



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell

Double Ended Shear Beam

Model: RL75058, RL75060S & RL75058I

 n_{\max} Multiple Cells, Class III: 5 000 n_{\max} Multiple Cells, Class III L: 10 000

Capacity: 20 000 to 200 000 lb

Accuracy Class: III / III L

Submitted By:

Rice Lake Weighing Systems

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- Material: Alloy Steel (Model RL75058) and Stainless Steel (Model RL75060S)
- The specific load cell capacities, v_{\min} , and minimum dead loads are listed on Page 2.

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.

Ronald Hayes
Chairman, NCWM, Inc.

John Gaccione
Chairman, National Type Evaluation Program Committee
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Rice Lake Weighing Systems

Load Cell / RL75058, RL75060S & RL75058I

Application: The load cells may be used for both Class III and 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 manufacture 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 Capacities and Parameters:

Capacity (lb)	Class III v_{min} (lb)	Class III L v_{min} (lb)	Minimum Dead Load (lb)
20 000	1.6	0.60	1000
25 000	2.0	0.75	1250
30 000	2.4	0.90	1500
35 000	2.8	1.05	1750
40 000	3.2	1.20	2000
50 000*	4.0	1.50	2500
60 000	4.8	1.80	3000
75 000	6.0	2.25	3750
90 000	7.2	2.70	4500
100 000	8.0	3.00	5000
125 000	10.0	3.75	6250
150 000	12.0	4.50	7500
200 000	16.0	6.00	10 000

*One stainless steel and two alloy steel load cells submitted for evaluation.

Test Conditions: This Certificate supersedes Certificate of Conformance number 96-027A2 and was issued without additional testing to recognize the change and addition of the model number (RL75058II) specified on the certificate. Previous test conditions are listed below for reference.

Certificate of Conformance Number 96-027A2: This Certificate supersedes Certificate of Conformance Number 96-027A1 and is issued to add a Class III, 5000 division and a Class III L, 10 000 division 35 000 lb capacity cell, for multiple cell applications. Justification is based on NCWM Publication 14 criteria for load cells to be tested and a recalculation of the data originally submitted. No additional testing was deemed necessary. The test conditions from the previous certificates are listed below for reference.

Certificate of Conformance Number 96-027A1: This Certificate supersedes Certificate of Conformance Number 96-027 and is issued based on the following tests and on information provided by the manufacturer to add a stainless steel construction model to the series. One 50 000 lb capacity stainless steel load cell was tested at NIST using dead weights as the reference standard. The data were analyzed for multiple load cell applications. The cell was tested over a temperature range of -10 °C to 40 °C. Three tests were run on the 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. This load cell meets all of the requirements for the following two NTEP classifications: Class III L, multiple-cell application, 10 000 divisions and a v_{min} of 1.5 lb; and Class III, multiple-cell application, 5000 divisions and a v_{min} of 4.0 lb.

Certificate of Conformance Number 96-027: This certificate is issued based upon the following tests and upon information provided by the manufacturer. Two load cells of different capacity than those examined for the initial evaluation were tested. New values were assigned for v_{min} to meet with current requirements. Two 50 000 lb capacity load cells were tested using dead weights. 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. The manufacturer's laboratory was used to collect the test data. Representatives from the National Institute of Standards and Technology analyzed the data.



Rice Lake Weighing Systems

Load Cell / RL75058, RL75060S & RL75058I

Evaluated By: NIST Force Group, NIST Office of Weights and Measures, 96-027, 96-027A1

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2011. NCWM, Publication 14: Weighing Devices, 2011.

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

Information Reviewed By: D. Ripley (NIST) 96-027; G. Newrock (NIST), L. Sebring (NIST) 96-027A1; J. Truex (NCWM) 96-027A2, 96-027A3

Example of Device:

