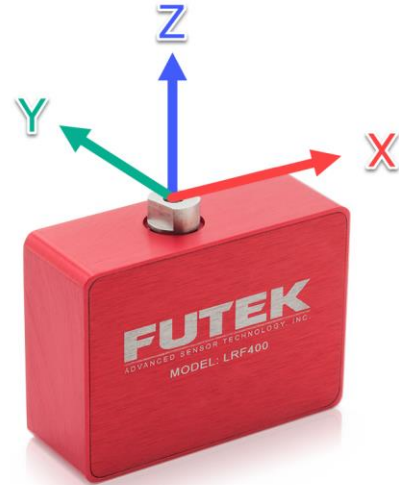


**Extraneous Load Factors**

**Equation:**  $\sigma_{max} \geq AF_x + BF_y + CF_z + DM_x + EM_y + F$



**Material:** 2024-T4 Aluminum

**Extraneous Load Coefficients:**

Capacity [lb]	A	B	C	D	E	F
0.25	2400	24200	45400	15500	1500	5360
0.5	1870	17000	24700	11000	1160	4010
1	1430	11600	12900	7600	900	2890
2.2	390	1800	6800	1100	230	1700
5	310	1100	2700	670	220	1000
10	290	810	1400	480	220	730
25	250	520	600	310	220	450
50	240	430	320	280	220	320
100	250	410	200	270	220	220

\*All Force and Moment to be calculated using lb and in-lb units

**$\sigma_{max}$  Table:**

Material	Static Load (=60% Y.S.)	Fatigue (Non-Reversing Loads)	Fatigue (Full Reversing Loads)
2024-T4/T351	28,000	18,000	15,000*

\*Value is 75% of Fatigue Strength based on 10-20 x 10<sup>6</sup> cycles and allow for factors that influence Fatigue such as surface finish, stress concentrations, corrosion, temperature, and other variables for the production of the transducer, for infinite Fatigue Life (100 x 10<sup>6</sup>) use 75% of values shown.

This documentation was generated and completed to the best ability of FUTEK's Engineering Team using FEA Analysis, Empirical data and Multiple Testing Simulations. The information and recommendations on this document are presented in good faith and believed to be correct however, FUTEK Advanced Sensor Technology makes no representations or warranties as to the completeness or accuracy of the information.