



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell
Double Ended Shear Beam, Compression
Model: RL70000A-xx*
 n_{max} Single Cell, Class III: 3 000
 n_{max} Single Cell, Class III L: 6 000
 n_{max} Multiple Cell, Class III: 5 000
 n_{max} Multiple Cell, Class III L: 10 000
Capacity: (see below)
Accuracy Class: III / III L

***Submitted By: Contact Info. Updated February 2010**

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Standard Features and Options

* The specific load cell capacities and v_{min} values for both Class III and III L single and multiple cells are listed in the table on Page 2.

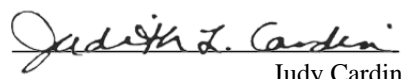
Standard Features:

- Minimum Dead Load: 0.0 lb
- Construction Material: Alloy steel
- Nominal Output: 3.0 mV/V
- Cable: 4 Wire Design

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.


Randy Jennings
Chairman, NCWM, Inc.


Judith Cardin
Chairman, National Type Evaluation Program Committee
Issued: June 27, 2007

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Rice Lake Weighing Systems

RL70000A-xx / Load Cell

Application: The load cells may be used in Class III and III L 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.

Load Cell Parameters:

Model	Capacity (lb)	Class III Single v_{\min} (lb) n_{\max} : 3000	Class III Multiple v_{\min} (lb) n_{\max} : 5000	Class III L Single v_{\min} (lb) n_{\max} : 6000	Class III L Multiple v_{\min} (lb) n_{\max} : 10 000
RL70000A-2K	2000	0.16	0.16	0.06	0.06
RL70000A-2.5K	2500	0.2	0.2	0.075	0.075
RL70000A-5K*	5000	0.4	0.4	0.15	0.15
RL70000A-10K	10 000	0.8	0.8	0.3	0.3
RL70000A-15K	15 000	1.2	1.2	0.45	0.45
RL70000A-20K	20 000	1.6	1.6	0.6	0.6
RL70000A-30K	30 000	2.4	2.4	0.9	0.9
RL70000A-40K	40 000	3.2	3.2	1.2	1.2
RL70000A-50K*	50 000	4.0	4.0	1.5	1.5
RL70000A-60K	60 000	4.8	4.8	1.8	1.8
RL70000A-100K	100 000	8.0	8.0	3.0	3.0
RL70000A-125K	125 000	10.0	10.0	3.75	3.75
RL70000A-150K	150 000	12.0	12.0	4.5	4.5
RL70000A-200K	200 000	16.0	16.0	6.0	6.0

* Two load cells of this capacity tested

Note: Load cells may have a nominal capacity different from those listed above if the capacity is between 2000 lb and 200 000 lb, they comply with the conditions listed in the "Application" section, and the v_{\min} complies with the following rule: The relationship between the verification scale interval, v_{\min} , and capacity for a load cell on this certificate is: (a) $v_{\min} = \text{capacity} \div 12\,500$ (Class III cells), and (b) $v_{\min} = \text{capacity} \div 33\,333$ (Class III L cells).

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 upon the following tests and upon information provided by the manufacturer. This Certificate supersedes Certificate of Conformance Number 97-125 and is issued to add additional capacities from 2000 lb to 15 000 lb and from 100 000 lb to 200 000 lb. Two 5000 lb capacity load cells were tested at NIST using dead weights as the reference standard. The data were analyzed for single and multiple load cell applications. The cells were tested over a temperature range of $-10\text{ }^{\circ}\text{C}$ to $40\text{ }^{\circ}\text{C}$. 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 barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure. Previous test conditions are listed below for reference.

Certificate of Conformance Number 97-125: This Certificate is issued based upon the following tests and upon information supplied by the manufacturer. Two 50 000-lb capacity load cells were tested at NIST using dead weights as the reference standard. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of $-10\text{ }^{\circ}\text{C}$ to $40\text{ }^{\circ}\text{C}$. 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 barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

Evaluated By: NIST Force Group, NIST Office of Weights and Measures

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 1997. NCWM, Publication 14: Weighing Devices, 1997.



Rice Lake Weighing Systems

RL70000A-xx / Load Cell

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

Information Reviewed By: L. T. Sebring (NIST) 97-125, S. Patoray, L. Bernetich (NCWM) 97-125A1

Example of Device:



Model RL70000A

