National Conference on Weights and Measures

15245 Shady Grove Road, Suite 130 • Rockville, MD 20850

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

For:
Force Transducer (Load Cell)
Tension
Model: UL/UB Series*
n_{max}: Class III 5000; Single Cell
n_{max}: Class III L 10 000; Single Cell
Capacity: 50 kg to 5000 kg
250 lb to 10 000 lb
Accuracy Class: III / III L

Submitted by:
Flintec, Inc.
18 Kane Industrial Drive
Hudson, MA 01749
Tel: (978) 562-7800
Fax: (978) 562-0008
Contact: Doug Bohlin

Standard Features and Options

* The specific capacities v_{min} values covered by this certificate are listed in the table on page 2.

Minimum Dead Load: 0.0kg / 0.0lbs
Material: Stainless Steel
Cable: 4-wire design
Nominal Input Impedance: 350 Ohms (ULG) and 1000 Ohms (ULB, UB6, UB1)
Nominal Output: 2 mV/V / 3 mV/V (ULG)
Excitation Voltage: 5.0 volt (minimum) to 15.0 volt (maximum) AC/DC

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.

Judith L. Cardin
Chair, NCWM, Inc.

Don Onwiler
Chairman, National Type Evaluation Program Committee

Issued Date: October 11, 2007

Flintec, Inc.
Force Transducer (Load Cell)
Model: UL / UB Series

Application: The load cells may be used in Class III and Class IIIL scales for single 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 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.

Load Cell Parameters:

Model	Output (mV/V) nominal	Capacity	v_{min} Class III / IIIL
ULB	2.0	50 kg	0.002 kg
ULB	2.0	100 kg	0.004 kg
ULB*	2.0	200 kg	0.008 kg
ULB	2.0	500 kg	0.020 kg
ULB	2.0	1000 kg	0.040 kg
ULB	2.0	2000 kg	0.080 kg
ULB	2.0	3000 kg	0.120 kg
ULB	2.0	5000 kg	0.200 kg
UB1	2.0	1000 kg	0.040 kg
UB1*	2.0	2000 kg	0.080 kg
UB1	2.0	5000 kg	0.200 kg
UB6	2.0	100 kg	0.004 kg
UB6*	2.0	200 kg	0.008 kg
UB6	2.0	500 kg	0.020 kg
ULG	3.0	250 lb	0.02 lb
ULG	3.0	500 lb	0.03 lb
ULG	3.0	750 lb	0.05 lb
ULG	3.0	1k lb	0.06 lb
ULG	3.0	2.5k lb	0.15 lb
ULG*	3.0	5k lb	0.3 lb
ULG	3.0	10k lb	0.6 lb

*** Load cells tested**

Identification: A pressure sensitive identification badge containing the manufacturer, model designation, and serial number is located on the load cell. All other required information, if not marked on the load cell, must be on an accompanying document including the serial number of the load cell.

Flintec, Inc.
Force Transducer (Load Cell)
Model: UL / UB Series

Test Conditions: This Certificate supersedes Certificate of Conformance Number 07-065 and is issued to correct an error in the Nominal Input Impedance in the "SFO" Box and to correct an omission in the "For Box" on page one of the Certificate. The Class III L Single n_{max}: 10 000 was in advertently left off the Certificate. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 07-065: Load cells submitted were ULB-200 kg, UB1-2000 kg, UB6-200 kg, and ULG-5k lb. These load cells were tested using dead weights as the reference standard. The data were analyzed for single load cell applications. The cells were tested over a temperature range of –10 °C to +40 °C degrees. Three tests were run at each temperature. The temperature effect on zero was measured and a time dependence (creep) test was performed. The barometric pressure test was conducted on these load cells.

Evaluated By: T. Bartel (NIST)

Type Evaluation Criteria Used: NIST Handbook 44, 2007 Edition, NCWM Publication 14, 2006 Edition

Conclusion: The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

Information Reviewed By: S. Patoray, L. Bernetich (NCWM) 07-065, 07-065A1

Example of models:

ULB

UB1

UB6

ULG