



Single Axis Electric Actuator Series **LJ1S** Slider Guide

Series	Motor type	Guide type	Mounting orientation	Model	Lead screw lead	Page
					mm	
LJ1S	Standard motor	Slider guide	Horizontal	LJ1S10	20	88
				LJ1S20	20	90
				LJ1S30	20	92
	Standard motor			LJ1S10	20	94
				LJ1S20	20	96
				LJ1S30	20	98

■ Option specifications	Page 100
■ Made to Order	101
• Dust seal specification	116
• TSUBAKI CABLEVEYOR specification	128
■ Construction	137
■ Mounting	140
■ Non-standard Motor Mounting	143
■ Deflection Data	145

Part Number Designations

LJ1 S 10 G 1 1 S C - 100 - F W - X10

Guide type

S | Slider guide

Series

10 | Series 10
20 | Series 20
30 | Series 30

Motor specification

Nil	Standard motor
G	Matsushita Electric Industrial Co., Ltd.
R	Mitsubishi Electric Corporation
Y	Yaskawa Electric Corporation

Motor output

1	50W
2	100W
3	200W

Power supply voltage

1	100/110VAC 50/60Hz 100/115VAC 50/60Hz
2	200/220VAC 50/60Hz 200/230VAC 50/60Hz
0	Without motor

Stroke

100 | 20mm

Lead screw lead

C | 20mm

Lead screw type

S | Slide screw

Cable entry direction

F | Axial
R | Right
L | Left
T | Top
B | Bottom

Limit switch

Nil | None
W | B contact specification 2 pcs.

Cable length

2	2m
3	3m
4	4m
5	5m

Non-standard motor

X10

The tables above show the definition for each symbol only and cannot be used for actual model selection.

Standard Motor
Horizontal Mount

Series LJ1S10

Motor Output
50W

Slider
Guide

Slide Screw
∅20mm/20mm lead

How to Order

LJ1H101 **1** **SC** — Stroke — **F** **2**

Power supply voltage

1	100/110VAC (50/60Hz)
2	200/220VAC (50/60Hz)

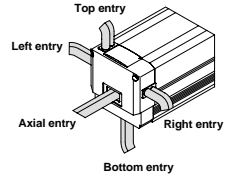
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable length

2	2m
3	3m
4	4m
5	5m

Cable entry direction



Specifications

Standard stroke		mm	100	200	300	400	500	600	700	800	900	1000
Performance	Body weight	kg	5.4	6.1	6.9	7.7	8.5	9.3	10.0	10.8	11.6	12.4
	Operating temperature range	°C	5 to 40 (with no condensation)									
	Work load	kg	5									
	Rated thrust	N	24									
	Maximum speed	mm/s	300									
Main parts	Positioning repeatability	mm	±0.1									
	Motor		AC servomotor (50W)									
	Encoder		Incremental system									
	Lead screw		Slide screw ∅20mm, 20mm lead									
	Guide		Slider guide									
Controller	Motor/Screw connection		With coupling									
	Model		LC1-1B1S□□□□ (Refer to page 185 for details.)									

Intermediate strokes

For manufacture of strokes other than the standard strokes above, add "-X2" at the end of the part number.
Applicable strokes: 150, 250, 350, 450, 550, 650, 750, 850, 950
Example) LJ1S1011SC-150-F2-X2

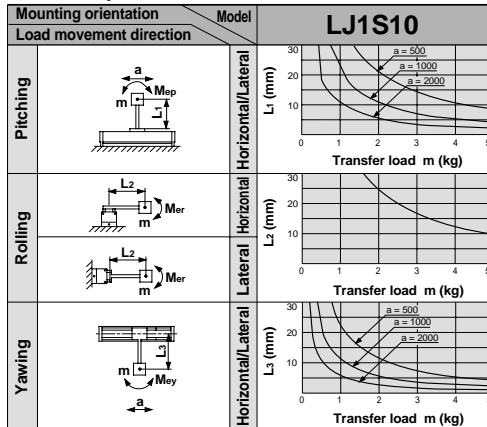
Allowable Moment (N·m)

Allowable static moment

Pitching	1.3
Rolling	1.5
Yawing	0.7

m : Transfer load (kg)
a : Work piece acceleration (mm/s²)
Me: Dynamic moment
L : Overhang to work piece center of gravity (mm)

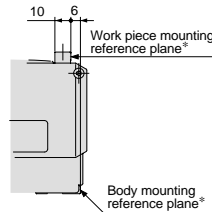
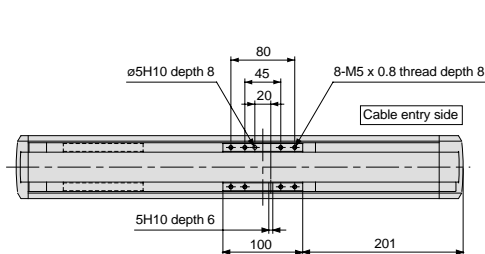
Allowable dynamic moment



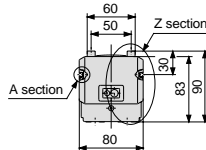
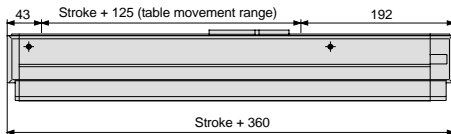
Refer to page 145 for deflection data.

Dimensions/LJ1S10□SC

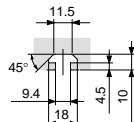
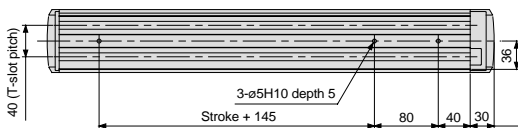
Scale: 15%



Z section detail



A section detail (Switch groove)



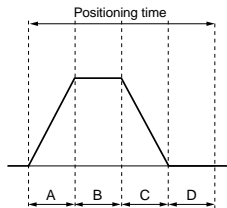
T-slot dimensions

* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

		Positioning time (sec.)				
		1	10	100	500	1000
Speed (mm/s)	10	0.5	1.4	10.4	50.4	100.4
	100	0.4	0.5	1.4	5.4	10.4
	150	0.4	0.5	1.1	3.8	7.1
	300	0.4	0.5	0.8	2.2	3.8

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
 B: Constant velocity time
 C: Deceleration time
 D: Resting time (0.1sec.)
 Maximum acceleration: 2000mm/s²

LJ1

LG1

LC1

LX

LC6D/LC6C

Switches

Standard Motor

Horizontal Mount

Series LJ1S20

Motor Output

100W

Slider Guide

Slide Screw

∅20mm/20mm lead

How to Order

LJ1S202 **1** **SC** — Stroke — **F** **2**

Power supply voltage

1	100/110VAC (50/60Hz)
2	200/220VAC (50/60Hz)

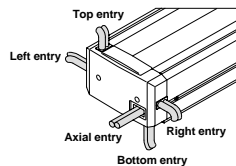
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable length

2	2m
3	3m
4	4m
5	5m

Cable entry direction



Specifications

	Standard stroke	mm	100	200	300	400	500	600	700	800	900	1000	1200
Performance	Body weight	kg	6.8	7.9	9.0	10.1	11.1	12.2	13.3	14.3	15.4	16.4	18.6
	Operating temperature range	°C	5 to 40 (with no condensation)										
	Work load	kg	10										
	Rated thrust	N	50										
	Maximum speed	mm/s	300										
Main parts	Motor		AC servomotor (100W)										
	Encoder		Incremental system										
	Lead screw		Slide screw ∅20mm, 20mm lead										
	Guide		Slider guide										
	Motor/Screw connection		With coupling										
Controller	Model		LC1-1B2S□-□□ (Refer to page 185 for details.)										

Intermediate strokes

For manufacture of strokes other than the standard strokes above, add "-X2" at the end of the part number.
 Applicable strokes:150, 250, 350, 450, 550, 650, 750, 850, 950, 1050
 Example) LJ1S2021SC-150-F2-X2

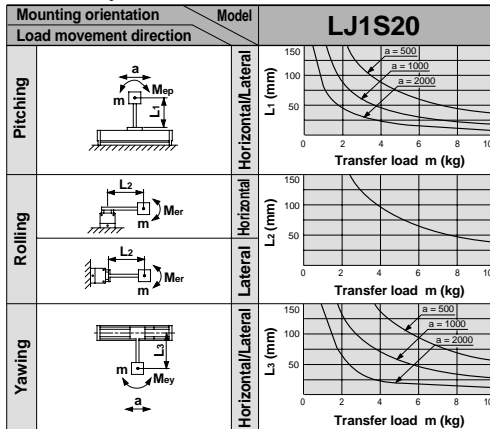
Allowable Moment (N·m)

Allowable static moment

Pitching	5.5
Rolling	6.0
Yawing	8.5

m : Transfer load (kg)
 a : Work piece acceleration (mm/s²)
 Me : Dynamic moment
 L : Overhang to work piece center of gravity (mm)

Allowable dynamic moment

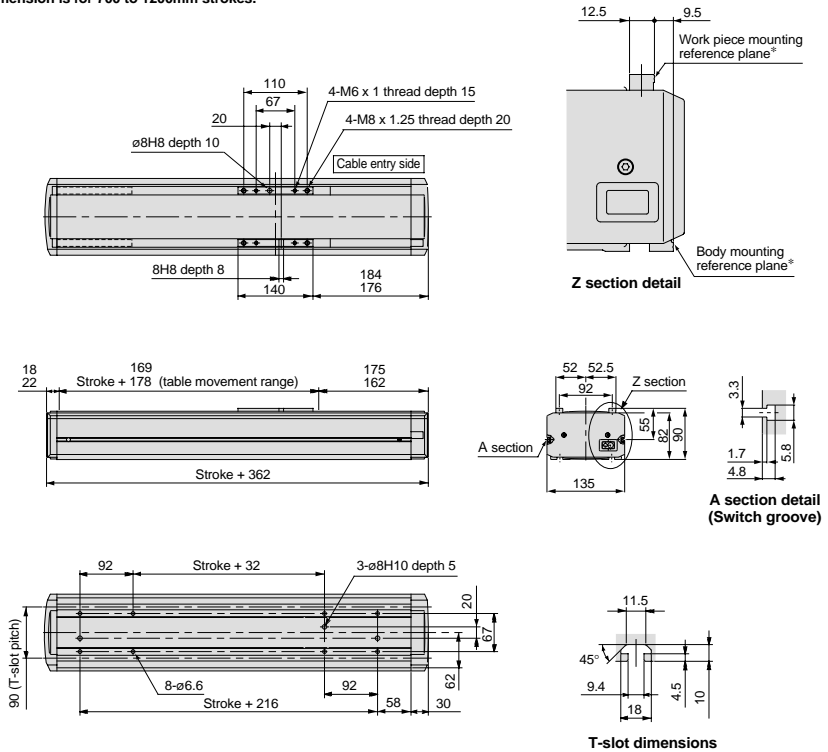


Refer to page 145 for deflection data.

Dimensions/LJ1S20□SC

When two dimensions are shown, the top dimension is for 100 to 600mm strokes, and the bottom dimension is for 700 to 1200mm strokes.

Scale: 10%

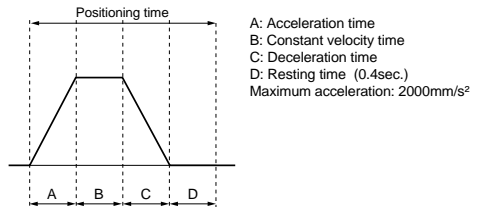


* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

Positioning distance (mm)		Positioning time (sec.)				
		1	10	100	600	1200
Speed (mm/s)	10	0.6	1.5	10.5	60.5	120.5
	100	0.5	0.6	1.5	6.5	12.5
	150	0.5	0.6	1.2	4.5	8.5
	300	0.5	0.6	0.9	2.6	4.6

* Values will vary slightly depending on the operating conditions.



LJ1

LG1

LC1

LX

LC6D/LC6C

Switches

How to Order

LJ1S303 1 SC Stroke F 2

Power supply voltage

1	100/110VAC (50/60Hz)
2	200/220VAC (50/60Hz)

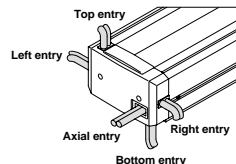
Cable entry direction

F	Axial
R	Right
L	Left
T	Top
B	Bottom

Cable length

2	2m
3	3m
4	4m
5	5m

Cable entry direction



Specifications

Standard stroke		mm	200	300	400	500	600	800	1000	1200	1500
Performance	Body weight	kg	14.4	16.2	18.0	19.8	21.5	25.7	29.7	33.3	38.7
	Operating temperature range	°C	5 to 40 (with no condensation)								
	Work load	kg	20								
	Rated thrust	N	50								
	Maximum speed	mm/s	300								
Main parts	Motor		AC servomotor (200W)								
	Encoder		Incremental system								
	Lead screw		Slide screw ø25mm, 20mm lead								
	Guide		Slider guide								
	Motor/Screw connection		With coupling								
Controller	Model		LC1-1B3S□-□□ (Refer to page 185 for details.)								

Intermediate strokes

For manufacture of strokes other than the standard strokes above, add "-X2" at the end of the part number.
Applicable strokes: 250, 350, 450, 550, 650, 700, 750, 850, 900, 950, 1050, 1100, 1150, 1250, 1300, 1350, 1400, 1450
Example) LJ1S3031SC-250-F2-X2

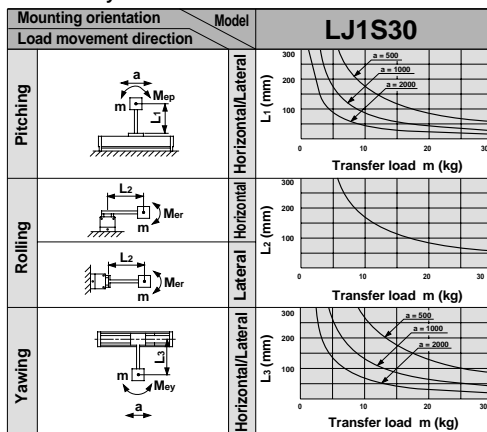
Allowable Moment (N·m)

Allowable static moment

Pitching	26.6
Rolling	40.2
Yawing	25.8

- m : Transfer load (kg)
- a : Work piece acceleration (mm/s²)
- Me: Dynamic moment
- L : Overhang to work piece center of gravity (mm)

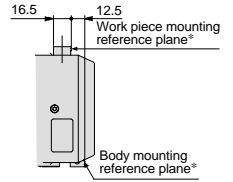
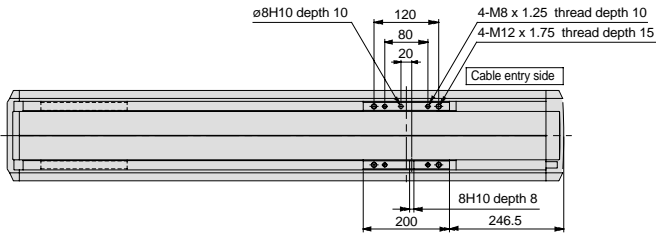
Allowable dynamic moment



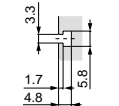
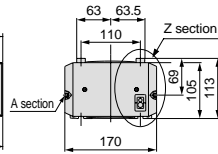
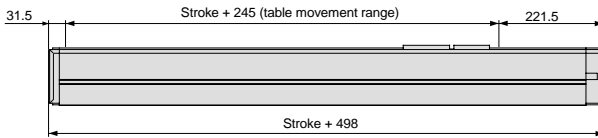
Refer to page 145 for deflection data.

Dimensions/LJ1S30□SC

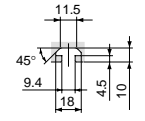
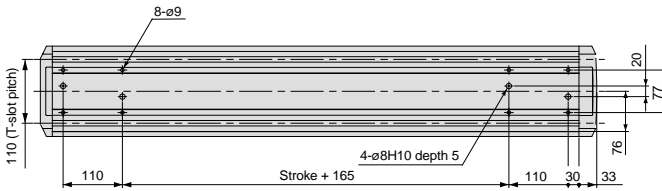
Scale: 10%



Z section detail



A section detail (Switch groove)



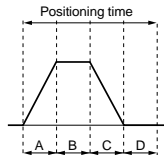
T-slot dimensions

* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 140 for mounting.

Positioning Time Guide

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	750	1500	
Speed (mm/s)	10	0.5	2.1	11.1	76.1	151.1
	100	1.1	1.2	2.1	8.6	16.1
	500	1.1	1.2	1.6	4.2	7.2
	1000	1.1	1.2	1.5	2.8	4.3

* Values will vary slightly depending on the operating conditions.



A: Acceleration time
B: Constant velocity time
C: Deceleration time
D: Resting time (0.4sec.)

LJ1

LG1

LC1

LX

LC6D/LC6C

Switches