

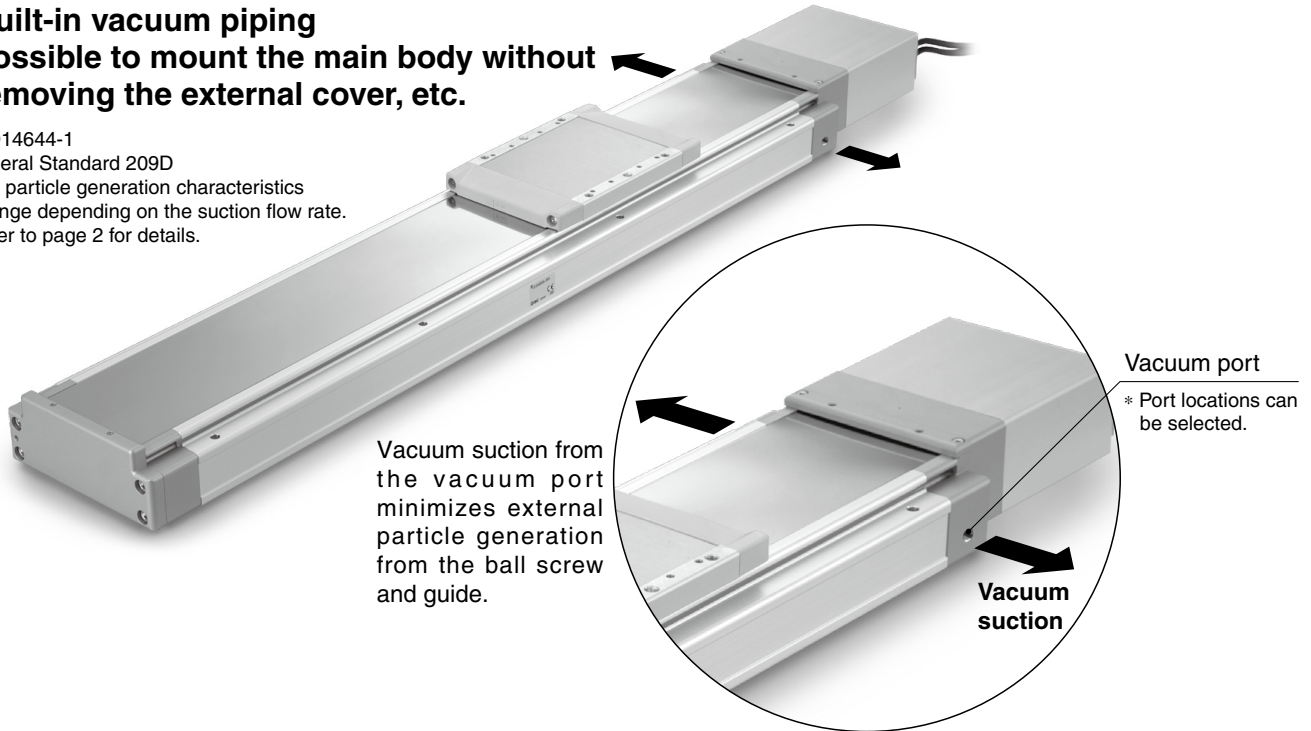
Electric Actuator/ High Rigidity Slider Type



Clean Room Specification ISO Class 4^{*1} (Class 10)^{*2, *3} !

- Built-in vacuum piping
- Possible to mount the main body without removing the external cover, etc.

*1 ISO14644-1
 *2 Federal Standard 209D
 *3 The particle generation characteristics change depending on the suction flow rate. Refer to page 2 for details.



AC Servo Motor Type

Ball Screw Drive Series 11-LEJS

Size: 40, 63

Max. work load: **85** kg

Positioning repeatability: ± 0.02 mm

Max. acceleration/deceleration: **20,000** mm/s²



Incremental type

Absolute type

Pulse input type/
Positioning type
Series LECSA



Pulse input type
Series LECSB



CC-Link
direct input type
Series LECSC



SSCNET III type
Series LECSS



Series 11-LEJS



12-E600

Series 11-LEJS

Particle Generation Measuring Method

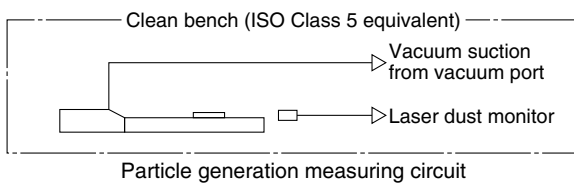
The particle generation data for 11-LEJS series are measured in the following test method.

Test Method (Example)

Operate the specimen that is placed in an ISO Class 5 (Class 100) equivalent clean bench, and measure the changes of the particle concentration over time until the number of cycles reaches the specified point.

Measuring Conditions

Measuring instrument	Description	Laser dust monitor (Automatic particle counter by lightscattering method)
	Minimum measurable particle diameter	0.1 μm
	Suction flow rate	28.3 L/min (ANR)
Setting conditions	Sampling time	5 min
	Interval time	55 min
	Sampling air flow	141.5 L (ANR)



Test Conditions

Size	Speed [mm/s]	Model	Workpiece mass [kg]	Acceleration [mm/s ²]	Duty ratio [%]
40	1200	11-LEJS40□A-200	4	13000	100
	600	11-LEJS40□B-200		10000	
63	1200	11-LEJS63□A-300		13000	
	600	11-LEJS63□B-300		10000	

* Mounting position: Horizontal

Evaluation Method

To obtain the measured values of particle concentration, the accumulated value ^{Note 1)} of particles captured every 5 minutes, by the laser dust monitor, is converted into the particle concentration in every 1 m³.

When determining particle generation grades, the 95% upper confidence limit of the average particle concentration (average value), when each specimen is operated at a specified number of cycles ^{Note 2)} is considered.

The plots in the graphs indicate the 95% upper confidence limit of the average particle concentration of particles with a diameter within the horizontal axis range.

Note 1) Sampling air flow rate: Number of particles contained in 141.5 L (ANR) of air

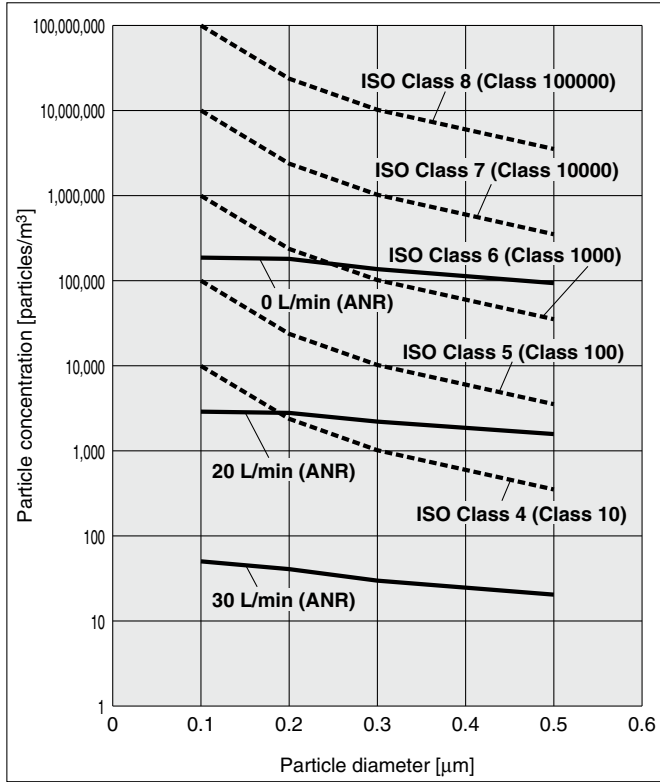
Note 2) Actuator: 1 million cycles

Note 3) The particle generation characteristics (Page 2) provide a guide for selection but is not guaranteed.

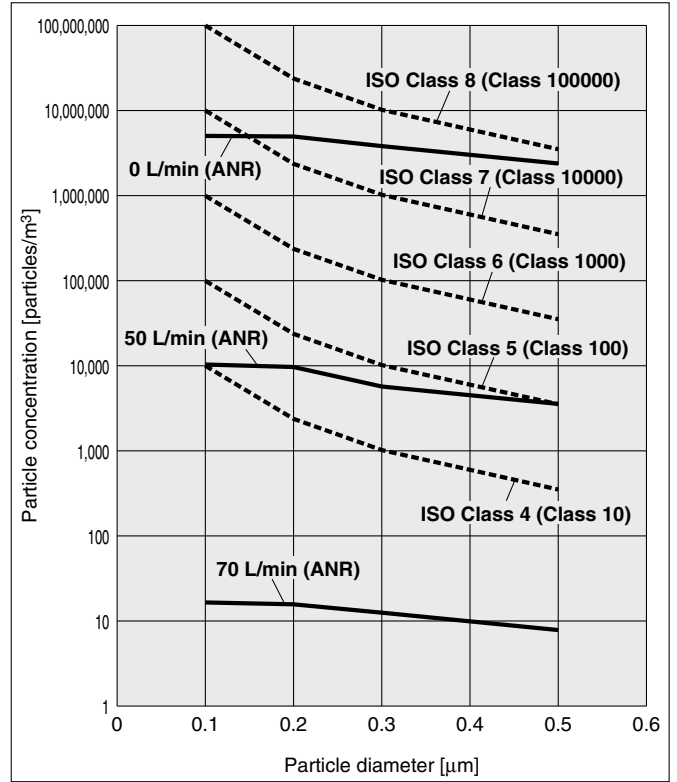
Particle Generation Characteristics

11-LEJS40/Ball Screw Drive

Speed 600 mm/s

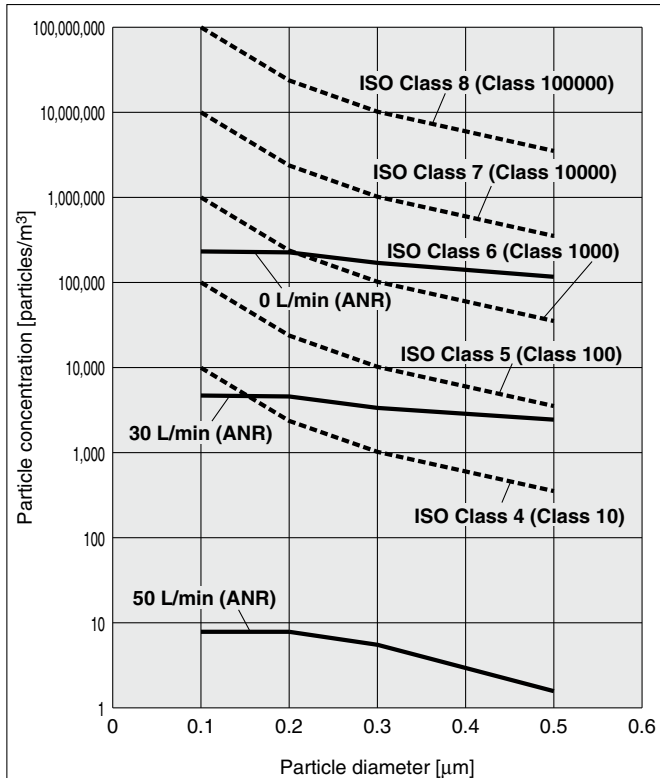


Speed 1,200 mm/s

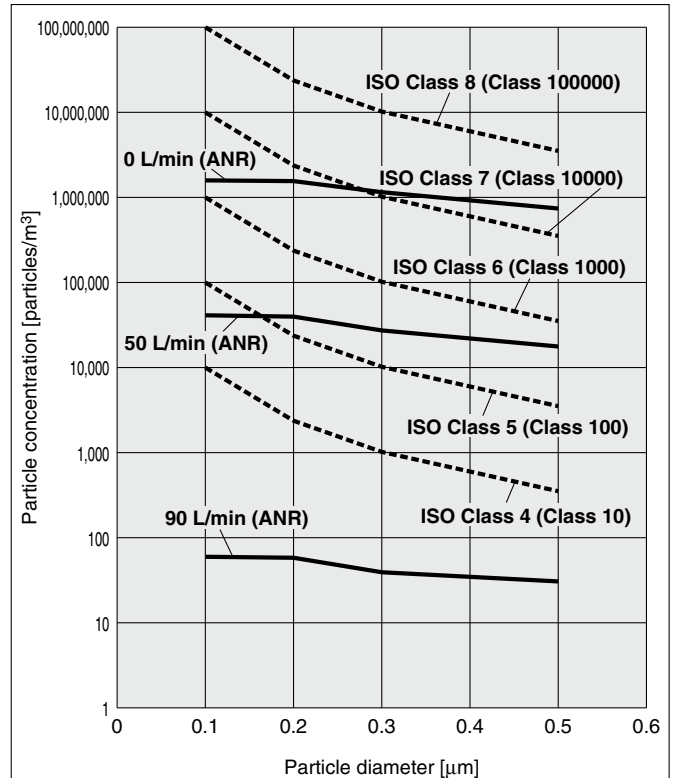


11-LEJS63/Ball Screw Drive

Speed 600 mm/s



Speed 1,200 mm/s



Electric Actuator/High Rigidity Slider Type Ball Screw Drive

AC Servo Motor

Clean Room Specification



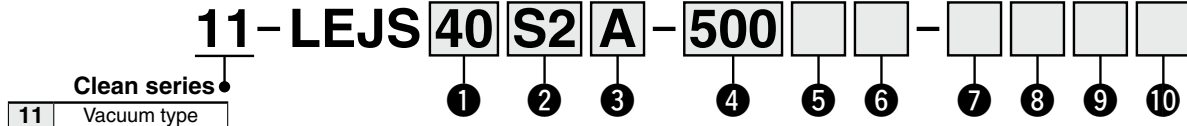
Series 11-LEJS

RoHS

LEJS40, 63



How to Order



1 Size

40
63

2 Motor type*1

Symbol	Type	Output [W]	Actuator size	Compatible drivers
S2	AC servo motor (Incremental encoder)	100	40	LECSA□-S1
S3	AC servo motor (Incremental encoder)	200	63	LECSA□-S3
S6	AC servo motor (Absolute encoder)	100	40	LECSB□-S5 LECSC□-S5 LECSS□-S5
S7	AC servo motor (Absolute encoder)	200	63	LECSB□-S7 LECSC□-S7 LECSS□-S7

*1: For motor type S2 and S6, the compatible driver part number suffixes are S1 and S5 respectively.

3 Lead [mm]

Symbol	LEJS40	LEJS63
A	16	20
B	8	10

4 Stroke [mm]*2

200
to
1500

*2: Refer to the table below for details.

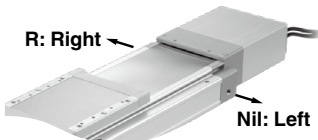
5 Motor option

Nil	Without option
B	With lock

6 Vacuum port*4

Nil	Left
R	Right
D	Both left and right

*4: Select "D" for the vacuum port for suction of 50 L/min (ANR) or more.



7 Cable type*5, *6, *7

Nil	Without cable
S	Standard cable
R	Robotic cable (Flexible cable)

*5: When the driver type is selected, the cable is included. Select cable type and cable length.

Example)

S2S2: Standard cable (2 m) + Driver (LECSS2)

S2: Standard cable (2 m)

Nil: Without cable and driver

*6: The motor and encoder cables are included. (The lock cable is also included when the motor with lock option is selected.)

*7: Standard cable entry direction is "(A) Axis side".

8 Cable length [m]*5, *8

Nil	Without cable
2	2 m
5	5 m
A	10 m

*8: The length of the encoder, motor and lock cables are the same.

9 Driver type*5

	Compatible drivers	Power supply voltage (V)
Nil	Without driver	—
A1	LECSA1-S□	100 to 120
A2	LECSA2-S□	200 to 230
B1	LECSB1-S□	100 to 120
B2	LECSB2-S□	200 to 230
C1	LECSC1-S□	100 to 120
C2	LECSC2-S□	200 to 230
S1	LECSS1-S□	100 to 120
S2	LECSS2-S□	200 to 230

10 I/O connector

Nil	Without connector
H	With connector

Applicable stroke table*3

● Standard ○ Produced upon receipt of order

Model	200	300	400	500	600	700	800	900	1000	1200	1500
LEJS40	●	●	○	●	●	○	●	○	○	○	—
LEJS63	—	●	○	●	●	○	●	○	●	○	○

*3: Consult with SMC as all non-standard and non-made-to-order strokes are produced as special orders.

Compatible Drivers

Driver type	Pulse input type/ Positioning type	Pulse input type	CC-Link direct input type	SSCNET III type
Series	LECSA	LECSB	LECSC	LECSS
Number of point tables	Up to 7	—	Up to 255	—
Pulse input	○	○	—	—
Applicable network	—	—	CC-Link	SSCNET III
Control encoder	Incremental 17-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder	Absolute 18-bit encoder
Communication function	USB communication	USB communication, RS422 communication	USB communication, RS422 communication	USB communication
Power supply voltage (V)	100 to 120 VAC (50/60 Hz), 200 to 230 VAC (50/60 Hz)			

Specifications

11-LEJS40, 63 AC Servo Motor

Model		11-LEJS40S ²		11-LEJS63S ³			
Actuator specifications	Stroke [mm] ^{Note 1)}	200, 300, (400), 500, 600, (700), 800 (900), (1000), (1200)		300, (400), 500, 600, (700), 800, (900) 1000, (1200), (1500)			
	Work load [kg] ^{Note 2)}	Horizontal	30	55	45	85	
		Vertical	5	10	10	20	
	Speed [mm/s] ^{Note 3)}	Stroke range	Up to 500	1200	600	1200	600
			501 to 600	1050	520	1200	600
			601 to 700	780	390	1200	600
			701 to 800	600	300	930	460
			801 to 900	480	240	740	370
			901 to 1000	390	190	600	300
			1001 to 1100	320	160	500	250
			1101 to 1200	270	130	420	210
			1201 to 1300	—	—	360	180
			1301 to 1400	—	—	310	150
	1401 to 1500	—	—	270	130		
	Max. acceleration/deceleration [mm/s ²]		20,000 (Refer to the catalog CAT. ES100-104 for limit according to work load and duty ratio.)				
	Positioning repeatability [mm] ^{Note 4)}		±0.02				
Lead [mm]		16	8	20	10		
Impact/Vibration resistance [m/s ²] ^{Note 5)}		50/20					
Actuation type		Ball screw					
Guide type		Linear guide					
Grease	Ball screw/Linear guide portion	Low particle generation grease					
Cleanliness class ^{Note 6)}		ISO Class 4 (ISO14644-1) Class 10 (Federal Standard 209D)					
Allowable external force [N]		20					
Operating temperature range [°C]		5 to 40					
Operating humidity range [%RH]		90 or less (No condensation)					
Regeneration option		May be required depending on speed and work load. (Refer to the catalog CAT. ES100-104.)					
Electric specifications	Motor output [W]/Size [mm]	100□40		200□60			
	Motor type	AC servo motor (100/200 VAC)					
	Encoder	Motor type S2, S3: Incremental 17-bit encoder (Resolution: 131072 p/rev) Motor type S6, S7: Absolute 18-bit encoder (Resolution: 262144 p/rev)					
	Power consumption [W] ^{Note 7)}	Horizontal	65		80		
		Vertical	165		235		
	Standby power consumption when operating [W] ^{Note 8)}	Horizontal	2		2		
Vertical		10		12			
Max. instantaneous power consumption [W] ^{Note 9)}		445		725			
Lock unit specifications	Type ^{Note 10)}	Non-magnetizing lock					
	Holding force [N]	101	203	330	660		
	Power consumption [W] at 20°C ^{Note 11)}	6.3		7.9			
	Rated voltage [V]	24 VDC ⁰ / _{-10%}					

Note 1) Strokes shown in () are produced upon receipt of order. Strokes other than those shown above are produced as special orders (1 mm increments).

Note 2) Refer to "Speed-Work Load Graph (Guide)" in the catalog CAT. ES100-104 for details.

Note 3) The allowable speed changes according to the stroke.

Note 4) Conforming to JIS B 6191-1999

Note 5) Impact resistance: No malfunction occurred when the actuator was tested with a drop tester in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the actuator in the initial state.)

Vibration resistance: No malfunction occurred in a test ranging between 45 to 2000 Hz. Test was performed in both an axial direction and a perpendicular direction to the lead screw. (Test was performed with the actuator in the initial state.)

Note 6) The amount of particle generation changes according to the operating conditions and suction flow rate. Refer to the particle generation characteristics for details.

Note 7) The power consumption (including the driver) is for when the actuator is operating.

Note 8) The standby power consumption when operating (including the driver) is for when the actuator is stopped in the set position during the operation.

Note 9) The maximum instantaneous power consumption (including the driver) is for when the actuator is operating. This value can be used for the selection of the power supply.

Note 10) Only when motor option "With lock" is selected.

Note 11) For an actuator with lock, add the power consumption for the lock.

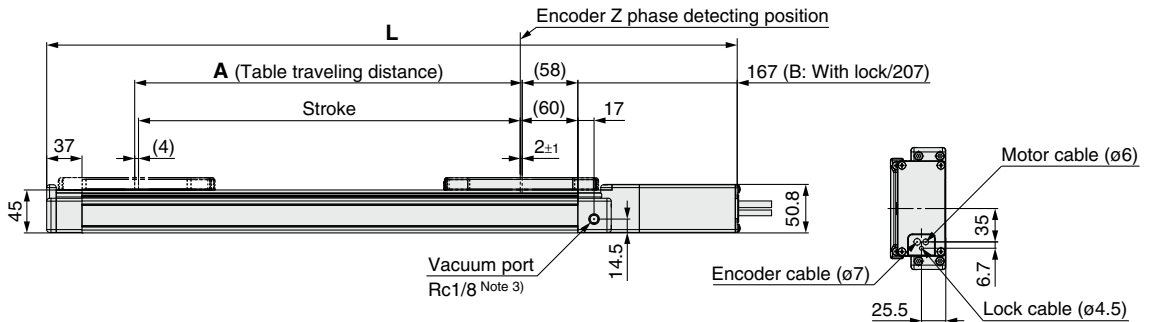
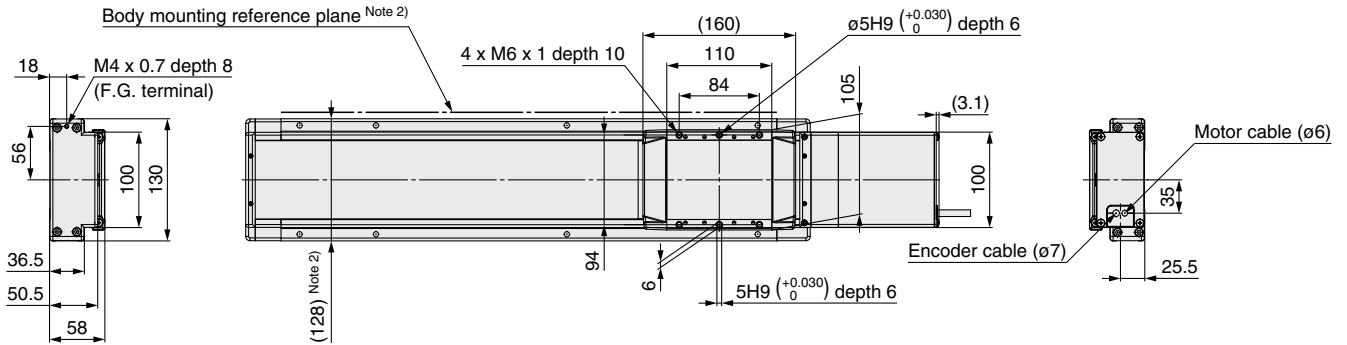
Weight

Model	11-LEJS40									
Stroke [mm]	200	300	(400)	500	600	(700)	800	(900)	(1000)	(1200)
Product weight [kg]	5.6	6.4	7.1	7.9	8.7	9.4	10.2	11.0	11.7	13.3
Additional weight with lock [kg]	0.2 (Incremental encoder)/0.3 (Absolute encoder)									
Model	11-LEJS63									
Stroke [mm]	300	(400)	500	600	(700)	800	(900)	1000	(1200)	(1500)
Product weight [kg]	11.4	12.7	13.9	15.2	16.4	17.7	18.9	20.1	22.6	26.4
Additional weight with lock [kg]	0.4 (Incremental encoder)/0.7 (Absolute encoder)									

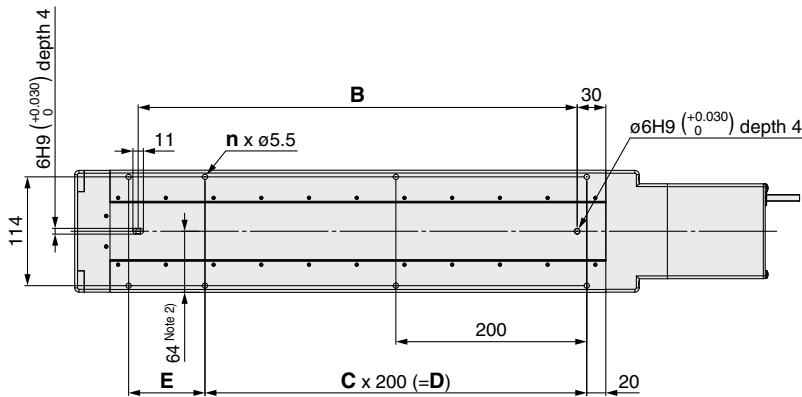
Series 11-LEJS

Dimensions: Ball Screw Drive

11-LEJS40



Motor option B: With lock



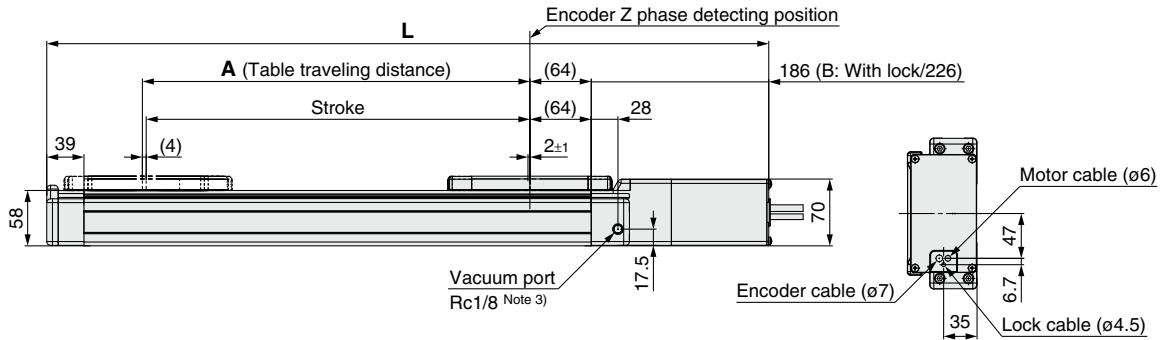
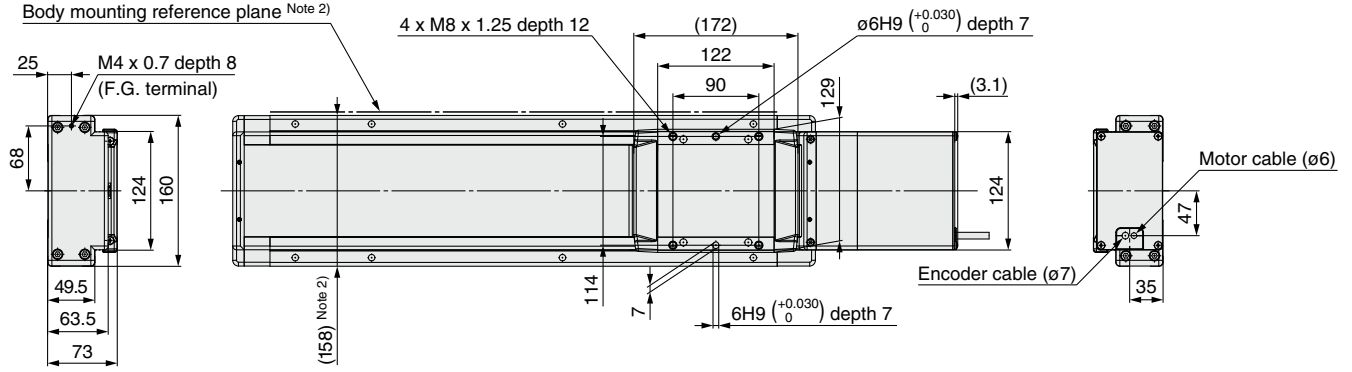
- Note 1) Consult with SMC for adjusting the Z phase detecting position at the stroke end of the end side.
- Note 2) When mounting the actuator using the body mounting reference plane, use a pin. Set the height of the pin to be 5 mm or more because of chamfering. (Recommended height 6 mm)
- Note 3) This drawing shows the left type.
- Note 4) The amount of particle generation changes according to the operating conditions and suction flow rate.

(mm)

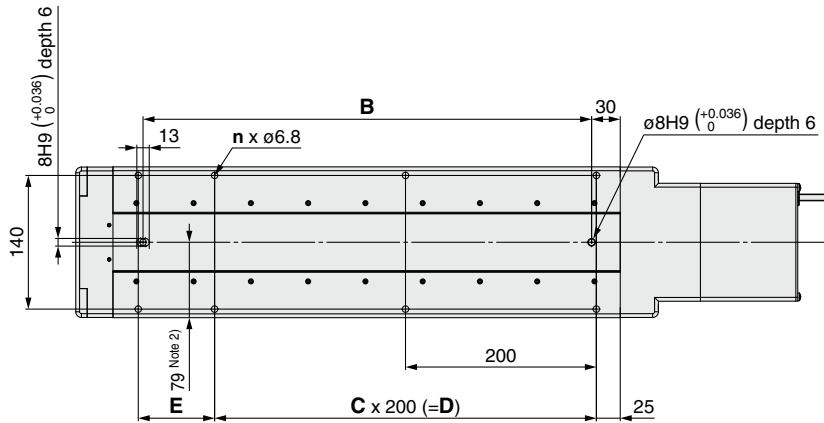
Model	L		A	B	n	C	D	E
	Without lock	With lock						
11-LEJS40S□□-200□□-□□□□	523.5	563.5	206	260	6	1	200	80
11-LEJS40S□□-300□□-□□□□	623.5	663.5	306	360	6	1	200	180
11-LEJS40S□□-400□□-□□□□	723.5	763.5	406	460	8	2	400	80
11-LEJS40S□□-500□□-□□□□	823.5	863.5	506	560	8	2	400	180
11-LEJS40S□□-600□□-□□□□	923.5	963.5	606	660	10	3	600	80
11-LEJS40S□□-700□□-□□□□	1023.5	1063.5	706	760	10	3	600	180
11-LEJS40S□□-800□□-□□□□	1123.5	1163.5	806	860	12	4	800	80
11-LEJS40S□□-900□□-□□□□	1223.5	1263.5	906	960	12	4	800	180
11-LEJS40S□□-1000□□-□□□□	1323.5	1363.5	1006	1060	14	5	1000	80
11-LEJS40S□□-1200□□-□□□□	1523.5	1563.5	1206	1260	16	6	1200	80

Dimensions: Ball Screw Drive

11-LEJS63



**Motor option B:
With lock**



- Note 1) Consult with SMC for adjusting the Z phase detecting position at the stroke end of the end side.
- Note 2) When mounting the actuator using the body mounting reference plane, use a pin. Set the height of the pin to be 5 mm or more because of chamfering. (Recommended height 6 mm)
- Note 3) This drawing shows the left type.
- Note 4) The amount of particle generation changes according to the operating conditions and suction flow rate.

(mm)

Model	L		A	B	n	C	D	E
	Without lock	With lock						
11-LEJS63S□□-300□□-□□□□	656.5	696.5	306	370	6	1	200	180
11-LEJS63S□□-400□□-□□□□	756.5	796.5	406	470	8	2	400	80
11-LEJS63S□□-500□□-□□□□	856.5	896.5	506	570	8	2	400	180
11-LEJS63S□□-600□□-□□□□	956.5	996.5	606	670	10	3	600	80
11-LEJS63S□□-700□□-□□□□	1056.5	1096.5	706	770	10	3	600	180
11-LEJS63S□□-800□□-□□□□	1156.5	1196.5	806	870	12	4	800	80
11-LEJS63S□□-900□□-□□□□	1256.5	1296.5	906	970	12	4	800	180
11-LEJS63S□□-1000□□-□□□□	1356.5	1396.5	1006	1070	14	5	1000	80
11-LEJS63S□□-1200□□-□□□□	1556.5	1596.5	1206	1270	16	6	1200	80
11-LEJS63S□□-1500□□-□□□□	1856.5	1896.5	1506	1570	18	7	1400	180

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D-G

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