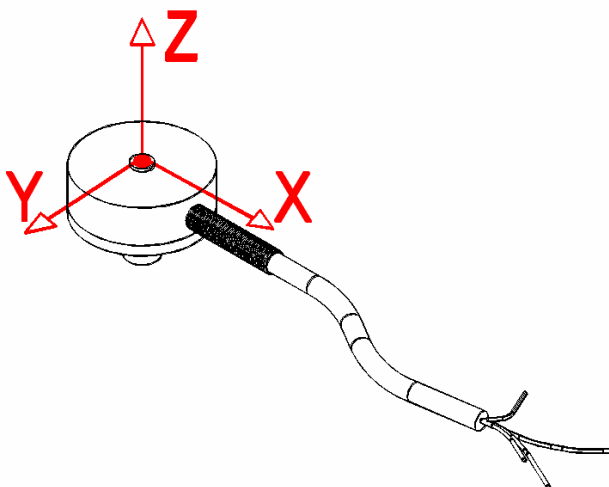


Deflection & Natural Frequency



Material	Model	Capacity (lb)	Deflection (in.)	Natural Frequency (Hz)	β
(S.S.*)	LLB355	25	0.0007	5,300	0.0110
		50	0.0005	8,600	0.0121
		100	0.0005	11,700	0.0124
	LLB405	100	0.0009	12,300	0.0072
		250	0.0009	18,000	0.0089
		500	0.0008	24,000	0.0107
		1,000	0.0008	29,900	0.0135
		2,000	0.0014	30,700	0.0151
		2,500	0.0015	31,800	0.0162
	LLB455	3,000	0.0013	22,400	0.0449
		5,000	0.0015	25,000	0.0513
		10,000	0.0018	27,800	0.0712
	LLB505	15,000	0.0027	18,600	0.1538
		20,000	0.0032	19,200	0.1679
		30,000	0.0037	20,000	0.1951
LLB555	50,000	0.0042	15,900	0.4624	

*FN results are based on calculation of deflection & weight scene on Sensor arm.

Natural Frequency & Frequency Response Equation's:

$$\text{Natural Frequency (FN)} = 3.13 \sqrt{\frac{1}{\frac{\beta}{\text{Capacity}} \cdot \text{Deflection}}} \text{ (Hz)}$$

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.

$$\text{Frequency Response with load (FR)} = 3.13 \sqrt{\frac{1}{\frac{\beta + \text{AppliedLoad}}{\text{Capacity}} \cdot \text{Deflection}}} \text{ (Hz)}$$

*Where β values are obtained by Futek Engineers