

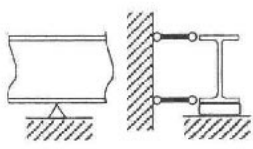



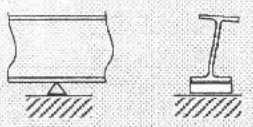

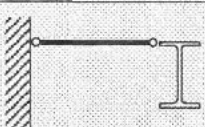
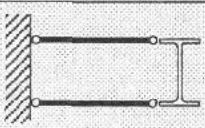


| Restraint at Root * | Restraint at Tip | Value of K for load at | |
|---|---|---|---|
| | | Top Flange  | Other Part  |
| Top flange laterally supported  bottom flange laterally supported and section torsionally restrained about its longitudinal axis |  | 2.5 | 1.0 |
| |  | 2.5 | 0.9 |
| |  | 1.2 | 0.7 |
| Top flange laterally unsupported  bottom flange lateral-torsionally restrained about its longitudinal axis |  | 7.5 | 3.0 |
| |  | 7.5 | 2.7 |
| |  | 3.6 | 2.1 |

Details illustrated within the shaded area are **Not Recommended** for Gerber-cantilever design. However, all values listed within this table are used in assessing the proposed design K-values as shown in Fig. A2.

- * - section free to rotate about weak axis.
- design cases represent continuous girder in which length of the back span is longer than the cantilever length.
- Kirby-Nethercot diagram (Ref. 18) of restraint at root has been modified to better illustrate the structural restraint assumptions.

$$M_u = \frac{\pi}{K L_c} \sqrt{E I_y G J + \frac{\pi^2 E^2}{(K L_c)^2} I_y C_w}$$

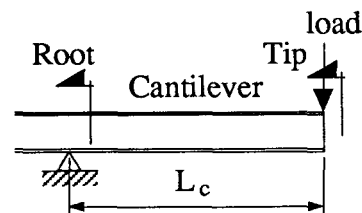


Fig. A1 Kirby-Nethercot Proposed Effective Length Factors (K)