

DGL Series



Linear motor
positioning system



Excellent force
/size ratio



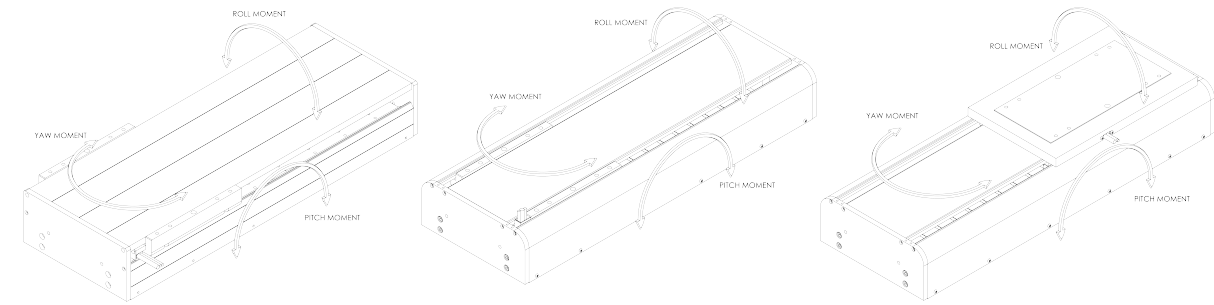
Precise homing



Modular design

Dimensions

DGL

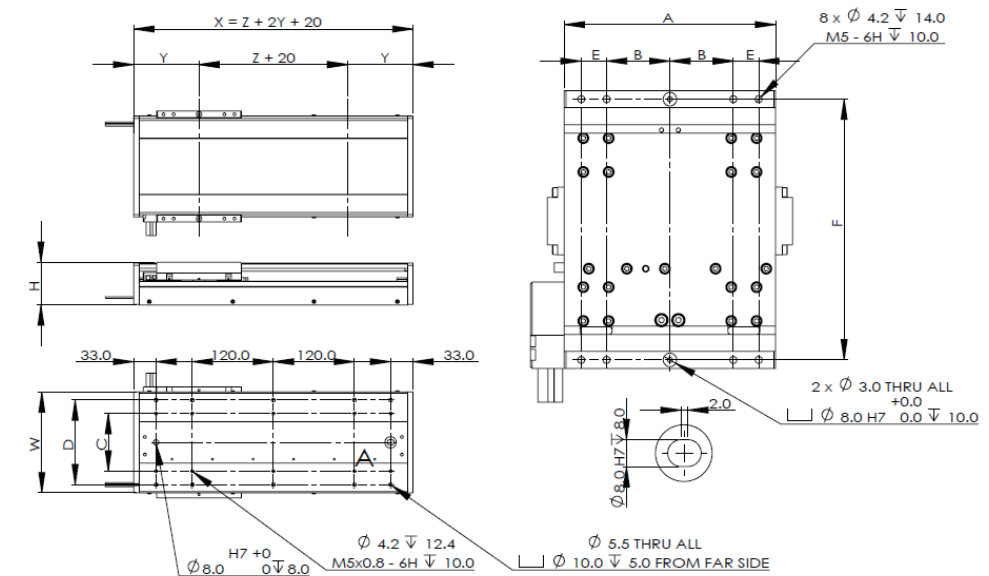


(Standard Cover)

(Conventional Cover)

(Clean Room Cover)

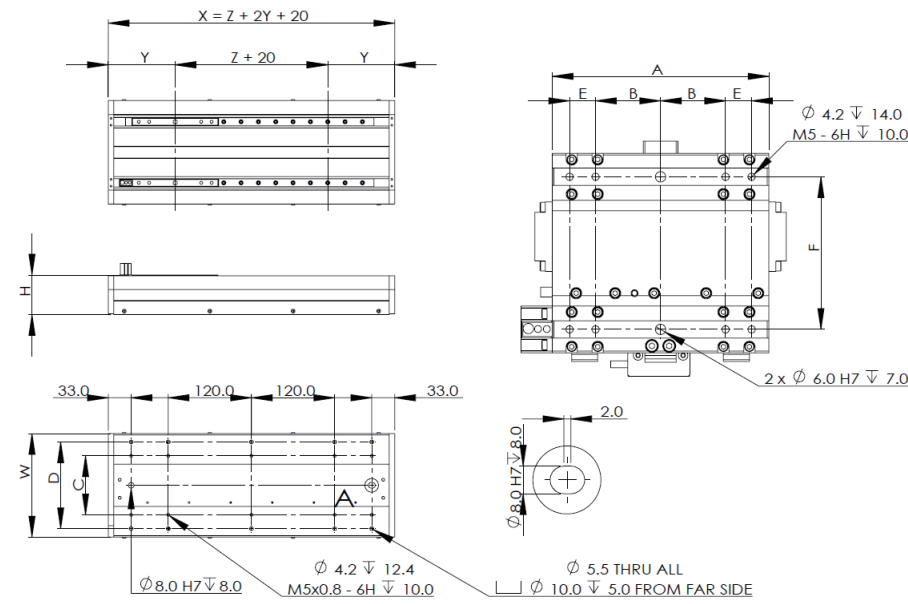
Standard Cover



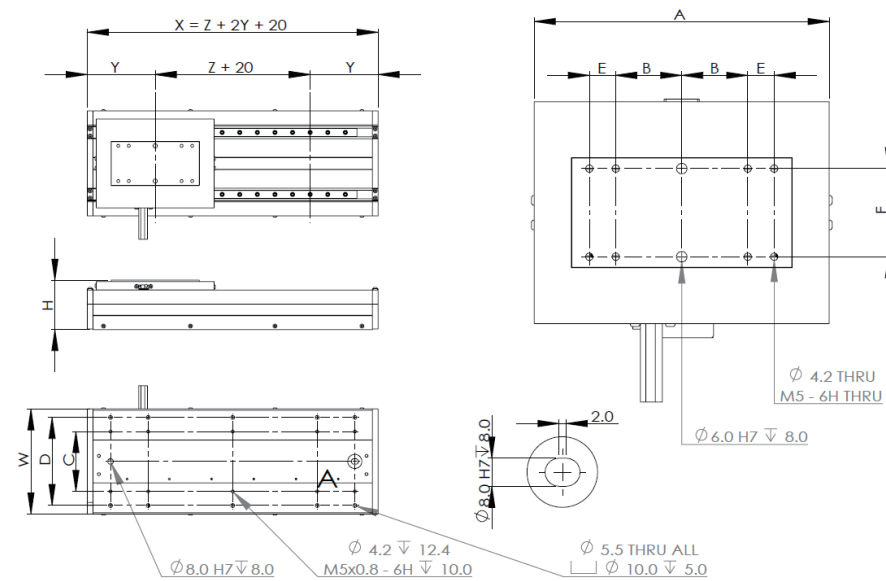
DGL

Dimensions

Conventional Cover



Clean Room Cover



DGL

Specifications

MODEL	MOTOR	Cover Type	SIZE											Moving Mass (Kg)	Encoder Resolution Option			
			Carriage Length (A) (mm)	Carriage Mounting Hole (B) (mm)	Base Mounting Hole (C) (mm)	Base Mounting Hole (D) (mm)	Carriage Mounting Hole (E) (mm)	Carriage Mounting Hole (F) (mm)	Module Height (H) (mm)	Module Width (W) (mm)	Module Length (X) (mm)	Hard Stopper Position (Y) (mm)	Effective Stroke (Z) (mm)					
DGL150	AUM2	S2	S	125	37.5	85	125	15	154	63	149	96.5	125	155	126	From 100 to 1200	0.93	DGL150 series AT201=0.1µm AT202=0.2µm AT205=0.5µm AT401=0.1µm AT404=0.4µm AT410=1.0µm AT4sincos=1vpp
			C	167.5					88	57							0.78	
		CR	167.5	50					70	1.46								
		S3	S	125					154	63							0.95	
			C	167.5					88	57							0.8	
		CR	167.5	50					70	1.48								
	ACM1	S30	S	125					154	63							0.97	
			C	167.5					88	57							0.82	
		CR	167.5	50					70	1.5								
		L30	S	180					154	76							1.72	
			C	222.5					88	70							1.57	
		CR	222.5	50					83	2.25								
DGL180	AUM3	S2	S	180	77	120	160	26	191	88.7	184	156	156	180	130	From 100 to 1200	2	DGL180/200/250 series R2201=0.1µm R4102=0.2µm R2205=0.5µm RH100=1.0µm R41sincos=1vpp R41sincos=1vpp
			C	222.5					115	78							1.25	
		CR	222.5	75					94	2.15								
		S3	S	240					191	88.7							2.6	
			C	282.5					115	78							1.62	
		CR	282.5	75					94	2.92								
	ACM1	S50	S	180					191	88.7							2.86	
			C	222.5					115	78							1.87	
		CR	222.5	75					94	3.18								
		L50	S	240					191	88.7							2.45	
			C	282.5					115	78							1.7	
		CR	282.5	75					94	2.6								
DGL200	AUM4	S2	S	180	77	136	175	26	213	91.7	206	160	180	130	From 100 to 1200	3.67	DGL180/200/250 series R2201=0.1µm R4102=0.2µm R2205=0.5µm RH100=1.0µm R41sincos=1vpp R41sincos=1vpp	
			C	222.5					137	83.5						2.68		
		CR	222.5	99					99.5	3.99								
		S3	S	240					213	91.7						2.19		
			C	282.5					137	83.5						1.46		
		CR	282.5	99					99.5	2.82								
	ACM1	S80	S	180					213	91.7						2.64		
			C	222.5					137	83.5						1.89		
		CR	222.5	99					99.5	3.97								
		L80	S	240					213	91.7						2.94		
			C	282.5					137	83.5						1.98		
		CR	282.5	99					99.5	4.37								
DGL250	AUM5	S1	S	240	77	166	232	26	213	107	250	180	180	180	From 100 to 1200	3.21	DGL180/200/250 series R2201=0.1µm R4102=0.2µm R2205=0.5µm RH100=1.0µm R41sincos=1vpp R41sincos=1vpp	
			C	142					137	83.5						2.48		
	S2	S	370	213					91.7	3.21								
		C	142	137					83.5	1.98								
	S3	S	240	213					91.7	2.94								
		C	282.5	137					83.5	1.98								
CR	282.5	99	99.5	4.37														
ACM1	S100	S	180	213					91.7	2.64								
		C	222.5	137					83.5	1.89								
	L100	S	240	213					91.7	2.94								
		C	282.5	137					83.5	1.98								
	S1	S	370	213					91.7	3.21								
		C	142	137	83.5	1.98												
CR	282.5	99	99.5	4.37														
ACM4	S2	S	370	142	107	6.05												
		C	142	137	83.5	1.98												

DGL

Specifications

Acceleration	G	10
Velocity(1μm resolution)	m/s	5 (40μm scale pitch and 20MHz counter frequency)
Velocity(0.5μm resolution)		2.5 (20μm scale pitch and 20MHz counter frequency)
Velocity(0.1μm resolution)		1.3 (20μm scale pitch and 20MHz counter frequency)
Velocity(Analogue)		8 (40μm scale pitch and 200kHz input frequency) 4 (20μm scale pitch and 200kHz input frequency)
Straightness ^①	μm	±3μm/25mm, NTE±8μm/300mm
Flatness ^①		±3μm/25mm, NTE±8μm/300mm
Repeatability(1μm resolution)		±3μm (40μm scale pitch)
Repeatability(0.5μm resolution)		±1.5μm (20μm scale pitch)
Repeatability(0.1μm resolution)		±1μm (20μm scale pitch)
Repeatability(Analogue)		±5 counts

① All measurement taken when module is mounted on a 5micron flat granite table.

Module	Specifications												
	Maximum bearing load	Recommended row moment	Recommended pitch moment	Recommended yaw moment									
	N	Nm	Nm	Nm									
DGL150	AUM2	S2	2480	109	108	108							
		S3											
	S4												
	ACM1	S30					173	236	236				
DGL180	AUM3	L30	213	355	355								
		S2											
		S3											
S4													
DGL200	ACM1	S50	3944	256	355	236							
		L50											
		S2											
	AUM4	S3					345	355	355				
		S4											
		S4											
	ACM1	S80								795	1123	842	1123
		L80											
		S1											
		S2											
		S1											
		S2											
DGL250	AUM5	S3	345	355	355								
		S4											
	ACM1	S100				9360							
		L100											
		S1											
		S2											

DGL

Part Numbering

DGL180-AUM3-S2-J-H9D-3.0-300-R10-1.0-S-T

Model

DGL
150/180
200/250

Coil Type

Refer to information table

Sensor Type¹

J, K

Hall Option¹

H9D, NH

Rail⁴
(type)

T, B, I

Cover Option³
(type)

S, C, CR, B, N, J

Encoder Option

ATxxx

Rxxxx

Effective Stroke⁵ (mm)

200-1200

Cable Length² (m)

3.0

① Sensor Type. J=Thermostat (standard), K=Thermocouple. Hall Option. H9D=DSUB 9 pins (standard), NH=Without hall sensor.

② For customized cable length and stroke length, please contact us (the longest length now is 8000mm).

③ Cover Option. S=standard cover, C= conventional cover, B= bellow cover, CR= cleanroom cover, N= no cover.

④ Rail. T= THK linear guide, B= Bosch linear guide, I = IKO linear guide.

For applications that have specific straightness and flatness requirements, precision class (H/P) is available.