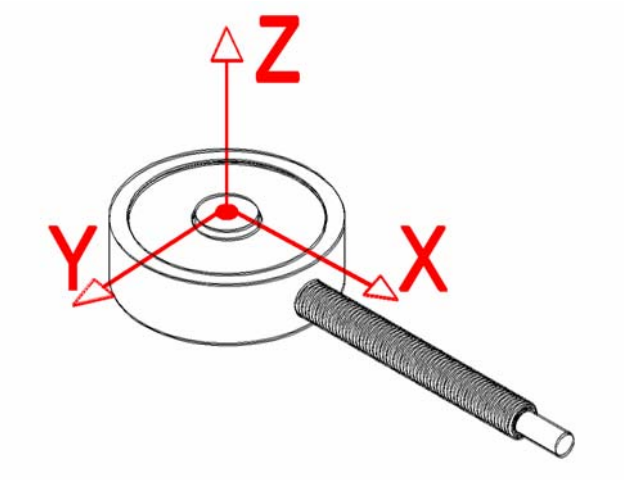
Deflection & Natural Frequency



Material	Capacity (lb)	Deflection (in.)	Natural Frequency (Hz)	β
(S.S.*)	10	0.0010	5,000	0.0042
	25	0.0010	7,200	0.0047
	50	0.0009	10,200	0.0055
	100	0.0009	13,000	0.0068
	250	0.0009	17,600	0.0095
	500	0.0009	21,500	0.0125
	1,000	0.0013	23,400	0.0142

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

Natural Frequency & Frequency Response Equation's:

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

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

*Where β values are obtained by Futek Engineers

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