

BS EN 10279 : 2000

Hot rolled steel channels

Tolerances on shape, dimension and mass

Tolerances on Dimensions and Shape

Section Height (h)

The deviation from nominal on section height (h) shall be within the tolerance given in **Table 1** for tapered flange channels and parallel flange channels. Height is measured over the web

Flange Width (b)

The deviation from nominal on flange width (b) shall be within the tolerance given in **Table 1** for tapered flange channels and parallel flange channels.

Web Thickness (s)

The deviation from nominal on web thickness (s), when measured at the mid-height position of the web, shall be within the tolerance given in **Table 1** for tapered flange channels and parallel flange channels.

Flange Thickness (t)

The deviation from nominal on flange thickness (t), when measured at a distance of $b/2$ from the toe of the flange, shall be within the tolerance given in **Table 1** for tapered flange channels and parallel flange channels.

Heel Radius (r_3)

The radius of the heel radius (r_3) shall not exceed $0,3t$ where t is the flange thickness

Out of Squareness ($k + k_1$) and web bow (f)

i. The out of squareness of the section ($k + k_1$) shall not exceed the maximum given in **Table 1** for tapered flange channels and parallel flange channels.

ii. The web flatness (f) shall not exceed the maximum given in **Table 1** for tapered flange channels and parallel flange channels.

Straightness (q_{xx} or q_{yy})

The straightness (q_{xx} or q_{yy}) shall conform to the requirements given in **Table 1** for tapered flange channels and parallel flange channels.

Table 1. Tolerances for taper flange channels

| Designation | Property mm | Range mm | Tolerance mm |
|--|-------------------------|---|---|
| | Height h | $h \leq 65$ $65 < h \leq 200$ $200 < h \leq 400$ $400 < h$ | ± 1.5 ± 2.0 ± 3.0 ± 4.0 |
| | Flange Width b | $b \leq 50$ $50 < b \leq 100$ $100 < b \leq 125$ $125 < b$ | ± 1.5 ± 2.0 ± 3.0 ± 4.0 |
| | Web thickness s | $s \leq 10$ $10 < s \leq 15$ $15 < s$ | ± 0.5 ± 0.7 ± 1.0 |
| | Flange thickness t | $t \leq 10$ $10 < t \leq 15$ $15 < t$ | * - 0.5 * - 1.0 * - 1.5 |
| | Heel radius | All sizes | $\leq 0.3t$ |
| | | Out of squareness $k=k_1$ | $b \leq 100$ $100 < b$ |
| Web flatness f | | $h \leq 100$ $100 < h \leq 200$ $200 < h \leq 400$ $400 < h$ | ± 0.5 ± 1.0 ± 1.5 ± 1.5 |
| Straightness q_{xx} | | $h \leq 150$ $150 < h \leq 300$ $300 < h$ | $\pm 0.3\%$ of $\pm 0.2\%$ of l $\pm 0.15\%$ of l |
| | | q_{yy} | $h \leq 150$ $150 < h \leq 300$ $300 < h$ |
| Standard | Length | All | +100 0 |
| Alternative standard (by agreement) | l | All | ± 50 |
| Mass per unit length | kg/m | $h \leq 125$ $125 < h$ | $\pm 6\%$ $\pm 4\%$ |