$M := 0.7375hp \qquad n := 1445rpm \qquad Torq := \frac{M}{n}$

$d_w := 1.00in$

$U := \frac{2 \cdot Torq}{d_w} \qquad U = 286.171\,N$

Assume pitch: $P := 0.25in$ and coefficient of friction: $\mu := 0.35$

$F_a := U \cdot \frac{\pi \cdot d_w - \mu \cdot P}{\pi \cdot \mu \cdot d_w + P} \qquad F_a = 647.615\,N$