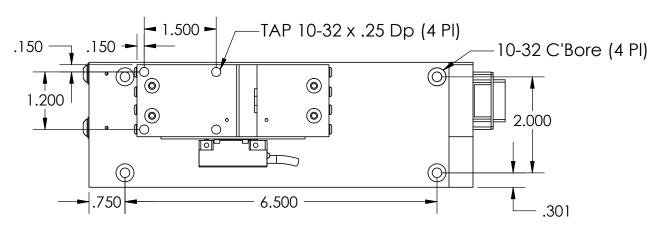
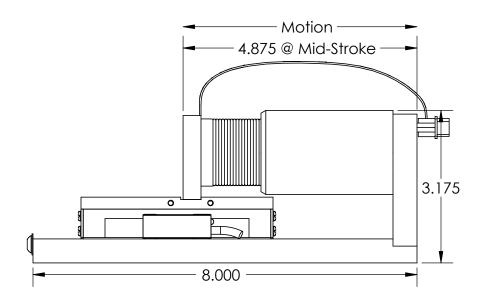
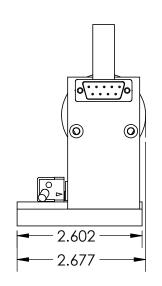
These drawings and specifications are the property of H2W Technologies, Inc. They are issued in confidence and shall not be reproduced, copied, or used without written permission from H2W Technologies, Inc. (www.h2wtech.com)

|     | REVISION TABLE |                  |               |          |         |  |  |  |
|-----|----------------|------------------|---------------|----------|---------|--|--|--|
| REV | ECN#           | DESCRIPTION      | <b>REV BY</b> | APPROVED | DATE    |  |  |  |
|     |                | Original Drawing | OOG           | MPW      | 3-10-15 |  |  |  |

## MOTOR HAS BEEN HIDDEN TO SHOW MOUNTING HOLES







| HEMA | H2 |
|------|----|
|      |    |

## **2W Technologies, Inc.** 380 Ferry Court Santa Clarita, CA 91350 USA Tel: (661) 291-1620 Fax: (661) 291-1626

MATERIAL

OOG

**Voice Coil Positioning Stage** Model #:VCS20-020-BS-01-MC

DATE 3-10-15 31-0718 MPW 3-10-15 1 of 2

| VOICE COIL POSITIONING STAGE SPECIFICATIONS |                     |                   |  |  |  |  |  |
|---|---------------------|-------------------|--|--|--|--|--|
| Motor P/N                                   | NCC20-18-020-1A     |                   |  |  |  |  |  |
| Stroke                                      | 2.00"               | 50.8 mm           |  |  |  |  |  |
| Encoder Resolution                          | 1 micron            |                   |  |  |  |  |  |
| Encoder Type                                | Magnetic            |                   |  |  |  |  |  |
| Bearing Type                                | Ball Slide          |                   |  |  |  |  |  |
| Moving Part                                 | Coil Assembly       |                   |  |  |  |  |  |
| Moving Mass                                 | 0.80 lbs            | 0.36 kg           |  |  |  |  |  |
| Total Mass                                  | 3.60 lbs            | 1.63 kg           |  |  |  |  |  |
| Resistance @ 20C                            | 3.50 ohms           |                   |  |  |  |  |  |
| Inductance @ 20C                            | 3.70 mH             |                   |  |  |  |  |  |
| Electrical Time Constant                    | 1.05 msec           |                   |  |  |  |  |  |
| Motor Constant                              | 0.75 LBS/SQRT(Watt) | 3.34 N/SQRT(Watt) |  |  |  |  |  |
| Force Constant                              | 1.4 lbs/Amp         | 6.1 N/Amp         |  |  |  |  |  |
| Back EMF                                    | 0.2 V/ips           | 6.1 V/m/sec       |  |  |  |  |  |
| Force @ 100% Duty                           | 2.0 lbs             | 8.9 N             |  |  |  |  |  |
| Power @ 100% Duty                           | 7 watts             |                   |  |  |  |  |  |
| Current @ 100% Duty                         | 1.4 Amps            |                   |  |  |  |  |  |
| Force @ 10% Duty                            | 6.0 lbs             | 26.7 N            |  |  |  |  |  |
| Power @ 10% Duty                            | 64 watts            |                   |  |  |  |  |  |
| Current @ 10% Duty                          | 4.3 Amps            |                   |  |  |  |  |  |

