



Angle F_m on cam $\approx 7^\circ$

$$F_m = 8000 \text{ N}$$

$$X = 150 \text{ mm}$$

$$F_N = 8000 / \cos(7) = 10611 \text{ N}$$

$$\text{max distance} = 2X = 300 \text{ mm}$$

$$\text{Torque} = F_N \cdot \text{Radius} = 10611 \cdot 0.3 = 3183 \text{ Nm}$$

safety margin ≈ 2

$$\text{Torque needed} \approx 6500 \text{ Nm}$$

$$\text{RPM required} = 30$$

$$\text{required drive: } \bullet 3 \text{ kW } \quad 6500 \text{ Nm } \quad 30 \text{ RPM}$$