INSTALLATION INSTRUCTIONS
Strainsert Flat Load Cells®
& Fatigue Rated Load Cells®

Best Performance of the Flat Load Cell is achieved through adherence to the following provisions and procedures.

A. Installation:
1. The support for the Load Cell must be rigid (at least two or three times the rigidity of the Cell), and have a flat and parallel surface to within 0.001in. TIR, and a recommended surface finish of 63 micro-in. and minimum hardness of Rockwell B-100.
2. The diaphragm side of the Load Cell must be against the supporting structure.
3. Load to the Universal Flat load Cell is applied through the threaded hole at the center of the Load Cell. All the threads in the Load Cell must be engaged by the loading member. For a through hole installation the loading rod must be torqued to the required levels.
4. Load to the Compression Flat Load Cell is applied to center raised loading boss. The entire surface of the boss must be engaged by the loading member.

B. Hold-Down Bolts:
Torque values tabulated on the following page should be used, in conjunction with Flat Load Cells®, as follows:
1. Universal and Fatigue rated Load Cell® Hold-Down Bolts must <u>always</u> be preloaded to specified torque values, regardless of magnitude or type of applied load, in order to repeat and maintain original calibration performance of the cell. The Hold-Down Bolts must be a minimum of 150,000 psi UTS, and seating torque must be applied gradually and uniformly to all bolts, in increments of no more than 1/4 of the final torque value.
2. Compression Flat Load Cell® Hold-Down Bolts are intended only for assembly location of the cell, and have no effect on calibration. Recommended Torque Values are not mandatory. In some applications, such as checking the forces generated in hydraulic presses, Hold-Down bolts may be omitted.

C. Loading Bolt:
Loading Bolt preload requirements may be modified according to the following conditions:
1. Uni-Directional, Low Cycle, Low Frequency*, or Static Loading Conditions do not require any preloading.
2. In all modes of loading, other than (1.) above, Loading Bolt Torque Values apply.
    (See tabulated values on the following page)
3. For Flat Load Cells® with through loading holes (without threads), above detailed preloading conditions must be simulated.

*Approximately 1-Hz, depending on masses involved and magnitude of inertia forces generated.

NOTE: "Flat Load Cell" is a registered trade mark.

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