

Nm := N·m      ° := deg

$M_{\text{Nenn}} := 1018.59\text{Nm}$        $M_{\text{Max}} := 1324.17\text{Nm}$        $d_1 := 250\text{mm}$        $\alpha_n := 20^\circ$        $\beta := 30^\circ$

$$F_{\text{T12}} := 2 \cdot \frac{M_{\text{Max}}}{d_1} \quad F_{\text{A12}} := F_{\text{T12}} \cdot \tan(\beta) \quad F_{\text{R12}} := F_{\text{T12}} \cdot \frac{\tan(\alpha_n)}{\cos(\beta)}$$

$$b_1 := 30\text{mm} \quad a := 25\text{mm} + \frac{b_1}{2} \quad b := 49.5\text{mm} + \frac{b_1}{2}$$

$$-F_{\text{A12}} \cdot \frac{d_1}{2} - F_{\text{R12}} \cdot a + B_z \cdot (a + b) = 0 \quad \left| \begin{array}{l} \text{solve, } B_z \\ \text{float, 6} \end{array} \right. \rightarrow 9.02005 \cdot \text{N} \cdot \frac{\text{m}}{\text{mm}} = 9020.05 \text{ N}$$

$$B_z = 9020.0533 \text{ N}$$