

# Product Specifications: Shackle Pin Load\*Cell

#### **Functional Specification**

The Motion Laboratories Shackle Pin Load\*Cell shall be the primary load bearing component of the Motion Laboratories V3 Cell\*Mate System. The Shackle Pin Load\*Cell shall work in unison with the Cell\*Mate Hub and Cell\*Mate Touch Screen Display to monitor both dynamic and static loads. They shall be part of the A-17-003 Series.



- The Shackle Pin Load\*Cell shall be available in a load rating of 3.25 Metric Tons (7165 lbs) & 4.75 Metric Tons (10471 lbs).
- The Shackle Pin Load\*Cell shall have a 5:1 safety factor.
- The Shackle Pin Load\*Cell shall be assembled with Crosby G2130 Bolt Type Anchor Shackles.
- The Shackle Pin Load\*Cell shall be assembled with 17-4PH Stainless Steel Pin, Nut & Bobbin.
- The Shackle Pin Load\*Cell shall utilize a Wheatstone Bridge, to attain a high level of accuracy.
- The Shackle Pin Load\*Cell shall have a 6-pin XLR data output connector.
- The Shackle Pin Load\*Cell shall be RF Shielded to protect electronic components.
- The Shackle Pin Load\*Cell shall transmit data via a digital signal, using RS485 communication protocol.
- The Shackle Pin Load\*Cell shall require minimal maintenance.
- The Shackle Pin Load\*Cell shall transmit data in 1 pound increments.
- The Shackle Pin Load\*Cell shall be capable of measuring 1,200 times per second.¹
- The Shackle Pin Load\*Cell shall be tested and certified to an accuracy of 2%.
- The Shackle Pin Load\*Cell shall transmit data to a hub with a maximum cable length of 1000 feet.
- The Shackle Pin Load\*Cell shall be assembled in the USA.

#### **Physical Specifications**

The Shackle Pin Load\*Cell shall be made of 17-4PH Stainless Steel.

The Shackle Pin Load\*Cell shall have a Housing made of 16 gauge 1020 Steel and have a dark gray sparkle metallic gloss smooth powder coat finish with yellow Motion Laboratories logo.

The Shackle Pin Load\*Cell shall have a weight of 2.1 pounds (3.25 Metric Ton) & 3.2 pounds (4.75 Metric Ton).

The Shackle Pin Load\*Cell shall have the following shackle sizes: 5/8" (3.25 Metric Ton), 3/4" (4.75 Metric Ton) &.



<sup>&</sup>lt;sup>1</sup> The Load\*Cell measures 1200 times per second capturing the peak load on the Load\*Cell. The Cell\*Mate Hub reads each channel's cell every 50 milliseconds and displays that load information on the Cell\*Mate Touch Screen Display. Please see V3 system specification for any additional information.



### **Electrical Specifications**

Unit Runs on 12VDC generated from the Cell\*Mate Hub's internal switching power supply.

### **Environmental Specifications**

For indoor use only

## **Ratings and Certifications**

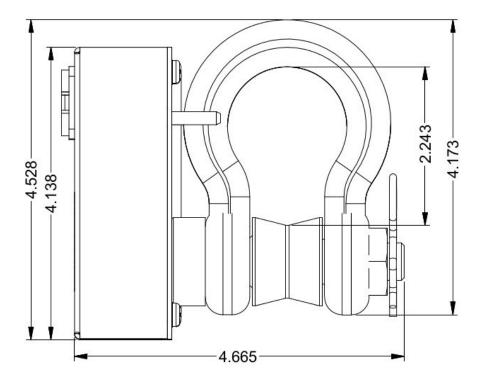
Motion Laboratories' Shackle Pin Load\*Cell utilizes UL and/or UR components and is built to the standards of the National Electric Code (NEC).

The Motion Laboratories Cell\*Mate Shackle Pin Load\*Cell shall be tested to its full range using certified test equipment. This test results in a proof of performance certificate issued with each cell, indicating compliance with the listed specifications. In order to ensure their performance, the Load\*Cell shall require annual recertification by a Motion Laboratories Certified Technician.



## Shackle Pin Load\*Cell, 3.25 Metric Ton (A-17-003-0006)





## Shackle Pin Load\*Cell, 4.75 Metric Ton (A-17-003-0007)

