

# C – Joists with Small Punchout (J)



| MATERIAL                  |        |
|---------------------------|--------|
| Web (in)                  | 6      |
| Flange (in)               | 2½     |
| Lip (in)                  | 0.625  |
| Yield Strength Fy (KSI)   | 33     |
| Tensile Strength Fu (KSI) | 45     |
| Design Thickness (in)     | 0.0451 |
| Minimum Thickness (mil)   | 43     |
| Gauge                     | 18     |
| Available Finish G60, G90 |        |

| GROSS SECTION PROPERTIES      |       |
|-------------------------------|-------|
| Weight of Member: (lb/ft)     | 1.83  |
| Cross Sectional Area: A (in²) | 0.537 |
| Moment of Inertia: Ix (in⁴)   | 3.083 |
| Section Modulus: Sx (in³)     | 1.028 |
| Radius of Gyration: Rx (in)   | 2.396 |
| Moment of Inertia: Iy (in⁴)   | 0.458 |
| Radius of Gyration: Ry (in)   | 0.923 |

| EFFECTIVE SECTION PROPERTIES                          |              |
|-------------------------------------------------------|--------------|
| Moment of Inertia-Deflection: Ixe (in⁴)               | 3.083        |
| Section Modulus: Sxe (in³)                            | <b>0.909</b> |
| Local Buckling Allowable Moment: Mal (in-k)           | 17.97        |
| Distortional Buckling Allowable Moment: Mad (in-k)    | 15.72        |
| Allowable strong axis shear away from punch: Vag (lb) | 1415         |
| Allowable strong axis shear at punch: Vanet (lb)      | 1240         |

(check web crippling)

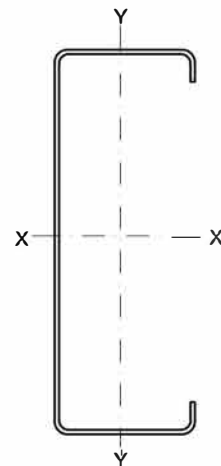
| TORSIONAL SECTION PROPERTIES                               |        |
|------------------------------------------------------------|--------|
| St. Venant Torsional Constant: Jx1000 (in⁴)                | 0.364  |
| Torsional Warping Constant: Cw (in⁶)                       | 3.411  |
| Shear Center to Centroid on Principal X-axis: Xo (in)      | -1.874 |
| Radius of Gyration on the Centroid Principal axis: Ro (in) | 3.179  |

## PRODUCT ID

600 J 250-43 (6x2½x18ga) (Grade 33)

## CODES & STANDARDS

- ASTM A 1003, A 653, & C 955
- AISI S100-16



See Hermes/Hephaistos Technical Manual  
for complete design data