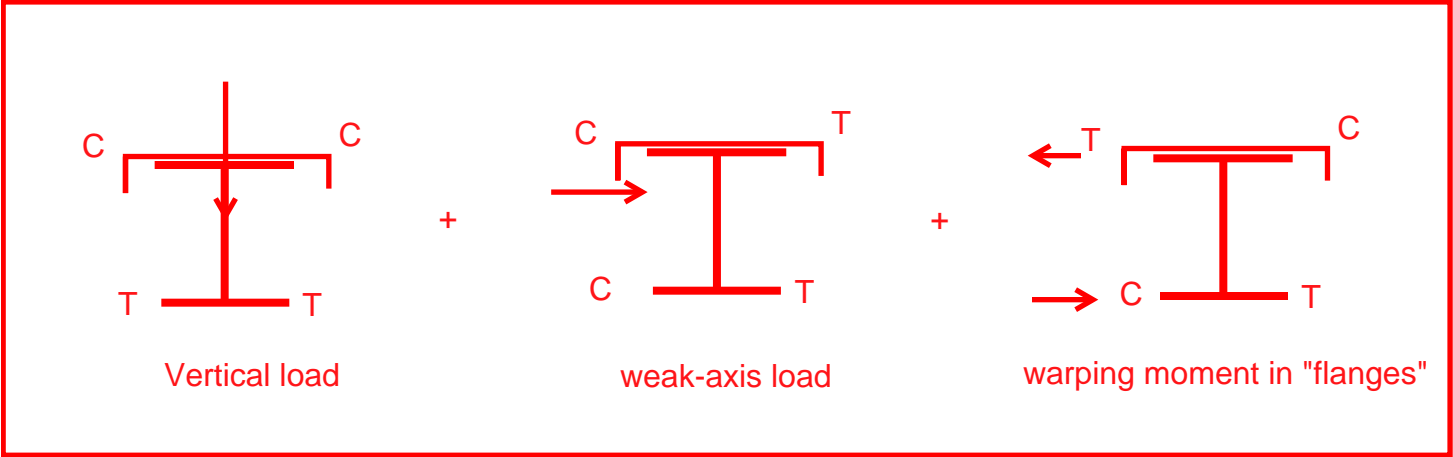


breaking down loads further



fw = warping stress

combination of normal stresses - capacity check

Top flange:

$$\frac{f_x(@top)}{\Phi F_{bx}} + \frac{f_y (@ \text{ tip of channel})}{\Phi F_y} + \frac{f_w (@ \text{ tip of channel})}{\Phi F_y} \leq 1$$

min of lateral torsional buckling (LTB), yielding, flange local buckling (FLB). a360-16 section F-4

Bottom flange:

$$\frac{f_x(@bot)}{\Phi F_{bx}} + \frac{f_y (@ \text{ tip of bot flange})}{\Phi F_y} + \frac{f_w (@ \text{ tip of bot flange})}{\Phi F_y} \leq 1$$

tension flange yielding only
OR min of tension flange yielding and LTB?