

**National Conference on Weights and Measures**  
15245 Shady Grove Road, Suite 130 • Rockville, MD 20850

Certificate Number: 96-101

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***National Type Evaluation Program***  
***Certificate of Conformance***  
***for Weighing and Measuring Devices***

**For:**

Load Cell

Single Ended Bending Beam

Model: RLHBB

n<sub>max</sub>: Single Cell: 4000

n<sub>max</sub>: Multiple Cells: 5000

Capacity: See Below

Accuracy Class: III

**Submitted by:**

Rice Lake Weighing Systems

230 West Coleman Street

Rice Lake, WI 54868

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**Standard Features and Options**

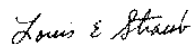
\*The specific load cells in this family covered by the certificate are identified by the model designation and the load cell capacity listed below.

Capacity (kg)	v <sub>min</sub> (kg) Single (4000 n <sub>max</sub> )	v <sub>min</sub> (kg) Multiple (5000 n <sub>max</sub> )	Minimum Dead Load
5	0.00086	0.00086	0.00
10	0.00172	0.00172	0.00
20*	0.00345	0.00344	0.00
50	0.00863	0.00860	0.00
100	0.01720	0.01720	0.00
200*	0.03450	0.03440	0.00
250	0.04313	0.04300	0.00
500	0.08625	0.08600	0.00
*Two load cells were submitted for evaluation			

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

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of 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.

Effective Date: July 30, 1996



Louis E. Straub  
Chairman, NCWM, Inc.



G. Weston Diggs  
Chairman, National Type Evaluation Program Committee

Issue date: March 3, 1997

Note: The National Conference on Weights and Measures does not "approve", "recommend", or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

This is a reissuance by the NCWM of a Certificate of Conformance already issued by the National Institute of Standards and Technology.

**Rice Lake Weighing Systems**  
**Single Ended Bending Beam Load Cell**  
**Model: RLHBB**

**Application:** The load cells may be used for Class III scales for both single and multiple cell applications 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,  $v_{\min}$  values, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer divisions ( $n_{\max}$ ) and with larger  $v_{\min}$  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:** A pressure sensitive identification badge containing the manufacturer, model designation and serial number is on the load cell. All other required information must be on an accompanying document including the serial number of the load cell.

**Test Conditions:** This Certificate is issued based on the following tests and upon information supplied by the manufacturer. Two 20-kg capacity load cells were tested at the California NTEP laboratory using dead weights as the reference standard. The cells were tested over a temperature range of  $-10^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ . Three tests were run on each cell at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The data were analyzed for both single and multiple load cell applications. The barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure. Identical tests were performed on two 200-kg load cells by the NIST Force Group in Gaithersburg, Maryland.

The results of these tests indicate the device meets the applicable requirements.

**Type Evaluation Criteria Used:** NIST Handbook 44, 1996 Edition

**Tested By:** G. Castro (CA) and NIST Force Group, NIST Office of Weights and Measures

**Information Reviewed By:** Lynn T. Sebring (NIST)