

# C-Joists

## with Big Stiffened Web Holes

| MATERIAL                  |        |
|---------------------------|--------|
| Web (in)                  | 10     |
| Flange (in)               | 3      |
| Lip (in)                  | 0.625  |
| Yield Strength Fy (KSI)   | 50     |
| Tensile Strength Fu (KSI) | 65     |
| Design Thickness (in)     | 0.0713 |
| Minimum Thickness (mil)   | 68     |
| Gauge                     | 14     |
| Available Finish G60, G90 |        |

| GROSS SECTION PROPERTIES                   |        |
|--------------------------------------------|--------|
| Weight of Member: (lb/ft)                  | 4.06   |
| Cross Sectional Area: A (in <sup>2</sup> ) | 1.192  |
| Moment of Inertia: Ix (in <sup>4</sup> )   | 17.513 |
| Section Modulus: Sx (in <sup>3</sup> )     | 3.503  |
| Radius of Gyration: Rx (in)                | 3.833  |
| Moment of Inertia: Iy (in <sup>4</sup> )   | 1.258  |
| Radius of Gyration: Ry (in)                | 1.027  |

| EFFECTIVE SECTION PROPERTIES FOR 20ft JOIST SPAN*    |       |       |       |
|------------------------------------------------------|-------|-------|-------|
| Hole Spacing (in)                                    | 48    | 32    | 16    |
| Moment of Inertia-Deflection: Ixe (in <sup>4</sup> ) | 15.13 | 15.13 | 14.89 |
| Allowable Design Bending Moment: Md(in-k)            | 64    | 64    | 58    |
| Allowable Shear Force: Va (lb) (solid section)       | 3345  | 3345  | 3345  |
| Check web crippling                                  |       |       |       |
| * For other joist spans, see Hermes Technical Manual |       |       |       |

| TORSIONAL SECTION PROPERTIES (Solid Section)               |        |
|------------------------------------------------------------|--------|
| St. Venant Torsional Constant: Jx1000 (in <sup>4</sup> )   | 2.020  |
| Torsional Warping Constant: Cw (in <sup>6</sup> )          | 24.551 |
| Shear Center to Centroid on Principal X-axis: Xo (in)      | -1.874 |
| Radius of Gyration on the Centroid Principal axis: Ro (in) | 4.389  |



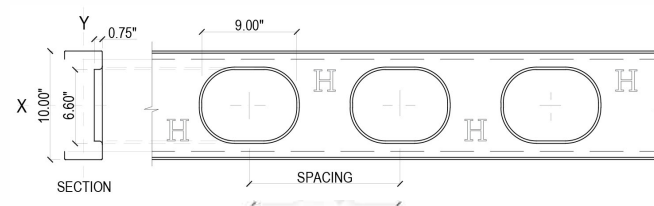
### PRODUCT ID

|      |   |    |   |        |              |           |
|------|---|----|---|--------|--------------|-----------|
| 1000 | H | 48 | J | 300-68 | (10x3x14 ga) | Holes@48" |
| 1000 | H | 32 | J | 300-68 | (10x3x14a)   | Holes@32" |
| 1000 | H | 16 | J | 300-68 | (10x3x14 ga) | Holes@16" |

### CODES & STANDARDS

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

### HOLE SIZE AND SPACING



See Hermes/Hephaistos Technical Manual  
for complete design data