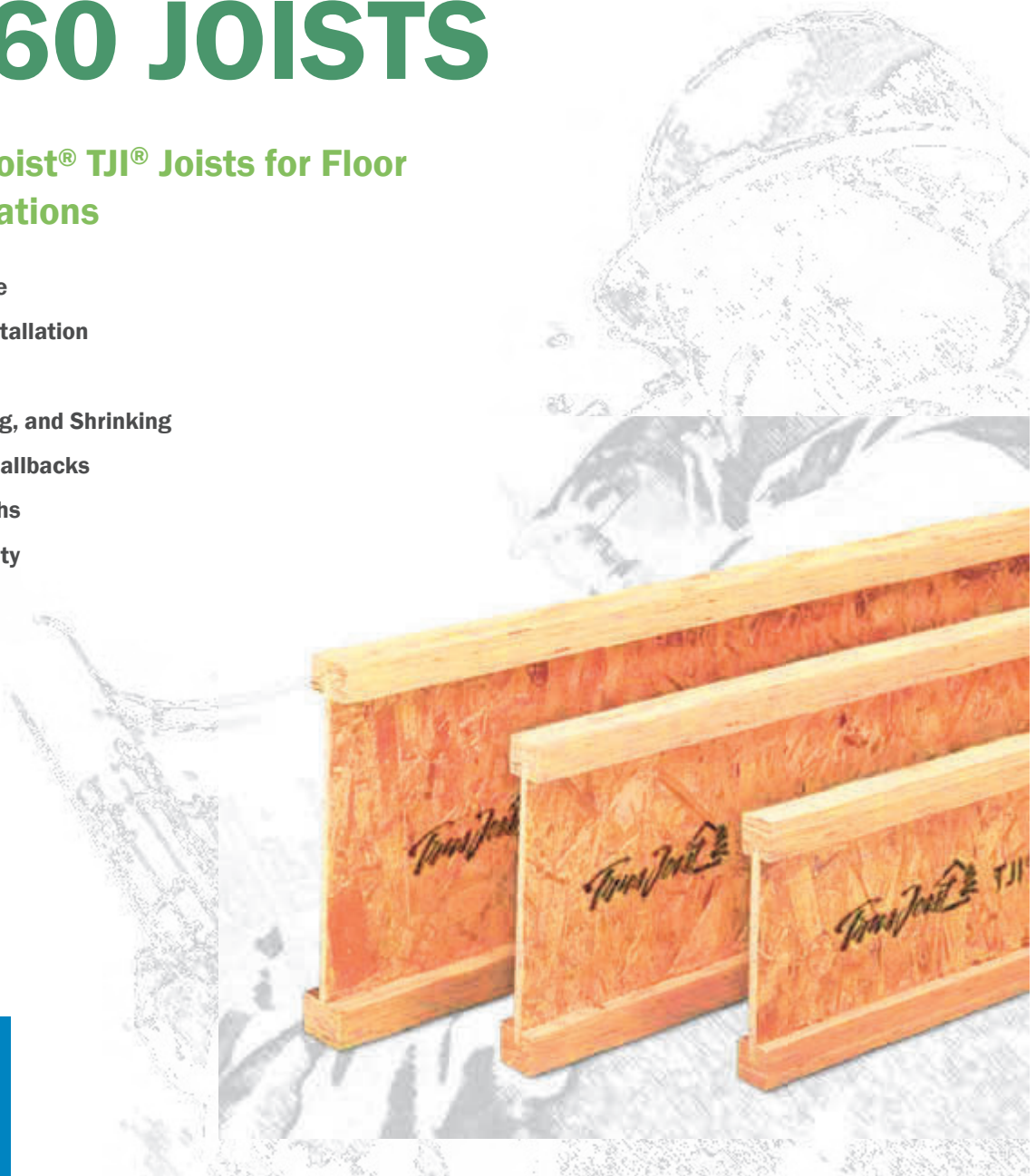


TJI[®] 110 • TJI[®] 210 TJI[®] 230 • TJI[®] 360 TJI[®] 560 JOISTS



Featuring Trus Joist[®] TJI[®] Joists for Floor and Roof Applications

- Uniform and Predictable
- Lightweight for Fast Installation
- Resource Efficient
- Resists Bowing, Twisting, and Shrinking
- Significantly Reduces Callbacks
- Available in Long Lengths
- Limited Product Warranty



NEW!

Now featuring
18" and 20"
TJI[®] joists

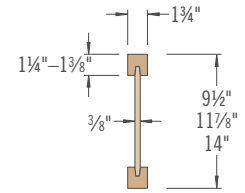
This section contains design information for 9½"-16" deep Trus Joist® TJI® joists.

These standard-size TJI® joists are readily available through your local Weyerhaeuser dealer or distributor. Offered with the flange sizes shown below, they come in lengths up to 60' (in 1' increments).

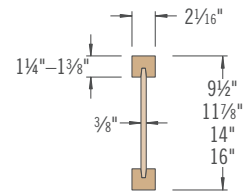
Design Properties

Depth	TJI®	Joist Weight (lbs/ft)	Joist Only EI x 10 ⁶ (lbs-in. ²)	Factored Resistances—Standard Term							
				Maximum Resistive Moment ⁽¹⁾ (ft-lbs)	Maximum Vertical Shear (lbs)	1¾" End Reaction (lbs)		3½" Intermediate Reaction (lbs)		5¼" Intermediate Reaction (lbs)	
						No Web Stiffeners	With Web Stiffeners ⁽²⁾	No Web Stiffeners	With Web Stiffeners ⁽²⁾	No Web Stiffeners	With Web Stiffeners ⁽²⁾
9½"	110	2.3	157	4,160	1,925	1,435	NA	3,055	N.A.	3,705	NA
	210	2.6	186	4,990	2,100	1,585	NA	3,385	N.A.	4,050	NA
	230	2.7	206	5,540	2,100	1,675	NA	3,800	N.A.	4,405	NA
	360	2.7	249	7,965	2,250	1,705	NA	3,885	N.A.	4,740	NA
	560	3.6	378	12,235	2,635	1,995	NA	4,735	NA	5,455	NA
11⅞"	110	2.5	267	5,255	2,460	1,435	1,885	3,055	3,575	3,705	4,225
	210	2.8	315	6,310	2,610	1,585	2,105	3,385	3,905	4,050	4,570
	230	3.0	347	7,010	2,610	1,675	2,190	3,800	4,320	4,405	4,925
	360	3.0	419	10,280	2,690	1,705	2,225	3,885	4,400	4,740	5,255
	560	4.0	636	15,795	3,235	1,995	2,680	4,735	5,425	5,455	6,140
14"	110	2.8	392	6,220	2,935	1,435	1,885	3,055	3,575	3,705	4,225
	210	3.1	462	7,470	3,070	1,585	2,105	3,385	3,905	4,050	4,570
	230	3.3	509	8,300	3,070	1,675	2,190	3,800	4,320	4,405	4,925
	360	3.3	612	12,200	3,085	1,705	2,225	3,885	4,400	4,740	5,255
	560	4.2	926	18,755	3,770	1,995	2,680	4,735	5,425	5,455	6,140
16"	210	3.3	629	8,550	3,455	1,585	2,105	3,385	3,905	4,050	4,570
	230	3.5	691	9,495	3,455	1,675	2,190	3,800	4,320	4,405	4,925
	360	3.5	830	13,980	3,455	1,705	2,225	3,885	4,400	4,740	5,255
	560	4.5	1,252	21,495	4,280	1,995	2,680	4,735	5,425	5,455	6,140

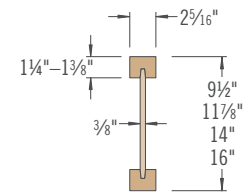
- (1) Caution: Do not increase joist moment design properties by a repetitive-member-use factor.
 (2) See detail W on page 22 for web stiffener requirements and nailing information.



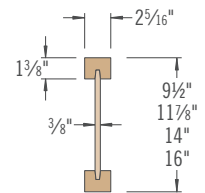
TJI® 110 joists



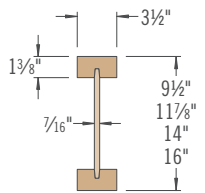
TJI® 210 joists



TJI® 230 joists



TJI® 360 joists



TJI® 560 joists

TJI® joists are intended for dry-use applications

Some TJI® joist series may not be available in your region. Contact your Weyerhaeuser representative for information.

General Notes

- Factored resistances are based on Limit States Design per CSA 086-09.
- Factored reaction includes all loads on the joist.
- Factored shear is computed at the inside face of supports and includes all loads on the span(s). Factored shear resistance may sometimes be increased at interior supports. For more information contact your Weyerhaeuser representative.
- The following formulas approximate the simple span uniform load deflection of Δ (inches):

For TJI® 110, 210, 230, and 360 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.67 wL^2}{d \times 10^5}$$

For TJI® 560 Joists

$$\Delta = \frac{22.5 wL^4}{EI} + \frac{2.29 wL^2}{d \times 10^5}$$

w = uniform load in pounds per linear foot d = out-to-out depth of the joist in inches
 L = span in feet EI = value from table above



DO NOT walk on joists until braced. INJURY MAY RESULT.



DO NOT stack building materials on unsheathed joists. Stack only over beams or walls.



DO NOT walk on joists that are lying flat.

WARNING

Joists are unstable until braced laterally

Bracing Includes:

- Blocking
- Hangers
- Rim Board
- Sheathing
- Rim Joist
- Strut Lines

WARNING NOTES: Lack of proper bracing during construction can result in serious accidents. Observe the following guidelines:

- All blocking, hangers, rim boards, and rim joists at the end supports of the TJI® joists must be completely installed and properly nailed.
- Lateral strength, like a braced end wall or an existing deck, must be established at the ends of the bay. This can also be accomplished by a temporary or permanent deck (sheathing) fastened to the first 4 feet of joists at the end of the bay.
- Safety bracing of 1x4 (minimum) must be nailed to a braced end wall or sheathed area (as in note 2) and to each joist. Without this bracing, buckling sideways or rollover is highly probable under light construction loads—such as a worker or one layer of unnailed sheathing.
- Sheathing must be completely attached to each TJI® joist before additional loads can be placed on the system.
- Ends of cantilevers require safety bracing on both the top and bottom flanges.
- The flanges must remain straight within a tolerance of ½" from true alignment.

Roof—Factored Resistance, Standard Term (PLF)

Depth	TJI®	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	Unfactored Deflection Resistance		Factored Strength Resistance	
		Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	Live Load L/360	Total Load L/180	Total Load	
		Roof Joist Horizontal Clear Span															
		8'			10'			12'			14'			16'			
9½"	110	*	*	300	*	*	240	114	*	201	74	*	166	51	*	127	
	210	*	*	332	*	*	266	132	*	222	87	*	191	60	*	153	
	230	*	*	373	*	*	299	145	*	250	95	*	214	66	*	170	
	360	*	*	381	*	*	306	170	*	255	112	*	219	78	*	192	
	560	*	*	465	*	*	373	*	*	311	164	*	267	115	*	234	
11½"	110	*	*	300	*	*	240	*	*	201	*	*	172	85	*	151	
	210	*	*	332	*	*	266	*	*	222	*	*	191	98	*	167	
	230	*	*	373	*	*	299	*	*	250	*	*	214	107	*	188	
	360	*	*	381	*	*	306	*	*	255	*	*	219	127	*	192	
	560	*	*	465	*	*	373	*	*	311	*	*	267	*	*	234	
14"	110	*	*	300	*	*	240	*	*	201	*	*	172	*	*	151	
	210	*	*	332	*	*	266	*	*	222	*	*	191	*	*	167	
	230	*	*	373	*	*	299	*	*	250	*	*	214	*	*	188	
	360	*	*	381	*	*	306	*	*	255	*	*	219	*	*	192	
	560	*	*	465	*	*	373	*	*	311	*	*	267	*	*	234	
16"	210	*	*	332	*	*	266	*	*	222	*	*	191	*	*	167	
	230	*	*	373	*	*	299	*	*	250	*	*	214	*	*	188	
	360	*	*	381	*	*	306	*	*	255	*	*	219	*	*	192	
	560	*	*	465	*	*	373	*	*	311	*	*	267	*	*	234	
		18'			20'			22'			24'			26'			
9½"	110	36	*	101	27	54	81										
	210	43	*	121	31	63	98	24	48	81							
	230	47	*	134	35	70	109	26	53	90	20	41	76				
	360	56	112	171	41	83	154	31	63	129	24	49	109	19	39	93	
	560	83	*	208	62	124	188	47	95	171	37	74	156	29	59	143	
11½"	110	61	*	127	45	*	103	34	*	85							
	210	71	*	149	52	*	124	40	*	102	31	*	86				
	230	77	*	167	57	*	138	44	*	114	34	*	96	27	54	82	
	360	92	*	171	68	*	154	52	*	140	41	82	128	32	65	118	
	560	135	*	208	101	*	188	78	*	171	61	*	156	48	97	144	
14"	110	88	*	134	65	*	121	50	*	101	39	*	85				
	210	102	*	149	76	*	134	58	*	121	45	*	102	36	*	87	
	230	111	*	167	83	*	150	63	*	135	49	*	113	39	*	97	
	360	*	*	171	98	*	154	75	*	140	59	*	128	47	*	118	
	560	*	*	208	*	*	188	111	*	171	87	*	156	69	*	144	
16"	210	*	*	149	*	*	134	78	*	122	61	*	112	48	*	100	
	230	*	*	167	*	*	150	85	*	137	66	*	125	53	*	111	
	360	*	*	171	*	*	154	*	*	140	79	*	128	63	*	118	
	560	*	*	208	*	*	188	*	*	171	*	*	156	92	*	144	

* Indicates value does not control.

How to Use These Tables

1. Calculate actual factored total load and unfactored snow and total load on the joist in pounds per linear foot (plf).
2. Select appropriate **Roof Joist Horizontal Clear Span**. For slopes greater than 2:12, approximate the increased dead load by multiplying the joist horizontal clear span by the **Slope Factor shown on page 28**.
3. Scan down the columns to find a TJI® joist that meets or exceeds the actual unfactored snow and total loads, and the factored total load. All three columns must be checked.

General Notes

- Tables are based on:
 - Minimum bearing length of 1¾" end and 3½" intermediate, without web stiffeners
 - Uniform loads.
 - More restrictive of simple or continuous span.
 - Minimum roof slope of ¼:12.
 - No composite action provided by sheathing.