



## NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Load Cell  
 Shear Beam, Compression  
 Model: SBP-1A Series  
 $n_{\max}$  Single Cell: 3 000  
 $n_{\max}$  Multiple Cell / Class III: 5 000  
 $n_{\max}$  Multiple Cell / Class III L: 10 000  
 Capacity: 1 000 to 10 000 lb  
 Accuracy Class: III

**Submitted By:**

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**Standard Features and Options**

The specific load cells covered by this Certificate are identified by the load cell capacities.

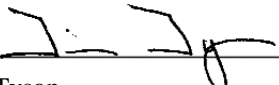
**Standard Features:**

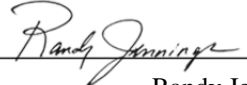
- Counterforce Material: Alloy Steel
- Number of Wires in Cable: 4-wire design
- Nominal Output: 3 mV/V

Capacity (lb)	Single $v_{\min}$ (lb)	Multiple Class III $v_{\min}$ (lb)	Multiple Class III L $v_{\min}$ (lb)	Minimum Dead Load (lb)
1 000	0.09	0.07	0.04	20
1 500	0.135	0.105	0.06	30
2 000	0.18	0.14	0.08	40
2 500	0.225	0.18	0.10	50
3 000	0.27	0.21	0.12	60
4 000	0.36	0.28	0.16	80
5 000	0.45	0.35	0.20	100
10 000	0.90	0.71	0.40	200

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.

  
 Tim Tyson  
 Chairman, NCWM, Inc.

  
 Randy Jennings  
 Chairman, National Type Evaluation Program Committee  
 Issued: June 3, 2011

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**Vishay Transducers, Ltd.**

Load Cell / SBP-1A

**Application:** The load cells may be used in Class III scales for both single and multiple cell applications and in Class III L for multiple cell applications, consistent with the model designations 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 load cells with fewer scale 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.

**Test Conditions:** This Certificate supersedes Certificate of Conformance number 04-044 and was issued without additional testing to reactivate Certificate of Conformance number 04-044 without lapse. Changes were also made to update the contact information. Previous test conditions are listed below for reference.

**Certificate of Conformance Number 04-044:** This certificate is issued based upon the following tests and upon information provided by the manufacturer. Two 2 500 lb capacity load cells were tested using dead weights. The data were analyzed for both single and multiple load cell applications for Class III applications for Class III L multiple 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.

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

**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:** S. Patoray (NCWM), L. Bernetich (NCWM) 04-044; J. Truex (NCWM) 04-044A1

**Example of Device:**

