Opgave Motoropstart

$$M'_{b\%} = M_{b\%} \cdot \frac{1}{4} = 80\,Nm \cdot \frac{1}{4} = 20\,Nm$$

$$M_{st} = M_{\%} \cdot 3{,}0 = 24{,}5 \cdot 3{,}0 = 73{,}5\,Nm$$

$$M_{max} = M_{\%} \cdot 3{,}5 = 24{,}5 \cdot 3{,}5 = 85{,}75\,Nm$$

$$J_{motor} = 1\,kg\,m^2$$

$$J'_B = J_B \left(\frac{1}{4}\right)^2 = 10 \cdot \frac{1}{16} = 0{,}625\,kg\,m^2$$

$$t_{start} = \frac{(J'_B + J_{motor}) \cdot K_1}{M_{acc}}$$

$$= \frac{(0{,}625 + 1) \cdot 345}{0{,}45(73{,}5 + 87{,}75) - \frac{1}{3} \cdot 20\,Nm} = \underline{8{,}5\,s}$$