Remarks: See §4.6, pages 168 till 170

Answer:

2,25 kN/m

Explanation:

$$W = \tfrac{1}{6} \times (120 \text{ mm}) \times (300 \text{ mm})^2 = 1{,}8 \times 10^6 \text{ mm}^3$$

$$\sigma_{\max} = \frac{M_{\max}}{1{,}8 \times 10^6 \text{ mm}^3} \leq 10 \text{ N/mm}^2 \Rightarrow M_{\max} = \tfrac{1}{8} q \ell^2 \leq 18 \text{ kNm}$$

$$q \leq \frac{8 \times (18 \text{ kNm})}{(8 \text{ m})^2} = 2{,}25 \text{ kN/m}$$