

Deflection & Natural Frequency



Material	Capacity (lb)	Deflection (in.)	Natural Frequency (kHz)	β
17-4 S.S.	25	0.0007	21	0.0008
	50	0.0003	34	0.0014
	100	0.0007	34	0.0012
	250	0.0004	52	0.0022
	500	0.0007	52	0.0025
	1,000	0.001	58	0.0029

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