



$$\begin{aligned}
 l_1 &:= 590 \text{ mm} \\
 l_2 &:= 250 \text{ mm} \\
 l_3 &:= 180 \text{ mm} \\
 F_g &:= 105 \text{ N} \\
 F_D &:= 200 \cdot 2 \text{ N} \\
 \alpha &:= 11.5^\circ
 \end{aligned}$$

$$\begin{aligned}
 F_{Dy} &:= \sin(\alpha) \cdot F_D = 79.747 \text{ N} \\
 F_{Dx} &:= \cos(\alpha) \cdot F_D = 391.97 \text{ N}
 \end{aligned}$$

Fg ... Gewichtskraft
 FD ... Dämpferkraft
 FH ... Haltekraft
 FA ... Auflagekraft

$$\begin{aligned}
 \Sigma F_x &= -F_{Dx} + F_{Ax} \\
 \Sigma F_y &= -F_H - F_g + F_{Dy} + F_{Ay} \\
 \Sigma M_A &= F_H \cdot l_1 + F_g \cdot l_2 - F_{Dy} \cdot l_3 \\
 F_H &:= \frac{F_g \cdot l_2 - F_{Dy} \cdot l_3}{l_1}
 \end{aligned}$$

$$F_H = 20.162 \text{ N}$$

$$F_{Ay} := F_H + F_g - F_{Dy}$$

$$F_{Ay} = 45.415 \text{ N}$$

$$F_{Ax} := F_{Dx}$$

$$F_{Ax} = 391.97 \text{ N}$$

$$F_A := \sqrt{F_{Ay}^2 + F_{Ax}^2}$$

$$F_A = 394.592 \text{ N}$$