

***National Type Evaluation Program
Certificate of Conformance
for Weighing and Measuring Devices***

For:

Load Cell
Universal, Bending and Shear
Model Family: BSP-A3 and BSP-B10*
 n_{\max} , Single Cell, Class III: 3,000
 n_{\max} , Single Cell, Class III L: 10,000
Capacity: 100 to 5,000 lb

Accuracy Class: III/IIIL

Submitted by:

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Standard Features and Options

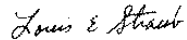
*The specific models of load cells covered by this Certificate for BSP-A3-XXX--YYYY; for Class III and Models BSP-B10-XXX-YYYY for Class III L where XXX is the capacity code and YYYY is the designator for the cable length, wiring color code and private label variations. The number following the "B" may be less than 10 since it corresponds to the maximum number of divisions in thousands for which individual load cells comply with Handbook 44.

The specific load cell capacities, v_{\min} and minimum dead load 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 (NTEP) 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.

Effective Date: April 2, 1993



Louis E. Straub
Chairman, NCWM, Inc.



G. Weston Diggs
Chairman, National Type Evaluation Program Committee
Issue date: August 10, 1993

Note: The National Conference on Weights and Measures 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.

This is a reissuance by the NCWM of a Certificate of Conformance already issued by the National Institute of Standards and Technology.

Revere Transducers, Inc.
Universal Bending and Shear Beam Load Cell
Model Family: BSP-A3 and BSP-B10

Application: The load cells may be used in both Class III and III L scales for both single and 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, v_{\min} values, and temperature range are suitable for the application.

Model Designations:

Minimum Capacity (lb)	Class III v_{\min} (lb)	Class III L v_{\min} (lb)	Dead Load (lb)
100	0.010	0.003	0
250	0.025	0.008	0
500	0.050	0.016	0
1,000	0.10	0.033	0
2,500	0.25	0.083	0
5,000	0.50	0.166	0

Test Conditions: This certificate supersedes Certificates of Conformance (CC) Nos. 88-089P (dated May 24, 1988), 88-089 (dated May 25, 1989), and 88-089A1 (dated March 28, 1991). This certificate is issued to reflect new suffix designations for the BSP family of load cells. No additional testing was required to issue this CC. Test conditions for the previous CCs are listed below for reference.

CC# 88-089P: One 100-lb and one 1,000-lb capacity load cells were tested using dead weights to collect data for the provisional certificates of conformance. The data were analyzed for both single and multiple load cell applications for both Class III and III L scales. The cells were tested over a temperature range of -10 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.

CC# 88-089: This CC was issued to upgrade CC from provisional to full. This CC was based on an evaluation of the manufacturer's test facility, witness of repeat tests on load cells, and analysis of the data by representations from the National Institute of Standards and Technology.

CC# 88-089A1: This CC was issued in addition to 88-089 and was issued to reflect new values for v_{\min} based upon the change the Handbook 44 performance requirements for the temperature effect on zero, effective January 1, 1991. One 100-lb and one 1,000-lb capacity load cells were tested using dead weights to collect data for the provisional certificates of conformance. The data were analyzed for single load cell applications for both Class III and III L scales. The cells were tested over a temperature range of -10 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.

Revere Transducers, Inc.
Universal Bending and Shear Beam Load Cell
Model Family: BSP-A3 and BSP-B10

The results of the evaluations indicate that the load cells comply with the applicable requirements of NIST Handbook 44.

Type Evaluation Criteria Used: NIST Handbook 44, 1993 Edition

Tested By: NIST Force Group, NIST Office of Weights and Measures

Update reviewed by: H. Oppermann, T. Grimes (NIST), S. Cook (CA) (88-089A1).

Control No.: 461