H58	
Cable length (m)	Standard: 1 / Option: 3, 5, 10	

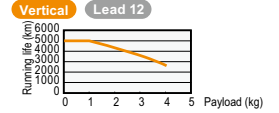
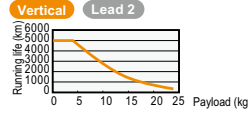
Note 1. The maximum speed needs to be changed in accordance with the payload.
 See the "Speed vs. payload" graph shown on the right. For details, see P. 336.
 Additionally, when the stroke is long, the maximum speed is decreased due to the critical speed of the ball screw.
 See the maximum speed table shown at the lower portion of the drawing.

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.

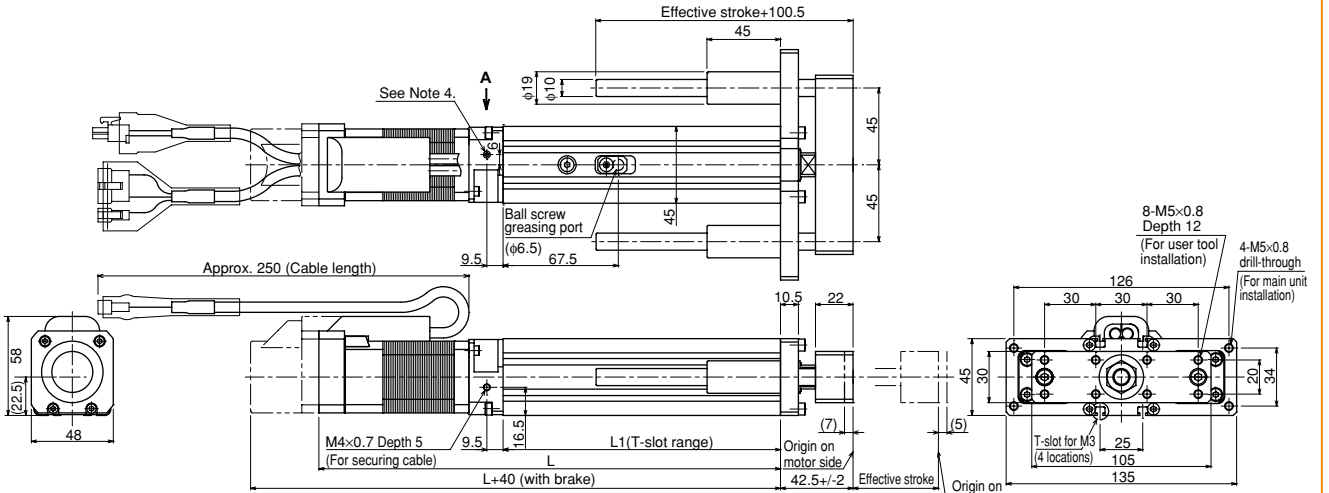


Note. See P.337 for running life distance to life time conversion example.

Controller

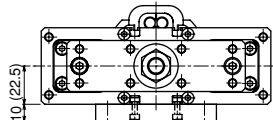
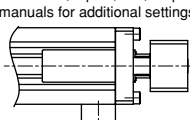
Controller	Operation method	Controller	Operation method
TS-S2	I/O point trace / Remote command	TS-SD	Pulse train control
TS-SH			

SRD04 Straight model S



Option: Horizontal installation plate (foot)

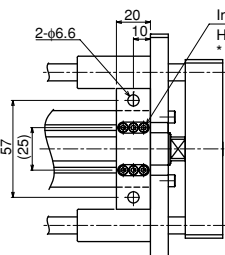
* Contents of option: Plate, 2 pcs., Nut, 12 pcs.
 See our robot manuals for additional settings.



Dimensions of attached square nut for T-slot (6 pcs.)

Details of T-slot

View A



Installed within the T-slot range of the main unit.
 Hex. socket head cap bolt (M3×0.5), Length under head 10
 * Six bolts are required for one plate.

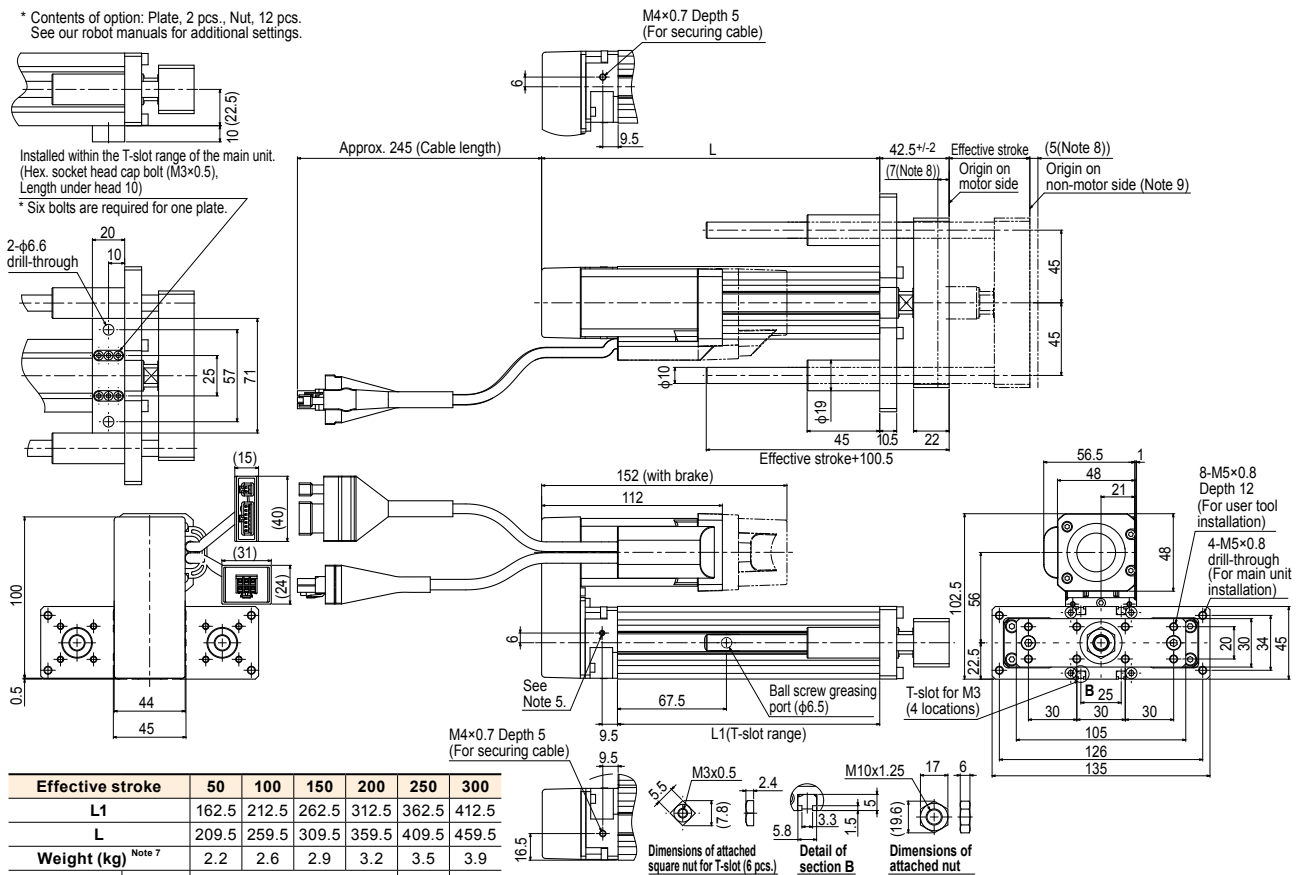
Effective stroke	50	100	150	200	250	300	
	L1	162.5	212.5	262.5	312.5	362.5	412.5
L	270.5	320.5	370.5	420.5	470.5	520.5	
Weight (kg) <small>Note 6</small>	Lead 12	2.0	2.4	2.7	3.0	3.3	3.7
	Lead 2						
Maximum speed for each stroke (mm/sec)	Lead 12	500			440	320	
	Lead 6	250			220	160	
	Lead 2	80			72	53	

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. For lead 2mm specifications, the origin on the non-motor side cannot be set.
 Note 3. When running the cables, secure cables so that any load is not applied to them.
 Note 4. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
 Note 5. The cable's minimum bend radius is R30.
 Note 6. Models with a brake will be 0.2kg heavier.
 Note 7. Distance to mechanical stopper.

SRD04 Space-saving model (motor installed on top) **U**

Option: Horizontal installation plate (foot)

* Contents of option: Plate, 2 pcs., Nut, 12 pcs.
See our robot manuals for additional settings.



Effective stroke	50	100	150	200	250	300
L1	162.5	212.5	262.5	312.5	362.5	412.5
L	209.5	259.5	309.5	359.5	409.5	459.5
Weight (kg) ^{Note 7}	2.2	2.6	2.9	3.2	3.5	3.9
Maximum speed for each stroke (mm/sec)	Lead 12	500		440	320	
	Lead 6	250		220	160	
	Lead 2	80		72	53	

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 guide together to maintain the straightness.
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 0.2kg heavier.
Note 8. Distance to mechanical stopper.
Note 9. For lead 2mm specifications, the origin on the non-motor side cannot be set.

SR05 Rod type

- CE compliance
- Origin on the non-motor side is selectable: Lead 6, 12



Ordering method

SR05

Model	Lead	Model	Brake	Origin position	Bracket plate	Stroke	Cable length
	12: 12mm 06: 6mm 02: 2mm	S: Straight model R: Space-saving model (motor installed on right) L: Space-saving model (motor installed on left)	N: With no brake B: With brake	N: Standard Z: Non-motor side	N: No plate H: With plate V: With flange	50 to 300 (50mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

- Note 1. See P.337 for grease gun nozzles.
 Note 2. When "2mm lead" is selected, the origin position cannot be changed (to non-motor side).
 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.
 Note 4. The robot cable is flexible and resists bending.
 Note 5. See P.600 for DIN rail mounting bracket.
 Note 6. Select this selection when using the gateway function.

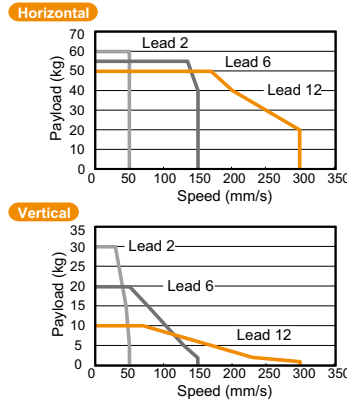
S2	I/O
Robot positioner S2: TS-S2	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board
SH	Battery
Robot positioner SH: TS-SH	B: With battery (Absolute) N: None (Incremental)
SD	I/O cable
Robot driver SD: TS-SD	1: 1m

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
Maximum payload (kg)	50 55 60
Max. pressing force (N)	10 20 30
Stroke (mm)	250 550 900
Lost motion	50 to 300 (50pitch) 0.1mm or less
Rotating backlash (°)	+/-1.0
Overall length (mm)	Horizontal: Stroke+276 Vertical: Stroke+316
Maximum outside dimension of body cross-section (mm)	W56.4 × H71
Cable length (m)	Standard: 1 / Option: 3, 5, 10

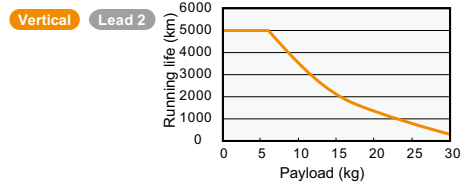
Note 1. The maximum speed needs to be changed in accordance with the payload. See the "Speed vs. payload" graph shown on the right. For details, see P. 336.

Speed vs. payload

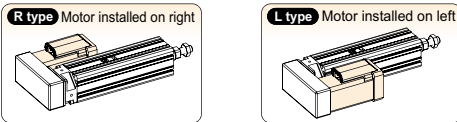


Running life

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.



Motor installation (Space-saving model)



Note. See P.337 for running life distance to life time conversion example.

Controller

Controller	Operation method	Controller	Operation method
TS-S2	I/O point trace / Remote command	TS-SD	Pulse train control

SR05 Straight model S

Option: Horizontal installation plate (foot)
 * Contents of option: Plate, 2 pcs., Nut, 8 pcs.
 See our robot manuals for additional settings.

Option: Vertical installation plate (flange)
 Hex. socket head cap bolt (M5×0.8), Length under head 14

Dimensions of attached square nut for T-slot (6 pcs.)

Effective stroke	50	100	150	200	250	300
L1	183	233	283	333	383	433
L	280.5	330.5	380.5	430.5	480.5	530.5

Weight (kg) Note 10

Effective stroke	50	100	150	200	250	300
L1	2.2	2.6	3.0	3.3	3.7	4.1

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. For lead 2mm specifications, the origin on the non-motor side cannot be set.
 Note 5. When the lead is 2mm, this dimension is 27mm.
 Note 6. When running the cables, secure cables so that any load is not applied to them.
 Note 7. Remove the M4 hex. socket head cap set bolts and use them to secure the cables. (Effective screw thread depth 5)
 Note 8. The cable's minimum bend radius is R30.
 Note 9. Take great care as the outer case of the motor projects from the bottom of the main unit.
 Note 10. Models with a brake will be 0.2kg heavier.
 Note 11. Distance to mechanical stopper.

SR05 Space-saving model (motor installed on right) **R**

Approx. 245 (Cable length)

146 (with brake)
106

45.5^{+/-2} Effective stroke (5)(Note 8, Note 12)
(7)(Note 8)

Origin on motor side
Origin on non-motor side (Note 9)

M4x0.7
(9.9)

Dimensions of attached square nut for T-slot (6 pcs.)

7.3
4.3
1.5
6

M12x1.25 19 7
(21.9)

Dimensions of attached nut

Detail of section B

28.5 70
T-slot for M4 (8 locations)

4-M5x0.8 Depth 10 (90°-equal division)

17 (Width across flat)

30 55
56.5 71

9.5
10 24 17
(Width across flat)

30 55

56.4

Ball screw greasing port (φ6.5)

See Note 5.

9.5 78

L1(T-slot range)

M12x1.25

9.5
10 24 17
(Width across flat)

(10) 35.5

Option: Horizontal installation plate (foot)

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

56.5
127.5

M4x0.7 Depth 5 (For securing cable)

M4x0.7 Depth 5 (For securing cable)

Option: Vertical installation plate (flange)

Hex. socket head cap bolt (M5x0.8), Length under head 14

4-φ6.6 drill-through

2-φ6.6 drill-through

Installed within the T-slot range of the main unit. (Hex. socket head cap bolt (M4x0.7), Length under head 12)

* Four bolts are required for one plate.

20 10 30 68 80

12 (27.5)

9.5 10 30 68 80

4-φ6.6 drill-through

Effective stroke	50	100	150	200	250	300
L1	183	233	283	333	383	433
L	227.5	277.5	327.5	377.5	427.5	477.5
Weight (kg) ^{Note 7}	2.4	2.8	3.2	3.5	3.9	4.3

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 guide together to maintain the straightness.
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 0.2kg heavier.
Note 8. Distance to mechanical stopper.
Note 9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).
Note 11. Take great care as the outer case of the motor and cover belt projects from the bottom of the main unit.
Note 12. When the lead is 2mm, this dimension is 27mm.

SR05 Space-saving model (motor installed on left) **L**

Approx. 245 (Cable length)

106
146 (with brake)

45.5^{+/-2} Effective stroke (5)(Note 8, Note 12)
(7)(Note 8)

Origin on motor side
Origin on non-motor side (Note 9)

M4x0.7
(9.9)

Dimensions of attached square nut for T-slot (6 pcs.)

7.3
4.3
1.5
6

M12x1.25 19 7
(21.9)

Dimensions of attached nut

Detail of section B

28.5 70
T-slot for M4 (8 locations)

4-M5x0.8 Depth 10 (90°-equal division)

17 (Width across flat)

30 55
56.5 71

9.5
10 24 17
(Width across flat)

30 55

56.4

Ball screw greasing port (φ6.5)

See Note 5.

9.5 78

L1(T-slot range)

M12x1.25

9.5
10 24 17
(Width across flat)

(10) 35.5

Option: Horizontal installation plate (foot)

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

56.5
127.5

M4x0.7 Depth 5 (For securing cable)

M4x0.7 Depth 5 (For securing cable)

Option: Vertical installation plate (flange)

Hex. socket head cap bolt (M5x0.8), Length under head 14

4-φ6.6 drill-through

2-φ6.6 drill-through

Installed within the T-slot range of the main unit. (Hex. socket head cap bolt (M4x0.7), Length under head 12)

* Four bolts are required for one plate.

20 10 30 68 80

12 (27.5)

9.5 10 30 68 80

4-φ6.6 drill-through

Effective stroke	50	100	150	200	250	300
L1	183	233	283	333	383	433
L	227.5	277.5	327.5	377.5	427.5	477.5
Weight (kg) ^{Note 7}	2.4	2.8	3.2	3.5	3.9	4.3

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 guide together to maintain the straightness.
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 0.2kg heavier.
Note 8. Distance to mechanical stopper.
Note 9. For lead 2mm specifications, the origin on the non-motor side cannot be set.
Note 10. This unit can be installed with the motor facing up (turned 90 degrees from the position in this drawing).
Note 11. Take great care as the outer case of the motor and cover belt projects from the bottom of the main unit.
Note 12. When the lead is 2mm, this dimension is 27mm.

SRD05

Rod type (With support guide)



- CE compliance
- Origin on the non-motor side is selectable: Lead 6, 12

Ordering method

SRD05

Model	Lead	Model	Brake	Origin position	Bracket plate	Stroke	Cable length
	12: 12mm 06: 6mm 02: 2mm	S: Straight model J: Space-saving model (motor installed on top)	N: With no brake B: With brake	N: Standard Z: Non-motor side	N: No plate H: With plate	50 to 300 (50mm pitch)	1K: 1m 3K: 3m 5K: 5m 10K: 10m

S2

Robot positioner	I/O
S2: TS-S2	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board

SH

Robot positioner	I/O	Battery
SH: TS-SH	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board	B: With battery (Absolute) N: None (Incremental)

SD

Robot driver	I/O cable
SD: TS-SD	f: 1m

Note 1. See P.337 for grease gun nozzles.
 Note 2. When "2mm lead" is selected, the origin position cannot be changed (to non-motor side).
 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.

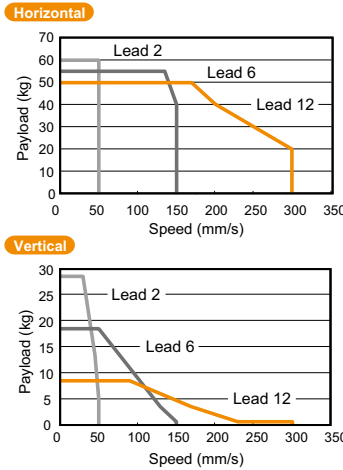
Note 4. The robot cable is flexible and resists bending.
 Note 5. See P.600 for DIN rail mounting bracket.
 Note 6. Select this selection when using the gateway function.

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^{Note 1} (mm/sec)	300	150	50
Maximum payload (kg)	Horizontal	Vertical	
	8.5	18.5	28.5
Max. pressing force (N)	250	550	900
Stroke (mm)	50 to 300 (50pitch)		
Lost motion	0.1mm or less		
Rotating backlash (°)	±0.05		
Overall length (mm)	Horizontal	Vertical	
	Stroke+276	Stroke+316	
Maximum outside dimension of body cross-section (mm)	W56.4 × H71		
Cable length (m)	Standard: 1 / Option: 3, 5, 10		

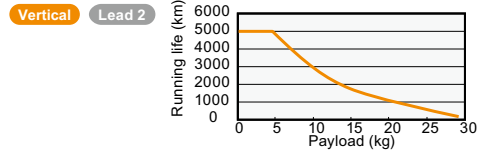
Note 1. The maximum speed needs to be changed in accordance with the payload.
 See the "Speed vs. payload" graph shown on the right.
 For details, see P. 336.

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.

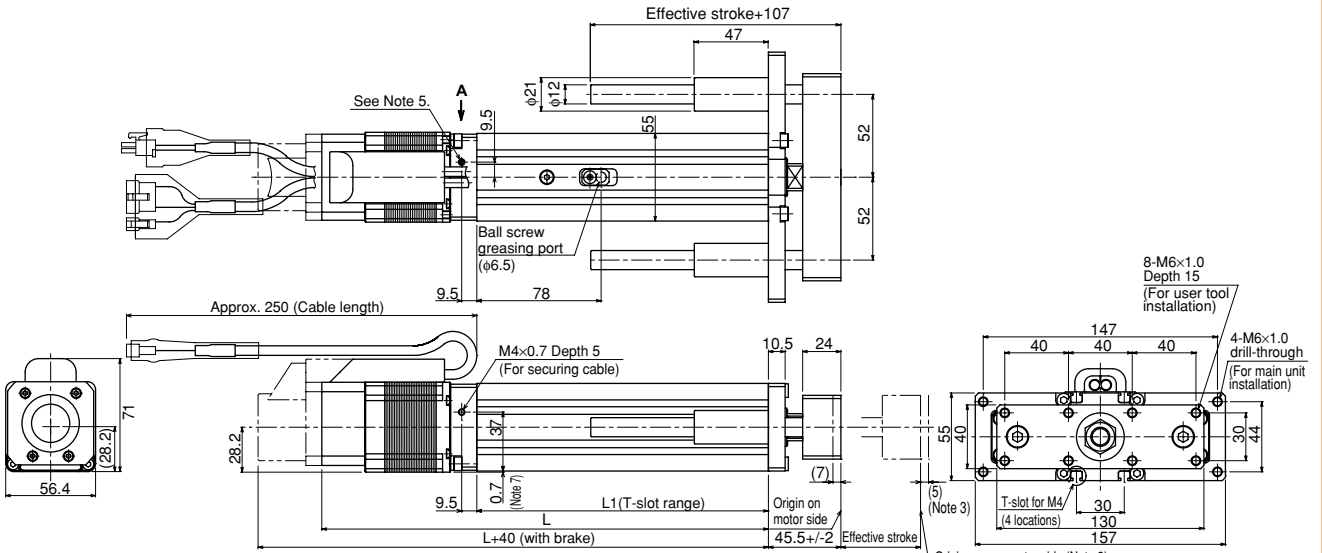


Note. See P.337 for running life distance to life time conversion example.

Controller

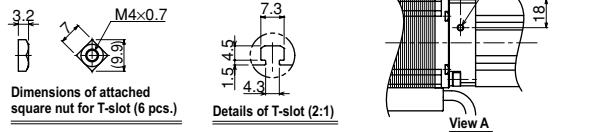
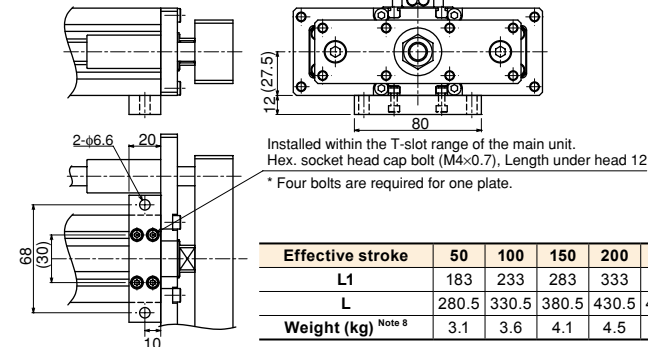
Controller	Operation method	Controller	Operation method
TS-S2	I/O point trace / Remote command	TS-SD	Pulse train control

SRD05 Straight model S



Option: Horizontal installation plate (foot)

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



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. For lead 2mm specifications, the origin on the non-motor side cannot be set.
 Note 3. When the lead is 2mm, this dimension is 27mm.
 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. 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.
 Note 9. Distance to mechanical stopper.

Effective stroke	50	100	150	200	250	300
L1	183	233	283	333	383	433
L	280.5	330.5	380.5	430.5	480.5	530.5
Weight (kg) ^{Note 8}	3.1	3.6	4.1	4.5	5.0	5.5

SRD05 Space-saving model (motor installed on top) U

