



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell
Double Ended Shear Beam
Model: RL72020
 n_{max} : 10 000, Multiple Cell
Capacity: See table below
Accuracy Class: III L

Submitted By:

Rice Lake Weighing Systems
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Standard Features and Options

- Nominal Output: 3 mV/V
- 4-wire Design
- Material: Stainless Steel and Alloy Steel

Stainless Steel Load Cell Capacities

Capacity (lb)	v_{min} (lb)	Minimum Dead Load (lb)
10 000	0.3	500
15 000	0.45	750
20 000	0.6	1 000
25 000	0.75	1 250
30 000 *	0.9	1 500
40 000	1.20	2 000
50 000	1.50	2 500
60 000	1.80	3 000
75 000	2.25	3 750
90 000	2.70	4 500
100 000	3.00	5 000

Alloy Steel Load Cell Capacities

Capacity (lb)	v_{min} (lb)	Minimum Dead Load (lb)
5000	0.15	250
10 000	0.3	500
15 000	0.45	750
20 000 *	0.6	1 000
25 000	0.75	1 250
30 000	0.9	1 500
40 000	1.20	2 000
50 000 *	1.50	2 500
60 000	1.80	3 000
75 000	2.25	3 750
90 000	2.70	4 500
100 000	3.00	5 000
125 000	3.75	6 250
150 000	4.50	7 500
200 000	6.00	10 000

This device was evaluated under the National Type Evaluation Program 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. *Editorial changes, not affecting the type or metrological content, corrected this certificate.

Ivan Hankins
Chairman, NCWM, Inc.

Hal Prince
Chair, NTEP Committee
Issued: September 16, 2021

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Rice Lake Weighing Systems

Load Cell / RL72020

Application: The load cells may be used in III L 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} 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: A pressure sensitive identification label located on the cell, states manufacturer name, model, and serial number. Other pertinent information will be specified on the Calibration Certificate accompanying the 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 21-064 and is issued to add additional capacities and material type. A 20 000 lb and 50 000 lb (Alloy Steel) 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. Tests were run on the cells 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. NCWM Publication 14 selection criteria were used to determine cells tested. Previous test conditions are listed below for reference.

Certificate of Conformance Number 21-064: This certificate is issued based upon the following tests and upon information provided by the manufacturer. Two 30 000 lb load cell 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. Tests were run on the cells 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. NCWM Publication 14 selection criteria were used to determine cells tested.

Evaluated By: K. Chesnutwood (NIST Force Group) 21-064, 21-064A1; M. Manheim (NCWM) 21-064A1

Type Evaluation Criteria Used: *Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2020 Edition. *NCWM Publication 14: Weighing Devices*, 2021 Edition.

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

Information Reviewed By: D. Flocken (NCWM) 21-064, 21-064A1

Example(s) of Device:



Stainless Steel Design



Alloy Steel Design