



NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Weighing/Load Receiving Element  
Vehicle Scale, Modular, Load Cell Electronic  
Model: SR-xxxxyy-S, SR-xxxxyy-P, SRST-xxxxyy-S  
 $n_{max}$ : 10 000  
 $e_{min}$ : 20 lb  
Capacity: Up to 200 000 lb  
CLC: 70 000 to 120 000 lb  
Platform: (see below)  
Accuracy Class: III L

**Submitted By:**

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**Standard Features and Options**

- Low profile pitless or pit type: Models SR-XXXXYY-S and SR-XXXXYY-P where XXX = platform length and YY = platform width. Suffix "S" refers to pitless and suffix "P" refers to pit type. Prefix SRX designates lighter duty, reduced CLC.
- Deck Material: Concrete Model SR, Steel Model SRST, optional dump through, where steel grating is installed as part of the load receiving element without modification to the beams or load cell placement
- Platform Sizes: Width from 10' to 14'; Minimum length 5' 6"
- Minimum Platform Area: 55 sq ft (example: 5.5' x 10')
- Maximum Span Between Sections: 42'
- Load Cells Used: Sensortronics 65058A Series (Certificate of Conformance Number 86-046), Rice Lake Weighing Systems RL75058 Series (Certificate of Conformance Number 96-027), or NTEP-approved metrological equivalent.
- Indicator: Rice Lake Weighing Systems IQ+810-3A (Certificate of Conformance Number 92-013A2) or a compatible indicator with a Certificate of Conformance.
- The manufacturer is also offering the same basic scale as a pit-type scale. These models are designated with a prefix of "SR" and a "P" as a suffix to the model number. The I-beams in the pit-type scale are placed under the weighbridge and moved in from the side of the scale approximately 6 inches. The load cells are mounted in the same manner as for the pitless scale.
- Nominal capacity must be less than, or equal to the CLC times the number of sections minus one-half.


Formula: Nominal capacity  $\leq$  CLC x (N - 0.5) where N = the number of sections in the scale.

- $v_{min}$  of the load cells must be less than or equal to the scale division divided by the square root of the number of load cells.

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, National Type Evaluation Program Committee  
Issued: July 31, 2018

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## Rice Lake Weighing Systems

Weighing/Load Receiving Element / SR-xxxxy-S, SR-xxxxy-P, SRST-xxxxy-S

**Application:** General-purpose vehicle scale.

**Identification:** The identification badge is located on the side of the scale adjacent to the load cell junction box.

**Sealing:** One or two load cell junction boxes, located near the center of the weighing element, can be secured with wire security seals threaded through the screw heads or with pressure sensitive seals applied to the cover joint on two opposite sides. The indicator can also be sealed.

**Test Conditions:** This Certificate supersedes Certificate of Conformance Number 98-011A4 and is issued to increase the maximum Concentrated Load Capacity (CLC) to 120 000 lb. For the purpose of this evaluation a model SR-4014-PS-100 Weighing/Load Receiving Element (40' x 14', consisting of 2 modules with each module being 20' x 14' wide) having 7 sections, and a capacity of 200 000 x 20 lb, The Weighing/Load Receiving Element was interfaced with a Rice Lake model 1280-2A indicating element (NTEP Certificate of Conformance No. 15-001). Increasing/decreasing, and shift tests were performed using 120 000 lb of known test weight. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

**Certificate of Conformance Number 98-011A4:** This certificate supersedes Certificate of Conformance 98-011A3 and is issued to recognize a lighter duty version (Prefix SRX) with a reduced CLC down to 70 000 lb. Scale drawings and engineering information supplied by the manufacturer, specifying the design difference were reviewed by NTEP. Per NCWM Publication 14, Weighing Devices, Technical Policy, no additional testing was deemed necessary.

**Certificate of Conformance Number 98-011A3:** This Certificate supersedes Certificate of Conformance Number 98-011A2 and is issued lower module minimum length. Other parameters were also updated. For the purpose of this evaluation a model SR11110-P scale (111' x 10', 4 module with the smallest module 5'6" x 10' wide, 12 section, 200 000 x 20 lb, 90 000 lb CLC) was interfaced with a Rice Lake model 920i indicating element (NTEP Certificate of Conformance No. 01-088A5). Increasing/decreasing, shift and strain-load tests were performed using 86 000 lb of known test weight. No additional testing was deemed necessary.

**Certificate of Conformance Number 98-011A2:** This Certificate supersedes Certificate of Conformance Number 98-011A1 and is issued to add the grain dump through option. NTEP modification of type policies allow for the dump through option when there is no modification to weighbridge construction or load cell placement. Therefore, no addition testing was deemed necessary.

**Certificate of Conformance Number 98-011A1:** This Certificate supersedes Certificate of Conformance Number 98-011 and is issued without additional testing to add Models 1514 and 2514 with steel deck structure covered under UHL Scale Certificate of Conformance Numbers 98-015 and 98-016.

**Certificate of Conformance Number 98-011:** This Certificate is issued based on the following tests and upon information provided by the manufacturer. A Model SR-8014-S (80' x 14', 200 000 lb capacity) was interfaced with Rice Lake indicator Model IQ+ 810-3A (Certificate of Conformance Number 92-013A2). Initially, the increasing/decreasing load, shift and mid-span tests were conducted with 84 000 lb of known test standards. Strain load tests were completed to 170 900 lb. The scale was sealed and used until the minimum time and load requirements had been met. A permanence test was conducted using 45 000 lb of known standards for sections and mid-span testing, and a strain load of 138 000 lb was applied. The emphasis of the evaluation was on the design, marking, and performance of the weighing/load receiving element.

The Model SR-7014-S (70' x 14', 120 000 lb capacity) scale was also tested. The scale was interfaced with a Howe Richardson Model HR-50 indicator for the purpose of this evaluation. The scale was tested initially by placing 15 000 lb of test weights over each load bearing point. Increasing/decreasing load and mid-span tests were performed using 58 000 lb of known test weights. Strain load tests were conducted using 58 000-lb of known test weights to a maximum load of 108 280 lb. The scale was used for over 30 days then tested again. The shift and mid-span tests were again conducted using 58 000 lb of known test weights. Strain load tests were again conducted to a maximum load of 109 000 lb.

**Evaluated By:** B. Badenhop (OH), T. Clark (IA), D. Brown (IA), J. Bane (IA), L. Wurdeman (NE), R. Suiter (NE) 98-011; M. Carlin (KS) 98-011A3; D. Flocken (NTEP) 98-011A5

**Type Evaluation Criteria Used:** *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices, 2018 Edition. NCWM Publication 14 Weighing Devices, 2018 Edition.*



## Rice Lake Weighing Systems

Weighing/Load Receiving Element / SR-xxxxy-S, SR-xxxxy-P, SRST-xxxxy-S

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

**Information Reviewed By:** R. Suiter (NIST) 98-011; G. Newrock (NIST) and R. Suiter (NIST) 98-011A1; J. Truex (NCWM) 98-011A2, 98-011A3, 98-011A4, 98-011A5

### Examples of Device:



Steel Deck



Concrete Deck