

SGL Series Single Guide Linear Motor Module

- *Direct drive*
- *Zero cogging*
- *Zero backlash ironless linear motor*
- *High speed and high acceleration*
- *Fast response and quick settling time*
- *High precision*
- *Very light moving plate*
- *Smooth motion at low speed (low velocity)*
- *Precise homing through encoder index pulse*

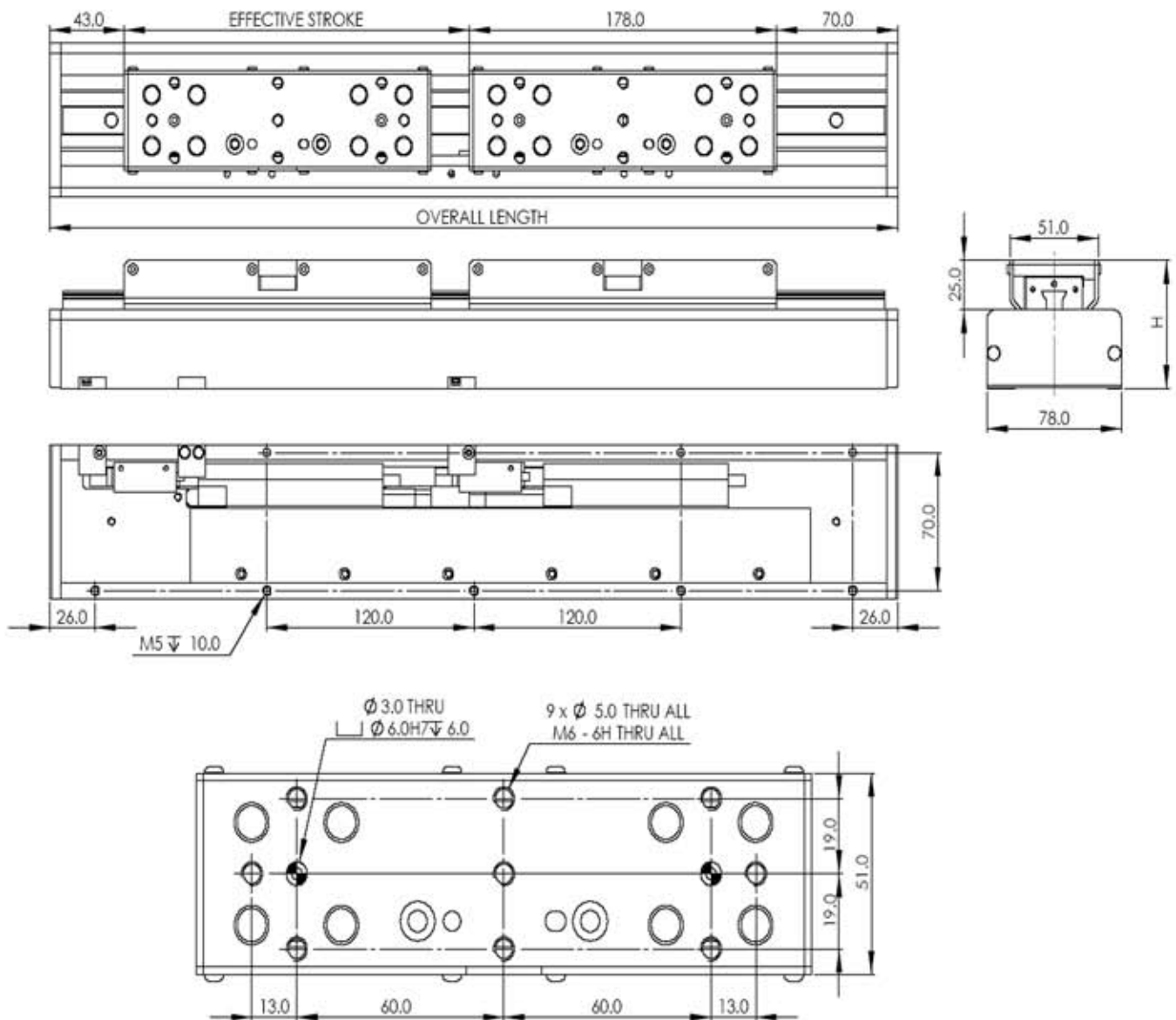


SGL78 Series (Standard Cover)

Datasheet

Specification Model	Carriage length (mm)	Effective stroke (mm)	Overall length (mm)	H (mm)	Overall mass (kg)	Moving mass (kg)	Continuous force at 100°C (N)	Peak force (N)
SGL80-S2 (driven by AUM2-S3)	178.0	200	491	65.0	4.7	0.85	32.0	109.5
		300			4.8	0.95		
SGL80-S3 (driven by AUM2-S4)	178.0	200	591	70.0	5.7	0.85	43.0	146.5
		300			5.8	0.95		

Dimensional Drawing



Part Numbering

		Motor size (type)		¹ Effective stroke (mm)		Encoder resolution (μ m)		² Cover option (type)
SGL78	-	S3, or S4	-	200, or 300	-	0.1, 1.0, or 5.0	-	S, or B

Example : SGL78-S4-300-1.0-B

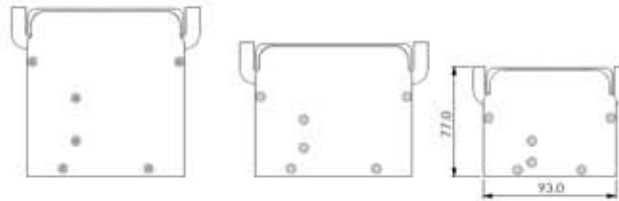
Matching Drivers / Amplifiers

DAP31, DDP21, DDP51, ADL43

¹ Please contact us for customized stroke

² S = Standard cover type
B = Bellow cover type

SGL80 Series (Standard Cover)

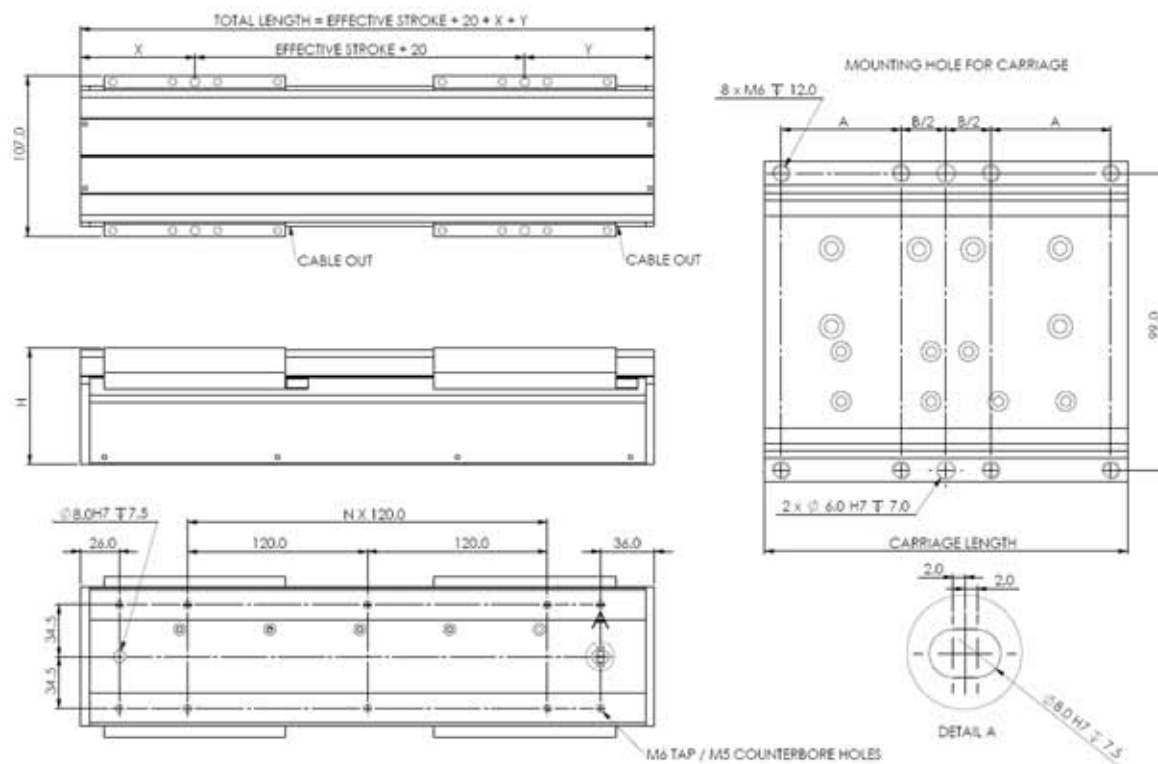


Datasheet

Specification Model	Effective stroke (mm)	Carriage length (mm)	Overall length (mm)	N (mm)	H (mm)	X (mm)	Overall mass (kg)	Moving mass (kg)	Continuous force at 100°C (N)	Peak force (N)
SGL80-S2 <i>(driven by AUM2-S2)</i>	200	121.0	383	2	77.1	76.5	5.0	0.86	22.0	88.0
	300		483	2			6.3			
	400		583	4			7.3			
	500		683	4			8.5			
	600		783	4			9.6			
	1000		1183	8			14.3			
	1200		1383	10			16.9			
	1500		1683	12			20.0			
	2000		2183	16	26.1					
	2500		2683	20	31.9					
	SGL80-S3 <i>(driven by AUM2-S3)</i>		200	121.0	383		2			
300		483	2		6.4					
400		583	4		7.7					
500		683	4		8.6					
600		783	4		9.9					
1000		1183	8		14.7					
1200		1383	10		17.0					
1500		1683	12		20.4					
2000		2183	16		26.2					
2500		2683	20		32.0					
SGL80-S4 <i>(driven by AUM2-S4)</i>		200	121.0		383	2	77.1	76.5	5.5	1.00
	300	483		2	6.5					
	400	583		4	7.8					
	500	683		4	9.0					
	600	783		4	10.0					
	1000	1183		8	14.8					
	1200	1383		10	17.1					
	1500	1683		12	20.5					
	2000	2183		16	26.6					
	2500	2683		20	32.3					

¹ Subjected to confirmation

Dimensional Drawing



COUNTERBORE HOLES ARE ACCESSIBLE ONLY WHEN SIDE COVERS ARE REMOVED

NOTES: ALL DIMENSIONS ARE IN MILLIMETERS

Model (Standard cover)	Dimension, mm		
	A	B/2	Y
SGL80-S2	40.0	15.0	86.5
SGL80-S3	40.0	15.0	86.5
SGL80-S4	40.0	15.0	86.5

Part Numbering

SGL80 - Motor size (type) S2, S3, or S4 - ¹Effective stroke (mm) 200 – 2500 - Encoder resolution (µm) 0.1, 1.0, or 5.0 - ²Cover option (type) S, or CR

Example : SGL78-S4-300-1.0-S

Matching Drivers / Amplifiers

DAP31, DDP21, DDP51, ADL43

¹ Please contact us for customized stroke

² S = Standard cover type
CR = Clean Room cover type

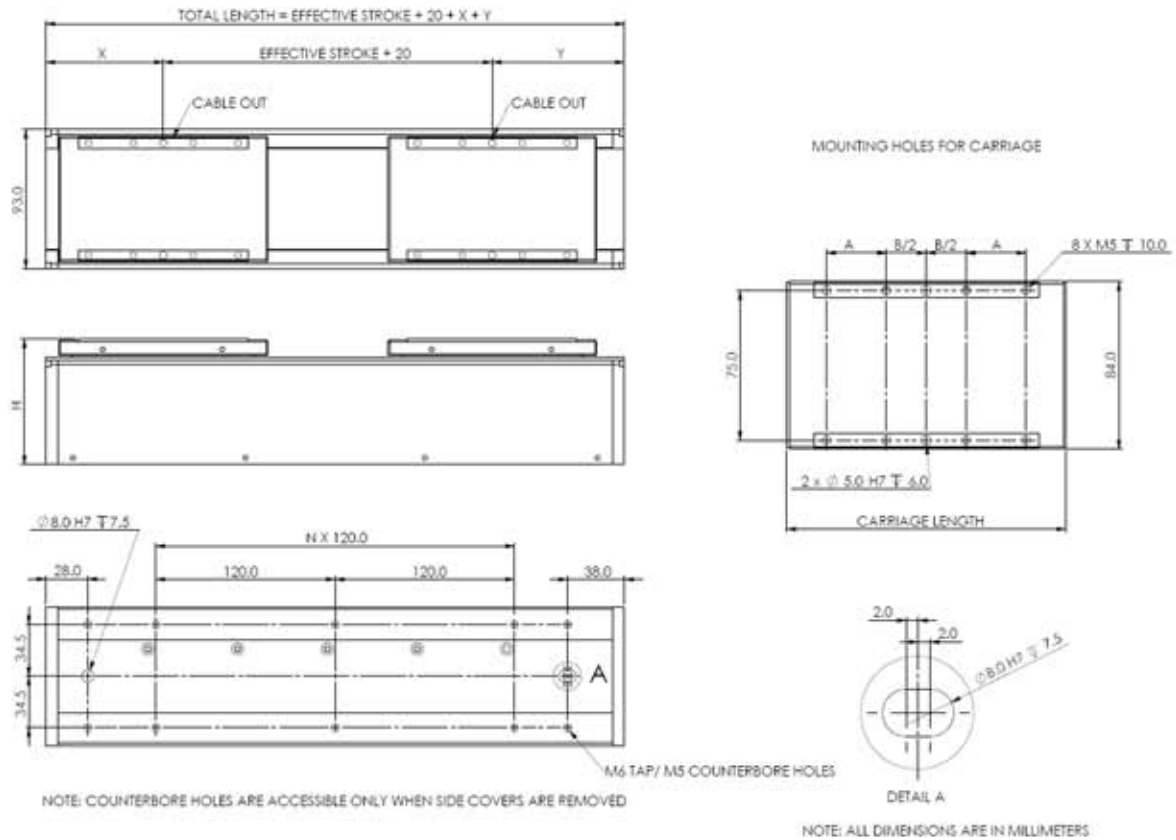
SGL80 Series (Clean Room Cover)



Datasheet

Specification Model	Effective stroke (mm)	Carriage length (mm)	Overall length (mm)	N (mm)	H (mm)	X (mm)	Overall mass (kg)	Moving mass (kg)	Continuous force at 100°C (N)	Peak force (N)
SGL80-S2 <i>(driven by AUM2-S2)</i>	200	140.0	387	2	84.1	78.5	4.8	0.80	22.0	88.0
	300		487	2			5.7			
	400		587	4			6.9			
	500		687	4			8.0			
	600		787	4			9.0			
	1000		1187	8			13.4			
	1200		1387	10			15.5			
	1500		1687	12			18.8			
	2000		2187	16			24.1			
	2500		2687	20			30.0			
SGL80-S3 <i>(driven by AUM2-S3)</i>	200	140.0	387	2	84.1	78.5	5.0	0.86	33.0	132.0
	300		487	2			6.0			
	400		587	4			7.2			
	500		687	4			8.1			
	600		787	4			9.3			
	1000		1187	8			13.8			
	1200		1387	10			15.8			
	1500		1687	12			19.1			
	2000		2187	16			24.5			
	2500		2687	20			29.8			
SGL80-S4 <i>(driven by AUM2-S4)</i>	200	140.0	387	2	84.1	78.5	5.1	0.92	44.0	176.0
	300		487	2			6.1			
	400		587	4			7.3			
	500		687	4			8.4			
	600		787	4			9.4			
	1000		1187	8			13.9			
	1200		1387	10			15.9			
	1500		1687	12			19.2			
	2000		2187	16			24.8			
	2500		2687	20			30.2			

Dimensional Drawing



Model (Clean room cover)	Dimension, mm		
	A	B/2	Y
SGL80-S2	30.0	20.0	88.5
SGL80-S3	30.0	20.0	88.5
SGL80-S4	30.0	20.0	88.5

Part Numbering

SGL80 - Motor size (type) S2, S3, or S4 - ¹Effective stroke (mm) 200 – 2500 - Encoder resolution (µm) 0.1, 1.0, or 5.0 - ²Cover option (type) S, or CR

Example : SGL78-S4-300-1.0-CR

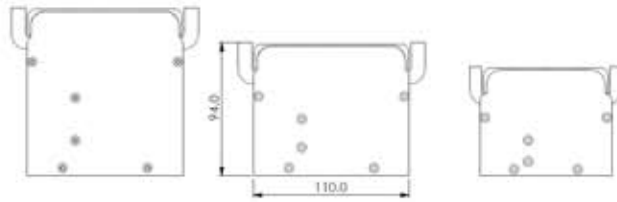
Matching Drivers / Amplifiers

DAP31, DDP21, DDP51, ADL43

¹ Please contact us for customized stroke

² S = Standard cover type
CR = Clean Room cover type

SGL100 Series (Standard Cover)

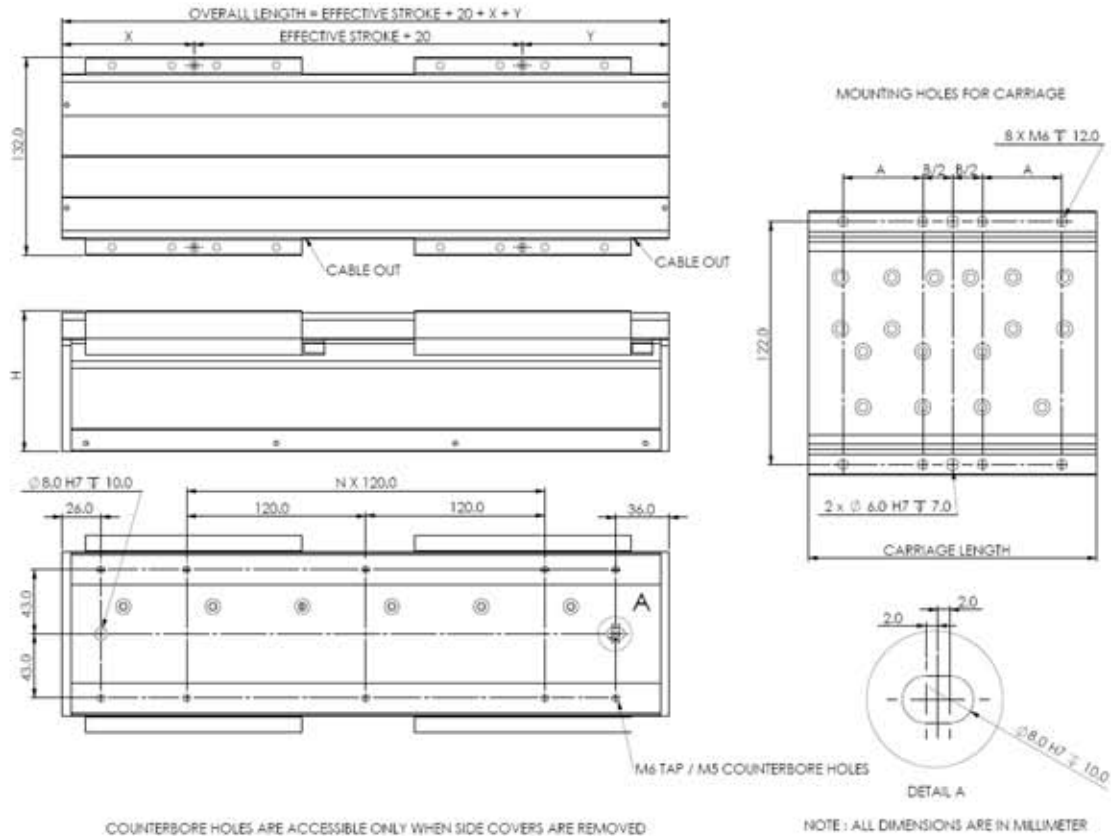


Datasheet

Specification Model	Effective stroke (mm)	Carriage length (mm)	Overall length (mm)	N (mm)	H (mm)	X (mm)	Overall mass (kg)	Moving mass (kg)	Continuous force at 100°C (N)	Peak force (N)
SGL100-S2 <i>(driven by AUM3-S2)</i>	200	145.0	383	2	94.0	88.5	7.3	1.50	72.0	288.0
	300		483	2			9.2			
	400		583	4			10.0			
	500		683	4			11.5			
	600		783	4			12.8			
	1000		1183	8			18.6			
	1200		1383	10			21.6			
	1500		1683	12			25.6			
	2000		2183	16	32.8					
	2500		2683	20	39.9					
SGL100-S3 <i>(driven by AUM3-S3)</i>	200	181.0	443	2	94.0	106.5	8.3	1.90	108.0	432.0
	300		543	2			9.5			
	400		643	4			11.1			
	500		743	4			12.6			
	600		843	6			13.8			
	1000		1243	8			19.5			
	1200		1443	10			22.3			
	1500		1743	12			26.5			
	2000		2243	18	33.5					
	2500		2743	22	41.0					
SGL100-S4 <i>(driven by AUM3-S4)</i>	200	241.0	503	2	94.0	136.5	9.6	2.40	144.0	576.0
	300		603	4			10.8			
	400		703	4			12.4			
	500		803	6			13.9			
	600		903	6			15.1			
	1000		1303	10			20.9			
	1200		1503	10			23.6			
	1500		1803	14			27.9			
	2000		2303	18	35.2					
	2500		2803	22	42.2					

¹ Subjected to confirmation

Dimensional Drawing



Model (Standard cover)	Dimension, mm		
	A	B/2	Y
SGL100-S2	40.0	15.0	98.5
SGL100-S3	40.0	20.0	116.5
SGL100-S4	40.0	30.0	146.5

Part Numbering

SGL100 - Motor size (type) S2, S3, or S4 - ¹Effective stroke (mm) 200 - 2500 - Encoder resolution (µm) 0.1, 1.0, or 5.0 - ²Cover option (type) S, or CR

Example : SGL100-S4-300-1.0-S

Matching Drivers / Amplifiers

DAP31, DDP21, DDP51, ADL43

¹ Please contact us for customized stroke

² S = Standard cover type
CR = Clean Room cover type

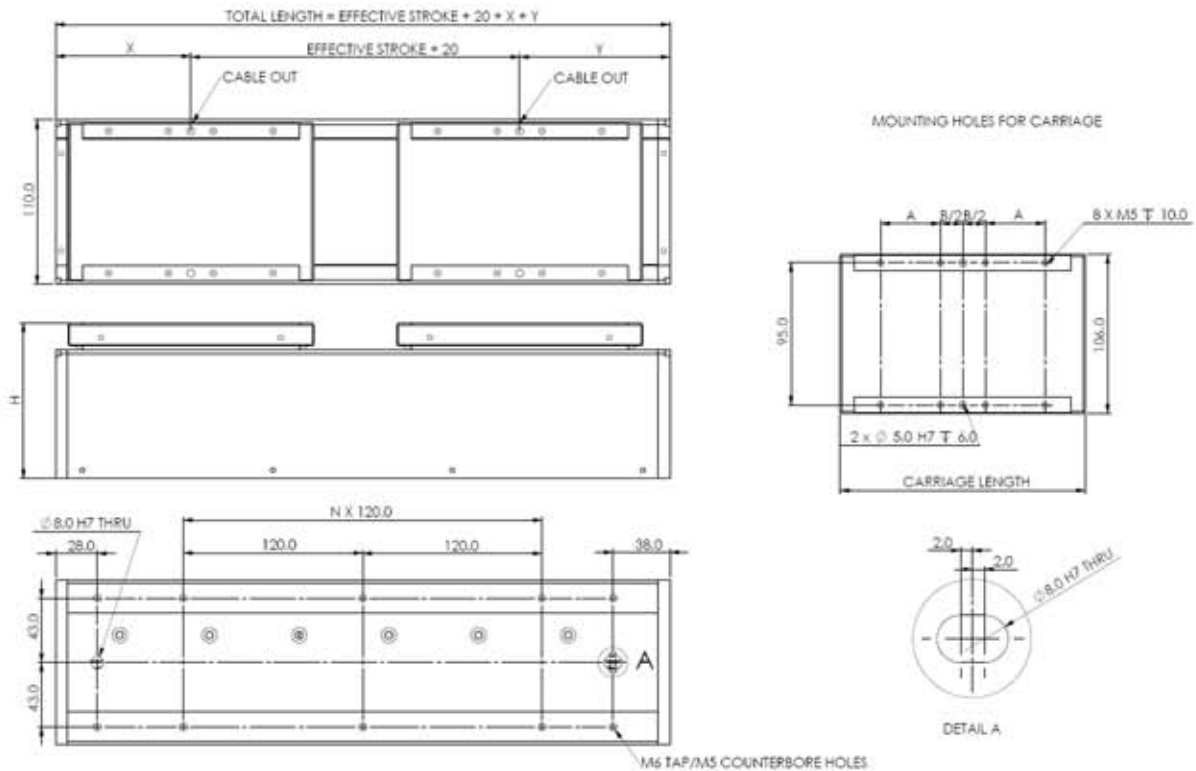
SGL100 Series (Clean Room Cover)



Datasheet

Specification Model	Effective stroke (mm)	Carriage length (mm)	Overall length (mm)	N (mm)	H (mm)	X (mm)	Overall mass (kg)	Moving mass (kg)	Continuous force at 100°C (N)	Peak force (N)
SGL100-S2 <i>(driven by AUM3-S2)</i>	200	164.0	411	2	104.0	90.5	6.9	1.40	72.0	288.0
	300		511	4			8.0			
	400		611	4			9.3			
	500		711	4			10.7			
	600		811	6			11.8			
	1000		1211	8			16.9			
	1200		1411	10			19.3			
	1500		1711	14			23.0			
	2000		2211	18			29.5			
	2500		2711	22			35.7			
	SGL100-S3 <i>(driven by AUM3-S3)</i>		200	200.0			447			
300		547	4		9.0					
400		647	4		10.4					
500		747	4		11.8					
600		847	6		13.0					
1000		1247	8		18.4					
1200		1427	10		21.0					
1500		1727	14		25.0					
2000		2247	18		32.0					
2500		2747	22		38.6					
SGL100-S4 <i>(driven by AUM3-S4)</i>		200	260.0		507	2	104.0	138.5	9.0	2.10
	300	607		4	10.2					
	400	707		4	11.6					
	500	807		6	13.0					
	600	907		6	14.2					
	1000	1307		10	19.6					
	1200	1507		12	22.2					
	1500	1807		14	26.3					
	2000	2307		18	33.2					
	2500	2807		22	40.0					

Dimensional Drawing



NOTE : COUNTERBORE HOLES ARE ACCESSIBLE ONLY WHEN SIDE COVERS ARE REMOVED

NOTE : ALL DIMENSIONS ARE IN MILLIMETERS

Model (Clean room cover)	Dimension, mm		
	A	B/2	Y
SGL100-S2	40.0	15.0	100.5
SGL100-S3	50.0	20.0	118.5
SGL100-S4	70.0	30.0	148.5

Part Numbering

SGL100 - Motor size (type) S2, S3, or S4 - ¹Effective stroke (mm) 200 – 2500 - Encoder resolution (µm) 0.1, 1.0, or 5.0 - ²Cover option (type) S, or CR

Example : SGL100-S4-300-1.0-CR

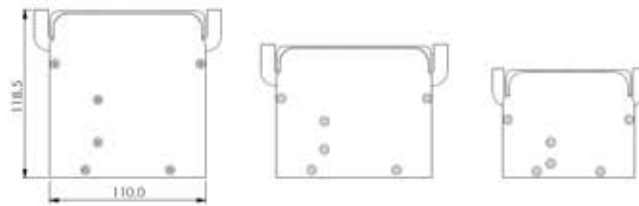
Matching Drivers / Amplifiers

DAP31, DDP21, DDP51, ADL43

¹ Please contact us for customized stroke

² S = Standard cover type
CR = Clean Room cover type

SGL120 Series (Standard Cover)

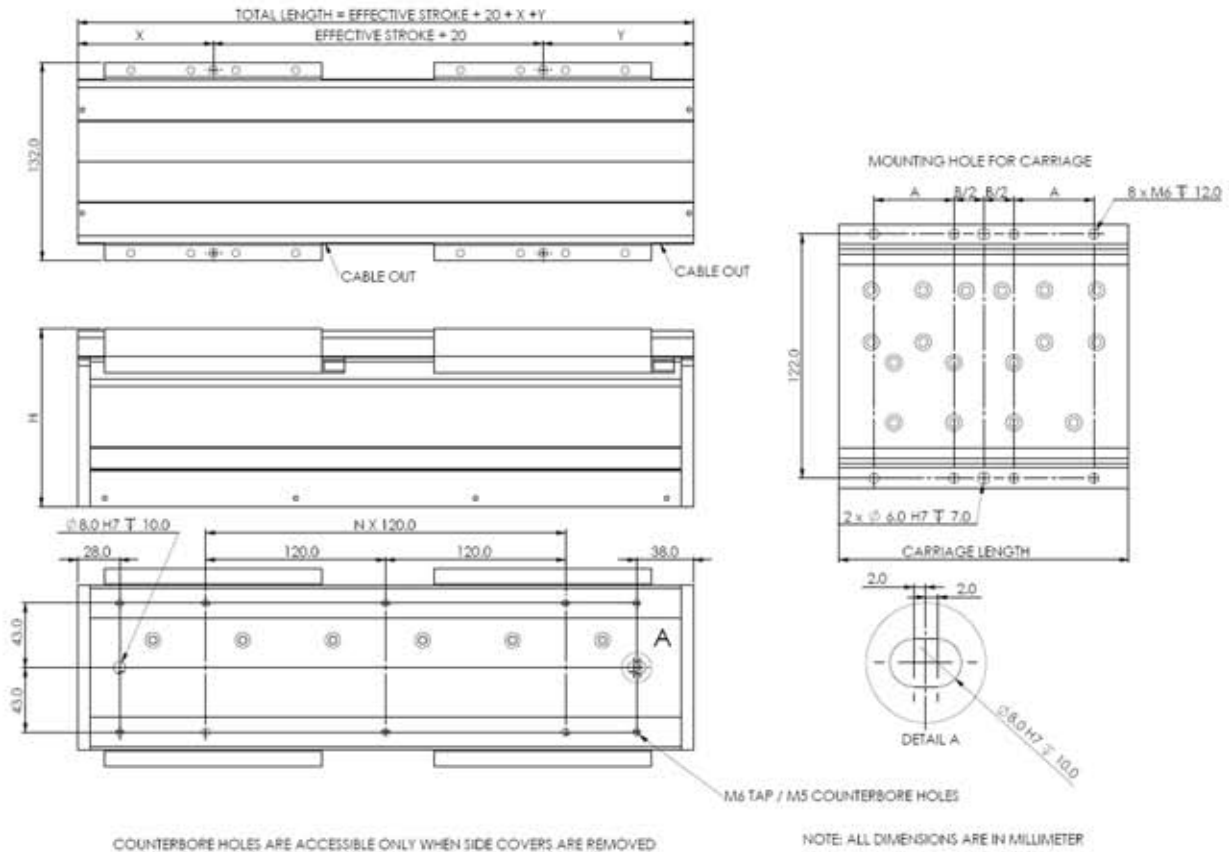


Datasheet

Specification Model	Effective stroke (mm)	Carriage length (mm)	Overall length (mm)	N (mm)	H (mm)	X (mm)	Overall mass (kg)	Moving mass (kg)	Continuous force at 100°C (N)	Peak force (N)
SGL120-S2 <i>(driven by AUM4-S2)</i>	200	145.0	411	2	118.5	88.5	11.7	1.60	112.0	448.0
	300		511	2			14.6			
	400		611	4			16.5			
	500		711	4			19.3			
	600		811	6			22.2			
	1000		1211	8			31.8			
	1200		1411	10			37.5			
	1500		1711	12			45.0			
	1700		1911	14	55.0					
SGL120-S3 <i>(driven by AUM4-S3)</i>	200	181.0	447	2	118.5	106.5	13.6	2.20	168.0	672.0
	300		547	2			15.5			
	400		647	4			18.3			
	500		747	4			21.2			
	600		847	6			23.2			
	1000		1247	8			33.6			
	1200		1447	10			38.4			
	1500		1747	12			46.0			
	1700		1947	14	56.0					
SGL120-S4 <i>(driven by AUM4-S4)</i>	200	241.0	507	2	118.5	138.5	15.5	2.70	224.0	896.0
	300		607	4			17.5			
	400		707	4			20.3			
	500		807	6			23.2			
	600		907	6			25.1			
	1000		1307	10			35.6			
	1200		1507	10			40.4			
	1500		1807	14			48.0			
	1700		2007	16	58.0					

¹ Subjected to confirmation

Dimensional Drawing



Model (Standard cover)	Dimension, mm		
	A	B/2	Y
SGL120-S2	40.0	15.0	98.5
SGL120-S3	50.0	20.0	116.5
SGL120-S4	70.0	30.0	148.5

Part Numbering

SGL120 - Motor size (type) S2, S3, or S4 - ¹Effective stroke (mm) 200 - 2500 - Encoder resolution (μm) 0.1, 1.0, or 5.0 - ²Cover option (type) S, or CR

Example : SGL120-S4-300-1.0-S

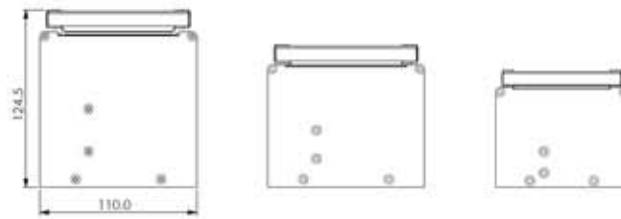
Matching Drivers / Amplifiers

DAP31, DDP21, DDP51, ADL43

¹ Please contact us for customized stroke

² S = Standard cover type
CR = Clean Room cover type

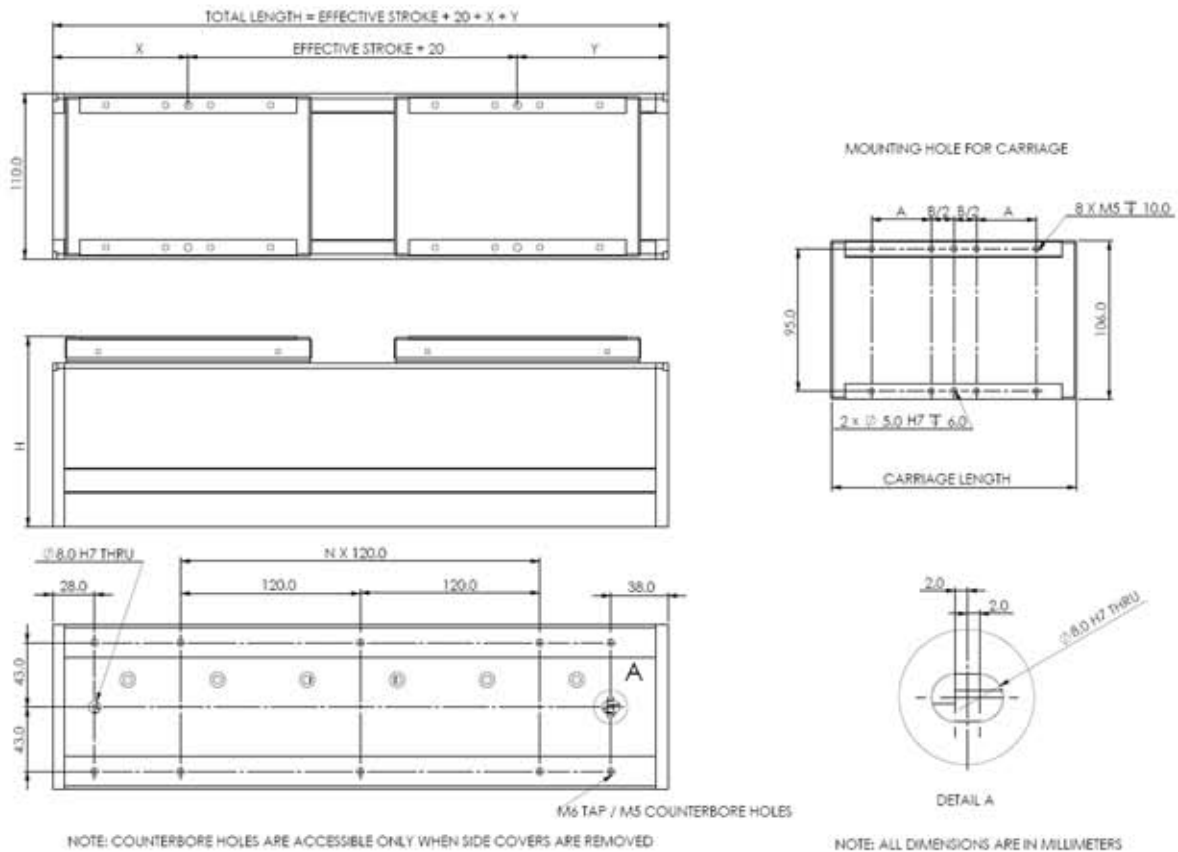
SGL120 Series (Clean Room Cover)



Datasheet

Specification Model	Effective stroke (mm)	Carriage length (mm)	Overall length (mm)	N (mm)	H (mm)	X (mm)	Overall mass (kg)	Moving mass (kg)	Continuous force at 100°C (N)	Peak force (N)
SGL120-S2 <i>(driven by AUM4-S2)</i>	200	164.0	411	2	127.0	90.5	11.1	1.40	112.0	448.0
	300		511	2			12.9			
	400		611	4			15.6			
	500		711	4			18.3			
	600		811	6			20.0			
	1000		1211	8			29.9			
	1200		1411	10			34.4			
	1500		1711	12			41.5			
	1700		1911	14			51.5			
SGL120-S3 <i>(driven by AUM4-S3)</i>	200	200.0	447	2	127.0	108.5	12.9	1.90	168.0	672.0
	300		547	2			14.7			
	400		647	4			17.4			
	500		747	4			20.0			
	600		847	6			21.8			
	1000		1247	8			31.6			
	1200		1427	10			36.1			
	1500		1727	12			43.3			
	1700		1947	14			53.3			
SGL120-S4 <i>(driven by AUM4-S4)</i>	200	260.0	507	2	127.0	138.5	14.9	2.40	224.0	896.0
	300		607	4			16.6			
	400		707	4			19.3			
	500		807	6			22.0			
	600		907	6			23.8			
	1000		1307	10			33.6			
	1200		1507	10			38.0			
	1500		1807	14			45.2			
	1700		2007	16			55.2			

Dimensional Drawing



Model (Clean room cover)	Dimension, mm		
	A	B/2	Y
SGL120-S2	40.0	15.0	100.5
SGL120-S3	50.0	20.0	118.5
SGL120-S4	70.0	30.0	148.5

Part Numbering

SGL120 - Motor size (type) S2, S3, or S4 - ¹Effective stroke (mm) 200 – 2500 - Encoder resolution (µm) 0.1, 1.0, or 5.0 - ²Cover option (type) S, or CR

Example : SGL120-S4-300-1.0-CR

Matching Drivers / Amplifiers

DAP31, DDP21, DDP51, ADL43

¹ Please contact us for customized stroke

² S = Standard cover type
CR = Clean Room cover type