

SOLID-SAWN FLANGE PRI OR SSI JOIST REFERENCE DESIGN VALUES

REFERENCE DESIGN VALUES⁽¹⁾

Joist Series	Joist Depth	PWI Joist	EI ⁽²⁾ (x 10 ⁶ lb-in ²)	k ⁽³⁾ (x 10 ⁶ lb)	M ⁽⁴⁾ (ft-lb)	V ⁽⁵⁾ (lb)	ER ⁽⁶⁾ (lb)	IR ⁽⁷⁾ (lb)	Vertical Load ⁽⁸⁾ (plf)
PRI 20	9½"	PRI 2095	145	4.94	2520	1120	830	1700	2400
	11⅞"	PRI 2011	253	6.18	3265	1420	830	1700	2400
SSI 36X	14"	SSI 36X	373	7.28	3890	1710	830	1700	2400
PRI 40	9½"	PRI 4095	193	4.94	2735	1120	1080	2160	2400
	11⅞"	PRI 4011	330	6.18	3545	1420	1200	2500	2400
	14"	PRI 4014	482	7.28	4270	1710	1200	2500	2400
	16"	PRI 4016	657	8.32	4950	1970	1200	2500	2400
PRI 60	9½"	PRI 6095	231	4.94	3780	1120	1080	2160	2400
	11⅞"	PRI 6011	396	6.18	4900	1420	1200	2500	2400
	14"	PRI 6014	584	7.28	5895	1710	1200	2500	2400
	16"	PRI 6016	799	8.32	6835	1970	1200	2500	2400
PRI 80	11⅞"	PRI 8011	547	6.18	6940	1420	1280	2760	2400
	14"	PRI 8014	802	7.28	8360	1710	1280	3020	2400
	16"	PRI 8016	1092	8.32	9690	1970	1280	3020	2400

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:

$$[1] \delta = \frac{5wl^4}{384EI} + \frac{wl^2}{k}$$

Center-Point Load:

$$[2] \delta = \frac{Pl^3}{48EI} + \frac{2Pl}{k}$$

where:

δ = calculated deflection (in.)

w = uniform load (lb/in.)

l = design span (in.)

P = concentrated load (lb)

EI = bending stiffness of the joist (lb-in²)

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 1¾ 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 joist vertical load capacity.

9. Web stiffeners required. See *Web Stiffener Requirements* on page 81.