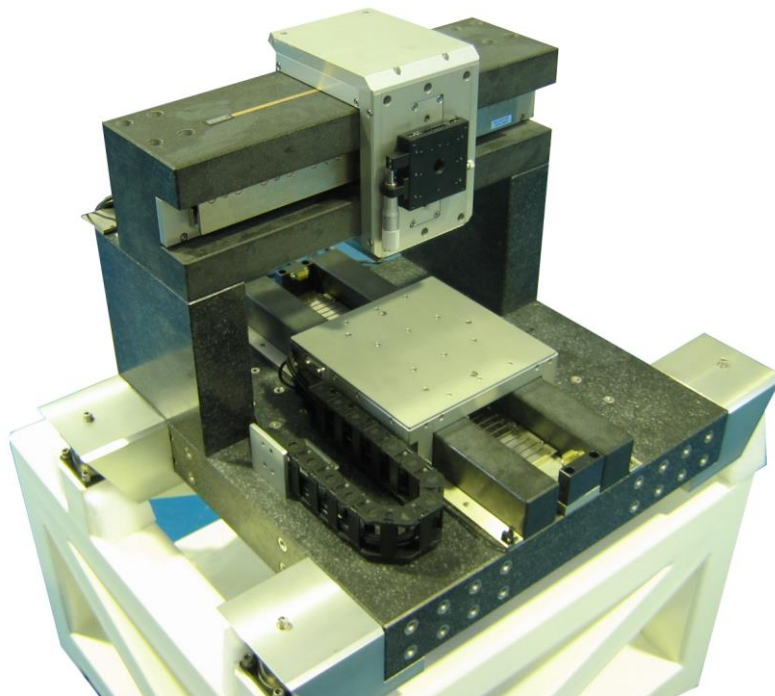


GAG Series

XY Air Bearing Stage



- Driven by direct drive high performance linear motor
- Superior flatness and straightness from non-contact air-bearing guidance system for smooth, no noise and low particle generation operation

Motor Parameter

Top Axis		
Specifications		AUM2-S2
Performance Parameters	Unit	Series
Continuous Force, coil @100°C	N	17.6
Peak Force	N	88.0
Motor Constant	N/SqRt(W)	4.31
Continuous Power	W	26.0
Peak Power	W	416.0
Electrical Cycle	mm	30
Max Bus Voltage	V	330
Max Coil Temperature	°C	125
Thermal Dissipation Constant	W/°C	0.35
Continuous current	Arms	1.6
Peak current	Arms	8.0
Force Constant	N/Arms	11.0
Back EMF Constant	Vpeak/(m/s)	9.0
Inductance	mH	1.5
Terminal Resistance @25°C	Ohms	6.5
Electrical Time Constant	ms	0.23
Mechanical Parameters		
Coil Mass	Kg	0.118
Coil Length	mm	61
Track Mass (per 120 mm)	Kg	0.468
Magnetic Attraction	N (lb)	0

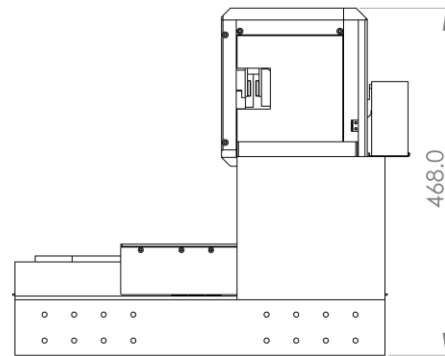
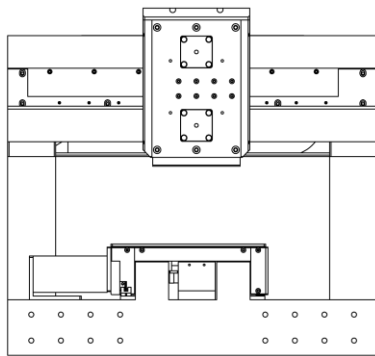
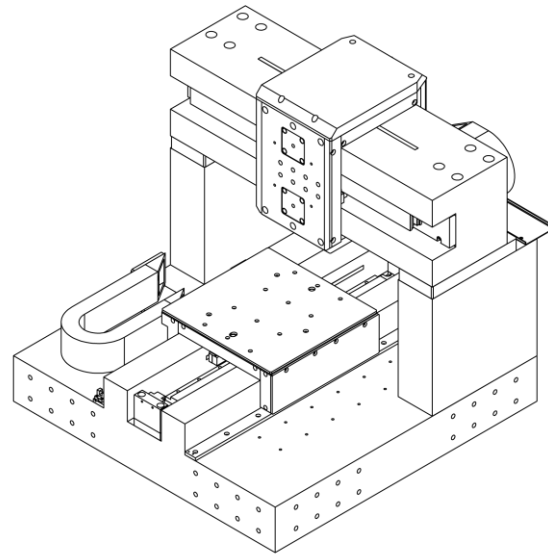
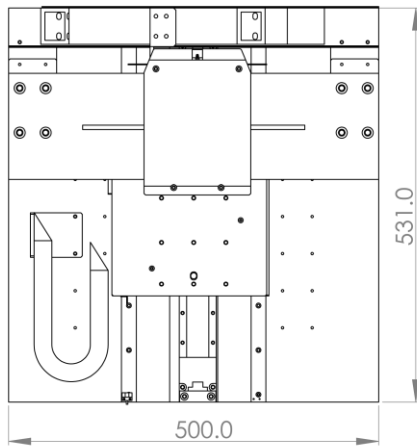
Bottom Axis		
Specifications		ACM1-S30
Performance Parameters	Unit	
Continuous Force	N	52.9
Peak Force	N	241.9
Motor Constant	N/SqRt(W)	12.93
Continuous Power	W	16.8
Peak Power	W	350.2
Magnetic period	mm	20
Max Coil Temperature	°C	130
Continuous current	Arms	2
Peak current	Arms	9.60
Force Constant	N/Arms	25.2
Back EMF Constant	Vpeak/m/s	20.6
Inductance	mH	13.5
Phase Resistance @25°C	Ohms	3.8
Magnetic Attraction	N	480.00
Coil Mass	Kg	0.6
Coil Length	mm	96
Track Mass (Per 80)	Kg	0.26

Specification

X-Axis (top)	
Stroke length ⁴	250mm
Recommended load	2kg
Maximum load	5kg
Flatness/Straightness ²	Full stroke $\pm 1\mu\text{m}$
Linear motor	AUM2-SS4K-3.0
Motor Continuous force ¹	44N
Motor Peak Force ¹	176N
Linearity ²	Full stroke $\pm 5\mu\text{m}$
Repeatability ³	$\pm 2.5 \mu\text{m}$
Y-Axis (Bottom)	
Stroke length ⁴	250mm
Flatness/Straightness ²	Full stroke $\pm 1\mu\text{m}$
Recommended load	2kg
Maximum load	5kg
Linear motor	ACM1-S30-J-3.0
Motor Continuous force ¹	53N
Motor Peak Force ¹	242N
Linearity ²	Full stroke $\pm 5\mu\text{m}$
Repeatability ³	$\pm 2.5 \mu\text{m}$
Orthogonal ²	± 5 arc second
Overall flatness ²	$\pm 1\mu\text{m}$

- 1 The continuous force and peak force can be increase with a bigger motor size
- 2 Measured with a 2kg load
- 3 Base on a 0.5micron encoder resolution. Different encoder resolution is available
- 4 Consults factory for different stroke length

Dimension Drawing



Part Numbering (Rapid Delivery Series)

GAG	Stroke	Top Axis Motor Model	Bottom Axis Motor Model	Sensor Type	⁵ Motor Cable (m)	Encoder Option (type)	Encoder Resolution (micron, μ)
	X250Y250	AUM2-S/P-S4	ACM1-S30	J K	1.0-5.0	RE, MII	0.1

⁵ Motor cable is the length of cable measured after the cable chain

Example: GAGX250Y250-AUM2-S-S4-ACM1-S30-J-3.0-RE-0.1