

## Low Profile Single Axis Electric Actuator

# Series LG1H

## High Rigidity Direct Acting Guide

Series	Motor type	Guide type	Mounting orientation	Motor/Screw connection	Model	Lead screw lead mm			Page		
						Ground ball screw	Rolled ball screw	Slide screw			
LG1H	Standard motor	High rigidity direct acting guide	Horizontal	Without coupling	LG1□H20	10	20	10	20	20	148
				With coupling	LG1□H21	10	20	10	20	20	158
	Non-standard motor			With coupling	LG1□H21	10	20	10	20	20	168

■ Options	Page 178
■ Construction	179
■ Mounting	181
■ Non-standard Motor Mounting	182
■ Deflection Data	183

LG1

LG1

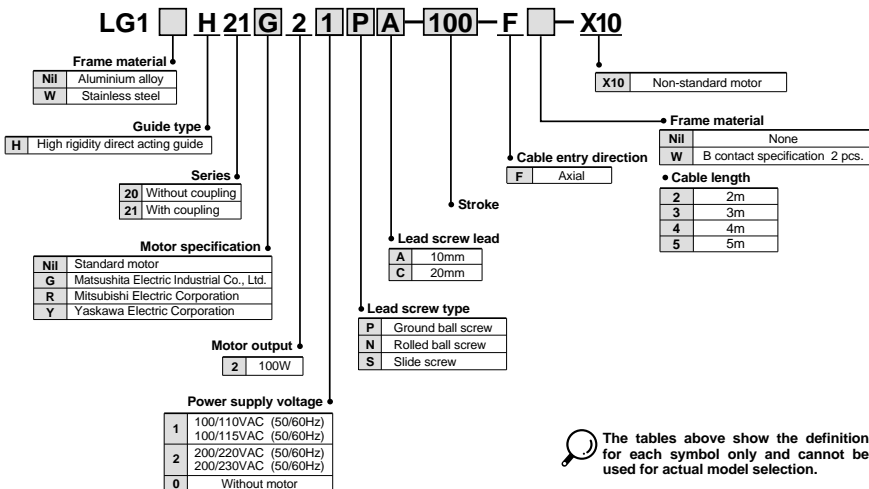
LG1

LX

LC6D/LC6C

Switches

### Part Number Designations



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

**Standard Motor**

**Series LG1 H20**

Motor Output

**100W**

High Rigidity  
Direct Acting  
Guide

Ground Ball Screw

ø15mm/10mm lead

**Horizontal Mount**

**Without Coupling**

**How to Order**

**LG1**  **H202**  **1** **PA** — **Stroke** — **F**  **2**

● <b>Power voltage</b>		● <b>Cable length</b>	
<b>1</b>	100/110VAC (50/60Hz)	<b>2</b>	2m
<b>2</b>	200/220VAC (50/60Hz)	<b>3</b>	3m
		<b>4</b>	4m
		<b>5</b>	5m
● <b>Frame material</b>			
<b>Nil</b>	Aluminum alloy		
<b>T</b>	Stainless steel		

**Specifications**

		Standard stroke	mm	100	200	300	400
<b>Performance</b>	Body weight	Aluminum	kg	5.3	6.1	6.9	7.7
		Stainless steel	kg	8.3	9.6	10.8	12.0
	Operating temperature range	°C	5 to 40 (with no condensation)				
	Work load	kg	30				
	Rated thrust	N	180				
	Maximum speed	mm/s	500				
<b>Main parts</b>	Motor	AC servomotor (100W)					
	Encoder	Incremental system					
	Lead screw	Ground ball screw ø15mm, 10mm lead					
	Guide	High rigidity direct acting guide					
	Motor/Screw connection	Without coupling					
<b>Controller</b>	Model	LC1-1F2HA□□□□ (Refer to page 185 for details.)					

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number.  
Applicable strokes: 150, 250, 350  
Example) **LG1H2021PA-150-F2-X2**

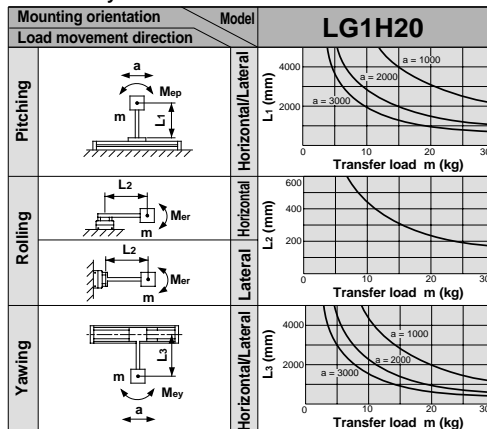
**Allowable Moment (N·m)**

**Allowable static moment**

<b>Pitching</b>	71
<b>Rolling</b>	79
<b>Yawing</b>	75

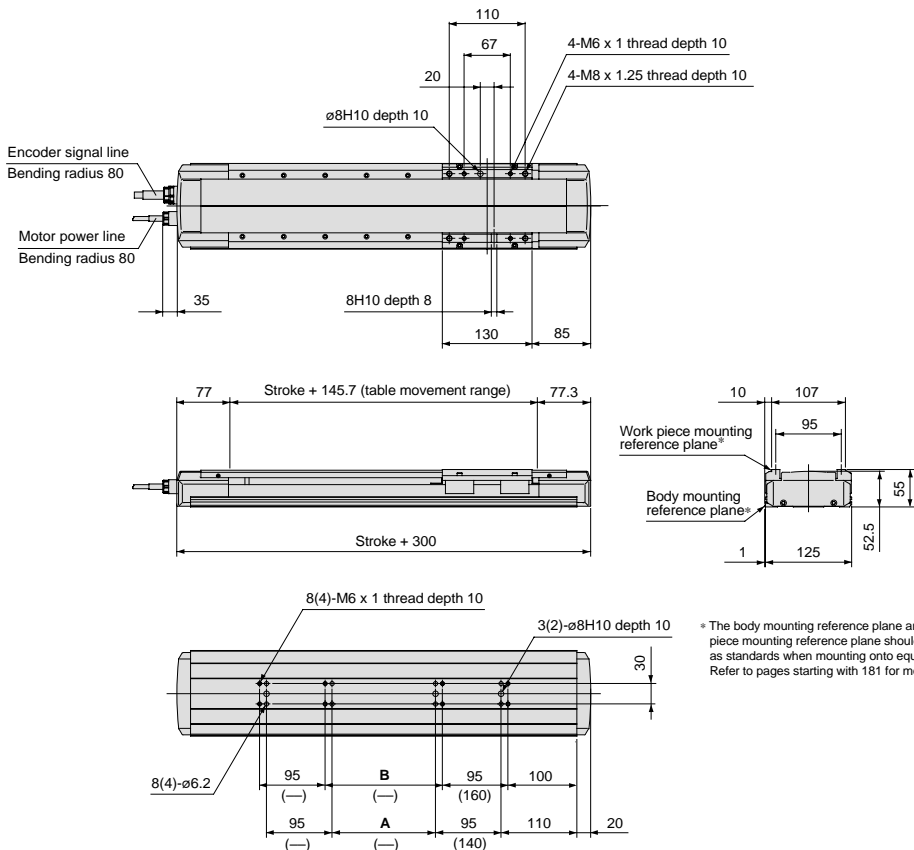
m : Transfer load (kg)  
a : Work piece acceleration (mm/s<sup>2</sup>)  
Me: Dynamic moment  
L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**



Refer to page 183 for deflection data.

**Dimensions/LG1□H20□PA**

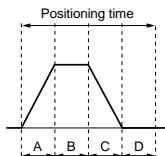


Model	Stroke	A	B
LG1□H20□PA-100-F□*	100	—	—
LG1□H20□PA-200-F□	200	50	70
LG1□H20□PA-300-F□	300	150	170
LG1□H20□PA-400-F□	400	250	270

\* Dimensions inside ( ) are for a 100 mm stroke.

**Positioning Time Guide**

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	200	400	
Speed (mm/s)	10	0.5	1.4	10.4	20.4	40.4
	100	0.5	0.6	1.5	2.5	4.5
	250	0.5	0.6	0.9	1.3	2.1
	500	0.5	0.6	0.8	1.0	1.4



\* Values will vary slightly depending on the operating conditions.

**Standard Motor****Series LG1 H20**

Motor Output

**100W**High Rigidity  
Direct Acting  
Guide

Ground Ball Screw

∅15mm/20mm lead

Horizontal Mount

Without Coupling

**How to Order**LG1  H202 1  PC  Stroke  F  2• **Frame material**

Nil	Aluminum alloy
T	Stainless steel

• **Power supply voltage**

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

• **Cable length**

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

**Specifications**

Standard stroke		mm	500	600	700	800	900	1000	
Performance	Body weight	Aluminum	kg	8.5	9.3	10.1	10.9	11.7	12.5
		Stainless steel	kg	13.3	14.5	15.8	17.1	18.3	19.6
	Operating temperature range	°C	5 to 40 (with no condensation)						
	Work load	kg	30						
	Rated thrust	N	90						
	Maximum speed <small>Note)</small>	mm/s	1000	1000	930	740	600	500	
Positioning repeatability	mm	±0.02							
Main parts	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Rolled ball screw ∅15mm, 20mm lead							
	Guide	High rigidity direct acting guide							
Motor/Screw connection	Without coupling								
Controller	Model	LC1-1F2HC□-□□ (Refer to page 185 for details.)							

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number.  
Applicable strokes: 450, 550, 650, 750, 850, 950

Example) LG1H2021PC-550-F2-X2

Note) The speed is limited by the transfer load. Refer to the maximum speeds for each transfer load on the next page.

**Allowable Moment (N·m)****Allowable static moment**

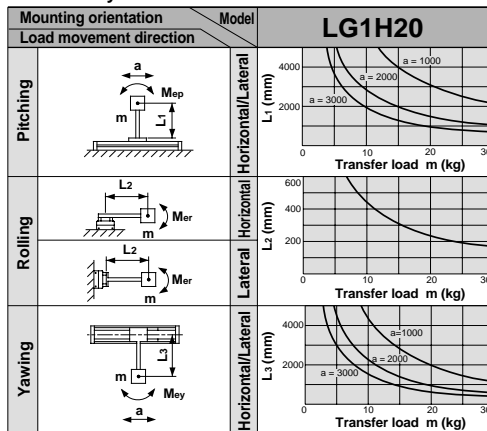
Pitching	71
Rolling	79
Yawing	75

m : Transfer load (kg)

a : Work piece acceleration (mm/s<sup>2</sup>)

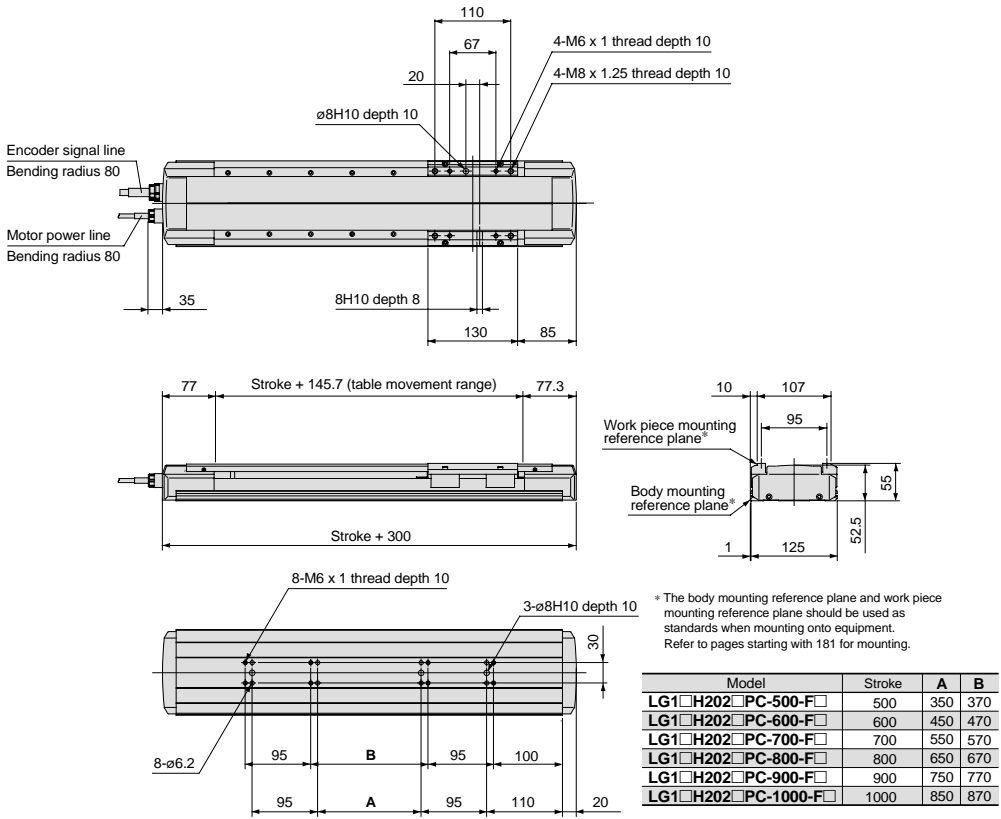
Me: Dynamic moment

L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**

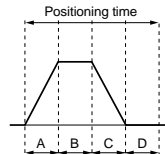
Refer to page 183 for deflection data.

**Dimensions/LG1□H20□PC**



**Positioning Time Guide**

		Positioning time (sec.)				
Positioning distance (mm)		1	10	100	500	1000
Speed (mm/s)	10	0.5	1.5	10.5	50.5	100.5
	100	0.5	0.6	1.5	5.5	10.5
	500	0.5	0.6	0.9	1.7	2.7
	1000	0.5	0.6	0.9	1.4	1.9



A: Acceleration time  
 B: Constant velocity time  
 C: Deceleration time  
 D: Resting time (0.4sec.)  
 Maximum acceleration: 2000mm/s<sup>2</sup>

\* Values will vary slightly depending on the operating conditions.

**Maximum Speeds for Each Transfer Load**

Model	Transfer load (kg)				Note
	15	20	25	30	
LG1□H20□PC-500-F□	1000	700	500	500	Power supply: 100/110(V)AC ±10% Compatible controller: LC1-1□2HC1-□□
LG1□H20□PC-600-F□	1000	700	500	500	
LG1□H20□PC-700-F□	930	600	500	500	
LG1□H20□PC-800-F□	740	600	500	500	
LG1□H20□PC-900-F□	600	500	500	500	Power supply: 200/220(V)AC ±10% Compatible controller: LC1-1□2HC2-□□
LG1□H20□PC-1000-F□	500	500	500	500	

\* Consult SMC if outside of the above conditions.

LJ1  
 LG1  
 LC1  
 LX  
 LC6D/LC6C  
 Switches

**Standard Motor**

**Series LG1 H20**

Motor Output

**100W**

High Rigidity  
Direct Acting  
Guide

Rolled Ball Screw

ø15mm/10mm lead

**Horizontal Mount**

**Without Coupling**

**How to Order**

**LG1** **H202** **1** **NA** — **Stroke** — **F** **2**

• **Frame material**

Nil	Aluminum alloy
T	Stainless steel

• **Power supply voltage**

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

• **Cable length**

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

**Specifications**

		Standard stroke	mm	100	200	300	400
<b>Performance</b>	Body weight	Aluminum	kg	5.3	6.1	6.9	7.7
		Stainless steel	kg	8.3	9.6	10.8	12.0
	Operating temperature range	°C	5 to 40 (with no condensation)				
	Work load	kg	30				
	Rated thrust	N	180				
	Maximum speed	mm/s	500				
<b>Main parts</b>	Positioning repeatability	mm	±0.05				
	Motor	AC servomotor (100W)					
	Encoder	Incremental system					
	Lead screw	Rolled ball screw ø15mm, 10mm lead					
	Guide	High rigidity direct acting guide					
<b>Controller</b>	Motor/Screw connection	Without coupling					
	Model	LC1-1F2HA□-□□ (Refer to page 185 for details.)					

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number. Applicable strokes: 150, 250, 350

Example **LG1H2021NA-150-F2-X2**

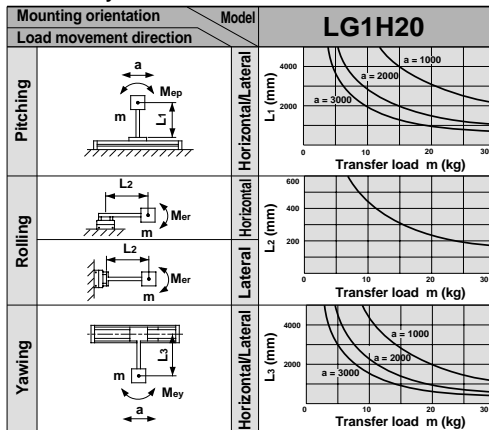
**Allowable Moment (N·m)**

**Allowable static moment**

<b>Pitching</b>	71
<b>Rolling</b>	79
<b>Yawing</b>	75

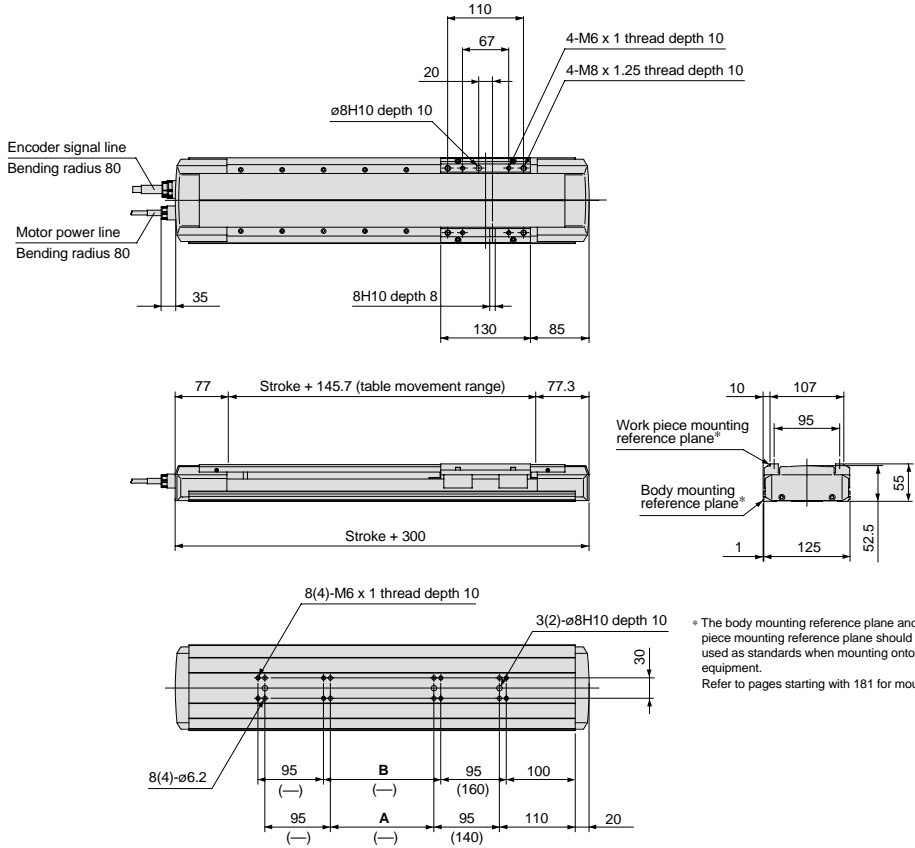
m : Transfer load (kg)  
a : Work piece acceleration (mm/s<sup>2</sup>)  
Me : Dynamic moment  
L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**



Refer to page 183 for deflection data.

**Dimensions/LG1□H20□PA**

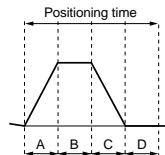


Model	Stroke	A	B
LG1□H20□PA-100-F□*	100	—	—
LG1□H20□PA-200-F□	200	50	70
LG1□H20□PA-300-F□	300	150	170
LG1□H20□PA-400-F□	400	250	270

\* Dimensions inside ( ) are for a 100 mm stroke.

**Positioning Time Guide**

		Positioning time (sec.)				
		1	10	100	200	400
Speed (mm/s)	10	0.5	1.4	10.4	20.4	40.4
	100	0.5	0.6	1.5	2.5	4.5
	250	0.5	0.6	0.9	1.3	2.1
	500	0.5	0.6	0.8	1.0	1.4



\* Values will vary slightly depending on the operating conditions.

LG1

LG1

LG1

LX

LC6D/LC6C

Switches

**Standard Motor**

**Series LG1 H20**

Motor Output

**100W**

High Rigidity  
Direct Acting  
Guide

Rolled Ball Screw

∅15mm/20mm lead

**Horizontal Mount**

**Without Coupling**

**How to Order**

**LG1**    **H202**    **1**    **NC** — **Stroke** — **F**    **2**

• **Frame material**

Nil	Aluminum alloy
T	Stainless steel

• **Power supply voltage**

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

• **Cable length**

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

**Specifications**

Standard stroke		mm	500	600	700	800	900	1000	
<b>Performance</b>	Body weight	Aluminum	kg	8.5	9.3	10.1	10.9	11.7	12.5
		Stainless steel	kg	13.3	14.5	15.8	17.1	18.3	19.6
	Operating temperature range	°C	5 to 40 (with no condensation)						
	Work load	kg	30						
	Rated thrust	N	90						
	Maximum speed <sup>Note)</sup>	mm/s	1000	1000	930	740	600	500	
<b>Main parts</b>	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Rolled ball screw ∅15mm, 20mm lead							
	Guide	High rigidity direct acting guide							
	Motor/Screw connection	Without coupling							
<b>Controller</b>	Model	LC1-1F2HC□-□□ (Refer to page 185 for details.)							

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number.  
Applicable strokes: 450, 550, 650, 750, 850, 950  
Example) **LG1H2021NC-550-F2-X2**

Note) The speed is limited by the transfer load. Refer to the maximum speeds for each transfer load on the next page.

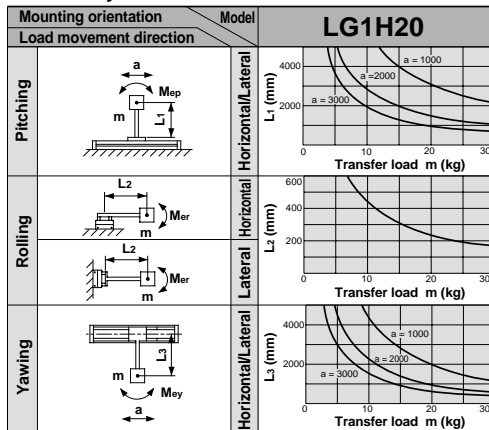
**Allowable Moment (N·m)**

**Allowable static moment**

<b>Pitching</b>	71
<b>Rolling</b>	79
<b>Yawing</b>	75

m : Transfer load (kg)  
a : Work piece acceleration (mm/s<sup>2</sup>)  
Me: Dynamic moment  
L : Overhang to work piece center of gravity (mm)

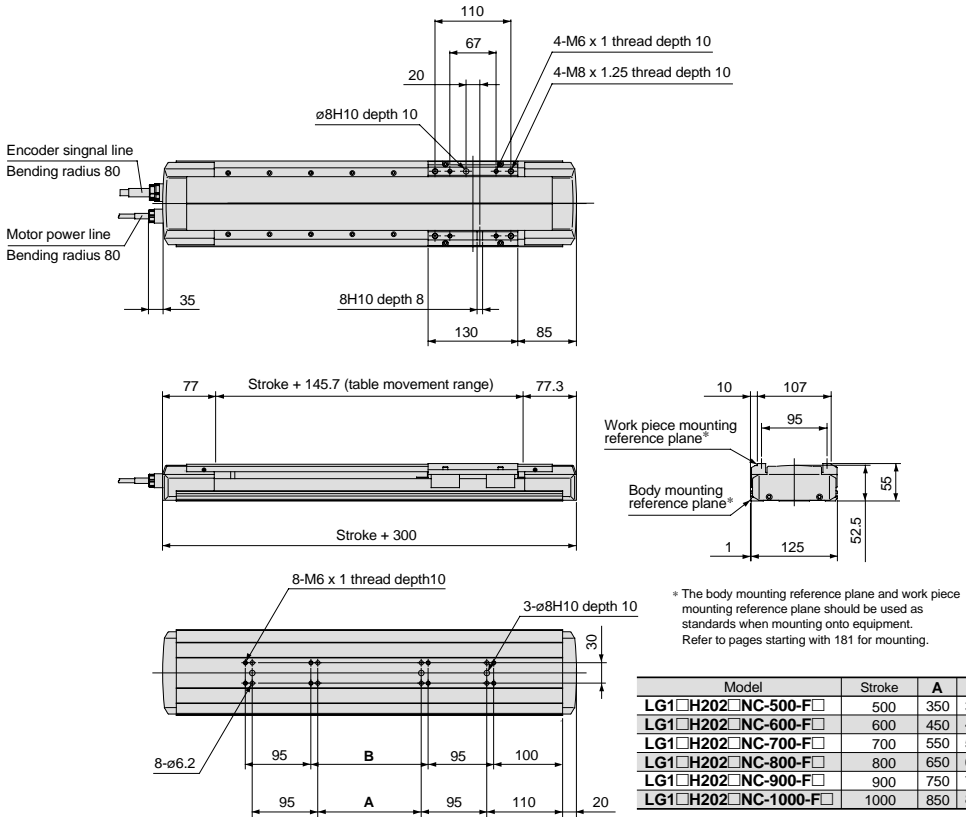
**Allowable dynamic moment**



Refer to page 183 for deflection data.



**Dimensions/LG1□H20□NC**

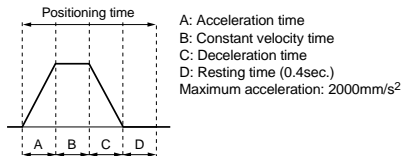


Model	Stroke	A	B
LG1□H20□NC-500-F□	500	350	370
LG1□H20□NC-600-F□	600	450	470
LG1□H20□NC-700-F□	700	550	570
LG1□H20□NC-800-F□	800	650	670
LG1□H20□NC-900-F□	900	750	770
LG1□H20□NC-1000-F□	1000	850	870

**Positioning Time Guide**

		Positioning time (sec.)				
		1	10	100	500	1000
Speed (mm/s)	10	0.5	1.5	10.5	50.5	100.5
	100	0.5	0.6	1.5	5.5	10.5
	500	0.5	0.6	0.9	1.7	2.7
	1000	0.5	0.6	0.9	1.4	1.9

\* Values will vary slightly depending on the operating conditions.



**Maximum Speeds for Each Transfer Load**

Model	Transfer load (kg)				Note
	15	20	25	30	
LG1□H20□NC-500-F□	1000	700	500	500	Power supply: 100/110(V)AC ±10% Compatible controller: LC1-1□2HC1-□□
LG1□H20□NC-600-F□	1000	700	500	500	
LG1□H20□NC-700-F□	930	600	500	500	
LG1□H20□NC-800-F□	740	600	500	500	
LG1□H20□NC-900-F□	600	500	500	500	Power supply: 200/220(V)AC ±10% Compatible controller: LC1-1□2HC2-□□
LG1□H20□NC-1000-F□	500	500	500	500	

\* Consult SMC if outside of the above conditions.

**Standard Motor**

**Series LG1 H20**

Motor Output

**100W**

High Rigidity  
Direct Acting  
Guide

Slide Screw

∅20mm/20mm lead

**Horizontal Mount**

**Without Coupling**

**How to Order**

**LG1**  **H202**  **1** **SC**  **Stroke**  **F**  **2**

• **Frame material**

<b>Nil</b>	Aluminum alloy
<b>T</b>	Stainless steel

• **Power supply voltage**

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

• **Cable length**

<b>2</b>	2m
<b>3</b>	3m
<b>4</b>	4m
<b>5</b>	5m

**Specifications**

Standard stroke		mm	100	200	300	400	500	600	700	800	900	1000	1200	
<b>Performance</b>	Body weight	Aluminum	kg	5.8	6.7	7.6	8.5	9.4	10.2	11.1	12.0	12.9	13.8	15.9
		Stainless steel	kg	9.1	10.5	11.9	13.2	14.6	16.0	17.4	18.8	20.1	21.6	24.9
	Operating temperature range	°C	5 to 40 (with no condensation)											
	Work load	kg	15											
	Rated thrust	N	50											
	Maximum speed	mm/s	500											
<b>Main parts</b>	Motor	AC servomotor (100W)												
	Encoder	Incremental system												
	Lead screw	Slide screw ∅20mm, 20mm lead												
	Guide	High rigidity direct acting guide												
	Motor/Screw connection	Without coupling												
<b>Controller</b>	Model	LC1-1F2MC□-□ (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) LG1H2021SC-150-F2-X2

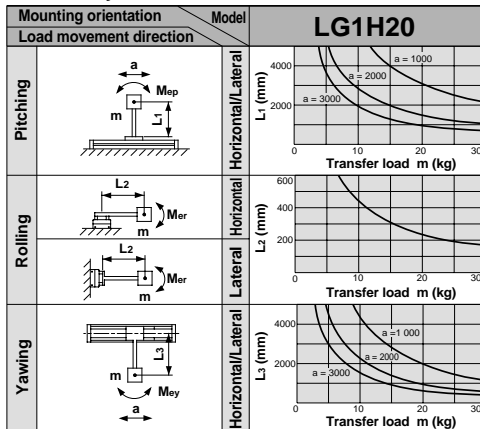
**Allowable Moment (N·m)**

**Allowable static moment**

<b>Pitching</b>	71
<b>Rolling</b>	79
<b>Yawing</b>	75

m : Transfer load (kg)  
a : Work piece acceleration (mm/s<sup>2</sup>)  
Me : Dynamic moment  
L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**



Refer to page 183 for deflection data.

# Standard Motor/Horizontal Mount Specification **Series LG1□H20**

## Dimensions/LG1□H202□SC

LG1

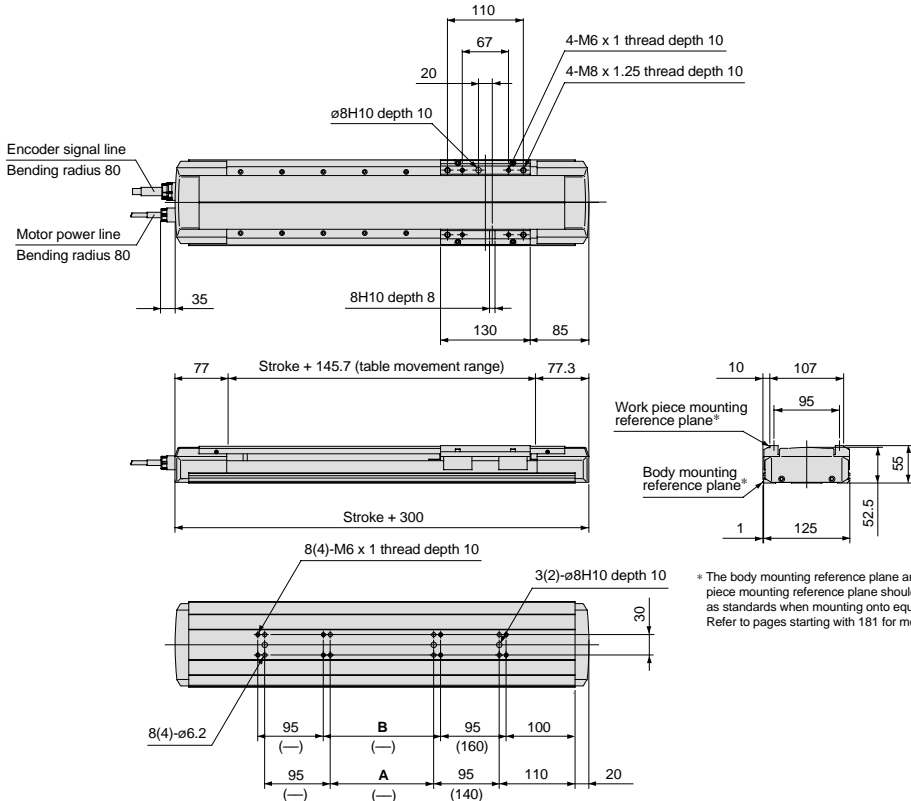
LG1

LG1

LX

LC6D/LC6C

Switches



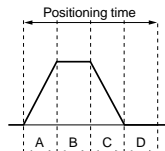
\* The body mounting reference plane and work piece mounting reference plane should be used as standards when mounting onto equipment. Refer to pages starting with 181 for mounting.

Model	Stroke	A	B
LG1□H202□SC-100-F□*	100	—	—
LG1□H202□SC-200-F□	200	50	70
LG1□H202□SC-300-F□	300	150	170
LG1□H202□SC-400-F□	400	250	270
LG1□H202□SC-500-F□	500	350	370
LG1□H202□SC-600-F□	600	450	470
LG1□H202□SC-700-F□	700	550	570
LG1□H202□SC-800-F□	800	650	670
LG1□H202□SC-900-F□	900	750	770
LG1□H202□SC-1000-F□	1000	850	870
LG1□H202□SC-1200-F□	1200	1050	1070

\* Dimensions inside ( ) are for a 100 mm stroke.

## Positioning Time Guide

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	600	1200	
Speed (mm/s)	10	0.5	1.5	10.5	60.5	120.5
	100	0.5	0.6	1.5	6.5	12.5
	250	0.5	0.6	1.0	3.0	5.4
	500	0.5	0.6	0.9	1.9	3.1



A: Acceleration time  
 B: Constant velocity time  
 C: Deceleration time  
 D: Resting time (0.4sec.)  
 Maximum acceleration: 2000mm/s<sup>2</sup>

\* Values will vary slightly depending on the operating conditions.

**Standard Motor**

**Series LG1 H21**

**Horizontal Mount**

**With Coupling**

Motor Output

**100W**

High Rigidity  
Direct Acting  
Guide

Ground Ball Screw

∅15mm/10mm lead

**How to Order**

**LG1**  **H212**  **1** **PA** — **Stroke** — **F**  **2**

• **Power supply voltage**

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

• **Cable length**

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

• **Frame material**

NII	Aluminum alloy
T	Stainless steel

**Specifications**

		Standard stroke	mm	100	200	300	400
<b>Performance</b>	Body weight	Aluminum	kg	5.3	6.1	6.9	7.7
		Stainless steel	kg	8.3	9.6	10.8	12.0
	Operating temperature range	°C	5 to 40 (with no condensation)				
	Work load	kg	30				
	Rated thrust	N	180				
	Maximum speed	mm/s	500				
<b>Main parts</b>	Motor	AC servomotor (100W)					
	Encoder	Incremental system					
	Lead screw	Ground ball screw ∅15mm, 10mm lead					
	Guide	High rigidity direct acting guide					
	Motor/Screw connection	With coupling					
<b>Controller</b>	Model	LC1-1D2HA□□□ (Refer to page 185 for details.)					

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number.  
Applicable strokes: 150, 250, 350  
Example) **LG1H2121PA-150-F2-X2**

**Allowable Moment (N·m)**

**Allowable static moment**

<b>Pitching</b>	142
<b>Rolling</b>	79
<b>Yawing</b>	150

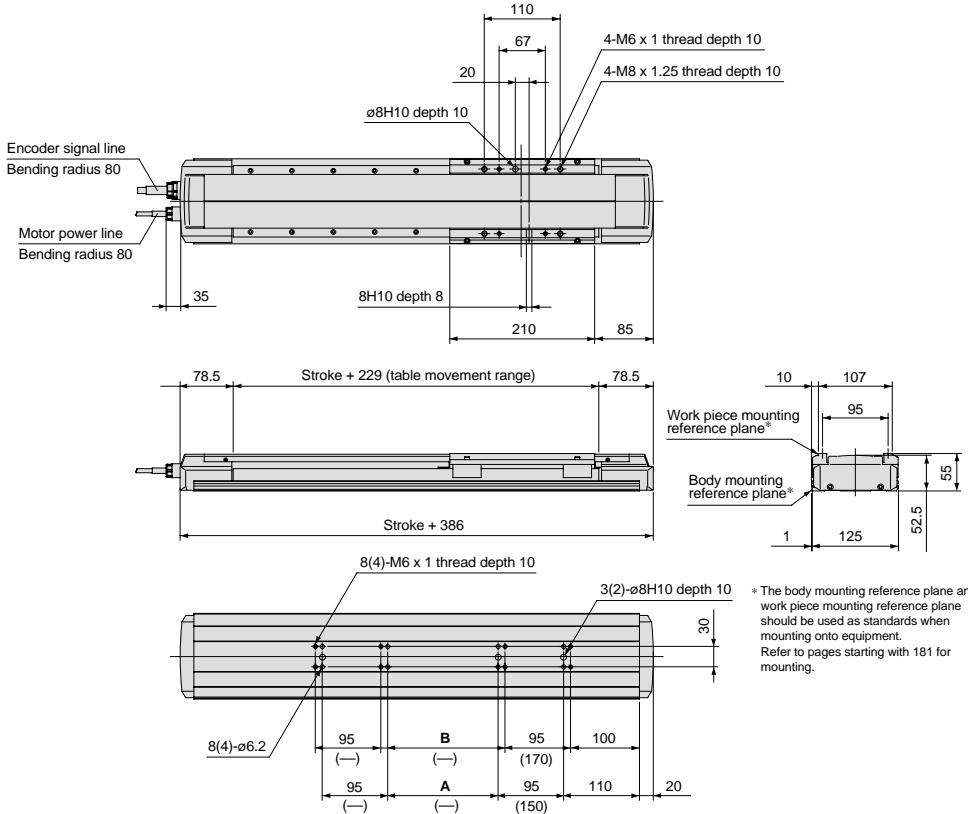
m : Transfer load (kg)  
a : Work piece acceleration (mm/s<sup>2</sup>)  
Me: Dynamic moment  
L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**

Mounting orientation		Model										
Load movement direction		LG1H21										
<b>Pitching</b>	Horizontal	 <table border="1"> <tr> <th>L<sub>1</sub> (mm)</th> <th>Transfer load m (kg)</th> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>2000</td> <td>~10</td> </tr> <tr> <td>4000</td> <td>~5</td> </tr> </table>	L <sub>1</sub> (mm)	Transfer load m (kg)	0	0	2000	~10	4000	~5		
	L <sub>1</sub> (mm)	Transfer load m (kg)										
0	0											
2000	~10											
4000	~5											
<b>Rolling</b>	Horizontal	 <table border="1"> <tr> <th>L<sub>2</sub> (mm)</th> <th>Transfer load m (kg)</th> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>200</td> <td>~10</td> </tr> <tr> <td>400</td> <td>~5</td> </tr> <tr> <td>600</td> <td>~3</td> </tr> </table>	L <sub>2</sub> (mm)	Transfer load m (kg)	0	0	200	~10	400	~5	600	~3
	L <sub>2</sub> (mm)	Transfer load m (kg)										
0	0											
200	~10											
400	~5											
600	~3											
<b>Yawing</b>	Lateral	 <table border="1"> <tr> <th>L<sub>2</sub> (mm)</th> <th>Transfer load m (kg)</th> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>200</td> <td>~10</td> </tr> <tr> <td>400</td> <td>~5</td> </tr> <tr> <td>600</td> <td>~3</td> </tr> </table>	L <sub>2</sub> (mm)	Transfer load m (kg)	0	0	200	~10	400	~5	600	~3
	L <sub>2</sub> (mm)	Transfer load m (kg)										
0	0											
200	~10											
400	~5											
600	~3											
<b>Yawing</b>	Horizontal/Lateral	 <table border="1"> <tr> <th>L<sub>1</sub> (mm)</th> <th>Transfer load m (kg)</th> </tr> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>2000</td> <td>~10</td> </tr> <tr> <td>4000</td> <td>~5</td> </tr> </table>	L <sub>1</sub> (mm)	Transfer load m (kg)	0	0	2000	~10	4000	~5		
	L <sub>1</sub> (mm)	Transfer load m (kg)										
0	0											
2000	~10											
4000	~5											

Refer to page 183 for deflection data.

**Dimensions/LG1□H212□PA**



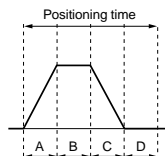
Model	Stroke	A	B
LG1□H212□PA-100-F□*	100	—	—
LG1□H212□PA-200-F□	200	60	80
LG1□H212□PA-300-F□	300	160	180
LG1□H212□PA-400-F□	400	260	280

\* Dimensions inside ( ) are for a 100 mm stroke.

**Positioning Time Guide**

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	200	400	
Speed (mm/s)	10	0.5	1.4	10.4	20.4	40.4
	100	0.5	0.6	1.5	2.5	4.5
	250	0.5	0.6	0.9	1.3	2.1
	500	0.5	0.6	0.8	1.0	1.4

\* Values will vary slightly depending on the operating conditions.



A: Acceleration time  
 B: Constant velocity time  
 C: Deceleration time  
 D: Resting time (0.4sec.)  
 Maximum acceleration: 3000mm/s<sup>2</sup>

**How to Order**

**LG1**  **H212**  **1** **PC**  **Stroke**  **F**  **2**

● **Power supply voltage**

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

● **Cable length**

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

● **Frame material**

Nil	Aluminum alloy
T	Stainless steel

**Specifications**

Standard stroke		mm	500	600	700	800	900	1000
Performance	Body weight	Aluminum kg	8.5	9.3	10.1	10.9	11.7	12.5
		Stainless steel kg	13.3	14.5	15.8	17.1	18.3	19.6
	Operating temperature range	°C	5 to 40 (with no condensation)					
	Work load	kg	30					
	Rated thrust	N	90					
	Maximum speed <sup>Note)</sup>	mm/s	1000	1000	930	740	600	500
	Positioning repeatability	mm	±0.02					
Main parts	Motor	AC servomotor (100W)						
	Encoder	Incremental system						
	Lead screw	Ground ball screw ø15mm, 20mm lead						
	Guide	High rigidity direct acting guide						
	Motor/Screw connection	With coupling						
Controller	Model	LC1-1D2HC-□-□ (Refer to page 185 for details.)						

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number.  
Applicable strokes: 450, 550, 650, 750, 850, 950  
Example) **LG1H2121PC-550-F2-X2**

Note) The speed is limited by the transfer load. Refer to the maximum speeds for each transfer load on the next page.

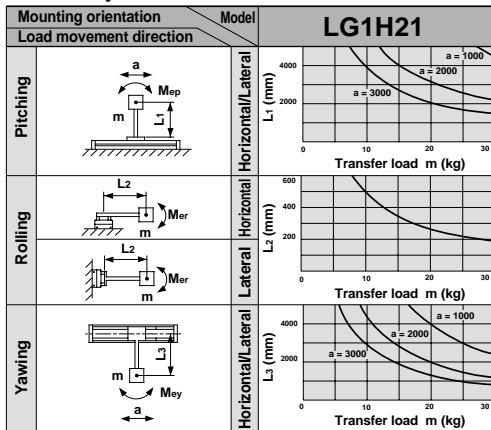
**Allowable Moment (N·m)**

**Allowable static moment**

Pitching	142
Rolling	79
Yawing	150

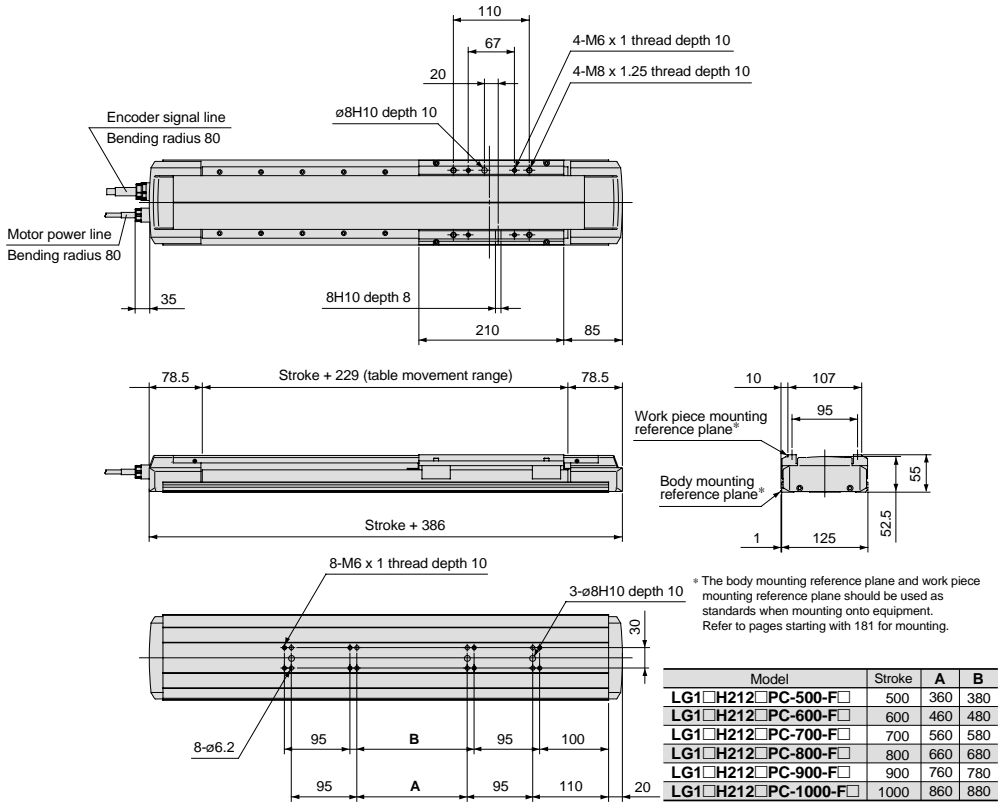
m : Transfer load (kg)  
a : Work piece acceleration (mm/s<sup>2</sup>)  
Me : Dynamic moment  
L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**



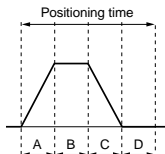
Refer to page 183 for deflection data.

**Dimensions/LG1□H212□PC**



**Positioning Time Guide**

		Positioning time (sec.)					
		1	10	100	500	1000	
Speed (mm/s)	10	0.5	1.5	10.5	50.5	100.5	
	100	0.5	0.6	1.5	5.5	10.5	
	500	0.5	0.6	0.9	1.7	2.7	
	1000	0.5	0.6	0.9	1.4	1.9	



A: Acceleration time  
 B: Constant velocity time  
 C: Deceleration time  
 D: Resting time (0.4sec.)  
 Maximum acceleration: 2000mm/s<sup>2</sup>

\* Values will vary slightly depending on the operating conditions.

**Maximum Speeds for Each Transfer Load**

Model	Transfer load (kg)				Note
	15	20	25	30	
LG1□H202□PC-500-F□	1000	700	500	500	Power supply: 100/110(V)AC ±10% Compatible controller: LC1-1□2HC1-□□
LG1□H202□PC-600-F□	1000	700	500	500	
LG1□H202□PC-700-F□	930	600	500	500	
LG1□H202□PC-800-F□	740	600	500	500	Power supply: 200/220(V)AC ±10% Compatible controller: LC1-1□2HC2-□□
LG1□H202□PC-900-F□	600	500	500	500	
LG1□H202□PC-1000-F□	500	500	500	500	

\* Consult SMC if outside of the above conditions.

**How to Order**

**LG1**  **H212**  **1** **NA** — **Stroke** — **F**  **2**

• <b>Power supply voltage</b>	<table border="1"> <tr> <td>1</td> <td>100/110VAC (50/60Hz)</td> </tr> <tr> <td>2</td> <td>200/220VAC (50/60Hz)</td> </tr> </table>	1	100/110VAC (50/60Hz)	2	200/220VAC (50/60Hz)	• <b>Cable length</b>	<table border="1"> <tr> <td>2</td> <td>2m</td> </tr> <tr> <td>3</td> <td>3m</td> </tr> <tr> <td>4</td> <td>4m</td> </tr> <tr> <td>5</td> <td>5m</td> </tr> </table>	2	2m	3	3m	4	4m	5	5m
1	100/110VAC (50/60Hz)														
2	200/220VAC (50/60Hz)														
2	2m														
3	3m														
4	4m														
5	5m														
• <b>Frame material</b>	<table border="1"> <tr> <td>Nil</td> <td>Aluminum alloy</td> </tr> <tr> <td>T</td> <td>Stainless steel</td> </tr> </table>	Nil	Aluminum alloy	T	Stainless steel										
Nil	Aluminum alloy														
T	Stainless steel														

**Specifications**

Standard stroke		mm	100	200	300	400
<b>Performance</b>	Body weight	Aluminum kg	5.3	6.1	6.9	7.7
		Stainless steel kg	8.3	9.6	10.8	12.0
	Operating temperature range	°C	5 to 40 (with no condensation)			
	Work load	kg	30			
	Rated thrust	N	180			
	Maximum speed	mm/s	500			
	Positioning repeatability	mm	±0.05			
<b>Main parts</b>	Motor	AC servomotor (100W)				
	Encoder	Incremental system				
	Lead screw	Rolled ball screw ∅15mm, 10mm lead				
	Guide	High rigidity direct acting guide				
	Motor/Screw connection	With coupling				
<b>Controller</b>	Model	LC1-1D2HA□□□ (Refer to page 185 for details.)				

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number.  
Applicable strokes: 150, 250, 350  
Example) **LG1H2121NA-150-F2-X2**

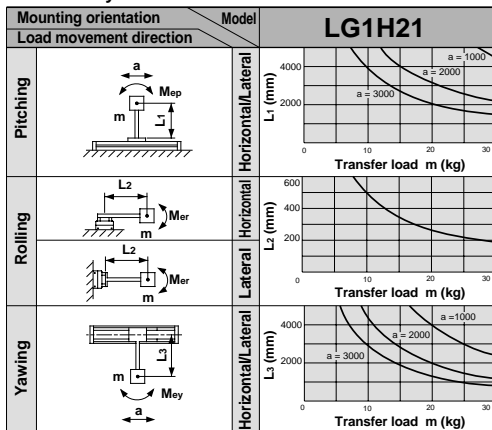
**Allowable Moment (N·m)**

**Allowable static moment**

<b>Pitching</b>	142
<b>Rolling</b>	79
<b>Yawing</b>	150

m : Transfer load (kg)  
a : Work piece acceleration (mm/s<sup>2</sup>)  
Me : Dynamic moment  
L : Overhang to work piece center of gravity (mm)

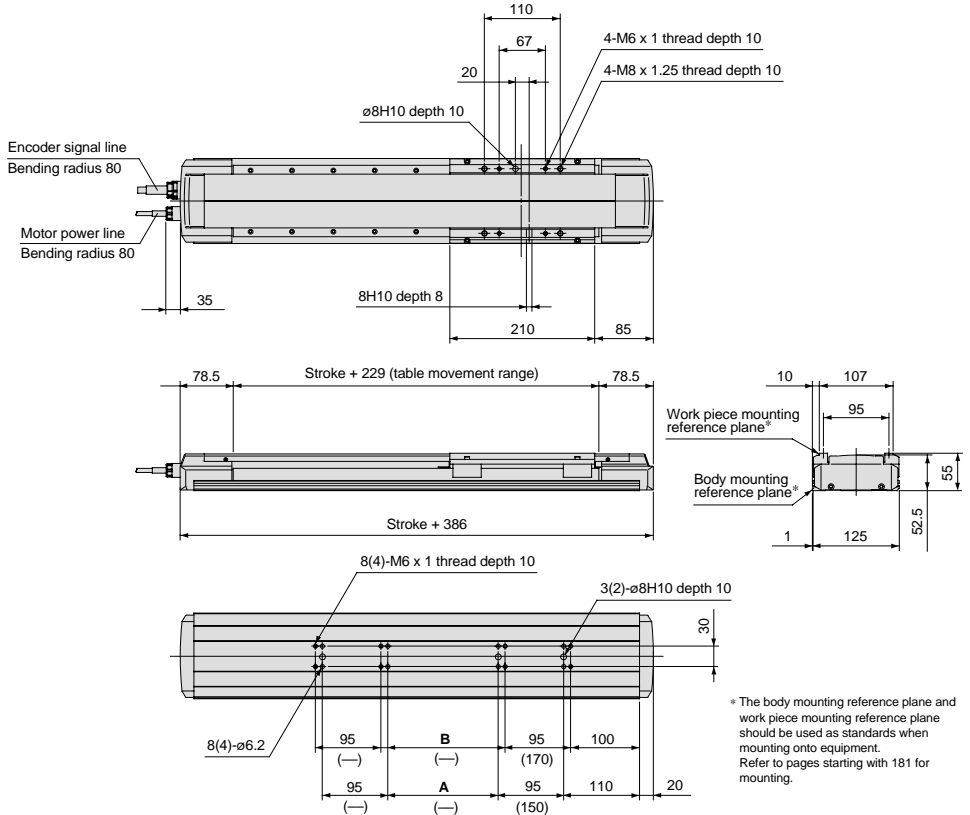
**Allowable dynamic moment**



Refer to page 183 for deflection data.



**Dimensions/LG1□H212□NA**

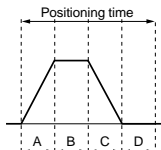


Model	Stroke	A	B
LG1□H212□NA-100-F□*	100	—	—
LG1□H212□NA-200-F□	200	60	80
LG1□H212□NA-300-F□	300	160	180
LG1□H212□NA-400-F□	400	260	280

\* Dimensions inside ( ) are for a 100 mm stroke.

**Positioning Time Guide**

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	200	400	
Speed (mm/s)	10	0.5	1.4	10.4	20.4	40.4
	100	0.5	0.6	1.5	2.5	4.5
	250	0.5	0.6	0.9	1.3	2.1
	500	0.5	0.6	0.8	1.0	1.4



\* Values will vary slightly depending on the operating conditions.

**Standard Motor**

**Series LG1 H21**

Motor Output

**100W**

High Rigidity  
Direct Acting  
Guide

Rolled Ball Screw

∅15mm/20mm lead

**Horizontal Mount**

**With Coupling**

**How to Order**

**LG1**   **H212**   **1** **NC**   **Stroke**   **F**   **2**

• **Frame material**

<b>Ni</b>	Aluminum alloy
<b>T</b>	Stainless steel

• **Power supply voltage**

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

• **Cable length**

<b>2</b>	2m
<b>3</b>	3m
<b>4</b>	4m
<b>5</b>	5m

**Specifications**

		Standard stroke	mm	500	600	700	800	900	1000
<b>Performance</b>	Body weight	Aluminum	kg	8.5	9.3	10.1	10.9	11.7	12.5
		Stainless steel	kg	13.3	14.5	15.8	17.1	18.3	19.6
	Operating temperature range	°C	5 to 40 (with no condensation)						
	Work load	kg	30						
	Rated thrust	N	90						
	Maximum speed <small>Note)</small>	mm/s	1000	1000	930	740	600	500	
Positioning repeatability	mm	±0.05							
<b>Main parts</b>	Motor	AC servomotor (100W)							
	Encoder	Incremental system							
	Lead screw	Rolled ball screw ∅15mm, 20mm lead							
	Guide	High rigidity direct acting guide							
	Motor/Screw connection	With coupling							
<b>Controller</b>	Model	LC1-1D2HC□□□ (Refer to page 185 for details.)							

**Intermediate strokes**

For manufacture of strokes other than the standard strokes on the left, add "-X2" at the end of the part number.

Applicable strokes: 450, 550, 650, 750, 850, 950

Example) **LG1H2121NC-550-F2-X2**

Note) The speed is limited by the transfer load. Refer to the maximum speeds for each transfer load on the next page.

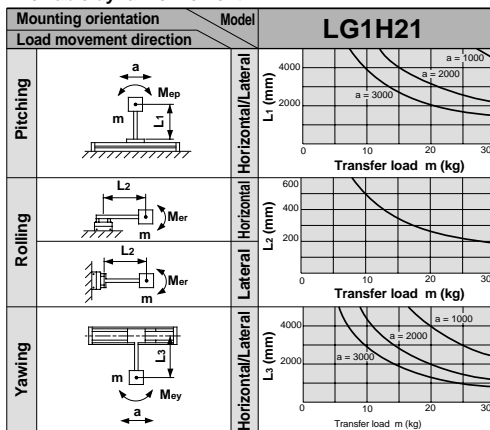
**Allowable Moment (N·m)**

**Allowable static moment**

<b>Pitching</b>	142
<b>Rolling</b>	79
<b>Yawing</b>	150

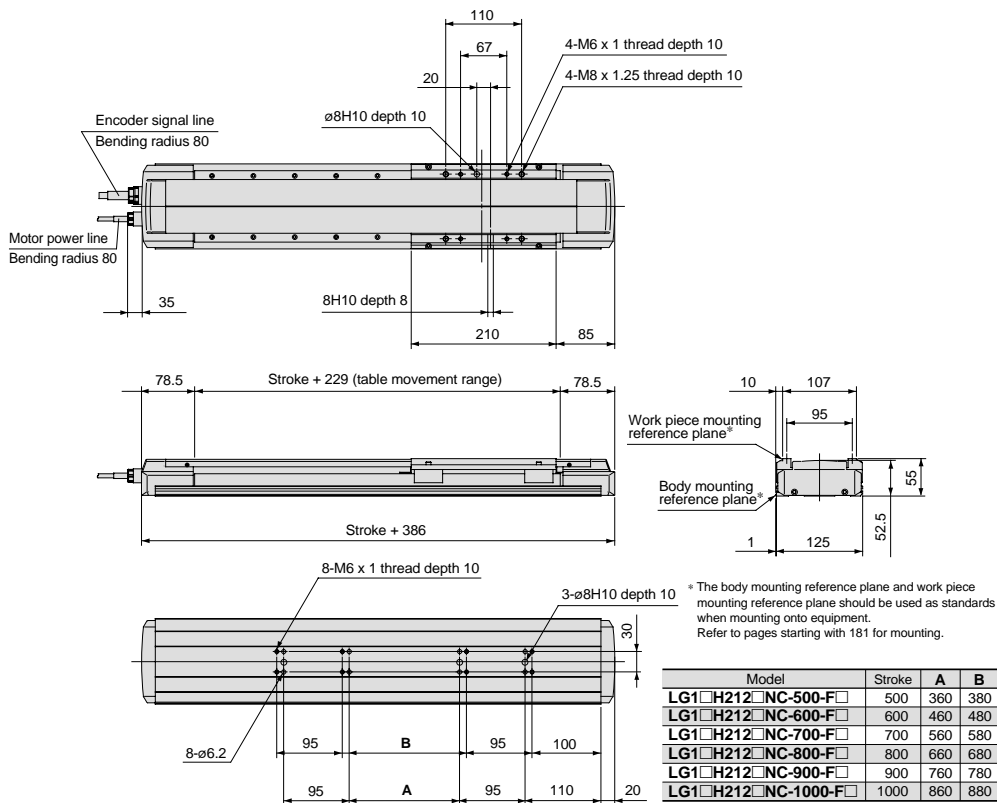
- m : Transfer load (kg)
- a : Work piece acceleration (mm/s<sup>2</sup>)
- Me: Dynamic moment
- L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**



Refer to page 183 for deflection data.

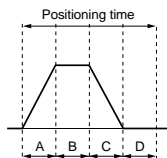
**Dimensions/LG1□H212□NC**



**Positioning Time Guide**

		Positioning time (sec.)				
		1	10	100	500	1000
Speed (mm/s)	10	0.5	1.5	10.5	50.5	100.5
	100	0.5	0.6	1.5	5.5	10.5
	500	0.5	0.6	0.9	1.7	2.7
	1000	0.5	0.6	0.9	1.4	1.9

\* Values will vary slightly depending on the operating conditions.



A: Acceleration time  
B: Constant velocity time  
C: Deceleration time  
D: Resting time (0.4sec.)  
Maximum acceleration: 2000mm/s<sup>2</sup>

**Maximum Speeds for Each Transfer Load**

Model	Transfer load (kg)				Note
	15	20	25	30	
LG1□H202□NC-500-F□	1000	700	500	500	Power supply: 100/110(V)AC ±10% Compatible controller: LC1-1□2HC1-□□
LG1□H202□NC-600-F□	1000	700	500	500	
LG1□H202□NC-700-F□	930	600	500	500	
LG1□H202□NC-800-F□	740	600	500	500	
LG1□H202□NC-900-F□	600	500	500	500	Power supply: 200/220(V)AC ±10% Compatible controller: LC1-1□2HC2-□□
LG1□H202□NC-1000-F□	500	500	500	500	

\* Consult SMC if outside of the above conditions.

**Standard Motor****Series LG1 H21**

Motor Output

**100W**High Rigidity  
Direct Acting  
Guide

Slide Screw

ø20mm/20mm lead

**Horizontal Mount****With Coupling****How to Order**LG1  H212  1 **SC** — Stroke — F  2• **Frame material**

Nil	Aluminum alloy
T	Stainless steel

• **Power supply voltage**

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

• **Cable length**

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

**Specifications**

		Standard stroke	mm	100	200	300	400	500	600	700	800	900	1000	1200
<b>Performance</b>	Body weight	Aluminum	kg	5.8	6.7	7.6	8.5	9.4	10.2	11.1	12.0	12.9	13.8	15.9
		Stainless steel	kg	9.1	10.5	11.9	13.2	14.6	16.0	17.4	18.8	20.1	21.6	24.9
	Operating temperature range		°C	5 to 40 (with no condensation)										
	Work load		kg	15										
	Rated thrust		N	50										
	Maximum speed		mm	500										
<b>Main parts</b>	Motor		AC servomotor (100W)											
	Encoder		Incremental system											
	Lead screw		Slide screw ø20mm, 20mm lead											
	Guide		High rigidity direct acting guide											
	Motor/Screw connection		With coupling											
	Controller		Model LC1-1D2MC□-□□ (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) LG1H2121SC-150-F2-X2

**Allowable Moment (N·m)****Allowable static moment**

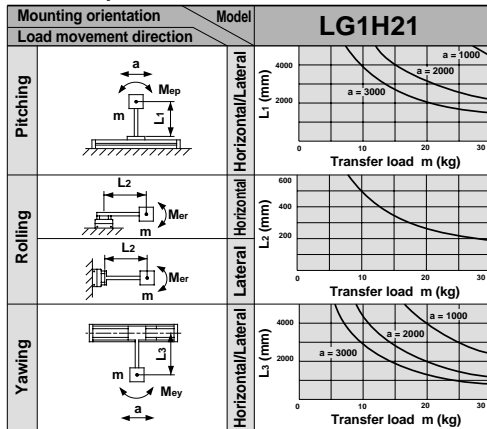
<b>Pitching</b>	142
<b>Rolling</b>	79
<b>Yawing</b>	150

m : Transfer load (kg)

a : Work piece acceleration (mm/s<sup>2</sup>)

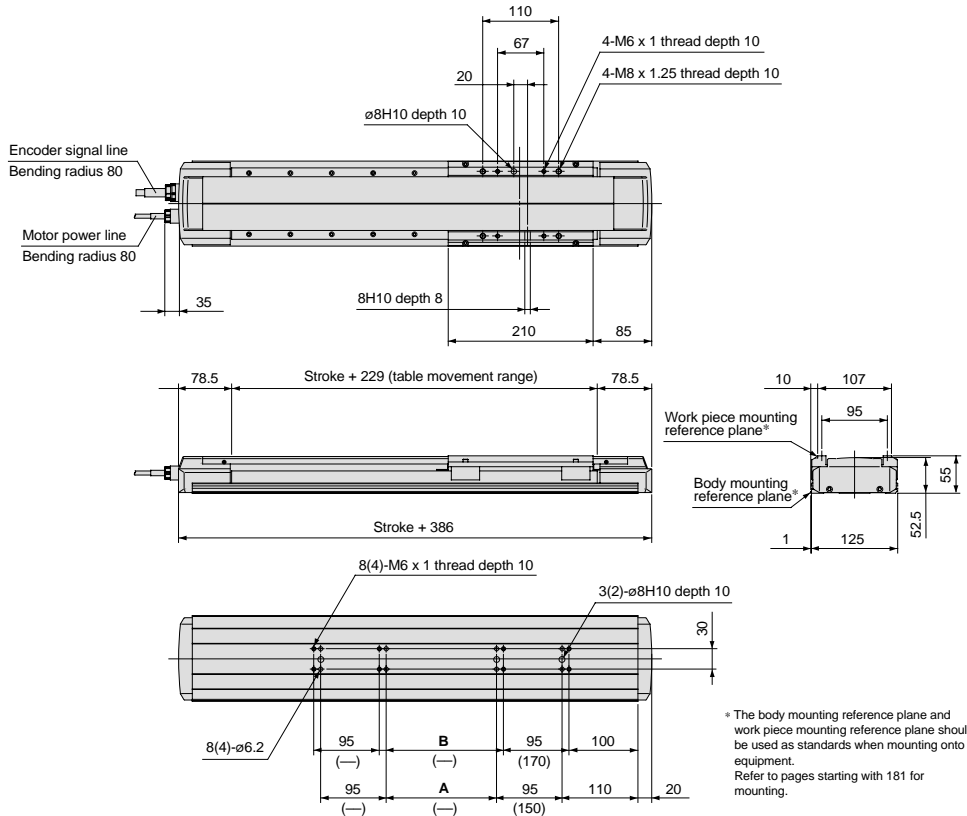
Me : Dynamic moment

L : Overhang to work piece center of gravity (mm)

**Allowable dynamic moment**

Refer to page 183 for deflection data.

**Dimensions/LG1□H212□SC**



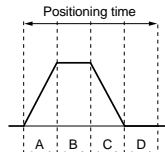
Model	Stroke	A	B
LG1□H212□SC-100-F□*	100	—	—
LG1□H212□SC-200-F□	200	60	80
LG1□H212□SC-300-F□	300	160	180
LG1□H212□SC-400-F□	400	260	280
LG1□H212□SC-500-F□	500	360	380
LG1□H212□SC-600-F□	600	460	480
LG1□H212□SC-700-F□	700	560	580
LG1□H212□SC-800-F□	800	660	680
LG1□H212□SC-900-F□	900	760	780
LG1□H212□SC-1000-F□	1000	860	880
LG1□H212□SC-1200-F□	1200	1060	1080

\* Dimensions inside ( ) are for a 100 mm stroke.

**Positioning Time Guide**

Positioning distance (mm)	Positioning time (sec.)					
	1	10	100	600	1200	
Speed (mm/s)	10	0.5	1.5	10.5	60.5	120.5
	100	0.5	0.6	1.5	6.5	12.5
	250	0.5	0.6	1.0	3.0	5.4
	500	0.5	0.6	0.9	1.9	3.1

\* Values will vary slightly depending on the operating conditions.



A: Acceleration time  
 B: Constant velocity time  
 C: Deceleration time  
 D: Resting time (0.4sec.)  
 Maximum acceleration: 2000mm/s<sup>2</sup>