Choix Vérin

$$\text{Course} = \frac{\max(D) - \min(D)}{2} = \frac{53 - 24}{2} = \frac{29}{2} = 14,5 \text{ mm}.$$

$$\min(\Phi) = 2 \times \sqrt{\frac{S \times mg}{\pi f \, \text{Max}(p)}}$$

On prend $S = 2$

$f = 0,15$

$p = 6 \text{ bar} = 600000 \text{ Pa}$

$\rho_{\text{Acier}} = 7800 \text{ kg.m}^{-3}$

$V = \pi R^2 h = \pi \times (20 \times 10^{-3})^2 \times 20 \times 10^{-3}$

$m = \rho_{\text{Acier}} \times V$

$$\min(\Phi) = 2 \times \sqrt{\frac{2 \times 7800 \times \pi \times (20 \times 10^{-3})^2 \times 20 \times 10^{-3} \times 9,81}{\pi \times 0,15 \times 600\,000}}$$

$\simeq 0,0074 \text{ m} \simeq 7,4 \text{ mm}$.

On retiendra 10 mm.