Futek Calibration Certificate

Certificate Number..... 0404220011

Sensor

Model Number..... LCB200 **Stock Number.....** LCB10002

ID Number..... 61631 **Capacity.....** 3000 lb

Model: LCB200 - 3000 lb (L1652) Tension & Compression Load Cell Ver.1 - Standard P/N: LCB10002 (FP10080) 17-4 PH S.S. 3/8-24 Thread Standard

REFERENCE CALIBRATION EQUIPMENT

Calibration House:

Futek
10 Thomas, Irvine, CA92618
949-465-0900

Reference Load Cell and Digital Indicator:

Model: 12000LBF **Cap.:** 5000 **ID No:** 062825
Display: Newport **ID No:** 125765
ID No: 125765
System Error does not exceed 0.01% for transfer standard
Reference NIST Number: SJT.01/107659 **System Cal. Date:** 10/5/2006 12:00:00 AM **Next Cal. Date by:** 10/5/2007 12:00:00 AM

Digital Indicator:

HP Model Number: Agilent 34401A **S/N:** US36135067
Cal. Date: 1/13/2004 12:00:00 AM **Next Cal. Date by:** 1/13/2005 12:00:00 AM
Uncertainty Value: 0.005%

Calibration Data

Test Temp ..... 74.00 °F (23.33 °C) **Relative Humidity .....** 22.00 %

Excitation ..... 10 (Vdc) **Input Resistance .....** 1005 (Ohms)
Zero ..... 0.0812 (NaN) **Output Resistance .....** 1005 (Ohms)

direction: Tension

Rated Output ... 1.0141 (NaN) **ZeroReturn ....** -0.033 % of R.O.
Linearity ..... -0.208 % of R.O.

Data Points

Load	Output	Non-Lin Error (%)	Hysteresis (%)
	channel: 1		
(lb)	(mV/V)		
	direction: Tension		
0.0	0.0000	0.000	
600.0	0.2011	-0.166	
1200.0	0.4037	-0.192	
1800.0	0.6063	-0.208	
2400.0	0.8097	-0.151	
3000.0	1.0141	0.000	

0.0	-0.0003	NaN

ASTM Uncertainty: 0.003661075 (mV/V)

* Error and Uncertainty were calculated using Straight Line Method in accordance with ASTM E74 with K = 2

Best Fit Equation: $Y = A0 + A1X + A2X^2 + A3X^3$

A0 = -6.44795e-005	A2 = 1.03066e-009
A1 = 3.35067e-004	A3 = -1.49184e-014

Best Fit Equation: $X = B0 + B1Y + B2Y^2 + B3Y^3$

B0 = 1.93636e-001	B2 = -2.72841e+001
B1 = 2.98445e+003	B3 = 1.53852e+000

Y = Output X = Load

Best Fit Equation Was Calculated using the Method of Least Squares.

Shunt Calibration

Shunt Value (K ohm)	Output (mV/V)	Load
	channel: 1	
		(lb)
	direction: Tension	
301	.8322	2461.914

Shunt Cal is placed across (-E)(-S)

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