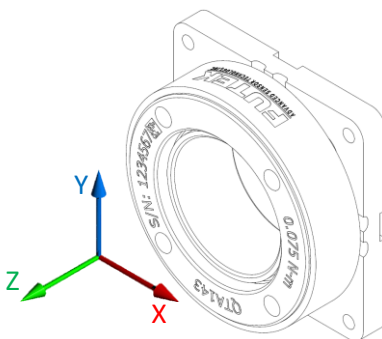


MODEL #QTA143

Extraneous Load Factors

Equation: $\sigma_{\max} \geq (A)F_x + (B)F_y + (C)F_z + (D)M_x + (E)M_y + (F)M_z$



Material: Aluminum 2024-T4 (*AL)

Model #	Capacity (in-lb)	A [$\frac{1}{\text{in}^2}$]	B [$\frac{1}{\text{in}^2}$]	C [$\frac{1}{\text{in}^2}$]	D [$\frac{1}{\text{in}^3}$]	E [$\frac{1}{\text{in}^3}$]	F [$\frac{1}{\text{in}^3}$]
QTA143	6.638	1,040	1,040	360	1,060	1,060	2,430

σ_{\max} **Table**

Material	Static Load (=60% Y.S.)	Fatigue (Non-Reversing Loads)	Fatigue (Full Reversing Loads)
2024-T4/T351	28,000 Psi	18,000 Psi	15,000 Psi

*Value is 75% of Fatigue Strength based on 10^{-20} to 10^6 cycles and allow for factors that influence Fatigue such as surface finish, stress concentrations, corrosion, temperature and other variables for the production of the transducer, for infinite Fatigue Life (10^6 to 10^7) use 75% of values shown.

Deflection & Natural Frequency

Material	Capacity (in-lb)	Torsional Stiffness (in-lb/rad)	Natural Frequency (Hz)
2024-T4/T351	6.638	6,300	8,790