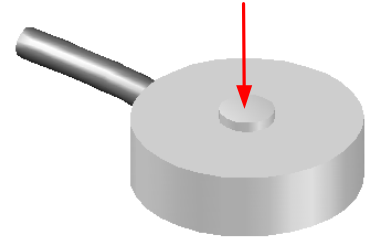


## Deflection & Natural Frequency



Model #	Capacity (lb)	Deflection (in.)	Natural Frequency (Hz)	$\beta$
LLB130	5	0.0006	28500	0.0001
	10	0.0006	28500	0.0002
	25	0.0007	42000	0.0002
	50	0.0006	52000	0.0003

\*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