



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Load Cell
Double Ended Shear Beam
Models: RL72019SS, RL72020, and RL72020SS
 n_{max} : Class III: 5 000, Class III L: 10 000, Multiple Cell
Capacity: See table below
Accuracy Class: III, III L

Submitted By: Contact Info. Updated February 2023

Rice Lake Weighing Systems
230 West Coleman Street
Rice Lake, WI 54868
Tel: 715-234-9171
Fax: 715-234-6967
Contact: Brandi Harder
Email: bharder@ricelake.com
Website: www.ricelake.com

Standard Features and Options

- Nominal Output: 3 mV/V
- 4-wire Design
- Material: Stainless Steel and Alloy Steel (Note: The “SS” in the model description indicates Stainless Steel construction)

Stainless Steel Load Cell Capacities

Capacity (lb)	Class III n_{max} 5000 v_{min} (lb)	Class III L n_{max} 10 000 v_{min} (lb)	Minimum Dead Load (lb)
10 000	0.8	0.3	500
15 000	1.2	0.45	750
20 000	1.6	0.6	1 000
25 000	2.00	0.75	1 250
*30 000	2.4	0.9	1 500
40 000	3.2	1.20	2 000
50 000	4.00	1.50	2 500
60 000	4.8	1.80	3 000
75 000	6.00	2.25	3 750
90 000	7.2	2.70	4 500
100 000	8.00	3.00	5 000

Alloy Steel Load Cell Capacities

Capacity (lb)	Class III n_{max} 5000 v_{min} (lb)	Class III L n_{max} 10 000 v_{min} (lb)	Minimum Dead Load (lb)
5000	0.4	0.15	250
10 000	0.8	0.3	500
15 000	1.2	0.45	750
*20 000	1.6	0.6	1 000
25 000	2.00	0.75	1 250
30 000	2.4	0.9	1 500
40 000	3.2	1.20	2 000
*50 000	4.00	1.50	2 500
60 000	4.8	1.80	3 000
75 000	6.00	2.25	3 750
90 000	7.2	2.70	4 500
100 000	8.00	3.00	5 000
125 000	10.00	3.75	6 250
150 000	12.00	4.50	7 500
200 000	16.00	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.

Mahesh Albuquerque
Chairman, NCWM, Inc.

Ivan Hankins
Chair, NTEP Committee
Issued: February 7, 2023

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

Load Cell / RL72019SS, RL72020, and RL72020SS

Application: The load cells may be used in Class III and Class 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. The differences between the model RL72019SS and the models RL72020 and RL72020SS are non-metrological and not defined in this certificate.

Test Conditions: This Certificate supersedes Certificate of Conformance number 21-064A2 and is issued to correct a missing reference to Class III in the Application paragraph of this certificate. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 21-064A2: This certificate is issued based upon the following tests and upon information provided by the manufacturer. This Certificate supersedes Certificate of Conformance number 21-064A1 and is issued to add additional capacities and material type. Two 30 000 lb load cells (Stainless Steel) 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 21-064A1: 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; K. Chesnutwood (NIST Force Group) 21-064A2; D. Flocken (NCWM) 21-064A3

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, 21-064A2, 21-064A3



Rice Lake Weighing Systems

Load Cell / RL72019SS, RL72020, and RL72020SS

Example(s) of Device:



Stainless Steel Design



Alloy Steel Design

