



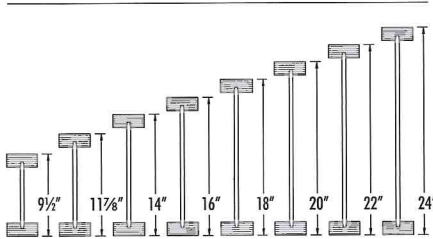
# SPI-90 I-JOIST



✓ Consider It Done!

## StructurePRO™ SPI-90 I-Joist JOIST DIMENSIONS & VALUES

SPI-90



7/16" OSB Web  
3 1/2" x 1 1/2" Flange

### REFERENCE DESIGN VALUES <sup>(1)</sup>

Joist Series	Joist Depth	EI <sup>(2)</sup> (x 10 <sup>6</sup> lb-in <sup>2</sup> )	k <sup>(3)</sup> (x 10 <sup>6</sup> lb)	M <sup>(4)</sup> (ft-lb)	V <sup>(5)</sup> (lb)	ER <sup>(6)</sup> (lb)	IR <sup>(7)</sup> (lb)	Vertical Load <sup>(8)</sup> (plf)
SPI-90	9 1/2"	392	6.08	7915	1430	1400	2860	2400
	11 7/8"	661	7.60	10255	1925	1400	3355	2400
	14"	965	8.96	12235	2125	1400	3355	2400
	16"	1306	10.24	14020	2330	1400	3355	2400
	18"	1703	11.52	15780	2535	1400	3355	1800
	20"	2155	12.80	17520	2740	1400	3355	1800
	22"	2664	14.08	19245	2935	2400 <sup>(9)</sup>	4605 <sup>(9)</sup>	1300
	24"	3232	15.36	20955	3060	2400 <sup>(9)</sup>	4605 <sup>(9)</sup>	1300

- 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.
- Bending stiffness (EI).
- 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:  
 $\delta$  = calculated deflection [in]      P = concentrated load [lb]  
 w = uniform load [lb/in]      EI = bending stiffness of the I-joist [lb-in<sup>2</sup>]  
 l = design span [in]      k = coefficient of shear deflection [lb]
- Moment capacity (M). The tabulated values shall not be increased by any code-allowed repetitive member factor.
- Shear capacity (V).
- End reaction capacity (ER) of the I-joist without web stiffeners and a minimum bearing length of 1 3/4 inches.
- Intermediate reaction capacity (IR) of the I-joist without web stiffeners and a minimum bearing length of 3 1/2 inches.
- Blocking panel and rim joist vertical load capacity.

SPI-90  
StructurePRO SPI-90  
StructurePRO SPI-90  
StructurePRO SPI-90



For information about our complete line of products, please scan this code, visit [www.eewp.com](http://www.eewp.com) or call 1-800-700-4788.