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	S: Straight model	N: With no brake	N: Standard Note 3	N: No plate	50 to 300	1K: 1m
	06: 6mm	U: Space-saving model Note 1	B: With brake	Z: Non-motor side	H: With plate	(50mm pitch)	3K: 3m
	02: 2mm	(motor installed on top)					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	B: With battery (Absolute)
	PN: PNP	N: None (Incremental)
	CC: CC-Link	
	DN: DeviceNet™	
	EP: EtherNet/IP™	
	PT: PROFINET	
	GW: No I/O board Note 6	

SD   **1**

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

Note 1. See P.255 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.634 for DIN rail mounting bracket.
Note 6. Select this selection when using the gateway function. For details, see P.96.

■ 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. 254.
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

Lead 2 / Lead 6 / Lead 12

Vertical

Lead 2 / Lead 6 / Lead 12
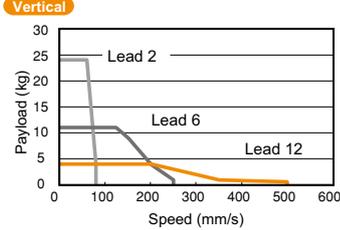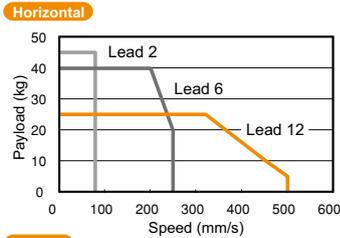
■ Running life

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.
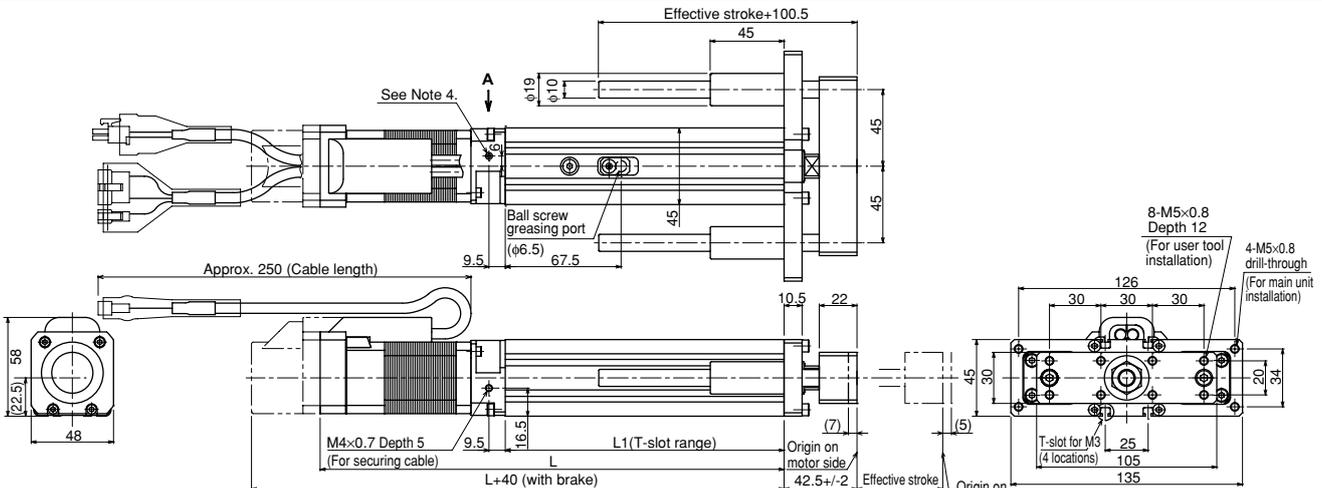
Vertical Lead 2   **Vertical Lead 12**

Note. See P.255 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.
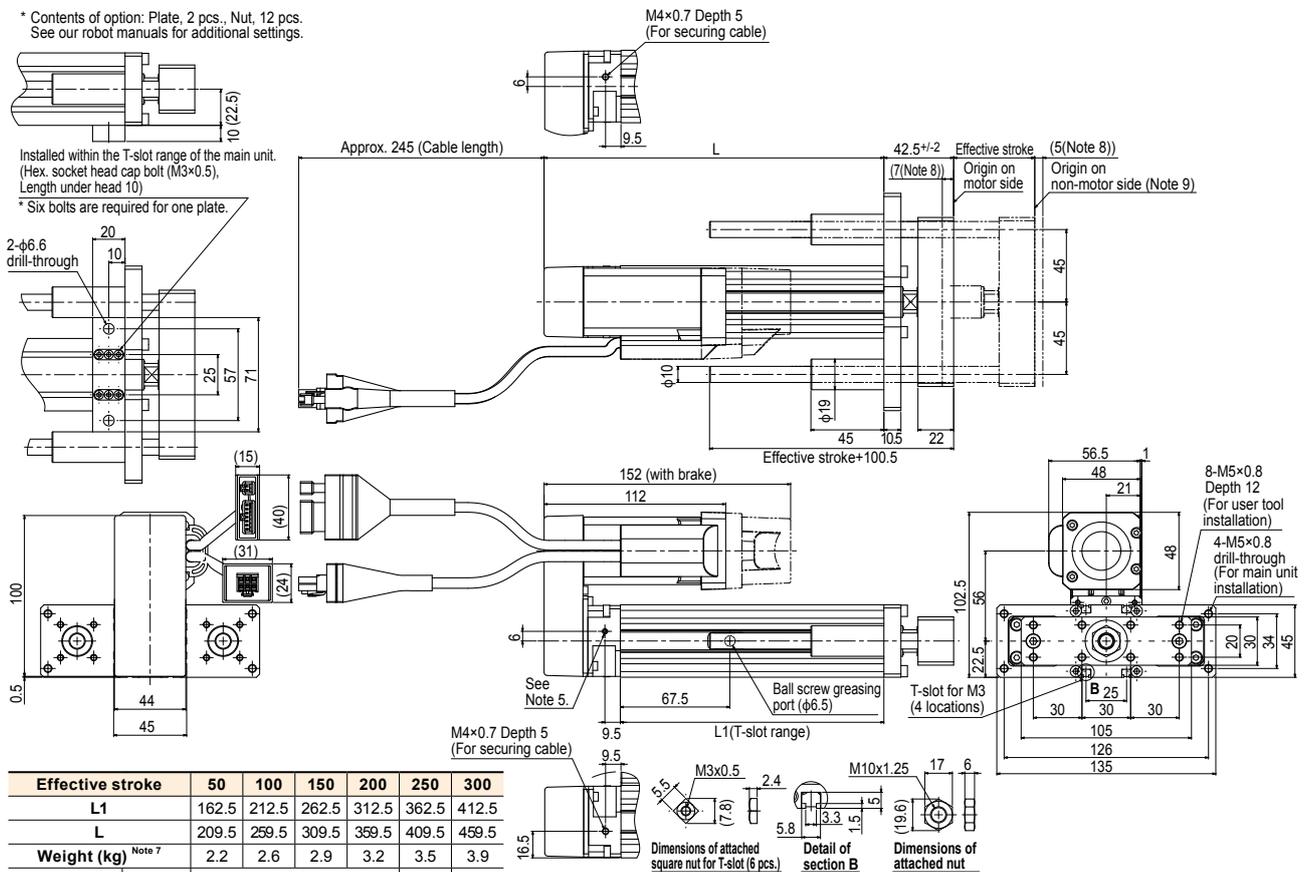See our robot manuals for additional settings.

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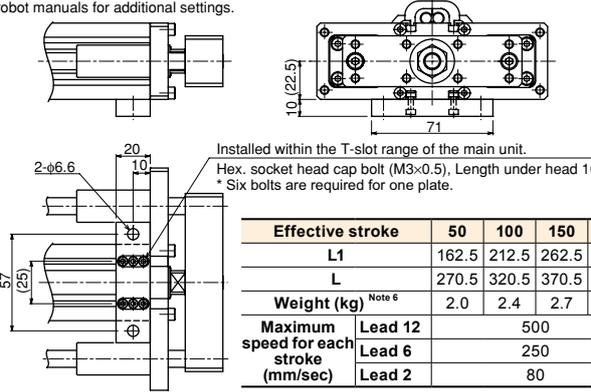
Effective stroke	50	100	150	200	250	300
L1	162.5	212.5	262.5	312.5	362.5	412.5
L	270.5	320.5	370.5	420.5	470.5	520.5
Weight (kg) Note 6	2.0	2.4	2.7	3.0	3.3	3.7
Maximum speed for each stroke (mm/sec) Lead 12	500				440	320
	Lead 6	250				220	160
	Lead 2	80				72	53

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.

Controller   TS-S2 ▶ 626 TS-SH ▶ 626 TS-SD ▶ 636

SRD04

YA — Articulated robots
LCM — Linear conveyor modules
GX — Single-axis robots
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) **U**

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)

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

See Note 5.

Ball screw greasing port (φ6.5)

T-slot for M3 (4 locations)

M4×0.7 Depth 5 (For securing cable)

8-M5×0.8 Depth 12 (For user tool installation)
4-M5×0.8 drill-through (For main unit installation)

M3x0.5
Dimensions of attached square nut for T-slot (6 pcs.)

Detail of section B

M10x1.25
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.