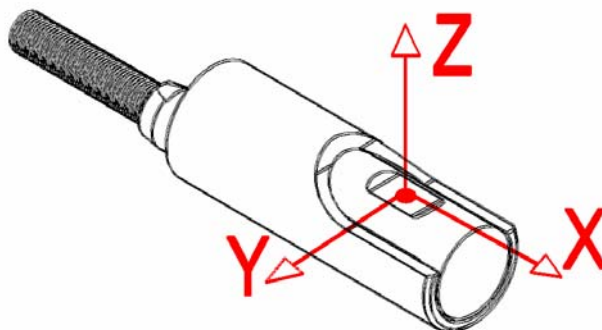


## Deflection & Natural Frequency



| Material | Capacity (lb) | Fz Deflection (in.) | Natural Frequency (Hz) | $\beta$ |
|----------|---------------|---------------------|------------------------|---------|
| (AL*)    | 50            | 0.005               | 3,300                  | 0.0086  |

\*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  $\beta$  values are obtained by Futek Engineers

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