

$$M_q := \rho \cdot Q = (5.115 \cdot 10^3) \text{ m} \cdot \text{kgf}$$

$$P := 16 \text{ mm}$$

$$m := 125 \text{ mm}$$

$$i := \frac{0.8 \text{ m}}{P} = 6.25$$

$$G_g := 200 \text{ kgf}$$

$$G_i := \frac{G_u + G_g}{9.81 \frac{\text{m}}{\text{s}^2}} a_{max} = 233.53 \text{ kgf}$$

$$\frac{|G_i|}{|G_u|} \cdot 100 = 0.425$$

$$d_3 := 122.4 \text{ mm}$$

$$\sigma := \frac{G_u + G_g + G_i}{\frac{\pi \cdot (1.2 \cdot d_3)^2}{4}} = 3.366 \frac{\text{kgf}}{\text{mm}^2}$$

Verifica nucleo della vite a trazione

$$\tau := 1.5 \cdot \frac{G_u + G_i + G_g}{\pi \cdot d_3 \cdot P \cdot i} = 2.225 \frac{\text{kgf}}{\text{mm}^2}$$

Verifica a strappamento dei filetti

$$d := 140 \text{ mm}$$

$$\sigma := \frac{G_u + G_g + G_i}{i \cdot \frac{\pi \cdot (d^2 - d_3^2)}{4}} = 2.516 \frac{\text{kgf}}{\text{mm}^2}$$

Verifica a schiacciamento dei filetti