







## **SYSTEM SPECIFICATIONS**

Horizontal X-Axis							
Motor P/N	BLDM-C04						
Stroke	3.50 in	88.9 mm					
Encoder Resolution	1 micron						
Bearing Type	Recirculating Ball						
Resistance @ 20C	10.6 ohms						
Inductance @ 20C	10.1 mH						
Electrical Time Constant	1.0 msec						
Motor Constant	2.1 LBS/SQRT(Watt)	9.4 N/SQRT(Watt)					
Force Constant	6.8 LBS/Amp	30.5 N/Amp					
Back EMF	0.77 V/ips	30.4 V/m/sec					
Force @ 100% Duty	13.0 lbs	58.0 N					
Power @ 100% Duty	49.5 watts						
Current @ 100% Duty	1.9 amps						
Force @ 10% Duty	39.0 lbs	173 N					
Power @ 10% Duty	445 watts						
Current @ 10% Duty	5.7 amps						
Moving Mass	3.75 LBS	1.7 Kg					
Total Mass	11 LBS	5 Kg					

Vertical Z-Axis						
Motor P/N	BLSM-2F					
Stroke	10.0 in	254 mm				
Encoder Resolution	1 micron					
Bearing Type	Recirculating Ball					
Resistance @ 20C	2.75 ohms					
Inductance @ 20C	2.5 mH					
Electrical Time Constant	8.5 msec					
Motor Constant	15.7 LBS/SQRT(Watt)	69.5 N/SQRT(Watt)				
Force Constant	26 LBS/Amp	115.4 N/Amp				
Back EMF	0.77 V/ips	30.4 V/m/sec				
Force @ 100% Duty	200 lbs	888 N				
Power @ 100% Duty	163 watts					
Current @ 100% Duty	7.7 amps					
Force @ 10% Duty	600 lbs	2664 N				
Power @ 10% Duty	14617 watts					
Current @ 10% Duty	23.1 amps					
Moving Mass	152 LBS	69 Kg				
Total Mass	52 LBS 23.5 Kg					

## NOTE:

- Moving and Total Mass are per individual stage axis.
  XZ Gantry total mass is 160 Lbs [72.5 Kg] (approx.)
  XZ Stand total mass is 115 Lbs [52 Kg] (approx.)

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UNLESS SPECIFIED OTHERWISE:
All dimensions are in inches
Standard Tolerances are a follow
XXX ±.005 ANGLES ±.1.
XX ±.010 FILLETS .010
X ±.020 CORNERS .010
Remove All Burrs and Sharp Edges

**FOR** REFERENCE ONLY

ATERIAL		TITLE		DWG# 4	7-0052
			7.0	REV	
Anodize Blue	XZ Gantry	.Z Gantry			
		DATE 5-21-18	SHEET 5 of 5		