

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

**For:**

Force Transducer (Load Cell)  
Double Ended Shear Beam, Compression  
Model: RL70000A-xx\*  
 $n_{max}$ , Single Cell, Class III: 3000  
 $n_{max}$ , Single Cell, Class III L: 6000  
 $n_{max}$ , Multiple Cell, Class III: 5000  
 $n_{max}$ , Multiple Cell, Class III L: 10 000  
Capacity: 2 000 lb to 200 000 lb (See Below)  
Accuracy Class: III and III L

**Submitted by:**

Rice Lake Weighing Systems  
230 West Coleman Street  
Rice Lake, WI 54868  
Tel: (715) 234-9171  
Fax: (715) 234-6967  
Contact: Paul Lewis, Sr.

**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.

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 (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.



Mike Cleary  
Chairman, NCWM, Inc.



Don Onwiler  
Chairman, National Type Evaluation Program Committee

Issue date: June 27, 2007

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.

**Rice Lake Weighing Systems  
Force Transducer (Load Cell)  
Model: RL70000A**

**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.

**Rice Lake Weighing Systems  
Force Transducer (Load Cell)  
Model: RL70000A**

**Certificate of Conformance 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 °C to 40 °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, 1997 Edition

**Conclusion:** The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

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

**Example of Model RL70000A:**





NATIONAL TYPE EVALUATION PROGRAM

*Certificate of Conformance*  
*for Weighing and Measuring Devices*

**For:**

Load Cell  
Double Ended Shear Beam, Analog  
Models: RL70000B Series  
 $n_{max}$ , Multiple Cells: 10 000 (Class III L)  
Capacity: 200 000 lb and 250 000 lb (See Below)  
Accuracy Class: III L

**Submitted By:**

Rice Lake Weighing Systems  
230 West Coleman Street  
Rice Lake, WI 54868  
Phone: 715-736-6479  
Fax: 715-234-6967  
Email: [jkonijnenburg@ricelake.com](mailto:jkonijnenburg@ricelake.com)  
Website: [www.ricelake.com](http://www.ricelake.com)

**Standard Features and Options**

Model*	Capacity (lb)	$v_{min}$ (lb) Class III	Minimum Dead Load (lb)
RL70000B-200K	200 000	6.6	4000
RL70000B-250K	250 000	8.3	5000

The RL70000B Series is identified by the model designation RL70000B-xxx, where xxx denotes the capacity.

**Nominal output:** 3 mV/V

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.

  
Brett Gurney  
Chairman, NCWM, Inc.

  
James Cassidy  
Committee Chair, NTEP Committee  
Issued: April 5, 2019

1135 M Street, Suite 110 / Lincoln, Nebraska 68508

The National Conference on Weights and Measures (NCWM) 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.



## Rice Lake Weighing Systems

### Double Ended Shear Beam Load Cell / RL70000B Series

**Application:** The load cells may be used in Class III L scales for 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, the  $v_{\min}$  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 located 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 was issued based upon the following tests and upon information provided by the manufacturer. Two RL70000B load cells were tested at NIST using dead weights as the reference standard. The excitation was 10 V dc. The data were analyzed for multiple load cell applications. The cells were tested over a temperature range of -10 to 40 °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.

**Conclusion:** The results of these evaluations and information provided by the manufacturer indicate the load cells comply with the applicable requirements.

**Type Evaluation Criteria Used:** Type Evaluation Criteria Used: NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices, 1999 Edition.

**Tested By:** NIST Force Group, NIST Office of Weights and Measures

**Information Reviewed By:** D. Flocken (NCWM)

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

**For:**

Load Cell  
Double-Ended Shear Beam  
Model: RL70000C-XXX  
 $n_{max}$ : Multiple Cell: 10 000 (Class III L)  
Capacity: 5000 lb to 200 000 lb

Accuracy Class: III L

**Submitted by:**

Rice Lake Weighing Systems  
230 W. Coleman St.  
Rice Lake, WI 54868  
Tel: (715) 234-9171  
Fax: (715) 234-6967  
Contact: Paul Lewis

**Standard Features and Options**

The RL70000C Series is identified by the model designation RL70000C followed by a numeric suffix, which represents the load cell capacity in thousands of pounds.

Capacity (lb)	$v_{min}$ (lb) Class III L	Minimum Dead Load
5000	0.15	500
10 000*	0.30	1000
20 000	0.60	1000
30 000	0.90	1500
40 000	1.20	2000
50 000*	1.50	2500
60 000	1.80	3000
100 000	3.00	5000
125 000	3.75	6250
150 000	4.50	7500
200 000	6.00	10 000

\*Two load cell submitted for evaluation

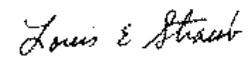
Excitation voltage: 10-15 volts  
Nominal output: 3 mV/V  
4-wire design  
Temperature Range: -10 °C to 40 °C (14 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program (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: October 9, 2001



Ronald D. Murdock  
Chairman, NCWM, Inc.



Louis E. Straub  
Chairman, National Type Evaluation Program Committee  
Issue date: October 9, 2001

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.

**Rice Lake Weighing Systems**  
**Double-Ended Shear Beam Load Cell**  
**Model: RL7000C-XXX**

**Application:** The load cells may be used in Class III L scales for 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, the  $v_{\min}$  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 located on the load cell. All other required information, if not marked on the load cell, must be on an accompanying document including the serial number of the load cell.

**Test Conditions:** This certificate supersedes Certificate of Conformance Number 98-142 and is issued to add 5000 and 10 000 lb capacity load cells. This Certificate is issued based on the following tests and on information provided by the manufacturer. Two 10 000 lb capacity load cells were tested by NIST using dead weights as the reference standard. The data was analyzed for multiple load cell applications. 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 barometric test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

**Certificate of Conformance Number 98-142:** This Certificate is issued based on the following tests and on information provided 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  $-10^{\circ}\text{C}$  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 barometric pressure test was waived due to the insensitivity of the load cell design to changes in barometric pressure.

The results indicate the load cells comply with the applicable requirements of NIST Handbook 44.

**Type Evaluation Criteria Used:** NIST Handbook 44, 2001 Edition

**Tested By:** NIST Force Group, NIST Office of Weights and Measures

**Information Reviewed By:** L. Sebring (NIST) 98-142; S. Patoray (NCWM) 98-142A1