



NATIONAL TYPE EVALUATION PROGRAM

*Certificate of Conformance*  
*for Weighing and Measuring Devices*

**For:**

Load Cell  
Load Stainless Steel Bending Beam  
Model: HI-SBH04  
n<sub>max</sub>: Single Cell: 3000  
n<sub>max</sub>: Multiple Cell: 5000  
Capacity: 1000 lb - 10 000 lb

Accuracy Class: III

**\*Submitted By: Contact Info. Updated December 2018**

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**Standard Features and Options**


The specific models and capacities covered by this certificate are listed below:

Class III				
Model	Capacity (lb)	Single Cell (lb)	Multiple Cell (lb)	Minimum Dead Load (lb)
HI-SBH04-1125	1 125	0.05	0.13	0
HI-SBH04-1.25K	1 250	0.06	0.16	0
HI-SBH04-2.25K	2 250	0.13	0.31	0
HI-SBH04-4.5K	4 500	0.25	0.63	0
HI-SBH04-11.25K	11 250	0.50	1.25	0

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, NTEP Committee  
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**Hardy Instruments, Inc.**  
Load Stainless Steel Bending Beam Load Cell / HI-SBH04

**Application:** The load cells may be used in Class III 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, the  $v_{\min}$  values, and temperature range are suitable for the application. The manufacturer may market the load cell with fewer 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.

**Identification:** A pressure sensitive identification badge containing the manufacturer, model designation,  $v_{\min}$ , capacity, accuracy class, and serial number are on the load cell. All other required information must be on an accompanying document including the serial number of the load cell.

**Test Conditions:** This Certificate supersedes Certificate of Conformance 99-057 and is issued based upon information provided by the manufacturer. This addendum is to change the capacity designation to reflect the actual values used to label these devices and correct errors in conversion from KN to lb. No additional testing is required. Previous test conditions are listed below for reference.

**Certificate of Conformance 99-057:** This Certificate is issued based on the following tests and upon information provided by the manufacturer. Two 20-kN load cells [1kN (one thousand Newtons) is equal to 224.81 lb (pound force)] were tested at NIST using dead weights as the reference standard. The data were analyzed for single and multiple load cell applications for 3000 divisions (single) and 5000 divisions (multiple). The load cells were tested over a temperature range of -10 EC to 40 EC. The excitation voltage was 10 Vdc. Three tests were run on the 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 the barometric pressure.

Results of the evaluation indicate the load cells comply with applicable requirements of NIST Handbook 44.

**Type Evaluation Criteria Used:** NIST Handbook 44, 2000 Edition

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

**Information Reviewed By:** L. T. Sebring (NIST) 99-057, S. Patoray (NCWM) 99-057A1