

1

2

3

4

5

REVISION TABLE					
REV	ECN#	DESCRIPTION	REV BY	APPROVED	DATE
---	---	Original Drawing	OOG	MPW	3-30-2020

A

A

B

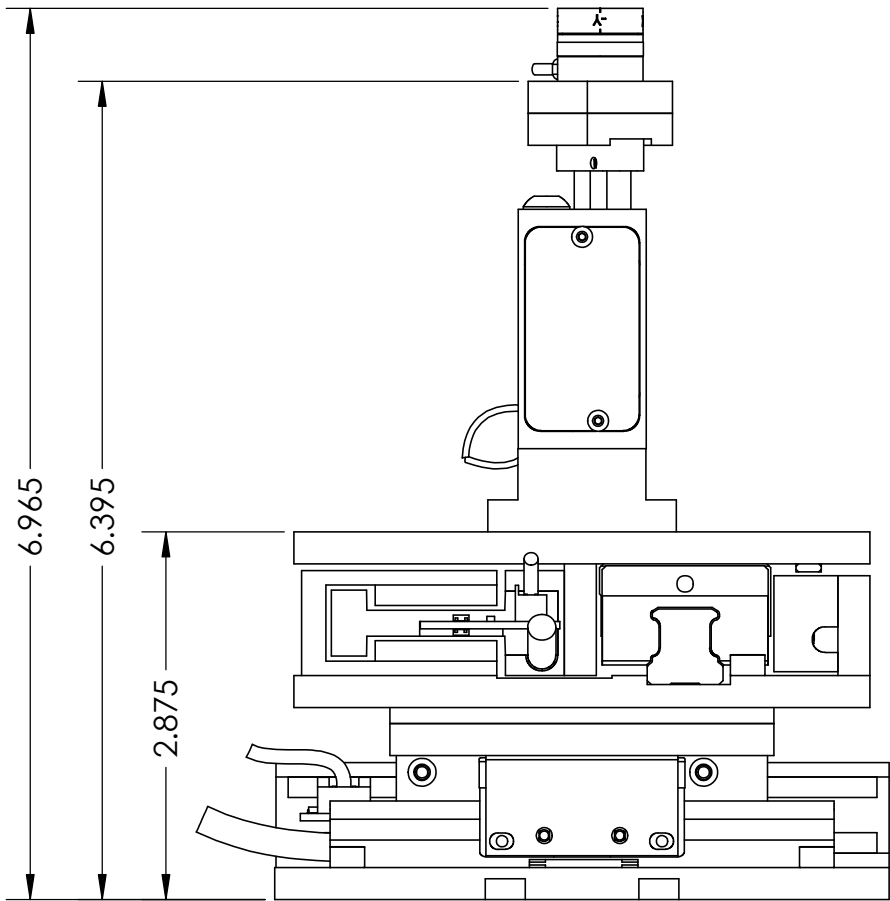
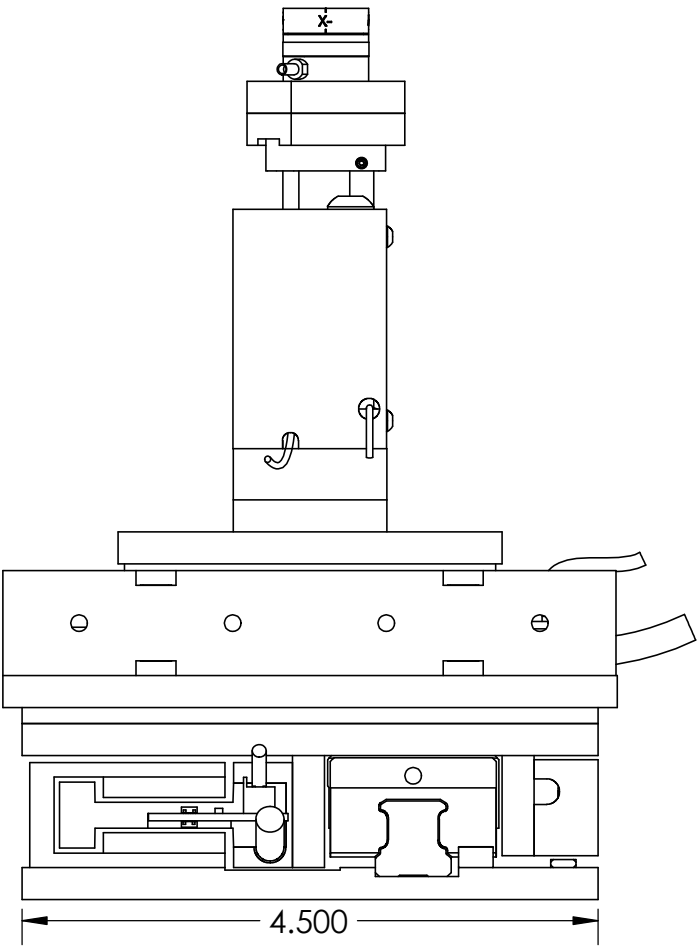
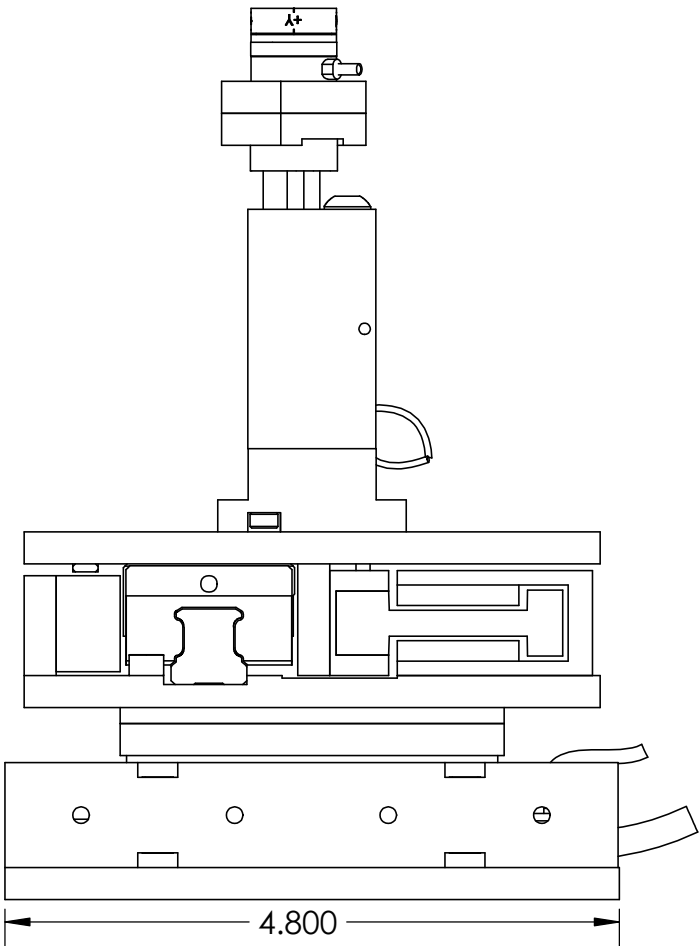
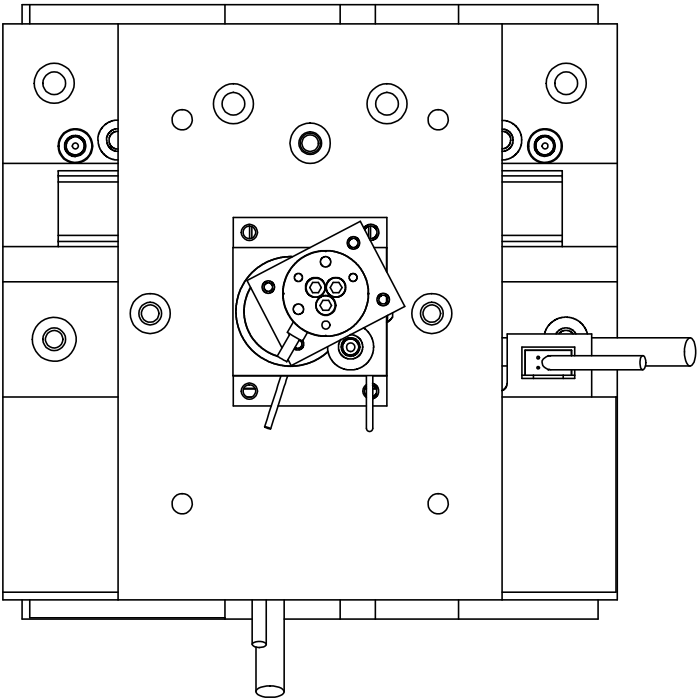
B

C

C

D

D



ALL AXIS SHOWN AT MID-STROKE

1

2

3

4

5

A

A

B

B

C

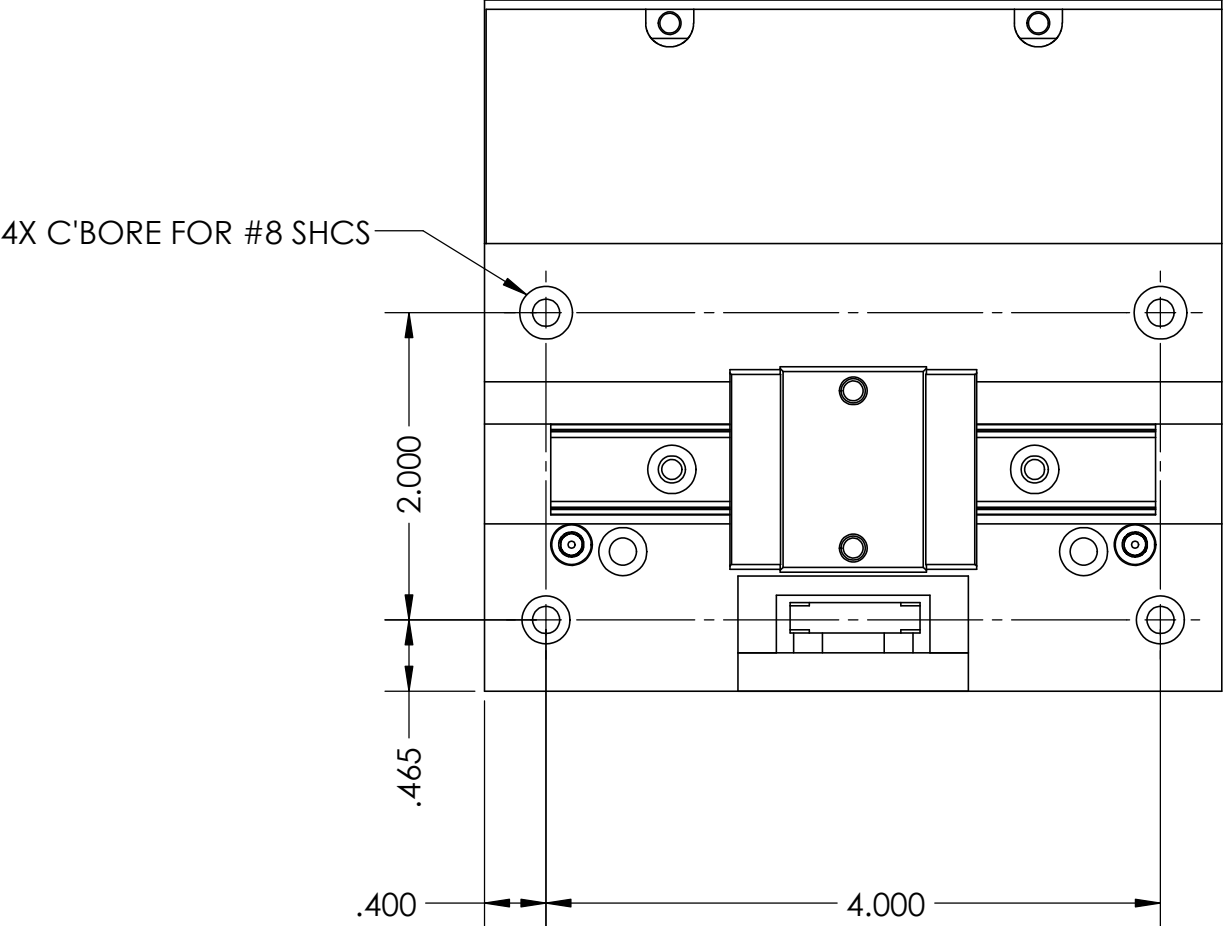
C

D

D

# MOUNTING FEATURES

PARTS HAVE BEEN HIDDEN TO  
SHOW BASE MOUNTING HOLES



**H2W Technologies, Inc.**  
Santa Clarita, CA 91350 USA  
Tel: (661) 291-1620  
[www.h2wtech.com](http://www.h2wtech.com)

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

**FOR  
REFERENCE  
ONLY**

MATERIAL

FINISH

TITLE

XYZ-Force Stage

DWG # **40-0464**

REV **----**

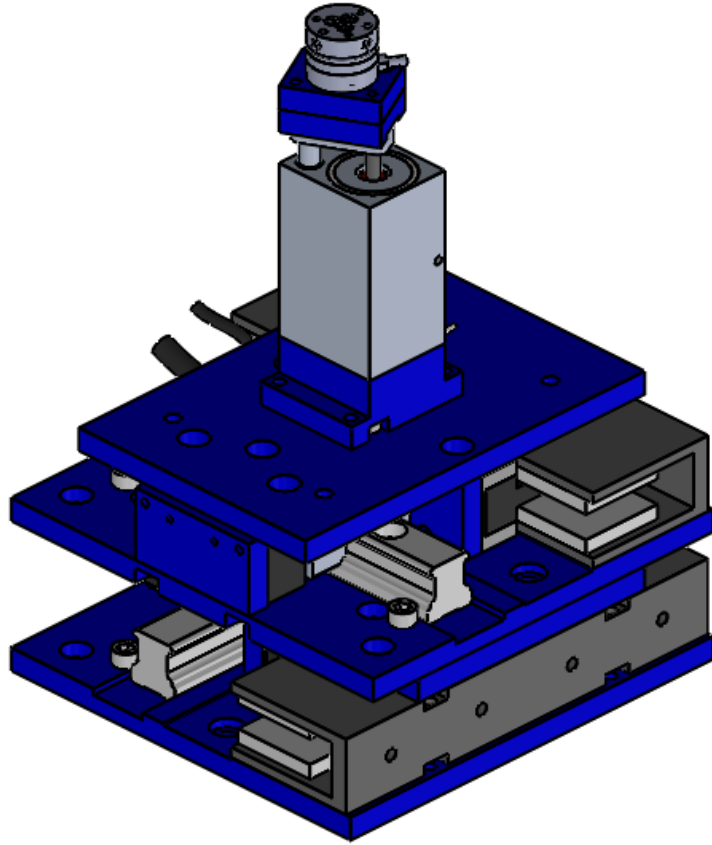
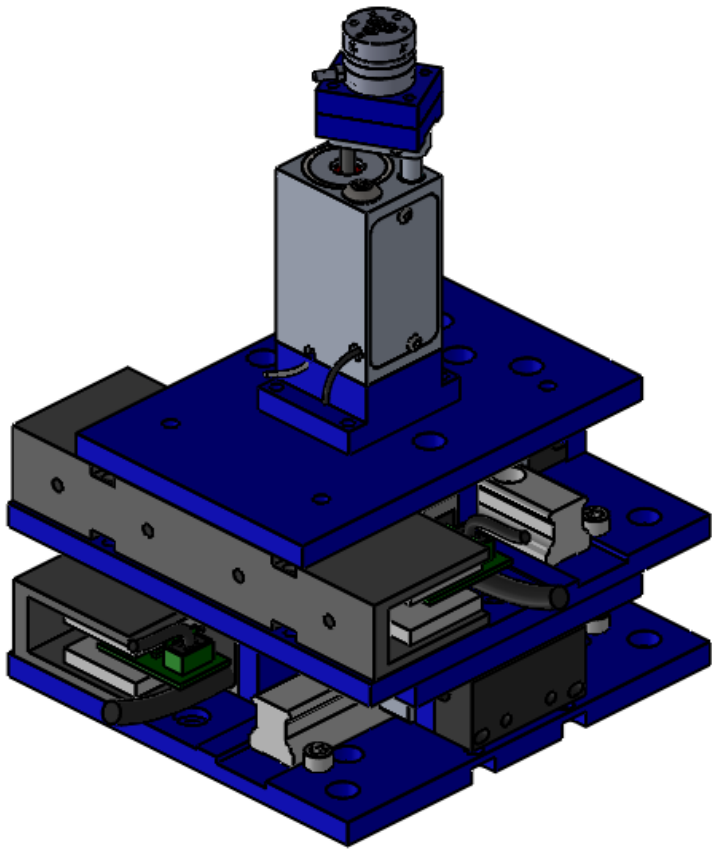
DATE **3-30-2020**

SHEET **2 of 3**

SINGLE RAIL POSITIONING STAGE SPECIFICATIONS (Top Axis)		
Motor P/N	BLDM-B02	
Stroke	1.80"	45.7 mm
Encoder Resolution	1 micron	
Bearing Type	Linear Bearing	
Moving Mass	0.80 lbs	0.36 Kg
Total Mass	3.0 lbs	1.36 Kg
Resistance @ 25C	3.2 ohms	
Inductance @ 25C	15.9 mH	
Electrical Time Constant	1.0 msec	
Motor Constant	0.84 LBS/SQRT(Watt)	3.7 N/SQRT(Watt)
Force Constant	1.48 LBS/A Peak	6.57 N/A Peak
Back EMF	0.17 V/ips	6.7 V/m/sec
Force @ 100% Duty	3.1 LBS	13.8 N
Power @ 100% Duty	19.6 Watts	
Current @ 100% Duty	2.1 Amps	
Force @ 10% Duty	9.4 LBS	41.8 N
Power @ 10% Duty	176 Watts	
Current @ 10% Duty	6.3 Amps	

SINGLE RAIL POSITIONING STAGE SPECIFICATIONS (Bottom Axis)		
Motor P/N	BLDM-B02	
Stroke	1.80"	45.7 mm
Encoder Resolution	1 micron	
Bearing Type	Linear Bearing	
Moving Mass	0.80 lbs	0.36 Kg
Total Mass	3.0 lbs	1.36 Kg
Resistance @ 25C	3.2 ohms	
Inductance @ 25C	15.9 mH	
Electrical Time Constant	1.0 msec	
Motor Constant	0.84 LBS/SQRT(Watt)	3.7 N/SQRT(Watt)
Force Constant	1.48 LBS/A Peak	6.57 N/A Peak
Back EMF	0.17 V/ips	6.7 V/m/sec
Force @ 100% Duty	3.1 LBS	13.8 N
Power @ 100% Duty	19.6 Watts	
Current @ 100% Duty	2.1 Amps	
Force @ 10% Duty	9.4 LBS	41.8 N
Power @ 10% Duty	176 Watts	
Current @ 10% Duty	6.3 Amps	

VOICE COIL POSITIONING STAGE SPECIFICATIONS (Vertical Axis)		
Motor P/N	NCM06-08-008-2IB	
Stroke	0.60"	15.2 mm
Encoder Resolution	1.0 micron	
Bearing Type	Sliding Contact	
Moving Mass	0.05 lbs	25 grams
Total Mass	0.29 lbs	135 grams
Resistance @ 20C	1.5 ohms	
Inductance @ 20C	0.3 mH	
Electrical Time Constant	0.20 msec	
Motor Constant	0.40 LBS/SQRT(Watt)	1.78 N/SQRT(Watt)
Force Constant	0.49 LBS/Amp	2.18 N/Amp
Back EMF	0.06 V/ips	2.18 V/m/sec
Force @ 100% Duty	1.12 LBS	5.0 N
Power @ 100% Duty	8 Watts	
Current @ 100% Duty	2.2 Amps	
Force @ 10% Duty	3.36 LBS	15.0 N
Power @ 10% Duty	73 Watts	
Current @ 10% Duty	6.6 Amps	



NOTE:  
1. ELECTRICAL SPECS & MASSES ARE PER INDIVIDUAL AXIS.



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XYZ-Force Stage

DWG # **40-0464**

REV **----**

DATE **3-30-2020** SHEET **3 of 3**