$m_n := 3.0mm$ $\alpha_n := 20deg$ $z := 24$ $\beta := 25.0deg$ $x := 0.4$

$$\alpha_t := \operatorname{atan}\left(\frac{\tan(\alpha_n)}{\cos(\beta)}\right) \qquad \alpha_t = 21.8802\,deg$$

$$inv\alpha_t := \tan(\alpha_t) - \alpha_t \qquad inv\alpha_t = 0.01971462$$

$$K_f := \frac{1}{\pi}\cdot\left[\left(1 + \frac{\sin(\beta)^2}{\cos(\beta)^2 + \tan(\alpha_n)^2}\right)\cdot\left[\left(\cos(\beta)^2 + \tan(\alpha_n)^2\right)\cdot\left(\sec(\beta) + 2\cdot\frac{x}{z}\right)^2 - 1\right]^{0.5} - inv\alpha_t - 2\cdot\frac{x}{z}\cdot\tan(\alpha_n)\right]$$

$$z_{span} := \operatorname{round}(z\cdot K_f + 0.5) \qquad z_{span} = 5$$

$$S_m := \left[m_n\cdot\cos(\alpha_n)\cdot\left[\pi(z_{span} - 0.5) + z\cdot inv\alpha_t\right] + 2\cdot x\cdot m_n\cdot\sin(\alpha_n)\right]$$

$$S_m = 42.0085\,mm$$