

belastingen

$$(\text{counterclockwise} + \square) \Sigma M_B = 0$$

$$A_y \cdot (914.49) - 15.75 \text{ kN} \cdot (2526.14) - 32.962 \text{ kN} \cdot (8005) = 0$$

$$A_y := \left(\frac{39786.705 \text{ kN} + 263860.81 \text{ kN}}{914.49} \right) = 332.04 \text{ kN}$$

$$(\text{up} + \square) \Sigma F_y = 0 \quad -332 \text{ kN} + \left(\frac{646.6}{1555.3} \right) \cdot F_{DB} - 15.75 \text{ kN} - 32.962 \text{ kN} = 0$$

$$F_{DB} := \frac{332 \text{ kN} + 15.75 \text{ kN} + 32.962 \text{ kN}}{0.4157397} = 915.746 \text{ kN}$$

$$(\text{rechts} + \square) \Sigma F_x = 0 \quad B_x - \left(\frac{1414.5}{1555.3} \right) 915.746 \text{ kN} = 0$$

$$B_x := \left(\frac{1414.5}{1555.3} \right) 915.746 \text{ kN} = 832.844 \text{ kN}$$

afmetingen

$$M := (960 \cdot 8895 + 461 \cdot 3441) \cdot 9.81 \cdot 3.5 \text{ N} \cdot \text{mm} = (3.477 \cdot 10^8) \text{ N} \cdot \text{mm}$$

$$r_{od} := \text{mm}$$

$$r_{id} := 25 \text{ mm}$$

$$\sigma_{max} := 690 \text{ MPa}$$

Guess Values	
Constraints	$r_{od} = \sqrt[3]{\frac{M}{\frac{1}{4} \pi \cdot \sigma_{max}}} + r_{id}$
Solver	$\text{find}(r_{od}) = 86.94 \text{ mm}$

$$\frac{332.04 \text{ kN}}{24021} = 13.823 \text{ N}$$