## PWI Joist Series

### Reference Design Values

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<th>Joist Depth</th>
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<th>$K$ (x 10$^6$ lb)</th>
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<th>$V$ (lb)</th>
<th>$ER$ (lb)</th>
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1. Values apply to normal load duration. All values except $EI$, $k$ and Vertical Load may be adjusted for other load durations as permitted by the code.
2. Bending stiffness ($EI$).
3. Coefficient of shear deflection ($k$). Use Equations 1 or 2 to calculate uniform load or center point load deflections in a simple-span application.

**Uniform Load:**

$$\delta = \frac{5wL^2}{384EI}$$

**Center Point Load:**

$$\delta = \frac{P\ell}{48EI}$$

Where:

- $\delta$ = calculated deflection [in]
- $w$ = uniform load [lb/in]
- $P$ = concentrated load [lb]
- $\ell$ = design span [in]
- $EI$ = bending stiffness of the I-joist [lb-in$^2$]
- $k$ = coefficient of shear deflection [lb]

4. Moment capacity (M). The tabulated values shall not be increased by any code-allowed repetitive member factor.
5. Shear capacity (V).
6. End reaction capacity (ER) of the I-joist without web stiffeners and a minimum bearing length of 1½ inches.
7. Intermediate reaction capacity (IR) of the I-joist without web stiffeners and a minimum bearing length of 3½ inches.
8. Blocking panel and rim joint vertical load capacity.
9. Web stiffeners required. See Web Stiffener Requirements on page 94.