

[Opmerkingen:](#) Zie §4.9, blz. 183 t/m 187

[Antwoorden 4.66-1:](#)

- a. $k_b = 51 \text{ mm}$
- b. $k_o = 85 \text{ mm}$

[Toelichting 4.66-1:](#)

$$A = 64,8 \times 10^3 \text{ mm}^2$$

$$I_{zz} = 743,58 \times 10^6 \text{ mm}^4$$

$$W_{z;b} = \frac{I_{zz}}{e_b} = \frac{743,58 \times 10^6 \text{ mm}^4}{135 \text{ mm}} = 5,508 \times 10^6 \text{ mm}^3$$

$$W_{z;o} = \frac{I_{zz}}{e_o} = \frac{743,58 \times 10^6 \text{ mm}^4}{225 \text{ mm}} = 3,305 \times 10^6 \text{ mm}^3$$

$$k_b = \frac{W_{z;o}}{A} \text{ en } k_o = \frac{W_{z;b}}{A}$$

[Antwoorden 4.66-2:](#)

- a. $k_b = 78,9 \text{ mm}$
- b. $k_o = 45,7 \text{ mm}$

[Toelichting 4.66-2:](#)

$$A = 72 \times 10^3 \text{ mm}^2$$

$$I_{zz} = 749,952 \times 10^6 \text{ mm}^4$$

$$W_{z;b} = 3,289 \times 10^6 \text{ mm}^3$$

$$W_{z;o} = 5,681 \times 10^6 \text{ mm}^3$$

[Antwoorden 4.66-3:](#)

- a. $k_b = 40 \text{ mm}$
- b. $k_o = 80 \text{ mm}$

[Toelichting 4.66-3:](#)

$$A = 108 \times 10^3 \text{ mm}^2$$

$$I_{zz} = 1036,8 \times 10^6 \text{ mm}^4$$

$$W_{z;b} = 8,64 \times 10^6 \text{ mm}^3$$

$$W_{z;o} = 4,32 \times 10^6 \text{ mm}^3$$