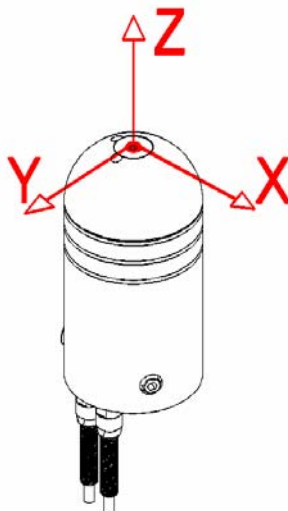


Deflection & Natural Frequency



Material	Capacity (lb)	Fx / Fy Deflection (in.)	Natural Frequency (Hz)	β
2024-T4/T351	10	0.002 (0.004)	460 (300)	0.23 (0.245)
	25	0.006	400	0.245
	50	.007	500	0.248
	100	.009	600	0.248

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

Natural Frequency & Frequency Response Equation's:

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

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

*Where β values are obtained by Futek Engineers

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