

4.3 Finished product requirements

4.3.1 Geometrical properties

4.3.1.1 General

Complementary to 4.3.1 of EN 13369:2004, next subclauses shall apply.

For technical documentation see Clause 8.

4.3.1.2 Production tolerances

4.3.1.2.1 General

The maximum deviations, measured in accordance with 5.2, on the specified nominal dimensions shall satisfy the following requirements.

4.3.1.2.2 Dimensional tolerances

- a) nominal concrete length: ± 25 mm
- b) nominal depth h :
 - $(- 5 ; + 10)$ mm if $h \leq 100$ mm
 - $(- 5h / 100 ; + 10)$ mm if $100 \leq h \leq 200$ mm
 - $(- 10 ; + 10)$ mm if $200 \leq h \leq 500$ mm
- c) width of the toe: ± 5 mm
- d) other transverse dimensions:
 - self-bearing beams and non self-bearing beams without overhang: $(- 5 ; + 10)$ mm
 - non self-bearing beams with overhang: $(- 5 ; + 5)$ mm

NOTE The conditions for considering a beam with overhang are given in Table 3 (type c_{2b}).

- e) straightness of prestressed beam in the horizontal plane: $\leq 1/250^{\text{th}}$ of this concrete length

4.3.1.2.3 Tolerances in the positioning of reinforcement

- a) Passive longitudinal reinforcement:
 - position in the transverse section: vertically: ± 5 mm on individual reinforcement
 - longitudinal position: ± 15 mm
 - protruding length: $[- 20$ mm ; $+ 50$ mm]

NOTE The tolerance on the longitudinal position may be increased if specific provisions guarantee an equivalent level of safety.

b) Prestressed reinforcement

- position in the transverse section: vertically: $\pm \text{MIN}[5\% h_c; 10 \text{ mm}]$ on individual reinforcement
 $\pm \text{MAX}[h_c/40; 3 \text{ mm}]$ on the centre of gravity of prestressed reinforcement

with h_c the concrete height of the beam excluding lattice girder (see Figure 7)

horizontally: $\pm 10 \text{ mm}$ on individual reinforcement

- protruding length: $[- 20 \text{ mm} ; + 50 \text{ mm}]$

c) Transverse reinforcement (connecting and shear reinforcement)

- position in the transverse section: vertically: $\pm 10 \text{ mm}$

horizontally: $\pm 10 \text{ mm}$ on individual reinforcement

- longitudinal position: $\pm 30 \text{ mm}$

4.3.1.3 Minimum dimensions

Complementary to 4.3.1.2 of EN 13369:2004, next subparagraphs shall apply. The dimensions shall be verified according to 5.2.2.

a) Depth

- self-bearing beams: $100 \text{ mm} \leq h \leq 500 \text{ mm}$
- non self-bearing beams: $70 \text{ mm} \leq h \leq 500 \text{ mm}$
- non self-bearing beams without lattice girder and without web: $h \geq 60 \text{ mm}$

b) Widths

- bottom width: $h_b \geq 85 \text{ mm}$
- web width: $b_w \geq 40 \text{ mm}$

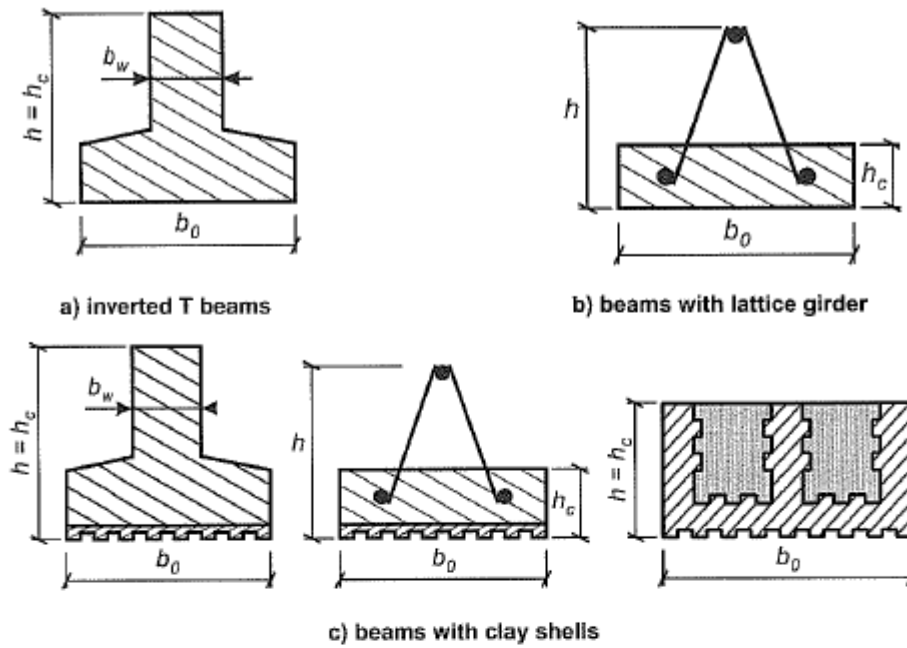


Figure 7 — Definitions of beam dimensions

Dimensions of toe rebate (see Figure 8)

- bearing surface: $b_t \geq 20$ mm
- thickness: $h_t \geq \text{Max} [0,9 b_t ; 30 \text{ mm}]$
- angle: $\alpha_t \leq 35^\circ$

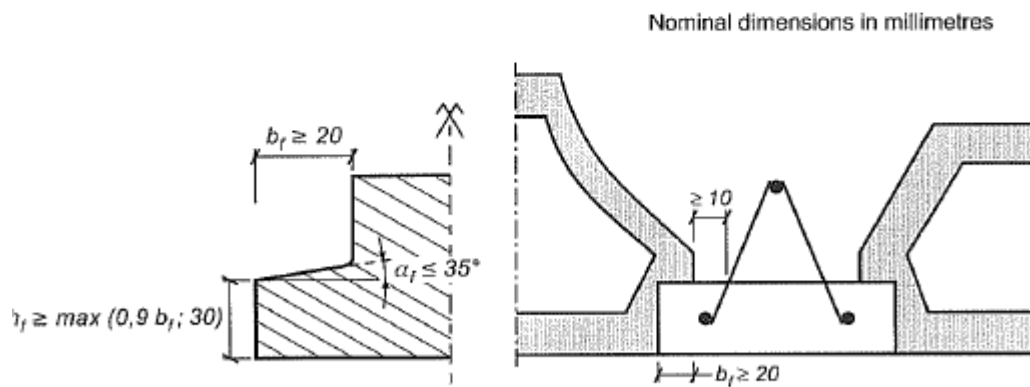


Figure 8 — Dimensions of toe rebate

TE The distance of 10 mm between the nib of the block and the diagonal of the lattice girder is given as a minimum value (cover).