



NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**  
Load Cell  
Compression  
Model: AS130, AS130S, AS133, AS137, AS203, SS130, SS130S, SS133, SS137 & SS203  
 $n_{max}$ : 6000, Class III, Multiple Cell  
Capacity: 500 lb to 5000 lb  
Accuracy Class: III

**Submitted By:**  
Changzhou Hongli Weighing Equipment Co., Ltd.  
No. 21 Longhui Road Wujin  
Changzhou, Jiangsu 213167  
China  
Tel: +8613813662663  
Contact: Bill Ma  
Email: [billma@holiscale.com](mailto:billma@holiscale.com)  
Web site: [www.holiscale.com](http://www.holiscale.com)

**Standard Features and Options**

- The specific load cell models, capacities and  $v_{min}$  values covered by this Certificate are listed in the table below.
- Nominal Output: 2.0 mV/V
- Stainless Steel & Alloy Steel
- 4 Wire Design
- Minimum Dead Load: 0 lb

| Models             | Capacity (lb) | Capacity (kg) | Class III, Multiple Cell |                |           |
|--------------------|---------------|---------------|--------------------------|----------------|-----------|
|                    |               |               | $v_{min}$ (lb)           | $v_{min}$ (kg) | $n_{max}$ |
| AS130 & SS130      | 500           | 250           | 0.028                    | 0.014          | 6000      |
| AS130S&SS130S      | 1000          | 500*          | 0.056                    | 0.028          | 6000      |
| AS133 & SS133      | 1500          | 750           | 0.083                    | 0.042          | 6000      |
| AS137 & SS137      | 2000          | 1000          | 0.11                     | 0.056          | 6000      |
| AS203 & SS203      | 3000          | 1500          | 0.17                     | 0.084          | 6000      |
| *load cells tested | 4000          | 2000          | 0.22                     | 0.11           | 6000      |
|                    | 5000          | 2500          | 0.28                     | 0.14           | 6000      |

Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

*James P. Cassidy Jr.*

James Cassidy  
Chairman, NCWM, Inc.

*Kristin Macey*

Kristin Macey  
Chairman, National Type Evaluation Program Committee  
Issued: September 19, 2017

1135 M Street, Suite 110 / Lincoln, Nebraska 68508

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## Changzhou Hongli Weighing Equipment Co., Ltd.

Load Cell / AS130, AS130S, AS133, AS137, AS203, SS130, SS130S, SS133, SS137 & SS203

**Application:** The load cells may be used in multiple cell applications Class III consistent with the model designations, number of scale divisions, and parameters specified in this certificate. Load cells of a given accuracy class may be used in applications with lower accuracy class requirements provided the number of scale divisions, the  $v_{\min}$  value, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions ( $n_{\max}$ ) and with greater  $v_{\min}$  values than those listed on the certificate. However, the load cells must be marked with the appropriate  $n_{\max}$  and  $v_{\min}$  for which the load cell may be used.

**Identification:** An identification label located on the cell, states manufacturer name, model, serial number, CC number,  $v_{\min}$  and rated capacity. Other pertinent information will be specified on the Calibration Certificate accompanying the cell.

**Test Conditions:** A Model AS133 and a Model SS133 (both 500 kg capacity) load cells were tested by the NMI Certain B.V. at The Netherlands facility. Testing was conducted in accordance with the OIML DoMC Mutual Acceptance Arrangement, signed by the NCWM as a utilizing participant for load cell testing. Testing was conducted using deadweights as the reference standard. The load cells were tested over a temperature range of  $-10^{\circ}\text{C}$  to  $40^{\circ}\text{C}$  with tests run on each cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test to determine sensitivity of the load cell design to changes in barometric pressure was conducted. The data were analyzed for multiple load cell applications. OIML R60 selection criteria were used to determine cells tested.

**Evaluated By:** M.M.J. Meijer, S.J. Koeman (NMI)

**Type Evaluation Criteria Used:** NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2017. NCWM, Publication 14: Weighing Devices, 2017.

**Conclusion:** The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

**Information Reviewed By:** J. Truex (NCWM)

**Example of Device:**

