SRD04

Rod type (With support guide)

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

SRD04-S   SRD04-U

■ Ordering method

SRD04 - ☐ ☐ ☐ ☐ ☐ ☐ ☐

Model	Lead	Model	Brake	Origin position Note 2	Bracket plate	Stroke	Cable length Note 4
	12: 12mm 06: 6mm 02: 2mm	S: Straight model U: Space-saving model Note 1 (motor installed on top)	N: With no brake B: With brake	N: Standard Note 3 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 Note 5	NP: NPN PN: PNP CC: CC-Link DN: DeviceNet™ EP: EtherNet/IP™ PT: PROFINET GW: No I/O board Note 6

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 Note 6	B: With battery (Absolute) N: None (Incremental)

SD   **1**

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

Note 1. See P.153 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.522 for DIN rail mounting bracket.
Note 6. Select this selection when using the gateway function. For details, see P.66.

■ 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 Note 1 (mm/sec)	500	250	80
Maximum payload (kg) Horizontal	25	40	45
Maximum payload (kg) Vertical	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 (mm) Horizontal	Stroke+263		
Overall length (mm) 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. 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.

■ Speed vs. payload

Horizontal

Vertical
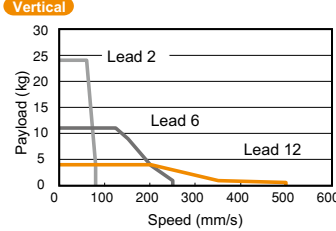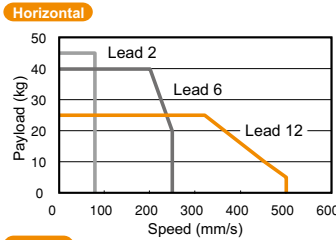
■ Running life

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.
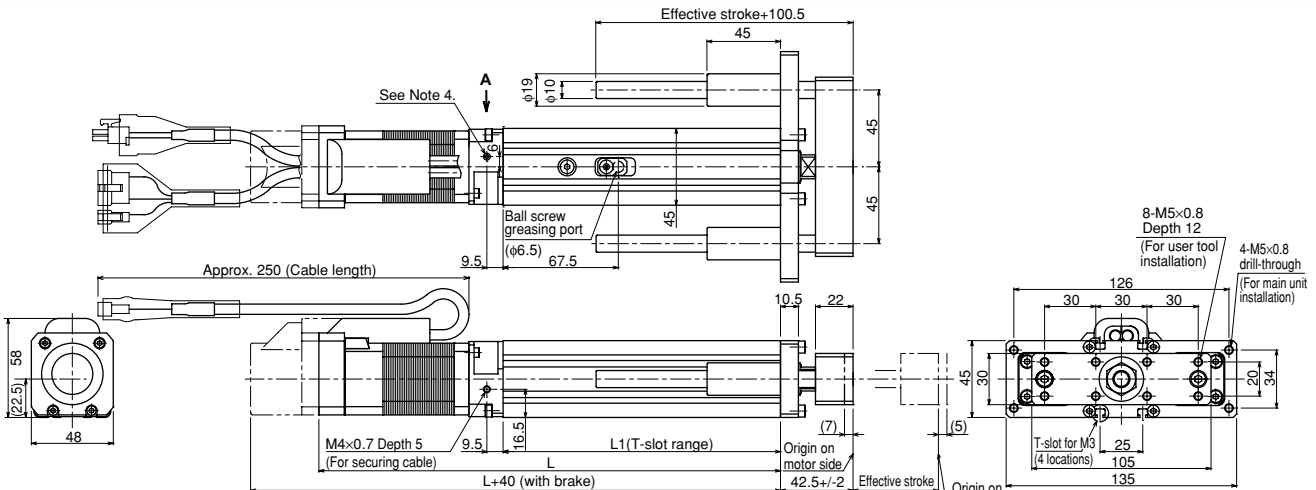
Vertical Lead 2

Vertical Lead 12
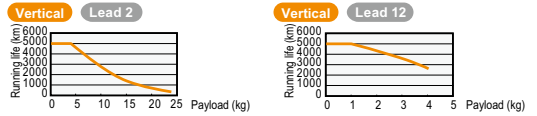
Note. See P.153 for running life distance to life time conversion example.

■ Controller

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

SRD04   Straight model S

Option: Horizontal installation plate (foot)

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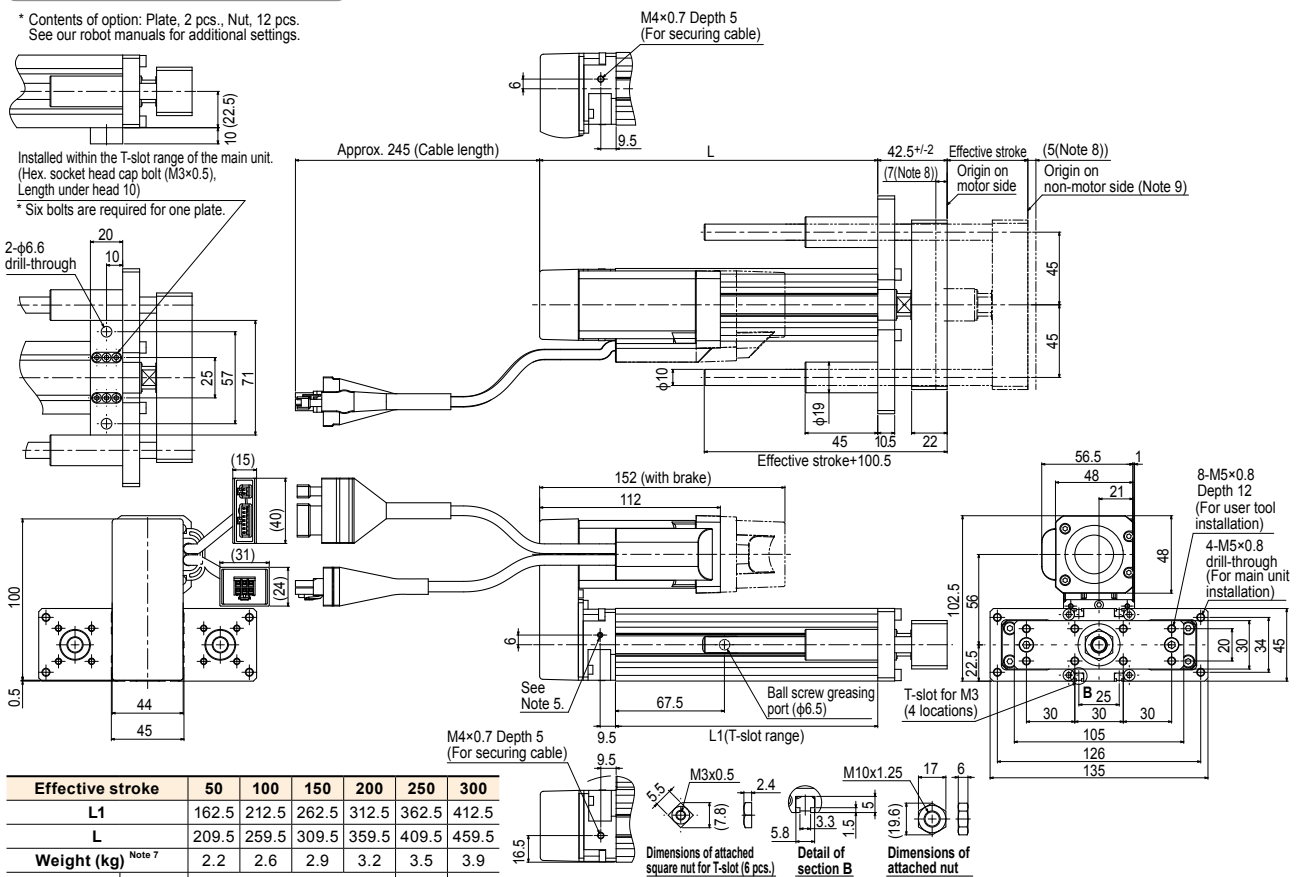See our robot manuals for additional settings.

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.

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

Details of T-slot

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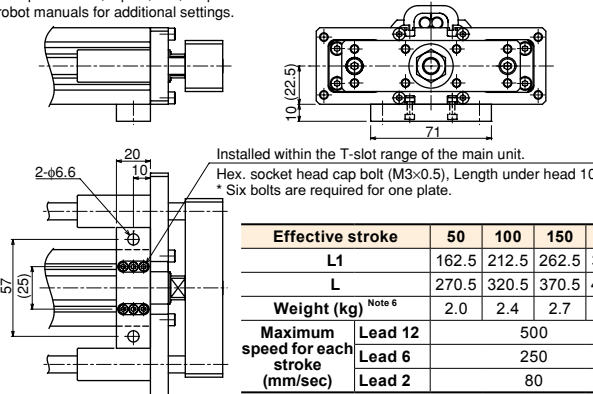
Effective stroke	50	100	150	200	250	300
L1	162.5	212.5	262.5	312.5	362.5	412.5
L	270.5	320.5	370.5	420.5	470.5	520.5
Weight (kg) Note 6	2.0	2.4	2.7	3.0	3.3	3.7
Maximum speed for each stroke (mm/sec) Lead 12	500				440	320
Maximum speed for each stroke (mm/sec) Lead 6	250				220	160
Maximum speed for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

YA — Articulated robots
LCM100 — Linear conveyor modules
Robonity — Motor-less single axis actuator
TRANSERVO — Compact single-axis robots
FLIP-X — Single-axis robots
PHASER — Linear motor single-axis robots
XY-X — Cartesian robots
YK-X — SCARA robots
YP-X — Pick & place robots
CLEAN
CONTROLLER
INFORMATION

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

Option: Horizontal installation plate (foot)

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

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

M4×0.7 Depth 5 (For securing cable)

Approx. 245 (Cable length)

L

42.5 +/-2

(7(Note 8))   Effective stroke   (5(Note 8))

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

Effective stroke+100.5

152 (with brake)

112

8-M5×0.8 Depth 12 (For user tool installation)

4-M5×0.8 drill-through (For main unit installation)

See Note 5.

Ball screw greasing port (φ6.5)

T-slot for M3 (4 locations)

M4×0.7 Depth 5 (For securing cable)

L1(T-slot range)

M3x0.5

M10x1.25

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

Detail of section B

Dimensions of attached nut

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.