

U.S. SPECIFIERS  
GUIDE

SOLID  
SAWN

FLANGE



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## ABOUT PK-USA

Founded in 2013, PK-USA operates as a privately owned I-joist distribution business with our head office in Utah and our production facility located in Calgary, Alberta, Canada.

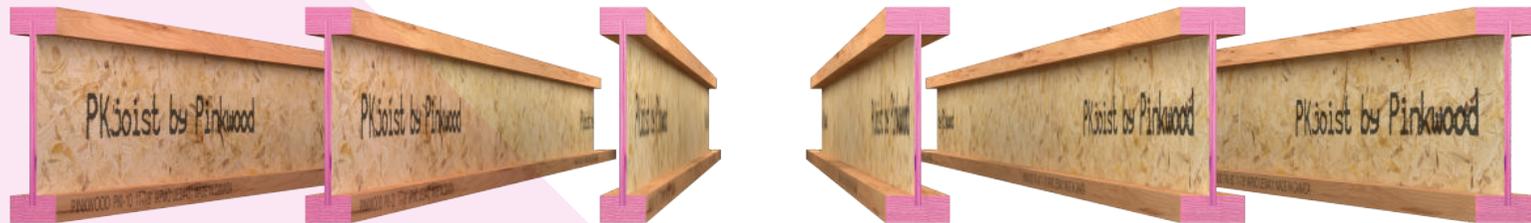
With a corporate culture and commitment to innovation, creativity, and lean manufacturing principles, PK-USA has proven to be the most agile I-joist producer in North America. Total customer satisfaction is what defines us and drives us every day.

## ABOUT PK-JOIST

PK Joists use proprietary grade flanges and come in several series with residential joist depths of 9 ½" to 16" and commercial joists depths of 18" to 24". With three 2x3 Series (PKI 10, 20, 23) and three 2x4 Series (PKI 35-PLUS, 40, 50), the PK Joist can handle all your solid sawn I-joist needs.

All PK-USA I-joists are shipped with a pink, wax based, moisture sealer to protect the I-joists against moisture related end-checking and absorption. Below is the list of all PK Joists Series PKI 10, 20, 23, 35-Plus, 40, and 50 series.

## PKI PRODUCT PROFILES



**SERIES:**  
Depths:  
Flange Size:  
Webstock:

**PKI 10**  
9 ½ thru 14"  
2x3 = 1 ½" x 2 ½"  
¾" OSB

**PKI 20**  
9 ½ thru 16"  
2x3 = 1 ½" x 2 ½"  
¾" OSB

**PKI 23**  
9 ½ thru 16"  
2x3 = 1 ½" x 2 ½"  
¾" OSB

**PKI 35-PLUS**  
9 ½ thru 16"  
2x4 = 1 ½" x 3 ½"  
¾" OSB

**PKI 40**  
9 ½ thru 24"  
2x4 = 1 ½" x 3 ½"  
¾" OSB (½" for 18"-24")

**PKI 50**  
11 ¾ thru 24"  
2x4 = 1 ½" x 3 ½"  
7/16" OSB

## PKI JOIST PRODUCT DESIGN PROPERTIES

Joist Series	Joist Type	Joist Depth (inches)	Bending Stiffness EI (x10 <sup>6</sup> lbf-in <sup>2</sup> )	Allowable Moment, M <sup>2</sup> (lbf-ft)	Shear (lbf)	Shear Deflection Coefficient K <sup>(3)</sup> (x10 <sup>6</sup> /lbf)
PKI 10	PKI10-10	9 ½	168	2,365	1,260	4.94
	PKI10-12	11 7/8	286	3,100	1,485	6.18
	PKI10-14	14	420	3,720	1,680	7.28
PKI 20	PKI20-10	9 ½	193	2,810	1,260	4.94
	PKI20-12	11 7/8	327	3,755	1,485	6.18
	PKI20-14	14	479	4,405	1,680	7.28
	PKI20-16	16	652	5,060	1,870	8.32
PKI 23	PKI23-10	9 ½	208	3,330	1,260	4.94
	PKI23-12	11 7/8	352	4,320	1,485	6.18
	PKI23-14	14	515	5,200	1,680	7.28
PKI 35-PLUS	PKI23-16	16	700	6,030	1,870	8.32
	PKI35Plus-10	9 ½	234	3,395	1,260	4.94
	PKI35Plus-12	11 7/8	396	4,395	1,485	6.18
	PKI35Plus-14	14	580	5,270	1,680	7.28
PKI 40	PKI35Plus-16	16	787	5,990	1,870	8.32
	PKI40-10	9 ½	328	5,390	1,340	4.94
	PKI40-12	11 7/8	553	6,970 <sup>(2)</sup>	1,625	6.18
	PKI40-14	14	807	8,395	1,875	7.28
	PKI40-16	16	1092	9,730	2,115	8.32
	PKI40-18	18	1421	11,005	2,535	9.36
	PKI40-20	20	1799	12,175	2,680	10.4
	PKI40-22	22	2224	13,335	2,815	11.44
PKI 50	PKI40-24	24	2698	14,480	2,945	12.48
	PKI50-12	11 7/8	565	7,955	2,135	6.18
	PKI50-14	14	824	9,200	2,280	7.28
	PKI50-16	16	1115	10,655	2,415	8.32
	PKI50-18	18	1453	12,770	2,535	9.36
	PKI50-20	20	1839	14,175	2,680	10.4
	PKI50-22	22	2273	14,590	2,815	11.44
	PKI50-24	24	2757	15,845	2,945	12.48

For S.I.: 1 inch = 25.4 mm; 1 lbf = 4.4 N

### Notes to Table:

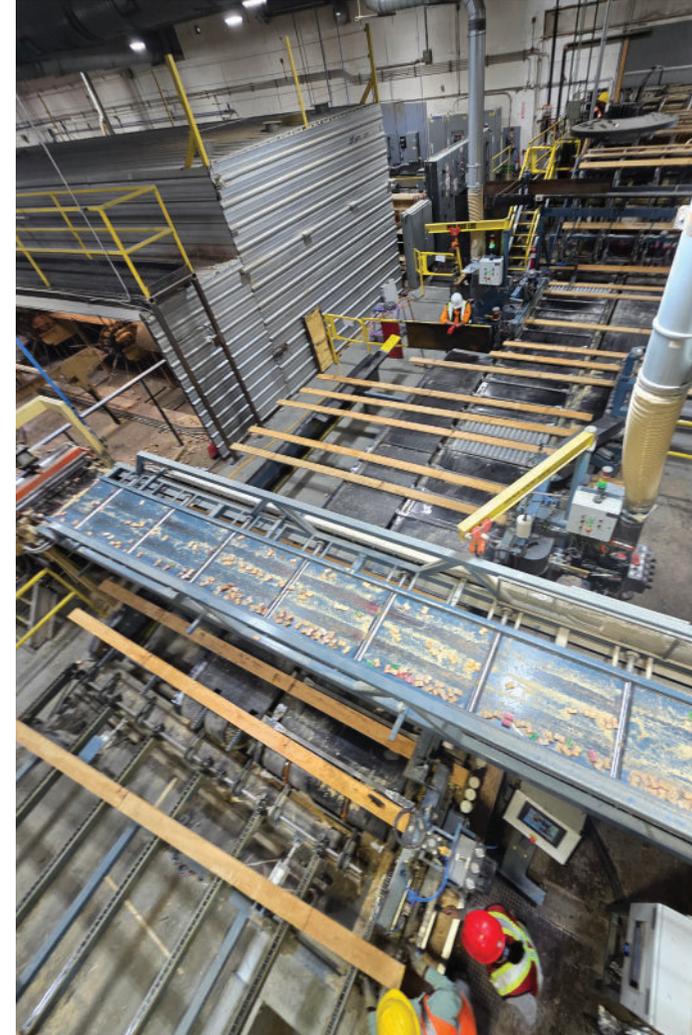
- The tabulated values are ASD design values for normal duration of load (CD = 1.0). All values, except for EI, K, and VLC shall be permitted to be adjusted for other load durations as permitted by the ANSI/AWC National Design Specification (NDS) Section 2.3.2.
- For calculating the maximum (center of span) uniform load and center point load deflections of an I-joist in a simple-span application, Equations 1 and 2 shall be used.

$$\text{Uniform Load: } \delta = \frac{5w\ell^4}{384EI} + \frac{w\ell^2}{K} \quad [\text{Eq. 1}]$$

$$\text{Center-Point Load: } \delta = \frac{P\ell^3}{48EI} + \frac{2P\ell}{K} \quad [\text{Eq. 2}]$$

Where:

- $\delta$  = calculated deflection (in.)
- $w$  = uniform load (lbf/in.)
- $P$  = concentrated load (lbf)
- $\ell$  = design span (in.)
- $EI$  = bending stiffness (lbf-in.<sup>2</sup>)
- $K$  = coefficient of shear deflection (lbf)



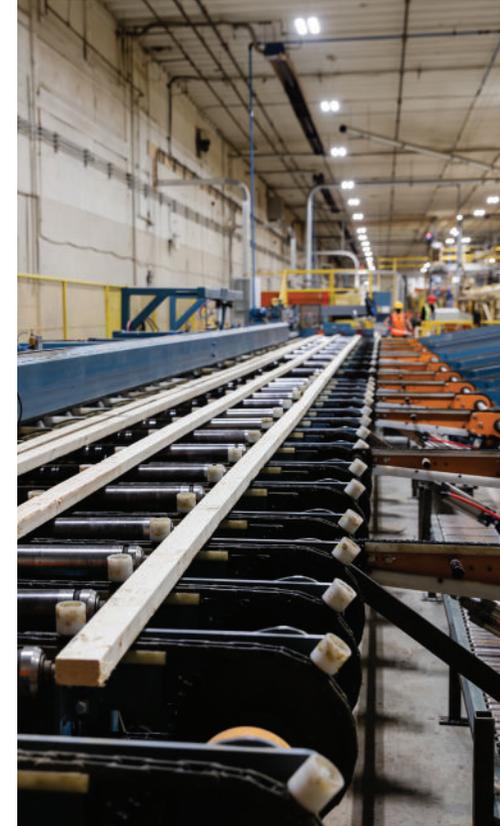
## PK JOIST PRODUCT REACTION CAPACITIES

Joist Series	Joist Type	Joist Depth (inches)	End Reaction (lbf)				End Reaction (lbf)				Flange Bearing Capacities (lbf/in)
			1 ½" or 2 ½" Bearing <sup>(4)</sup>		3 ½" or 4" Bearing <sup>(5)</sup>		3 ½" Bearing		5 ½" Bearing		
			Web Stiff.		Web Stiff.		Web Stiff.		Web Stiff.		
			No	Yes	No	Yes	No	Yes	No	Yes	
PKI 10	PKI 10-10	9½	900	1,140	1,110	1,260	2,195	2,280	2,450	2,520	955
	PKI 10-12	11⅞	900	1,275	1,160	1,485	2,195	2,485	2,525	2,810	955
	PKI 10-14	14	900	1,395	1,200	1,680	2,195	2,665	2,585	2,960	955
PKI 20	PKI 20-10	9½	970	1,140	1,110	1,260	2,195	2,375	2,450	2,635	955
	PKI 20-12	11⅞	970	1,275	1,160	1,485	2,330	2,525	2,595	2,830	955
	PKI 20-14	14	970	1,395	1,200	1,680	2,455	2,665	2,725	3,005	955
PKI 23	PKI 20-16	16	970	1,510	1,240	1,870	2,570	2,795	2,850	3,175	955
	PKI 23-10	9½	970	1,140	1,110	1,260	2,195	2,375	2,450	2,635	955
	PKI 23-12	11⅞	970	1,275	1,160	1,485	2,330	2,525	2,595	2,830	955
PKI 35-PLUS	PKI 23-14	14	970	1,395	1,200	1,680	2,455	2,665	2,725	3,005	955
	PKI 23-16	16	970	1,510	1,240	1,870	2,570	2,795	2,850	3,175	955
	PKI35Plus-10	9½	900	1,140	1,110	1,260	2,195	2,280	2,450	2,520	1,380
PKI 40	PKI35Plus-12	11⅞	900	1,275	1,160	1,485	2,195	2,485	2,525	2,810	1,380
	PKI35Plus-14	14	900	1,395	1,200	1,680	2,195	2,665	2,585	2,960	1,380
	PKI35Plus-16	16	900	1,510	1,240	1,865	2,195	2,880	2,645	3,105	1,380
PKI 40	PKI 40-10	9½	1,185	1,340	1,305	1,340	2,900	3,095	2,940	3,195	1,705
	PKI 40-12	11⅞	1,245	1,510	1,595	1,625	3,025	3,340	3,120	3,515	1,705
	PKI 40-14	14	1,280	1,660	1,595	1,875	3,085	3,565	3,280	3,805	1,705
	PKI 40-16	16	1,295	1,800	1,595	2,115	3,145	3,775	3,435	4,080	1,705
	PKI 40-18	18	1,310	2,060	1,680	2,550	2,850	4,285	3,435	4,970	1,705
	PKI 40-20	20	1,310	2,185	1,680	2,640	2,850	4,410	3,435	4,970	1,705
	PKI 40-22	22	1,310	2,310	1,680	2,735	2,850	4,530	3,435	4,970	1,705
PKI 50	PKI 40-24	24	1,310	2,440	1,680	2,830	2,850	4,640	3,435	4,970	1,705
	PKI 50-12	11⅞	1,245	1,510	1,595	1,625	3,025	3,340	3,120	3,515	1,995
	PKI 50-14	14	1,280	1,660	1,595	1,875	3,085	3,565	3,280	3,805	1,995
	PKI 50-16	16	1,295	1,800	1,595	2,115	3,145	3,775	3,435	4,080	1,995
	PKI 50-18	18	1,310	2,060	1,680	2,550	2,850	4,285	3,435	4,970	1,995
	PKI 50-20	20	1,310	2,185	1,680	2,640	2,850	4,410	3,435	4,970	1,995
	PKI 50-22	22	1,310	2,310	1,680	2,735	2,850	4,530	3,435	4,970	1,995
	PKI 50-24	24	1,310	2,440	1,680	2,830	2,850	4,640	3,435	4,970	1,995

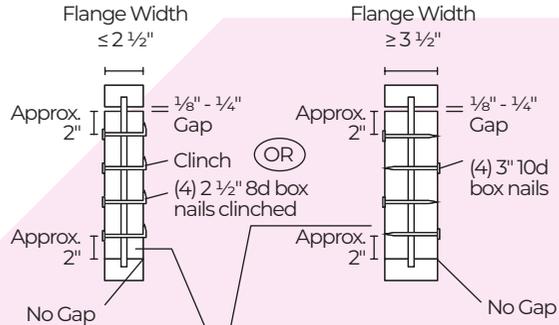
For S.I.: 1 inch = 25.4 mm; 1 lbf = 4.4 N

### Notes to Table:

1. Reaction capacity shall be limited by the flange bearing capacity or the bearing capacity of the support material, whichever is less. The flange bearing capacity, per inch of bearing length, is based on the allowable compression perpendicular-to-grain of the I-joist flange, accounting for eased edges.
2. Reaction capacity is for normal duration of load and shall be permitted to be adjusted for other load durations provided that the adjusted reaction capacity is not greater than the flange bearing capacity or the bearing capacity of the support material, which shall not be increased for any load durations.
3. Reaction capacity shall be permitted to be increased over that tabulated for the minimum bearing length by linear interpolation of the reaction capacity between the minimum and maximum bearing lengths. Extrapolation beyond the minimum and maximum bearing lengths is beyond the scope of this table.
4. For the I-joist with the depth equal to or less than 16 inches, the minimum bearing length of end reaction is 1½ inches; For the I-joist with the depth equal to or larger than 18 inches, the minimum bearing length of end reaction is 2½ inches.
5. The maximum end bearing length is 4 inches.

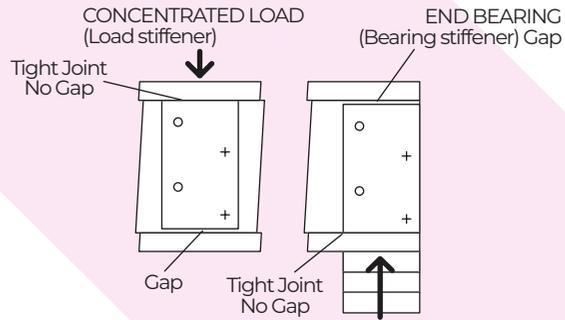


## PK JOIST WEB STIFFENER INFO



See table to the right for web stiffener size requirements

Refer to Table 4 of IAPMO UES ER-431



PKI Flange Width	Web Stiffener Size Each Side of Web
2 1/2"	1" x 2 5/16" min. width
3 1/2"	1 1/2" x 2 5/16" min. width



	2 1/2" Wide Flange		3 1/2" Wide Flange	
	3/8" Thick Web	1/2" Thick Web	3/8" Thick Web	1/2" Thick Web
Minimum Web Stiffener Width	Minimum Web Stiffener Thickness			
	1"		1 1/2"	
	Minimum Nail Size			
	8d Box (2 1/2" x 0.113")		10d Box (3" x 0.128")	
	Total Nails Required			
2 5/16"	4		4	

## PK JOIST WEB HOLES - RULES AND ALLOWABLE LOCATIONS:

# HOLE IN JOIST WEB

When web holes are required in PK Joists, the following equation can be used to determine allowable size and location.

### HOLE SHEAR EQUATIONS

The reduced shear capacity at the location of a hole in an I-Joist is calculated as follows:

Round Holes, Other Hole Shapes, and Clustered Small Holes that may be circumscribed by a round hole:

$$V_{\text{hole}} = V_r (D - \emptyset) / D$$

Where:  $V_r$  = I-Joist shear capacity (with and without web stiffeners, same value)

$D$  = Depth of I-Joist (inches)

$\emptyset$  = Hole Diameter (inches)

$$\text{And } \emptyset_{\text{max}} = D - 2(t_{\text{flange}}) - 0.25$$

Where:

$t_{\text{flange}}$  = I-Joist flange thickness (inches)

Square, Rectangular, Oblong, and Clustered Small Holes that may not be circumscribed by a round hole:

$$V_{\text{hole}} = V_r (D - \frac{4}{3}(h_{\text{hole,max}})) / D$$

Where:  $V_r$  = I-Joist shear capacity (with and without web stiffeners, same value)

$h_{\text{hole,max}}$  = max hole height =  $0.75(D - 2(t_{\text{flange}}) - 0.25)$

And  $W_{\text{hole,max}}$  = max hole width with

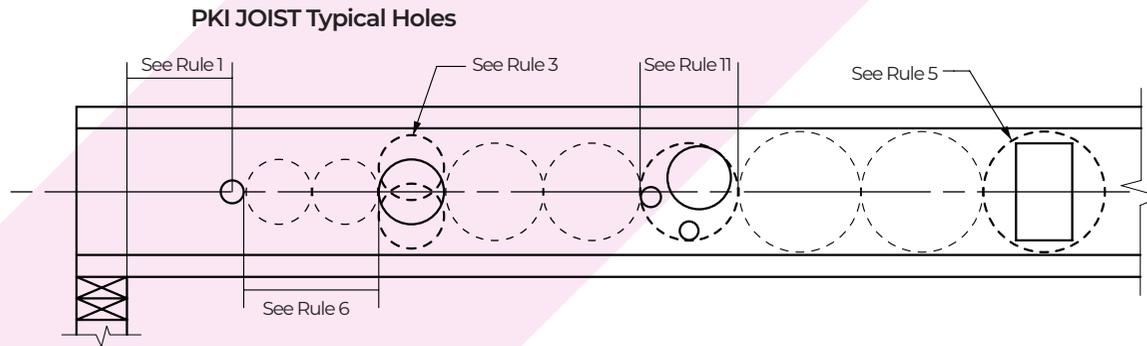
- 24" max for PKI 35-PLUS, PKI 40 and PKI 50

- 20" max for PKI 10, PKI 20 and PKI 23

$t_{\text{flange}}$  = I-Joist flange thickness (inches)



## ALLOWABLE HOLES IN WEB - Size and spacing



One of the benefits of using I-joists in residential construction is that holes may be cut in the joist webs to accommodate electrical wiring, plumbing lines and other mechanical systems, thereby minimizing the depth of the floor system.

### Rules for cutting holes in PK Joists

1. The distance between the inside edge of the support and the centerline of any hole shall be in compliance with the requirements of Table 10 in IAPMO UES ER-431.
2. I-joist top and bottom flange should NEVER be cut, notched or otherwise modified.
3. Whenever possible, field-cut holes should be centered in the middle of the web.
4. The maximum size hole that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus  $\frac{1}{4}$ ". A minimum of  $\frac{1}{8}$ " should always be maintained between the top or bottom of the hole and the adjacent I-joist flange.
5. Square and rectangular holes are permitted in the joist web. See the provided charts for location allowances.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (or twice the length of the longest side of the longest rectangular hole) and each hole must be sized and located in compliance with the requirements of Table 12 in IAPMO UES ER-431.
7. Holes measuring  $1\frac{1}{2}$ " or smaller shall be permitted anywhere in a cantilevered section of a PKI-joist. Holes of a greater size may be permitted subject to verification.
8. A  $1\frac{1}{2}$ " hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
9. All holes shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in the above image.
10. Limit three maximum-size holes per span.
11. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

# PK JOIST ALLOWABLE HOLE LOCATIONS - See IAPMO UES ER-431

Series	Depth	Clear Span	O.C. Spacing	Simple Span for Live Loads up to 40 psf and Dead Loads up to 25 psf									
				Minimum Distance from Inside Face of Bearing to Center of Hole									
				Round and Clustered Round Hole Size (inches)					Square or Rectangular Hole Size (inches)				
	4	6 1/4	8 1/2	10 3/4	12 3/4	4	6 1/4	8 1/2	10 3/4	12 3/4			
PKI 10	9 1/2"	8'	24"	1'-0"	1'-0"		1'-0"	1'-4"					
		10'	1'-0"	1'-6"		1'-0"	2'-5"						
		12'	1'-0"	2'-7"		1'-9"	3'-7"						
		13'	19.2"	1'-0"	2'-3"		1'-2"	3'-4"					
		15'	16"	1'-0"	2'-5"		1'-1"	3'-7"					
		17'	12"	1'-0"	1'-8"		1'-0"	3'-2"					
	11 7/8"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"				
		10'	1'-0"	1'-0"	1'-9"		1'-0"	1'-8"	3'-9"				
		12'	1'-0"	1'-0"	2'-10"		1'-0"	2'-9"	3'-11"				
		14'	1'-0"	1'-5"	4'-0"		1'-0"	3'-11"	5'-1"				
		15'	19.2"	1'-0"	1'-0"	3'-7"		1'-0"	3'-6"	4'-10"			
		17'	16"	1'-0"	1'-0"	3'-10"		1'-0"	3'-7"	5'-3"			
14"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"				
	10'	1'-0"	1'-0"	1'-0"	1'-10"		1'-0"	2'-9"	3'-1"				
	12'	1'-0"	1'-0"	1'-0"	3'-0"		1'-0"	1'-0"	3'-11"	4'-3"			
	14'	1'-0"	1'-0"	1'-10"	4'-2"		1'-0"	1'-10"	5'-1"	5'-5"			
	15'	19.2"	1'-0"	1'-0"	2'-5"	4'-9"		1'-0"	2'-5"	5'-8"	6'-0"		
	17'	16"	1'-0"	2'-2"	5'-0"		1'-0"	2'-0"	6'-0"	6'-5"			
9 1/2"	8'	24"	1'-0"	1'-0"		1'-0"	1'-4"						
	10'	1'-0"	1'-0"	1'-6"		1'-0"	2'-5"						
	12'	1'-0"	2'-7"		1'-9"	3'-7"							
	13'	1'-0"	3'-2"		2'-3"	4'-2"							
	15'	19.2"	1'-0"	3'-4"		2'-2"	4'-5"						
	16'	1'-0"	2'-11"		1'-7"	4'-2"							
PKI 20	11 7/8"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"				
		10'	1'-0"	1'-0"	1'-9"		1'-0"	1'-8"	2'-9"				
		12'	1'-0"	1'-0"	2'-10"		1'-0"	2'-9"	3'-11"				
		14'	1'-0"	1'-5"	4'-0"		1'-0"	3'-11"	5'-1"				
		15'	1'-0"	1'-11"	4'-7"		1'-2"	4'-6"	5'-8"				
		17'	19.2"	1'-0"	1'-6"	4'-9"		1'-0"	4'-7"	6'-0"	6'-5"		
	14"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"			
		10'	1'-0"	1'-0"	1'-0"	1'-10"		1'-0"	1'-0"	2'-9"	3'-1"		
		12'	1'-0"	1'-0"	1'-0"	3'-0"		1'-0"	1'-0"	3'-11"	4'-3"		
		14'	1'-0"	1'-0"	1'-10"	4'-2"		1'-0"	1'-10"	5'-1"	5'-5"		
		15'	19.2"	1'-0"	1'-0"	2'-5"	4'-9"		1'-0"	2'-5"	5'-8"	6'-0"	
		17'	16"	1'-0"	2'-2"	5'-0"		1'-0"	2'-0"	6'-0"	6'-5"		
16"	10'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-4"				
	12'	1'-0"	1'-0"	1'-0"	1'-1"	3'-1"		1'-0"	2'-2"	4'-3"	4'-6"		
	14'	1'-0"	1'-0"	1'-0"	2'-2"	4'-3"		1'-0"	3'-3"	5'-5"	5'-9"		
	16'	1'-0"	1'-0"	1'-2"	3'-3"	5'-5"		1'-0"	1'-2"	4'-5"	6'-7"		
	18'	1'-0"	1'-0"	2'-2"	4'-4"	6'-7"		1'-0"	2'-2"	5'-6"	7'-10"	8'-1"	
	20'	19.2"	1'-0"	1'-0"	1'-6"	4'-1"	6'-10"		1'-0"	1'-5"	5'-6"	8'-2"	

Series	Depth	Clear Span	O.C. Spacing	Simple Span for Live Loads up to 40 psf and Dead Loads up to 25 psf									
				Minimum Distance from Inside Face of Bearing to Center of Hole									
				Round and Clustered Round Hole Size (inches)					Square or Rectangular Hole Size (inches)				
	4	6 1/4	8 1/2	10 3/4	12 3/4	4	6 1/4	8 1/2	10 3/4	12 3/4			
PKI 23	9 1/2"	8'	24"	1'-0"	1'-0"		1'-0"	1'-4"					
		10'	1'-0"	1'-0"	1'-0"		1'-0"	2'-9"	3'-11"				
		12'	1'-0"	2'-9"		1'-9"	3'-7"						
		14'	19.2"	1'-0"	2'-8"		1'-1"	3'-7"					
		16'	1'-0"	2'-1"		1'-0"	3'-2"						
		19'	12"	1'-0"	1'-0"		1'-0"	1'-0"	1'-8"				
	11 7/8"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"				
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"			
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	2'-9"	3'-1"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-9"	4'-3"		
		15'	19.2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-10"	5'-3"		
		17'	16"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	5'-3"	6'-0"		
14"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"				
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	2'-9"	3'-1"			
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-9"	4'-3"			
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-10"	5'-3"			
	15'	19.2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	5'-3"	6'-0"			
	17'	16"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	6'-0"	6'-5"			
16"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"				
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	2'-9"	3'-1"			
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-9"	4'-3"			
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-10"	5'-3"			
	15'	19.2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	5'-3"	6'-0"			
	17'	16"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	6'-0"	6'-5"			
PKI 35-PLUS	9 1/2"	8'	24"	1'-0"	1'-6"		1'-0"	1'-4"					
		10'	1'-0"	2'-7"		1'-0"	2'-5"	5'-10"					
		12'	1'-0"	3'-9"		1'-0"	3'-7"						
		14'	19.2"	1'-0"	3'-6"		1'-0"	3'-6"	6'-8"				
		16'	1'-0"	2'-9"		1'-0"	2'-9"						
		19'	12"	1'-0"	1'-0"		1'-0"	1'-0"	1'-8"				
	11 7/8"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"				
		10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"			
		12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	2'-9"	3'-1"		
		14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-9"	4'-3"		
		15'	19.2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-10"	5'-3"		
		17'	16"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	5'-3"	6'-0"		
14"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"				
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	2'-9"	3'-1"			
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-9"	4'-3"			
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-10"	5'-3"			
	15'	19.2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	5'-3"	6'-0"			
	17'	16"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	6'-0"	6'-5"			
16"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	1'-11"				
	10'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	2'-9"	3'-1"			
	12'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	3'-9"	4'-3"			
	14'	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	4'-10"	5'-3"			
	15'	19.2"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	5'-3"	6'-0"			
	17'	16"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-8"	6'-0"	6'-5"			



# PK JOIST ALLOWABLE HOLE LOCATIONS

Series	Depth	Clear Span	O.C. Spacing	Simple Span for Live Loads up to 40 psf and Dead Loads up to 25 psf											
				Minimum Distance from Inside Face of Bearing to Center of Hole											
				Round and Clustered Round Hole Size (inches)						Square or Rectangular Hole Size (inches)					
4	6 ¼	8 ½	10 ¾	12 ¾	4	6 ¼	8 ½	10 ¾	12 ¾	12 ¾	12 ¾				
PKI 50	11 7/8"	8'	24"	1'-0"	1'-0"	1'-0"				1'-0"	1'-0"	1'-0"			
				1'-0"	1'-0"	1'-0"				1'-0"	1'-0"	2'-0"			
				1'-0"	1'-0"	1'-4"				1'-0"	1'-2"	3'-2"			
				1'-0"	1'-0"	2'-5"				1'-0"	2'-2"	4'-4"			
				1'-0"	1'-0"	3'-6"				1'-0"	3'-4"	5'-6"			
				1'-0"	1'-0"	4'-8"				1'-0"	4'-5"	6'-8"			
				1'-0"	2'-0"	5'-9"				1'-0"	5'-7"	7'-10"			
				1'-0"	1'-1"	5'-7"				1'-0"	5'-3"	8'-0"			
				1'-0"	1'-0"	4'-10"				1'-0"	4'-5"	7'-7"			
	1'-0"	1'-0"	3'-5"				1'-0"	2'-10"	6'-10"						
	14"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"				1'-0"	1'-0"	1'-0"	1'-3"	
				1'-0"	1'-0"	1'-0"	1'-0"				1'-0"	1'-0"	2'-0"	2'-4"	
				1'-0"	1'-0"	1'-0"	1'-9"				1'-0"	1'-0"	3'-2"	3'-6"	
				1'-0"	1'-0"	1'-0"	2'-10"				1'-0"	1'-0"	4'-4"	4'-8"	
				1'-0"	1'-0"	1'-0"	4'-0"				1'-0"	1'-0"	5'-6"	5'-10"	
				1'-0"	1'-0"	2'-1"	5'-2"				1'-0"	2'-0"	6'-8"	7'-0"	
				1'-0"	1'-0"	3'-2"	6'-4"				1'-0"	3'-0"	7'-10"	8'-2"	
				1'-0"	1'-1"	4'-3"	7'-6"				1'-0"	4'-2"	9'-0"	9'-4"	
				1'-0"	1'-7"	4'-10"	8'-1"				1'-0"	4'-8"	9'-7"	10'-0"	
	1'-0"	1'-0"	3'-6"	7'-5"				1'-0"	3'-3"	9'-2"	9'-7"				
	1'-0"	1'-0"	2'-9"	7'-3"				1'-0"	2'-5"	9'-4"	9'-10"				
	1'-0"	1'-0"	1'-0"	6'-0"				1'-0"	1'-0"	8'-6"	9'-1"				
	16"	8'	24"	1'-0"	1'-0"	1'-0"	1'-0"	1'-1"		1'-0"	1'-0"	1'-0"	2'-4"	2'-8"	
				1'-0"	1'-0"	1'-0"	1'-0"	2'-1"		1'-0"	1'-0"	1'-0"	3'-6"	3'-9"	
				1'-0"	1'-0"	1'-0"	1'-0"	3'-3"	1'-0"	1'-0"	1'-11"	4'-8"	4'-11"		
				1'-0"	1'-0"	1'-0"	1'-9"	4'-4"	1'-0"	1'-0"	3'-0"	5'-10"	6'-1"		
				1'-0"	1'-0"	1'-0"	2'-10"	5'-6"	1'-0"	1'-0"	4'-2"	7'-0"	7'-4"		
				1'-0"	1'-0"	1'-3"	3'-11"	6'-8"	1'-0"	1'-1"	5'-3"	8'-2"	8'-6"		
				1'-0"	1'-0"	2'-3"	5'-0"	7'-10"	1'-0"	2'-2"	6'-5"	9'-4"	9'-8"		
				1'-0"	1'-0"	3'-4"	6'-2"	9'-1"	1'-0"	3'-6"	7'-7"	10'-7"	10'-11"		
1'-0"				1'-0"	2'-1"	5'-6"	9'-0"	1'-0"	1'-11"	7'-2"	10'-9"	11'-2"			
1'-0"	1'-0"	2'-8"	6'-1"	9'-7"	1'-0"	1'-0"	6'-9"	11'-5"	11'-9"						
1'-0"	1'-0"	1'-5"	5'-5"	9'-7"	1'-0"	1'-2"	7'-4"	11'-7"	12'-0"						
1'-0"	1'-0"	1'-0"	3'-2"	8'-5"	1'-0"	1'-0"	5'-5"	10'-10"	11'-5"						

Series	Depth	Clear Span	O.C. Spacing	Simple Span for Live Loads up to 40 psf and Dead Loads up to 25 psf											
				Minimum Distance from Inside Face of Bearing to Center of Hole											
				Round and Clustered Round Hole Size (inches)						Square or Rectangular Hole Size (inches)					
8 ¾	14 ¾	16 ¾	18 ¾	20 ¾	8 ¾	14 ¾	16 ¾	18 ¾	20 ¾	8 ¾	14 ¾				
PKI 50 DEEP	18"	14'	24"	1'-0"	2'-5"					1'-0"	4'-1"				
				1'-0"	3'-6"					1'-0"	5'-3"				
				1'-0"	4'-8"					1'-3"	6'-5"				
				1'-0"	5'-10"					2'-4"	7'-8"				
				1'-0"	7'-0"					3'-5"	8'-10"				
				1'-0"	8'-2"					4'-6"	10'-0"				
				1'-9"	9'-5"					5'-7"	11'-3"				
				2'-10"	10'-7"					6'-9"	12'-6"				
				3'-11"	11'-9"					8'-11"					
	1'-9"	11'-3"					6'-5"	13'-5"							
	1'-0"	11'-3"					5'-7"	13'-8"							
	1'-0"	10'-2"					2'-11"	13'-2"							
	1'-0"	11'-4"					4'-0"								
	20"	14'	24"	1'-0"	1'-5"	3'-9"				1'-0"	5'-3"	5'-7"			
				1'-0"	2'-6"	4'-11"				1'-0"	6'-5"	6'-9"			
				1'-0"	3'-7"	6'-1"				1'-0"	7'-8"	8'-0"			
				1'-0"	4'-8"	7'-3"				1'-7"	8'-10"	9'-2"			
				1'-0"	5'-10"	8'-5"				2'-7"	10'-0"	10'-5"			
				1'-0"	7'-0"	9'-7"				3'-8"	11'-3"	11'-7"			
				1'-2"	8'-2"	10'-10"				4'-9"	12'-6"				
				2'-3"	9'-4"	12'-0"				5'-10"	13'-8"				
				2'-9"	9'-11"	12'-8"				6'-5"					
	1'-0"	9'-5"	12'-8"				5'-1"	14'-7"	15'-0"						
	1'-3"	10'-0"	13'-4"				5'-8"	15'-2"	15'-7"						
	1'-0"	9'-6"	13'-4"				4'-5"	15'-6"	16'-0"						
	1'-0"	7'-5"	12'-5"				1'-0"	14'-11"	15'-6"						
	1'-0"	8'-0"	13'-0"				1'-5"	15'-7"	16'-2"						
	22"	16'	24"	1'-0"	1'-2"	2'-9"	5'-1"			1'-0"	6'-5"	6'-9"	7'-1"		
				1'-0"	1'-8"	3'-10"	6'-3"			1'-0"	7'-8"	8'-0"	8'-4"		
				1'-0"	2'-9"	5'-0"	7'-5"			1'-0"	8'-10"	9'-2"	9'-6"		
1'-0"				3'-10"	6'-1"	8'-7"			1'-0"	10'-0"	10'-5"	10'-9"			
1'-0"				4'-11"	7'-3"	9'-10"			2'-0"	11'-3"	11'-7"				
1'-0"				6'-1"	8'-5"	11'-0"			3'-0"	12'-6"					
1'-0"				7'-2"	9'-7"	12'-3"			4'-1"	13'-8"					
1'-9"				8'-4"	10'-10"	13'-5"			5'-2"						
1'-0"				7'-4"	10'-4"	13'-7"			3'-6"	15'-2"	15'-7"				
1'-0"	7'-11"	10'-11"	14'-2"			4'-0"	15'-10"	16'-3"							
1'-0"	7'-0"	10'-6"	14'-3"			2'-5"	16'-1"	16'-7"	17'-1"						
1'-0"	7'-7"	11'-1"	14'-10"			2'-11"	16'-9"	17'-2"	17'-8"						
1'-0"	4'-8"	9'-1"	13'-11"			1'-0"	16'-2"	16'-9"	17'-4"						
1'-0"	5'-9"	10'-3"	15'-2"			1'-0"	17'-4"	17'-11"	18'-6"						
24"	16'	24"	1'-0"	1'-2"	1'-3"	3'-0"	5'-3"			1'-0"	4'-7"	6'-9"	7'-1"	7'-5"	
			1'-0"	1'-2"	2'-0"	4'-1"	6'-5"	1'-0"	5'-9"	8'-0"	8'-4"	8'-8"			
			1'-0"	1'-2"	3'-1"	5'-3"	7'-7"	1'-0"	6'-11"	9'-2"	9'-6"				
			1'-0"	2'-1"	4'-2"	6'-5"	8'-10"	1'-0"	8'-1"	10'-5"	10'-9"				
			1'-0"	3'-2"	5'-3"	7'-7"	10'-0"	1'-0"	9'-3"	11'-7"					
			1'-0"	4'-3"	6'-5"	8'-9"	11'-2"	1'-6"	10'-5"						
			1'-0"	5'-4"	7'-7"	9'-11"	12'-5"	2'-6"	11'-8"						
			1'-0"	6'-5"	8'-8"	11'-1"	13'-7"	3'-7"	12'-10"						
			1'-0"	7'-0"	9'-3"	11'-8"	14'-3"	4'-1"	13'-5"						
1'-0"	5'-8"	8'-4"	11'-3"	14'-5"	2'-1"	13'-3"	16'-3"								
1'-0"	6'-9"	9'-6"	12'-5"	15'-7"	3'-2"	14'-6"									
1'-0"	5'-5"	8'-7"	12'-1"	15'-9"	1'-2"	14'-4"	17'-10"								
1'-0"	5'-11"	9'-2"	12'-8"	16'-4"	1'-8"	14'-11"	18'-5"								
1'-0"	2'-4"	6'-5"	10'-9"	15'-6"	1'-0"	13'-6"	17'-11"	18'-6"	19'-1"						
1'-0"	3'-4"	7'-6"	11'-11"	16'-8"	1'-0"	14'-8"	19'-2"	19'-9"	20'-4"						
1'-0"	3'-11"	8'-0"	12'-6"	17'-3"	1'-0"	15'-3"	19'-9"	20'-4"	21'-3"						

## GENERAL NOTES FOR FLOOR SPAN TABLES:

# FLOOR SPAN TABLES

Values shown are maximum allowable spans based on the following assumptions:

- Simple span; horizontal clear distance between supports.
- Uniformly loaded conditions with minimum 1 ½" bearing length and no web stiffeners. Other capacities may be possible with different criteria; contact your PK-USA representative.
- Composite action with horizontal diaphragm sheathing is considered for joist deflection. Span values assume 23/32" OSB rated sheathing is glued and nailed to joists for composite action.
- Floor Total Load deflection limit is L/240.
- Floor Live Load deflection limit is based on the specific limit noted in the tables.
- For multi-span joist design, analyze using Simpson Strong Tie or MiTek software.



# L360 CODE MINIMUM

## PKI 10

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
 (LL Defl= L/360); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 10 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 10-10	18' 4 ½"	15' 10 ½"	14' 5 ½"	12' 11 ½"
PKI 10-12	21' ½"	18' 2 ½"	16' 7 ½"	14' 10 ½"
PKI 10-14	23' 1 ½"	19' 11 ½"	18' 2 ½"	16' 3 ½"

Joist Type	PKI 10 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 10-10	16' 3 ½"	14' ½"	12' 9 ½"	11' 5 ½"
PKI 10-12	18' 7 ½"	16' 1 ½"	14' 8 ½"	13' 1 ½"
PKI 10-14	20' 5 ½"	17' 8 ½"	16' 1 ½"	14' 4 ½"

## PKI 20

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
 (LL Defl= L/360); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 20 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 20-10	19' 11 ½"	17' 4 ½"	15' 9 ½"	14' 1 ½"
PKI 20-12	23' 2 ½"	20' ½"	18' 3 ½"	16' 4 ½"
PKI 20-14	25' 1 ½"	21' 9 ½"	19' 10 ½"	17' 8 ½"
PKI 20-16	26' 11 ½"	23' 3 ½"	21' 3 ½"	19' ½"

Joist Type	PKI 20 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 20-10	17' 9 ½"	15' 4 ½"	14' ½"	12' 6 ½"
PKI 20-12	20' 6 ½"	17' 9 ½"	16' 2 ½"	14' 5 ½"
PKI 20-14	22' 3 ½"	19' 3 ½"	17' 6 ½"	15' 8 ½"
PKI 20-16	23' 10 ½"	20' 7 ½"	18' 10 ½"	16' 10 ½"

# L360 CODE MINIMUM

## PKI 23

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/360); Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 23 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 23-10	16' 3 ½"	14' 8 ½"	13' 8 ½"	12' 7 ½"
PKI 23-12	19' 4 ½"	17' 5 ½"	16' 4 ½"	15' ½"
PKI 23-14	21' 11 ½"	19' 9 ½"	18' 6 ½"	17' 1 ½"
PKI 23-16	24' 3 ½"	21' 11 ½"	20' 6 ½"	18' 11 ½"

Joist Type	PKI 23 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 23-10	16' 3 ½"	14' 8 ½"	13' 8 ½"	12' 7 ½"
PKI 23-12	19' 4 ½"	17' 5 ½"	16' 4 ½"	15' ½"
PKI 23-14	21' 11 ½"	19' 9 ½"	18' 6 ½"	17' ½"
PKI 23-16	24' 3 ½"	21' 11 ½"	20' 6 ½"	17' 1 ½"

## PKI 35-PLUS

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/360); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 35-PLUS - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI35 Plus-10	16' 6 ½"	14' 10 ½"	13' 11 ½"	12' 9 ½"
PKI35 Plus-12	19' 10"	17' 8 ½"	16' 7 ½"	15' 3 ½"
PKI35 Plus-14	22' 4 ½"	20' 1 ½"	18' 10 ½"	17' 4 ½"
PKI35 Plus-16	24' 8 ½"	22' 3 ½"	20' 10 ½"	19' 2 ½"

Joist Type	PKI 35-PLUS - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI35 Plus-10	16' 6 ½"	14' 10 ½"	13' 11 ½"	12' 9 ½"
PKI35 Plus-12	19' 8 ½"	17' 8 ½"	16' 7 ½"	15' 3 ½"
PKI35 Plus-14	22' 4 ½"	20' 1 ½"	18' 10 ½"	17' 2 ½"
PKI35 Plus-16	24' 8 ½"	22' 3 ½"	20' 6 ½"	17' 4 ½"

# L360 CODE MINIMUM

## PKI 40

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/360); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 40 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 40-10	18' 2 ½"	16' 3 ½"	15' 2 ½"	14' ½"
PKI 40-12	21' 7 ½"	19' 5 ½"	18' 1 ½"	16' 8 ½"
PKI 40-14	24' 6 ½"	22' ½"	20' 7 ½"	18' 11 ½"
PKI 40-16	27' 2 ½"	24' 5 ½"	22' 10 ½"	21' ½"
PKI 40-18	29' 7 ½"	26' 8 ½"	24' 11 ½"	22' 11 ½"
PKI 40-20	32' ½"	28' 10 ½"	27' ½"	24' 10 ½"
PKI 40-22	34' 4 ½"	31' ½"	29' ½"	26' 9 ½"
PKI 40-24	36' 8 ½"	33' 1 ½"	30' 11 ½"	28' 6 ½"

Joist Type	PKI 40 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 40-10	18' 2 ½"	16' 4 ½"	15' 3 ½"	14' 1 ½"
PKI 40-12	21' 7 ½"	19' 6 ½"	18' 2 ½"	16' 9 ½"
PKI 40-14	24' 6 ½"	22' 1 ½"	20' 8 ½"	19' ½"
PKI 40-16	27' 2 ½"	24' 6 ½"	22' 11 ½"	21' 1 ½"
PKI 40-18	29' 7 ½"	26' 8 ½"	24' 11 ½"	22' 11 ½"
PKI 40-20	32' ½"	28' 10 ½"	27' ½"	24' 10 1/2"
PKI 40-22	34' 4 ½"	31' ½"	29' ½"	26' 9 1/2"
PKI 40-24	36' 8 ½"	33' 1 ½"	30' 11 ½"	28' 4 1/2"

# L360 CODE MINIMUM

## PKI 50

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/360); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 50 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 50-12	22' 4 ½"	20' 1 ½"	18' 10 ½"	17' 3 ½"
PKI 50-14	25' 3 ½"	22' 9 ½"	21' 3 ½"	19' 7 ½"
PKI 50-16	27' 11 ½"	25' 2 ½"	23' 6 ½"	21' 8 ½"
PKI 50-18	30' 5 ½"	27' 5 ½"	25' 8 ½"	23' 7 ½"
PKI 50-20	32' 4 ½"	29' 2 ½"	27' 4 ½"	25' 2 ½"
PKI 50-22	34' 9 ½"	31' 4 ½"	29' 4 ½"	27' ½"
PKI 50-24	37' 1 ½"	33' 5 ½"	31' 3 ½"	28' 10 ½"

Joist Type	PKI 50 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 50-12	22' 4 ½"	20' 1 ½"	18' 10 ½"	17' 3 ½"
PKI 50-14	25' 3 ½"	22' 9 ½"	21' 3 ½"	19' 7 ½"
PKI 50-16	27' 11 ½"	25' 2 ½"	23' 6 ½"	21' 8 ½"
PKI 50-18	30' 5 ½"	27' 5 ½"	25' 8 ½"	23' 7 ½"
PKI 50-20	32' 4 ½"	29' 2 ½"	27' 4 ½"	25' 2 ½"
PKI 50-22	34' 9 ½"	31' 4 ½"	29' 4 ½"	27' ½"
PKI 50-24	37' 1 ½"	33' 5 ½"	31' 3 ½"	28' 10 ½"

# L480 RECOMMENDED MINIMUM

## PKI 10

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/480); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 10 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 10-10	17' 4 ½"	15' 10 ½"	14' 5 ½"	12' 11 ½"
PKI 10-12	20' 8 ½"	18' 2 ½"	16' 7 ½"	14' 10 ½"
PKI 10-14	23' 1 ½"	19' 11 ½"	18' 2 ½"	16' 3 ½"

Joist Type	PKI 10 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 10-10	16' 3 ½"	14' ½"	12' 9 ½"	11' 5 ½"
PKI 10-12	18' 7 ½"	16' 1 ½"	14' 8 ½"	13' 1 ½"
PKI 10-14	20' 5 ½"	17' 8 ½"	16' 1 ½"	14' 4 ½"

## PKI 20

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/480); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 20 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 20-10	18' ½"	16' 3 ½"	15' 3 ½"	14' 1 ½"
PKI 20-12	21' 5 ½"	19' 4 ½"	18' 2 ½"	16' 4 ½"
PKI 20-14	24' 4 ½"	21' 9 ½"	19' 10 ½"	17' 8 ½"
PKI 20-16	26' 11 ½"	23' 3 ½"	21' 3 ½"	19' ½"

Joist Type	PKI 20 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 20-10	17' 9 ½"	15' 4 ½"	14' ½"	12' 6 ½"
PKI 20-12	20' 6 ½"	17' 9 ½"	16' 2 ½"	14' 5 ½"
PKI 20-14	22' 3 ½"	19' 3 ½"	17' 6 ½"	15' 8 ½"
PKI 20-16	23' 10 ½"	20' 7 ½"	18' 10 ½"	16' 10 ½"

# L480 RECOMMENDED MINIMUM

## PKI 23

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
 (LL Defl= L/480); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 23 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 23-10	18' 10 ½"	17' ½"	15' 11 ½"	14' 8 ½"
PKI 23-12	22' 4 ½"	20' 2 ½"	18' 11 ½"	17' 5 ½"
PKI 23-14	25' 4 ½"	22' 11 ½"	21' 5 ½"	19' 3 ½"
PKI 23-16	28' ½"	25' 4 ½"	23' 2 ½"	20' 9 ½"

Joist Type	PKI 23 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 23-10	18' 10 ½"	16' 8 ½"	15' 3 ½"	13' 7 ½"
PKI 23-12	22' ½"	19' ½"	17' 4 ½"	15' 6 ½"
PKI 23-14	24' 2 ½"	20' 11 ½"	19' 1 ½"	17' ½"
PKI 23-16	26' 1 ½"	22' 6 ½"	20' 7 ½"	18' 4 ½"

## PKI 35-PLUS

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
 (LL Defl= L/480); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 35-PLUS - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI35 Plus-10	19' 1 ½"	17' 3 ½"	16' 2 ½"	14' 10 ½"
PKI35 Plus-12	22' 10"	20' 6 ½"	19' 2 ½"	17' 8 ½"
PKI35 Plus-14	25' 9 ½"	23' 3 ½"	21' 8 ½"	19' 4 ½"
PKI35 Plus-16	28' 6 ½"	25' 4 ½"	23' 2 ½"	20' 8 ½"

Joist Type	PKI 35-PLUS - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI35 Plus-10	19' 1 ½"	16' 10 ½"	15' 4 ½"	13' 9 ½"
PKI35 Plus-12	22' 2 ½"	19' 2 ½"	17' 6 ½"	15' 8 ½"
PKI35 Plus-14	24' 4 ½"	21' 1 ½"	19' 2 ½"	17' 2 ½"
PKI35 Plus-16	25' 11 ½"	22' 5 ½"	20' 6 ½"	18' 4 ½"

# L480 RECOMMENDED MINIMUM

## PKI 40

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
 (LL Defl= L/480); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 40 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 40-10	21' ½"	18' 10 ½"	17' 8 ½"	16' 3 ½"
PKI 40-12	25' ½"	22' 6 ½"	21' ½"	19' 5 ½"
PKI 40-14	28' 4 ½"	25' 6 ½"	23' 11 ½"	22' ½"
PKI 40-16	31' 4 ½"	28' 3 ½"	26' 5 ½"	24' 5 ½"
PKI 40-18	34' 2 ½"	30' 10 ½"	28' 11 ½"	26' 8 ½"
PKI 40-20	36' 11 ½"	33' 5 ½"	31' 3 ½"	28' 10 ½"
PKI 40-22	39' 8 ½"	35' 10 ½"	33' 7 ½"	30' 10 ½"
PKI 40-24	42' 4 ½"	38' 3 ½"	35' 10 ½"	32' ½"

Joist Type	PKI 40 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 40-10	21' ½"	18' 11 ½"	17' 9 ½"	16' 4 ½"
PKI 40-12	25' ½"	22' 7 ½"	21' 1 ½"	19' 6 ½"
PKI 40-14	28' 4 ½"	25' 7 ½"	24' ½"	21' 8 ½"
PKI 40-16	31' 4 ½"	28' 4 ½"	26' 2 ½"	23' 4 ½"
PKI 40-18	34' 2 ½"	30' 5 ½"	27' 9 ½"	24' 9 ½"
PKI 40-20	36' 11 ½"	32' ½"	29' 2 ½"	26' 1 ½"
PKI 40-22	34' ½"	33' 6 ½"	30' 7 ½"	27' 4 ½"
PKI 40-24	40' 3 ½"	34' 10 ½"	31' 9 ½"	28' 4 ½"

# L480 RECOMMENDED MINIMUM

## PKI 50

40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
 (LL Defl= L/480); Simple Spans (ft-in)

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 50 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 50-12	25' 10 ½"	23' 4 ½"	21' 10 ½"	20' 1 ½"
PKI 50-14	29' 2 ½"	26' 4 ½"	24' 8 ½"	22' 9 ½"
PKI 50-16	32' 3 ½"	29' 1 ½"	27' 3 ½"	24' 8 ½"
PKI 50-18	35' 2 ½"	31' 9 ½"	29' 8 ½"	27' 5 ½"
PKI 50-20	37' 4 ½"	33' 9 ½"	31' 7 ½"	29' 2 ½"
PKI 50-22	40' 1 ½"	36' 3 ½"	34' ½"	31' 4 ½"
PKI 50-24	42' 9 ½"	38' 8 ½"	36' 3 ½"	33' 5 ½"

Joist Type	PKI 50 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 50-12	25' 10 ½"	23' 4 ½"	21' 10 ½"	20' 1 ½"
PKI 50-14	29' 2 ½"	26' 4 ½"	24' 8 ½"	22' 9 ½"
PKI 50-16	32' 3 ½"	29' 1 ½"	27' 3 ½"	24' 6 ½"
PKI 50-18	35' 2 ½"	31' 9 ½"	29' 8 ½"	26' 9 ½"
PKI 50-20	37' 4 ½"	33' 9 ½"	31' 6 ½"	28' 2 ½"
PKI 50-22	40' 1 ½"	35' 1 ½"	32' ½"	28' 7 ½"
PKI 50-24	42' 3 ½"	36' 7 ½"	33' 4 ½"	29' 10 ½"

# L720 SUPERIOR

## PKI 10

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/720); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 10 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 10-10	18' 4 ½"	15' 10 ½"	14' 5 ½"	12' 11 ½"
PKI 10-12	21' ½"	18' 2 ½"	16' 7 ½"	14' 10 ½"
PKI 10-14	23' 1 ½"	19' 11 ½"	18' 2 ½"	16' 3 ½"

Joist Type	PKI 10 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 10-10	16' 3 ½"	14' ½"	12' 9 ½"	11' 5 ½"
PKI 10-12	18' 7 ½"	16' 1 ½"	14' 8 ½"	13' 1 ½"
PKI 10-14	20' 5 ½"	17' 8 ½"	16' 1 ½"	14' 4 ½"

## PKI 20

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/720); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 20 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 20-10	19' 11 ½"	17' 4 ½"	15' 9 ½"	14' 1 ½"
PKI 20-12	23' 2 ½"	20' ½"	18' 3 ½"	16' 4 ½"
PKI 20-14	25' 1 ½"	21' 9 ½"	19' 10 ½"	17' 8 ½"
PKI 20-16	26' 11 ½"	23' 3 ½"	21' 3 ½"	19' ½"

Joist Type	PKI 20 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 20-10	17' 9 ½"	15' 4 ½"	14' ½"	12' 6 ½"
PKI 20-12	20' 6 ½"	17' 9 ½"	16' 2 ½"	14' 5 ½"
PKI 20-14	22' 3 ½"	19' 3 ½"	17' 6 ½"	15' 8 ½"
PKI 20-16	23' 10 ½"	20' 7 ½"	18' 10 ½"	16' 10 ½"

# L720 SUPERIOR

## PKI 23

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/720); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 23 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 23-10	20' 10 ½"	18' 10 ½"	17' 2 ½"	15' 4 ½"
PKI 23-12	24' 9 ½"	21' 6 ½"	19' 7 ½"	17' 6 ½"
PKI 23-14	27' 4 ½"	23' 7 ½"	21' 6 ½"	19' 3 ½"
PKI 23-16	29' 5 ½"	25' 5 ½"	23' 2 ½"	20' 9 ½"

Joist Type	PKI 23 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 23-10	19' 4 ½"	16' 8 ½"	15' 3 ½"	13' 7 ½"
PKI 23-12	22' ½"	19' ½"	17' 4 ½"	15' 6 ½"
PKI 23-14	24' 2 ½"	20' 11 ½"	19' 1 ½"	17' ½"
PKI 23-16	26' 1 ½"	22' 6 ½"	20' 7 ½"	18' 4 ½"

## PKI 35-PLUS

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/720); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 35-PLUS - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI35 Plus-10	21' 2 ½"	19' ½"	17' 4 ½"	15' 6 ½"
PKI35 Plus-12	25' 3"	21' 8 ½"	19' 9 ½"	17' 8 ½"
PKI35 Plus-14	27' 6 ½"	23' 9 ½"	21' 8 ½"	19' 4 ½"
PKI35 Plus-16	28' 7 ½"	25' 4 ½"	23' 2 ½"	20' 8 ½"

Joist Type	PKI 35-PLUS - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI35 Plus-10	19' 6 ½"	16' 10 ½"	15' 4 ½"	13' 9 ½"
PKI35 Plus-12	22' 2 ½"	19' 2 ½"	17' 6 ½"	15' 8 ½"
PKI35 Plus-14	24' 4 ½"	21' 1 ½"	19' 2 ½"	17' 2 ½"
PKI35 Plus-16	25' 11 ½"	22' 5 ½"	20' 6 ½"	18' 4 ½"

# L720 SUPERIOR

## PKI 40

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/720); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 40 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 40-10	23' 3 1/2"	20' 11 1/2"	19' 7 1/2"	18' 1 1/2"
PKI 40-12	27' 8 1/2"	24' 11 1/2"	23' 4 1/2"	21' 6 1/2"
PKI 40-14	31' 4 1/2"	28' 3 1/2"	26' 6 1/2"	24' 5 1/2"
PKI 40-16	34' 8 1/2"	31' 3 1/2"	29' 4 1/2"	26' 4 1/2"
PKI 40-18	37' 9 1/2"	34' 2 1/2"	31' 4 1/2"	28' 1/2"
PKI 40-20	40' 10 1/2"	36' 2 1/2"	33' 1/2"	29' 6 1/2"
PKI 40-22	39' 1/2"	37' 10 1/2"	34' 6 1/2"	30' 10 1/2"
PKI 40-24	45' 5 1/2"	39' 3 1/2"	35' 10 1/2"	32' 1/2"

Joist Type	PKI 40 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 40-10	23' 3 1/2"	21' 1/2"	19' 5 1/2"	17' 4 1/2"
PKI 40-12	27' 8 1/2"	24' 3 1/2"	22' 1 1/2"	19' 9 1/2"
PKI 40-14	30' 9 1/2"	26' 7 1/2"	24' 3 1/2"	24' 6 1/2"
PKI 40-16	33' 2 1/2"	28' 8 1/2"	26' 2 1/2"	23' 4 1/2"
PKI 40-18	35' 2 1/2"	30' 5 1/2"	27' 9 1/2"	24' 9 1/2"
PKI 40-20	37' 1/2"	32' 1/2"	29' 2 1/2"	26' 1 1/2"
PKI 40-22	34' 1/2"	33' 6 1/2"	30' 7 1/2"	27' 4 1/2"
PKI 40-24	40' 3 1/2"	34' 10 1/2"	31' 9 1/2"	28' 4 1/2"

# L720 SUPERIOR

## PKI 50

**40 LL/15 DL and 40 LL/30 DL – Loads in (psf)  
(LL Defl= L/720); Simple Spans (ft-in)**

Note: Published allowable simple spans are measured to the face of support (clear span)

Joist Type	PKI 50 - 40/15 o.c. Spacing (in)			
	12	16	19.2	24
PKI 50-12	28' 7 ½"	25' 10 ½"	24' 2 ½"	22' 4 ½"
PKI 50-14	32' 4 ½"	29' 2 ½"	27' 4 ½"	25' 3 ½"
PKI 50-16	35' 8 ½"	32' 3 ½"	30' 3 ½"	24' 8 ½"
PKI 50-18	38' 10 ½"	35' 2 ½"	32' 11 ½"	30' 2 ½"
PKI 50-20	41' 4 ½"	37' 4 ½"	35' 1 ½"	31' 10 ½"
PKI 50-22	44' 4 ½"	39' 7 ½"	36' 2 ½"	32' 3 ½"
PKI 50-24	47' 4 ½"	41' 3 ½"	37' 8 ½"	33' 8 ½"

Joist Type	PKI 50 - 40/30 o.c. Spacing (in)			
	12	16	19.2	24
PKI 50-12	28' 7 ½"	25' 10 ½"	23' 8 ½"	21' 1 ½"
PKI 50-14	32' 3 ½"	27' 10 ½"	25' 5 ½"	25' 3 ½"
PKI 50-16	34' 8 ½"	30' ½"	27' 5 ½"	24' 6 ½"
PKI 50-18	37' 11 ½"	32' 10 ½"	29' 11 ½"	26' 9 ½"
PKI 50-20	39' 11 ½"	34' 7 ½"	31' 6 ½"	28' 2 ½"
PKI 50-22	40' 7 ½"	35' 1 ½"	32' ½"	28' 7 ½"
PKI 50-24	42' 3 ½"	36' 7 ½"	33' 4 ½"	29' 10 ½"

## GENERAL NOTES FOR FLOOR LOAD TABLES:

# FLOOR LOAD TABLES

Values shown are maximum allowable load capacities based on the following assumptions:

- Simple span; horizontal clear distance between supports
- Uniformly loaded conditions with minimum 1 ½" bearing length and no web stiffeners. Other capacities may be possible with different criteria; contact your PK-USA representative.
- Composite action with horizontal diaphragm sheathing is not considered for joist deflection.
- Floor Total Load deflection limit is  $L/240$ .
- Floor Live Load deflection limit is  $L/480$ .
- (-) Indicates Total Load (TL) value controls.
- For multi-span joist design, analyze using Simpson Strong Tie or MiTek software.



## PKI 10 Allowable Uniform Floor Loading (100% Load Duration)

Span Length (ft)	PKI 10-10		PKI 10-12		PKI 10-14	
	Live Load (plf)	Total Load (plf)	Live Load (plf)	Total Load (plf)	Live Load (plf)	Total Load (plf)
6	-	420	-	495	-	560
7	-	360	-	424	-	480
8	284	296	-	371	-	420
9	209	234	-	306	-	367
10	158	189	-	248	-	298
11	122	156	198	205	-	246
12	96	131	157	172	-	207
13	77	112	126	147	-	176
14	62	97	103	127	147	152
15	51	84	85	110	122	132
16	43	74	71	97	102	116
17	-	-	60	86	86	103
18	-	-	51	77	73	92
19	-	-	43	69	63	82
20	-	-	-	-	54	74
21	-	-	-	-	47	67
22	-	-	-	-	41	61
23	-	-	-	-	-	-
24	-	-	-	-	-	-
25	-	-	-	-	-	-
26	-	-	-	-	-	-
27	-	-	-	-	-	-
28	-	-	-	-	-	-
29	-	-	-	-	-	-
30	-	-	-	-	-	-

## PKI 20 Allowable Uniform Floor Loading (100% Load Duration)

Span Length (ft)	PKI 20-10		PKI 20-12		PKI 20-14		PKI 20-16	
	Live Load (plf)	Total Load (plf)						
6	-	420	-	495	-	560	-	623
7	-	360	-	424	-	480	-	534
8	-	315	-	371	-	420	-	468
9	234	278	-	330	-	373	-	416
10	177	225	283	297	-	336	-	374
11	137	186	221	248	-	291	-	335
12	108	156	176	209	-	245	-	281
13	87	133	142	178	201	209	-	240
14	71	115	116	153	165	180	-	207
15	58	100	96	134	136	157	-	180
16	48	88	80	117	114	138	152	158
17	41	78	67	104	97	122	129	140
18	-	-	57	93	82	109	110	125
19	-	-	49	83	71	98	95	112
20	-	-	42	75	61	88	82	101
21	-	-	-	-	53	80	71	92
22	-	-	-	-	47	73	63	84
23	-	-	-	-	41	67	55	77
24	-	-	-	-	-	-	49	70
25	-	-	-	-	-	-	43	65
26	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-

## PKI 23 Allowable Uniform Floor Loading (100% Load Duration)

Span Length (ft)	PKI 23-10		PKI 23-12		PKI 23-14		PKI 23-16	
	Live Load (plf)	Total Load (plf)						
6	-	420	-	495	-	560	-	623
7	-	360	-	424	-	480	-	534
8	-	315	-	371	-	420	-	468
9	265	280	-	330	-	373	-	416
10	202	252	-	297	-	336	-	374
11	157	220	250	270	-	305	-	340
12	124	185	199	240	278	280	-	312
13	100	158	161	204	226	246	-	285
14	81	136	132	176	186	212	244	246
15	67	118	109	154	155	185	204	214
16	56	104	91	135	130	163	172	188
17	47	92	77	120	110	144	146	167
18	40	80	66	107	94	128	125	149
19	-	-	56	96	81	115	107	134
20	-	-	49	86	70	104	93	121
21	-	-	42	78	61	94	81	109
22	-	-	-	-	53	86	71	100
23	-	-	-	-	47	79	63	91
24	-	-	-	-	42	72	56	84
25	-	-	-	-	-	-	50	77
26	-	-	-	-	-	-	44	71
27	-	-	-	-	-	-	40	66
28	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-

## PKI 35-PLUS Allowable Uniform Floor Loading (100% Load Duration)

Span Length (ft)	PKI 35-PLUS-10		PKI 35-PLUS-12		PKI 35-PLUS-14		PKI 35-PLUS-16	
	Live Load (plf)	Total Load (plf)						
6	-	420	-	495	-	560	-	623
7	-	360	-	424	-	480	-	534
8	-	315	-	371	-	420	-	468
9	272	280	-	330	-	373	-	416
10	208	252	-	297	-	336	-	374
11	162	224	258	270	-	305	-	340
12	128	189	206	244	-	280	-	312
13	103	161	167	208	234	249	-	284
14	84	139	137	179	193	215	-	244
15	69	121	113	156	161	187	212	213
16	58	106	95	137	135	165	178	187
17	49	94	80	122	114	146	152	166
18	41	83	68	109	98	130	130	148
19	-	-	59	97	84	117	112	133
20	-	-	51	88	73	105	97	120
21	-	-	44	80	63	96	85	109
22	-	-	-	-	56	87	74	99
23	-	-	-	-	49	80	66	91
24	-	-	-	-	43	73	58	83
25	-	-	-	-	-	-	52	77
26	-	-	-	-	-	-	46	71
27	-	-	-	-	-	-	42	66
28	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-

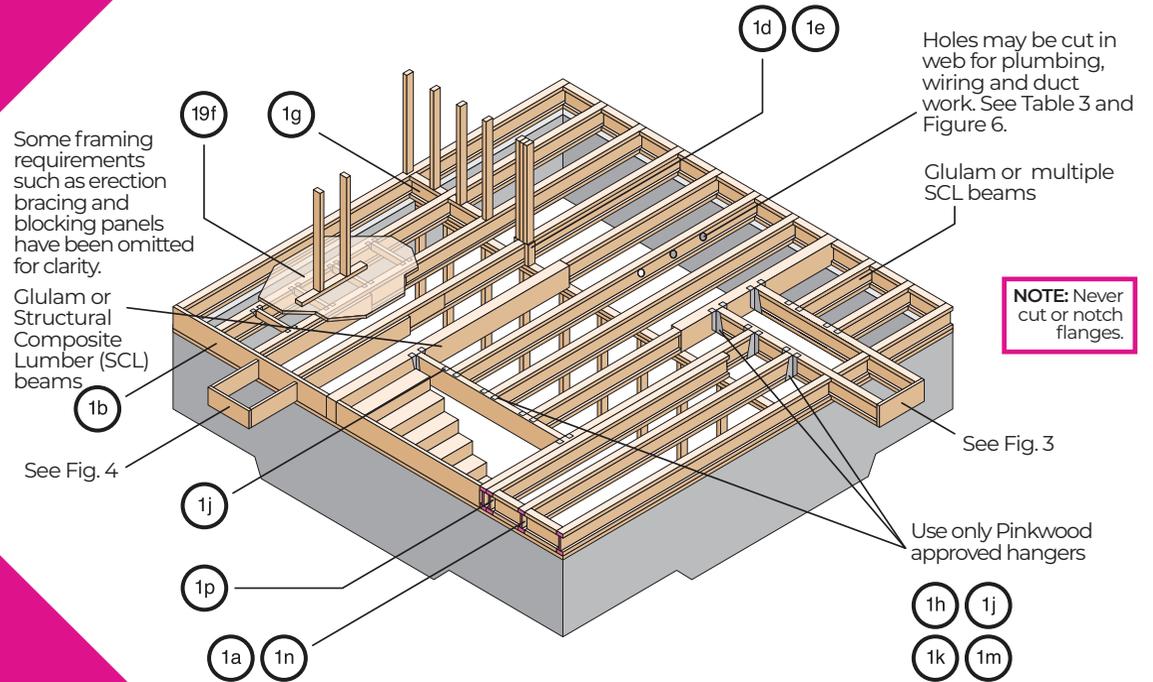
# PKI 40 Allowable Uniform Floor Loading (100% Load Duration)

Span Length (ft)	PKI 40-10		PKI 40-12		PKI 40-14		PKI 40-16		PKI 40-18		PKI 40-20		PKI 40-22		PKI 40-24	
	Live Load (plf)	Total Load (plf)														
6	-	447	-	542	-	625	-	705	-	845	-	893	-	938	-	982
7	-	383	-	464	-	536	-	604	-	724	-	766	-	804	-	841
8	-	335	-	406	-	469	-	529	-	634	-	670	-	704	-	736
9	-	298	-	361	-	417	-	470	-	563	-	596	-	626	-	654
10	-	268	-	325	-	375	-	423	-	507	-	536	-	563	-	589
11	212	244	-	295	-	341	-	385	-	461	-	487	-	512	-	535
12	169	223	267	271	-	313	-	353	-	423	-	447	-	469	-	491
13	137	206	218	250	-	288	-	325	-	390	-	412	-	433	-	453
14	112	191	180	232	251	268	-	302	-	362	-	383	-	402	-	421
15	93	179	150	217	210	250	274	282	-	338	-	357	-	375	-	393
16	78	156	126	203	178	234	233	264	293	317	-	335	-	352	-	368
17	66	132	107	191	152	221	199	249	251	298	308	315	-	331	-	346
18	56	113	92	172	130	207	171	235	217	272	267	298	-	313	-	327
19	48	97	79	154	112	186	148	216	188	244	232	270	280	296	-	310
20	42	84	69	137	98	168	129	195	164	220	203	244	245	267	-	290
21	-	-	60	120	85	152	113	177	144	200	178	221	216	242	257	263
22	-	-	53	105	75	139	100	161	127	182	158	201	191	220	227	239
23	-	-	46	93	66	127	88	147	113	166	140	184	170	202	202	219
24	-	-	41	82	59	117	78	135	100	153	125	169	151	185	181	201
25	-	-	-	-	52	105	70	125	89	141	111	156	136	171	162	185
26	-	-	-	-	47	94	63	115	80	130	100	144	122	158	146	171
27	-	-	-	-	42	84	56	107	72	121	90	134	110	146	132	159
28	-	-	-	-	-	-	51	99	65	112	81	124	99	136	119	148
29	-	-	-	-	-	-	46	92	59	105	74	116	90	127	108	138
30	-	-	-	-	-	-	42	83	54	98	67	108	82	119	98	129

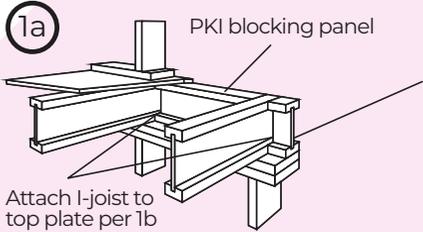
# PKI 50 Allowable Uniform Floor Loading (100% Load Duration)

Span Length (ft)	PKI 50-12		PKI 50-14		PKI 50-16		PKI 50-18		PKI 50-20		PKI 50-22		PKI 50-24	
	Live Load (plf)	Total Load (plf)												
6	-	712	-	760	-	805	-	845	-	893	-	938	-	982
7	-	610	-	651	-	690	-	724	-	766	-	804	-	841
8	-	534	-	570	-	604	-	634	-	670	-	704	-	736
9	-	474	-	507	-	537	-	563	-	596	-	626	-	654
10	-	427	-	456	-	483	-	507	-	536	-	563	-	589
11	354	388	-	415	-	439	-	461	-	487	-	512	-	535
12	287	356	-	380	-	403	-	423	-	447	-	469	-	491
13	235	328	322	351	-	372	-	390	-	412	-	433	-	453
14	194	305	268	326	-	345	-	362	-	383	-	402	-	421
15	162	283	225	304	291	322	-	338	-	357	-	375	-	393
16	137	249	191	285	247	302	311	317	-	335	-	352	-	368
17	116	220	163	255	212	284	267	298	308	315	-	331	-	346
18	100	196	140	227	183	263	231	282	267	298	-	313	-	327
19	86	172	121	204	158	236	201	267	232	282	280	296	-	310
20	75	149	105	184	138	213	175	254	203	268	245	267	-	290
21	65	130	92	167	121	193	154	232	178	255	216	242	257	263
22	57	114	81	152	107	176	136	211	158	234	191	220	227	239
23	51	101	72	139	94	161	121	193	140	214	170	202	202	219
24	45	90	64	127	84	148	107	177	125	197	151	185	181	201
25	40	80	57	113	75	136	96	163	111	181	136	171	162	185
26	-	-	51	101	67	126	86	151	100	168	122	158	146	171
27	-	-	46	91	60	117	78	140	90	156	110	146	132	159
28	-	-	41	82	55	109	70	130	81	145	99	136	119	148
29	-	-	-	-	49	99	63	121	74	135	90	127	108	138
30	-	-	-	-	45	90	58	114	67	126	82	119	98	129

# FLOOR INSTALLATION DETAILS

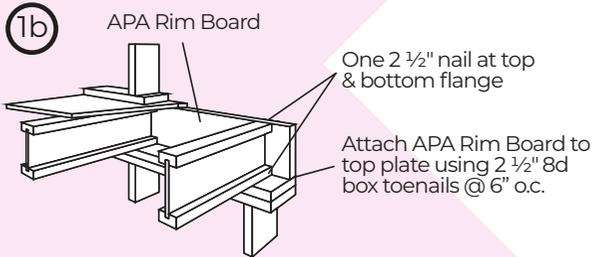


**FLOOR INSTALLATION DETAILS - 1a, 1b, 1d**



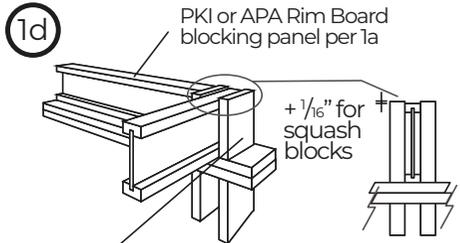
2 ½" 8d box nails at 6" o.c. to top plate (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking).

\* The uniform vertical load is limited to a joist depth of 16" or less and is based on standard term load duration. It shall not be used in the design of a bending member such as joist, header or rafter. For concentrated vertical load transfer capacity, see IAPMO UES ER-431.



\*The uniform vertical load capacity is limited to a rim board depth of 16" or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header or rafter. For concentrated vertical load transfer capacity, see 1d.

One 8d face nail at each side at bearing. To avoid splitting flange, start nails at least 1 ½" from end of i-joist. Nails may be driven at an angle to avoid splitting of bearing plate.

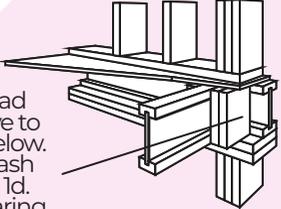


Refer to detail 1q for block bearing capacity.

**FLOOR INSTALLATION DETAILS - 1e, 1f, 1g**

1e

Transfer load from above to bearing below. Install squash blocks per 1d. Match bearing area of blocks below to post above.



1g

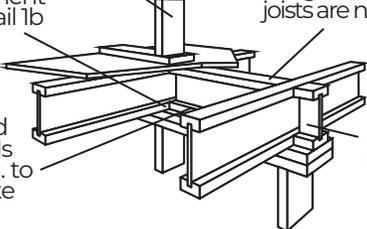
Load bearing wall above shall align vertically with the wall below. Other conditions, such as offset walls, are not covered by this detail.

Joist attachment per detail 1b

Blocking required over all interior supports under load-bearing walls or when floor joists are not continuous over support.

2 1/2" 10d box nails at 6" o.c. to top plate

PKI blocking panel per 1a



1h

Filler block per Figure 1p

Double I-joist header

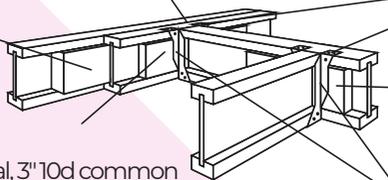
Top-or face-mounted hanger

Backer block (use if hanger load exceeds 250 lbf). Before installing a backer block to a double I-joist, drive (3) additional, 3" 10d common nails through the webs and filler block where the backer block will fit. Clinch. Install backer tight to top flange. Use (12) 3" 10d common nails, clinched when possible. Maximum capacity for hanger for this detail = 1280 lbf.

Backer block required (both sides for face-mounted hangers)

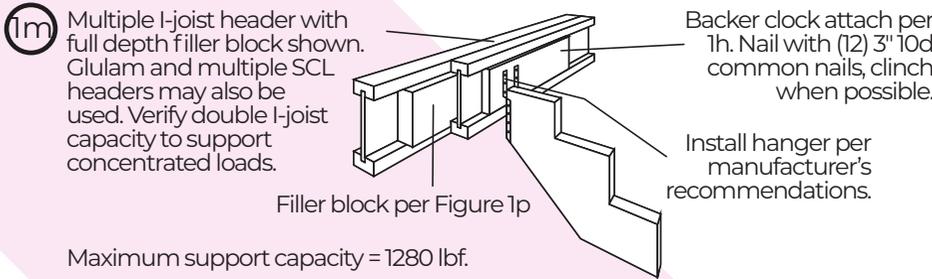
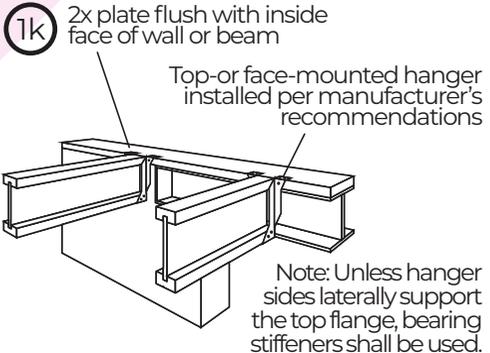
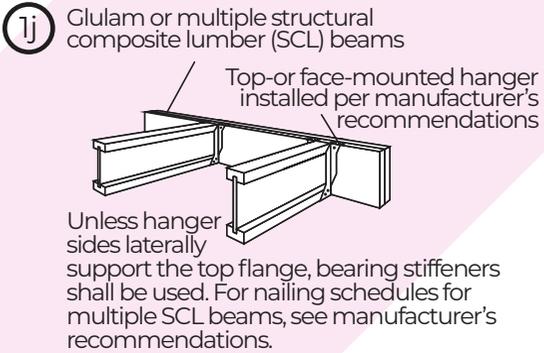
Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

For hanger capacity, see hanger manufacturer's recommendations. Verify double I-joist capacity to support concentrated loads.

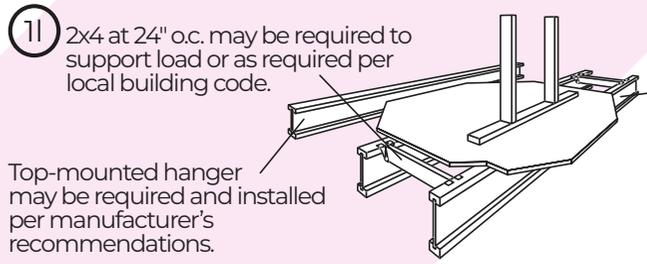


**BACKER BLOCKS** (Blocks must be long enough to permit required nailing without splitting)

**FLOOR INSTALLATION DETAILS - 1j, 1k, 1m**



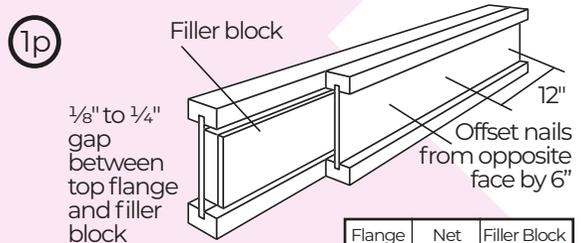
## FLOOR INSTALLATION DETAILS - 1l, 1p



1l 2x4 at 24" o.c. may be required to support load or as required per local building code.

Double joists may be required to support load or as required per local building code.

Top-mounted hanger may be required and installed per manufacturer's recommendations.



1p 1/8" to 1/4" gap between top flange and filler block

Offset nails from opposite face by 6"

Flange Width	Net Depth	Filler Block Size
2 1/2"	9 1/2"	2 1/8" x 6"
	11 7/8"	2 3/8" x 8"
	14"	2 1/8" x 10"
	16"	2 1/8" x 12"
3 1/2"	9 1/2"	3" x 6"
	11 7/8"	3" x 8"
	14"	3" x 10"
	16"	3" x 12"

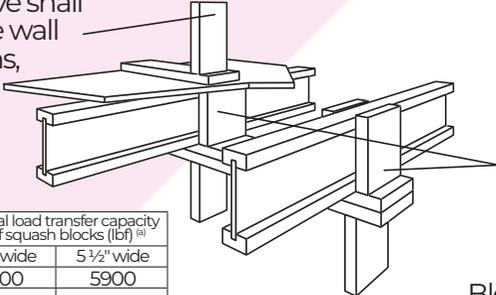
**NOTES:**

1. Support back of I-joist web during nailing to prevent damage to web/flange connection.
2. Leave a 1/8" gap between top of filler block and bottom of top I-joist flange.
3. Filler block is required between joists for full length of span.
4. For flange widths of 2 1/2" or less, nail joists together with two rows of 3" 10d common nails, 12" o.c. (clinched when possible) on each side of the double I-joist (total 4 nails per ft.). For flange widths greater than 2 1/2" use two rows of 3" 10d common nails at 6" o.c. on each side of the double I-joist (total 8 nails per ft.).
5. The maximum load that may be applied to one side of the double joist using this detail is 620 lb./ft.
6. For I-joist depths greater than 16 inches, please contact your PK Joist representative for details.
7. Web fill may be omitted for some loading conditions. Please contact your PK Joist representative for details.

**FLOOR INSTALLATION DETAILS - 1q**

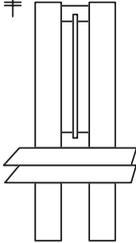
1q

Load bearing wall above shall align vertically with the wall below. Other conditions, such as offset walls, are not covered by this detail.



Squash blocks (+ 1/16" height over joist)

+ 1/16" for squash blocks



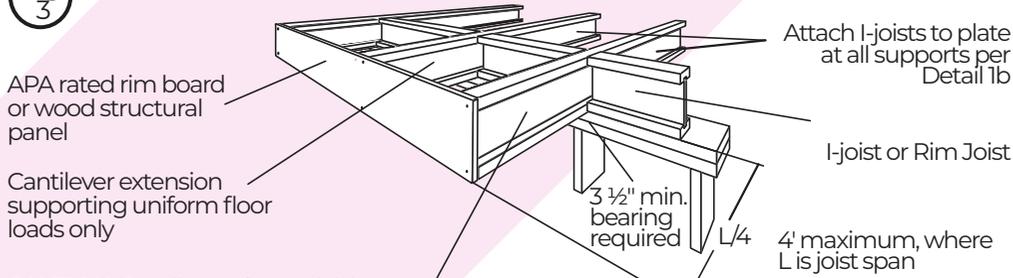
Pair of Squash Blocks	Vertical load transfer capacity pr of squash blocks (lbf) <sup>(1)</sup>	
	3 1/2" wide	5 1/2" wide
2x lumber	3800	5900
1 3/8" APA Rim Board, Rim Board Plus, or Rated Sturd-I-Floor 32 o.c.	2600	4000
1" APA Rim Board, or Rated Sturd-I-Floor 32 o.c.	1900	3000

Blocking may be required at intermediate bearing for floor diaphragm. Consult local building regulations. Squash blocks are assumed to be in full bearing on the plate below.

**FLOOR INSTALLATION DETAILS - Figure 3, 4**

**Fig. 3**

shear capacity = i-joist shear capacity

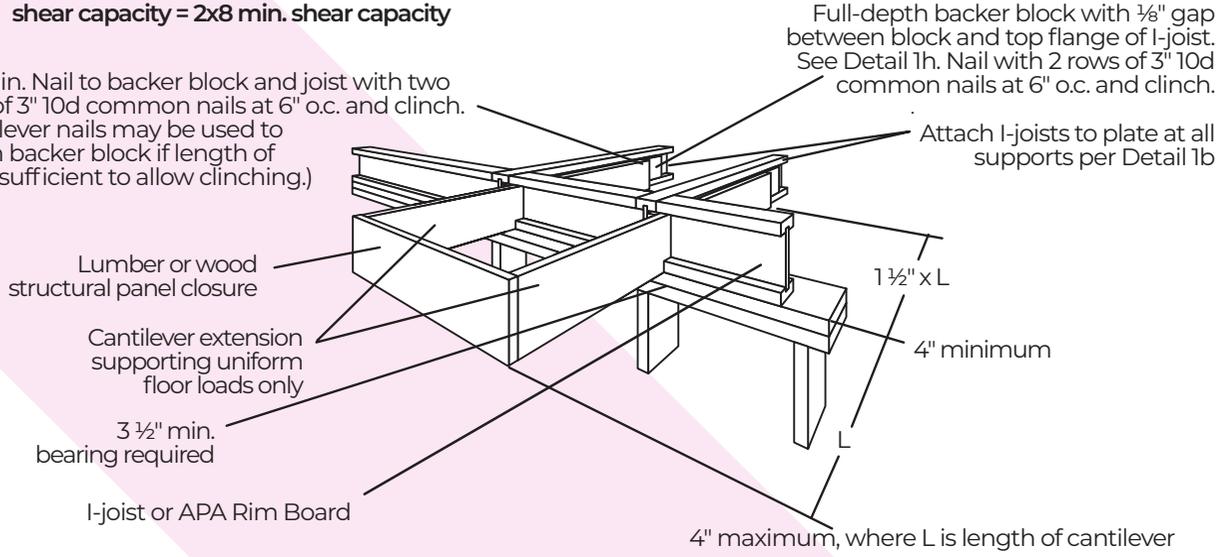


**CAUTION:** Cantilevers formed this way must be carefully detailed to prevent moisture intrusion into the structure and potential decay of untreated I-joist extensions.

**Fig. 4**

shear capacity = 2x8 min. shear capacity

2x8 min. Nail to backer block and joist with two rows of 3" 10d common nails at 6" o.c. and clinch. (Cantilever nails may be used to attach backer block if length of nail is sufficient to allow clinching.)



## FLOOR INSTALLATION DETAILS - Figure 5a

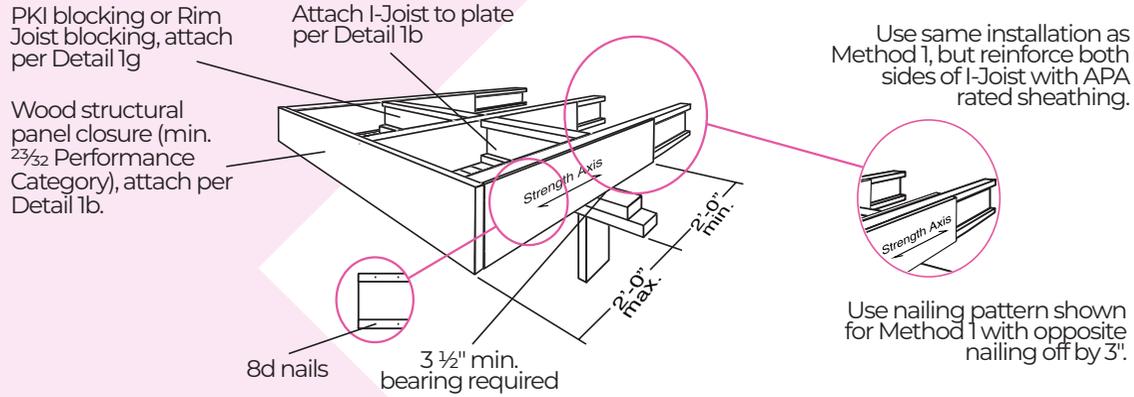
**Fig. 5a** CANTILEVER DETAIL FOR VERTICAL BUILDING OFFSET

**Method 1**  
Sheathing Reinforcement One Side

Shear Capacity = i-Joist shear capacity +  $2\frac{3}{32}$ " OSB's

**Method 2**  
Sheathing Reinforcement Two Sides

Shear Capacity = i-Joist shear capacity (2) +  $2\frac{3}{32}$ " OSB's



APA RATED SHEATHING 48/24 OR APA RATED STURD-I-FLOOR 24 o.c. (min.  $2\frac{3}{32}$  Performance Category) required on sides of joist. Depth shall match the fill height of the joist. Nail with 2  $\frac{1}{2}$ " 8d common nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-Joist to plate at all supports per Detail 1b.

**Notes:**

- 1: Maximum load shall be : 15 psf roof dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3' - 0" maximum width window or door openings. For larger openings, or multiple 3' - 0" width opening spaced less than 6' - 0" o.c., additional joists beneath the opening's cripple studs may be required.
- 2: For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.
- 3: Joists spaced at 12" o.c. require no reinforcement.

**FLOOR INSTALLATION DETAILS - Figure 5b**

**Fig. 5b** CANTILEVER DETAIL FOR VERTICAL BUILDING OFFSET

**Alternative Method 2 Double I-Joist**

Shear Capacity = (2) I-Joist shear capacity

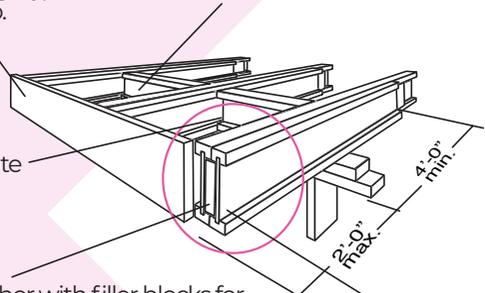
Rim Joist, or wood structural panel closure (min.  $2\frac{3}{32}$  Performance Category), attach per Detail 1b.

PKI blocking panel or Rim Joist blocking, attach per Detail 1g

Attach I-Joist to plate per Detail 1b

Block I-Joists together with filler blocks for the full length of the reinforcement. For I-Joist flange widths greater than 3" place an additional row of 3" 10d common nails along the centerline of the reinforcing panel from each side. Clinch when possible.

Face nail two rows 3" 10d common nails at 12" o.c. each side through one I-Joist web and the filler block to the other I-Joist web. Offset nails from opposite face by 6". Clinch if possible (four nails/ft. required).



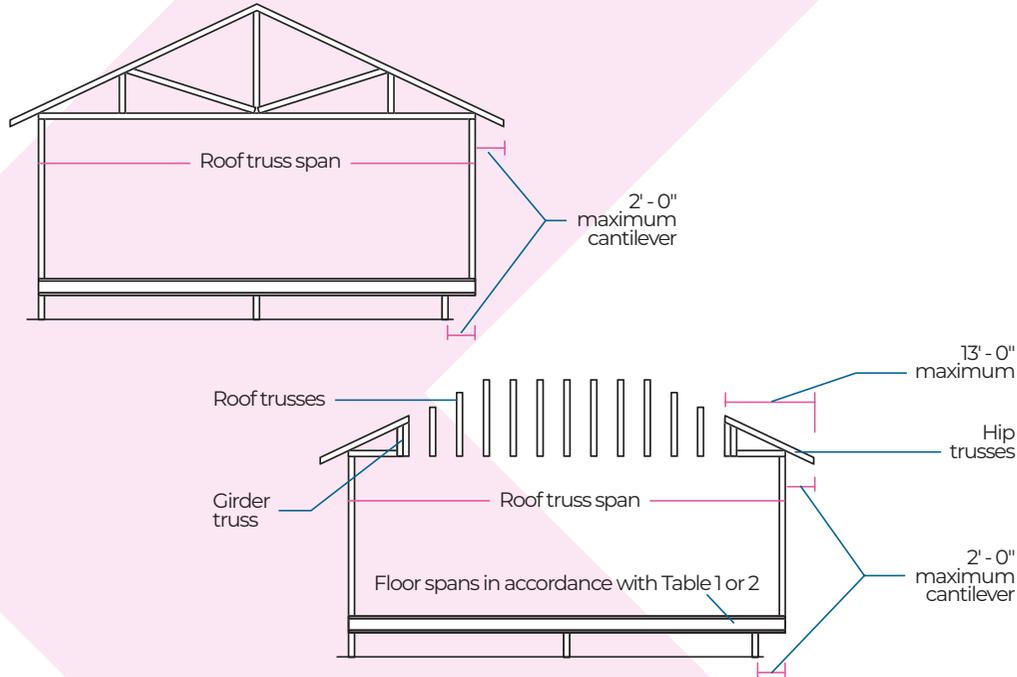
**Notes:**

- 1: Maximum load shall be : 15 psf roof dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3' - 0" maximum width window or door openings. For larger openings, or multiple 3' - 0" width opening spaced less than 6' - 0" o.c., additional joists beneath the opening's cripple studs may be required.
- 2: For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.
- 3: Joists spaced at 12" o.c. require no reinforcement.

## REINFORCED LOAD BEARING CANTILEVER ILLUSTRATIONS

Note: PKI 20 and 40. Call for additional series.

See Table below for PKI reinforcement requirements at cantilever.



For hip roofs with the hip trusses running parallel to the cantilevered floor joists, the I-Joist reinforcements for a span of 26" shall be permitted to be used.

**NOTE:** In all roof and floor details, 10d common nails may be used where 10d is specified unless otherwise specified in IAPMO UES ER-431. 8d common nails may be used where 8d is specified unless otherwise specified in IAPMO UES ER-431.

## REINFORCED LOAD BEARING CANTILEVER TABLES

Note: PKI 20 and 40 only. Call for additional series.

Series	Joist Depth (IN)	Roof Truss Span (FT)	Roof Total Load (PSF)									
			35			45			55			
			Joist Spacing (IN)									
			16	19.22	24	16	19.22	24	16	19.22	24	
PKI 20	9 1/2"	24	0	0	0	0	0	2	0	2	X	
		26	0	0	1	0	1	X	1	2	X	
		28	0	0	1	0	1	X	1	X	X	
		30	0	0	2	0	2	X	2	X	X	
		32	0	0	2	0	2	X	2	X	X	
		34	0	0	X	1	X	X	X	X	X	
		36	0	1	X	1	X	X	X	X	X	
		38	0	1	X	2	X	X	X	X	X	
	40	0	2	X	2	X	X	X	X	X		
	11 3/8"	24	0	0	0	0	0	1	0	0	2	
		26	0	0	0	0	0	1	0	1	X	
		28	0	0	0	0	0	2	0	1	X	
		30	0	0	0	0	0	2	0	2	X	
		32	0	0	1	0	1	X	1	2	X	
		34	0	0	1	0	1	X	1	X	X	
		36	0	0	1	0	1	X	1	X	X	
		38	0	0	2	0	2	X	2	X	X	
	40	0	0	2	0	2	X	2	X	X		
	14"	24	0	0	0	0	0	0	0	0	1	
		26	0	0	0	0	0	0	0	0	2	
		28	0	0	0	0	0	1	0	0	2	
		30	0	0	0	0	0	1	0	1	X	
		32	0	0	0	0	0	1	0	1	X	
		34	0	0	0	0	0	2	0	1	X	
36		0	0	0	0	0	2	0	2	X		
38		0	0	1	0	1	X	1	2	X		
40	0	0	1	0	1	X	1	X	X			
16"	24	0	0	0	0	0	0	0	0	0		
	26	0	0	0	0	0	0	0	0	1		
	28	0	0	0	0	0	0	0	0	1		
	30	0	0	0	0	0	0	0	0	2		
	32	0	0	0	0	0	0	0	0	2		
	34	0	0	0	0	0	1	0	1	2		
	36	0	0	0	0	0	1	0	1	X		
	38	0	0	0	0	0	2	0	1	X		
40	0	0	0	0	0	2	0	2	X			

Series	Joist Depth (IN)	Roof Truss Span (FT)	Roof Total Load (PSF)									
			35			45			55			
			Joist Spacing (IN)									
			16	19.22	24	16	19.22	24	16	19.22	24	
PKI 40	9 1/2"	24	0	0	0	0	0	2	0	1	X	
		26	0	0	0	0	0	2	0	2	X	
		28	0	0	1	0	1	X	1	2	X	
		30	0	0	1	0	1	X	1	X	X	
		32	0	0	2	0	2	X	1	X	X	
		34	0	0	2	0	2	X	2	X	X	
		36	0	0	2	1	2	X	2	X	X	
		38	0	1	X	1	X	X	X	X	X	
	40	0	1	X	1	X	X	X	X	X		
	11 3/8"	24	0	0	0	0	0	0	0	0	1	
		26	0	0	0	0	0	0	0	0	2	
		28	0	0	0	0	0	1	0	0	X	
		30	0	0	0	0	0	1	0	1	X	
		32	0	0	0	0	0	2	0	1	X	
		34	0	0	0	0	0	2	0	2	X	
		36	0	0	1	0	1	X	1	2	X	
		38	0	0	1	0	1	X	1	X	X	
	40	0	0	1	0	1	X	1	X	X		
	14"	24	0	0	0	0	0	0	0	0	0	
		26	0	0	0	0	0	0	0	0	1	
		28	0	0	0	0	0	0	0	0	1	
		30	0	0	0	0	0	0	0	0	2	
		32	0	0	0	0	0	0	0	0	2	
		34	0	0	0	0	0	1	0	1	X	
36		0	0	0	0	0	1	0	1	X		
38		0	0	0	0	0	2	0	1	X		
40	0	0	0	0	0	2	0	2	X			
16"	24	0	0	0	0	0	0	0	0	0		
	26	0	0	0	0	0	0	0	0	0		
	28	0	0	0	0	0	0	0	0	0		
	30	0	0	0	0	0	0	0	0	1		
	32	0	0	0	0	0	0	0	0	1		
	34	0	0	0	0	0	0	0	0	1		
	36	0	0	0	0	0	0	0	0	2		
	38	0	0	0	0	0	1	0	0	2		
40	0	0	0	0	0	1	0	1	X			

**Table Legend:**

- 0 = No reinforcement required. 1 = PKI's reinforced with 2 3/32 Performance Category wood structural panel on one side only.
- 2 = PKI's reinforced with 2 3/32 Performance Category wood structural panel on both sides or double I-joist. X = Try a deeper joist or closer spacing.

**Notes:**

- Maximum load shall be: 15 psf roof dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3' - 0" maximum width window or door openings. For larger openings, or multiple 3' - 0" width opening spaced less than 6' - 0" o.c., additional joists beneath the opening's cripple studs may be required.
- Table applies to joists 16" to 24" o.c.
- For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.
- Joists spaced at 12" o.c. require no reinforcement.

## GENERAL NOTES FOR ROOF SPAN TABLES:

# ROOF SPAN TABLES

Values shown are maximum allowable span capacities based on the following assumptions:

- Simple span; horizontal clear distance between supports.
- Uniformly loaded conditions with minimum 1 ½" bearing length and no webstiffeners. Other capacities may be possible with different criteria; contact your PK-USA representative.
- Positive drainage in roof applications (minimum ¼" per foot slope).
- Composite action with horizontal diaphragm sheathing is not considered for joist deflection.
- Roof Live Load deflection limit is L/240.
- Roof Total Load deflection limit is L/180 with no finished ceiling attached to the rafters.
- For multi-span joist design, analyze using Simpson Strong Tie or MiTek software.
- Allowable spans and loads shall be adjusted and checked for wind loads as required by local building code.



# PKI 10

## ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)	PKI 10-10				PKI 10-12				PKI 10-14				PKI 10-10				PKI 10-12				PKI 10-14			
			≤¾:12	≤¾:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¾:12	≤¾:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¾:12	≤¾:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¾:12	≤¾:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¾:12	≤¾:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¾:12	≤¾:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12
No Snow 125%	20	10	25'-0"	24'-5"	23'-1"	21'-5"	29'-11"	29'-3"	27'-7"	25'-7"	34'-1"	33'-3"	31'-5"	29'-1"	22'-8"	22'-2"	20'-11"	19'-4"	27'-1"	26'-6"	25'-0"	23'-2"	30'-3"	30'-0"	28'-5"	26'-5"
	20	15	23'-9"	23'-2"	21'-9"	20'-1"	28'-5"	27'-8"	26'-0"	24'-0"	32'-4"	31'-6"	29'-7"	27'-4"	21'-6"	21'-0"	19'-8"	18'-2"	25'-6"	25'-1"	23'-7"	21'-9"	28'-0"	27'-8"	26'-10"	24'-9"
	20	20	22'-8"	22'-1"	20'-8"	19'-0"	27'-1"	26'-5"	24'-9"	22'-9"	30'-3"	29'-10"	28'-2"	25'-10"	20'-6"	20'-0"	18'-9"	17'-2"	23'-10"	23'-6"	22'-5"	20'-7"	26'-2"	25'-10"	24'-11"	23'-5"
Snow 115%	25	10	23'-9"	23'-2"	21'-11"	20'-5"	28'-4"	27'-9"	26'-3"	24'-5"	31'-0"	30'-9"	29'-10"	27'-9"	21'-4"	21'-0"	19'-10"	18'-6"	24'-6"	24'-3"	23'-9"	22'-2"	26'-10"	26'-7"	26'-1"	25'-2"
	25	15	22'-8"	22'-2"	20'-10"	19'-3"	26'-5"	26'-2"	24'-11"	23'-1"	29'-0"	28'-9"	27'-11"	26'-3"	19'-11"	19'-9"	18'-10"	17'-5"	22'-10"	22'-8"	22'-1"	20'-11"	25'-1"	24'-10"	24'-2"	23'-4"
	25	20	21'-9"	21'-3"	19'-11"	18'-4"	24'-11"	24'-8"	23'-10"	22'-0"	27'-4"	27'-0"	26'-2"	25'-0"	18'-10"	18'-7"	18'-0"	16'-7"	21'-7"	21'-4"	20'-8"	19'-9"	23'-8"	23'-4"	22'-8"	21'-8"
	30	10	22'-8"	22'-2"	21'-0"	19'-7"	26'-5"	26'-3"	25'-2"	23'-5"	29'-0"	28'-10"	28'-3"	26'-8"	19'-11"	19'-10"	19'-0"	17'-9"	22'-10"	22'-9"	22'-4"	21'-3"	25'-1"	24'-11"	24'-6"	23'-10"
	30	15	21'-9"	21'-3"	20'-1"	18'-7"	24'-11"	24'-8"	24'-0"	22'-3"	27'-4"	27'-1"	26'-5"	25'-4"	18'-10"	18'-7"	18'-2"	16'-10"	21'-7"	21'-4"	20'-10"	20'-2"	23'-8"	23'-5"	22'-10"	22'-2"
	30	20	20'-7"	20'-5"	19'-3"	17'-10"	23'-8"	23'-5"	22'-9"	21'-4"	25'-11"	25'-8"	24'-11"	24'-0"	17'-10"	17'-7"	17'-2"	16'-1"	20'-5"	20'-3"	19'-8"	18'-11"	22'-5"	22'-2"	21'-7"	20'-9"
	40	10	20'-6"	20'-2"	19'-4"	18'-3"	23'-8"	23'-6"	23'-2"	21'-10"	25'-11"	25'-9"	25'-5"	24'-11"	17'-10"	17'-9"	17'-6"	16'-6"	20'-5"	20'-4"	20'-0"	19'-8"	22'-5"	22'-3"	22'-0"	21'-6"
	40	15	19'-8"	19'-6"	18'-9"	17'-6"	22'-6"	22'-4"	21'-11"	20'-11"	24'-8"	24'-6"	24'-0"	23'-5"	17'-0"	16'-10"	16'-6"	15'-10"	19'-6"	19'-4"	18'-11"	18'-5"	21'-4"	21'-2"	20'-9"	20'-3"
	40	20	18'-10"	18'-7"	18'-2"	16'-10"	21'-7"	21'-4"	20'-10"	20'-2"	23'-8"	23'-5"	22'-10"	22'-2"	16'-3"	16'-1"	15'-9"	15'-3"	18'-8"	18'-6"	18'-0"	17'-5"	20'-5"	20'-3"	19'-9"	19'-2"
	50	10	18'-10"	18'-8"	17'-11"	17'-0"	21'-7"	21'-5"	21'-2"	20'-4"	23'-8"	23'-6"	23'-3"	22'-10"	16'-3"	16'-2"	16'-0"	15'-5"	18'-8"	18'-7"	18'-4"	18'-0"	20'-5"	20'-4"	20'-1"	19'-9"
	50	15	18'-1"	17'-11"	17'-8"	16'-7"	20'-8"	20'-7"	20'-3"	19'-4"	22'-8"	22'-7"	22'-2"	21'-8"	15'-7"	15'-6"	15'-3"	14'-11"	17'-11"	17'-9"	17'-6"	17'-1"	19'-7"	19'-6"	19'-2"	18'-9"
	50	20	17'-5"	17'-3"	16'-11"	16'-1"	19'-11"	19'-9"	19'-5"	18'-10"	21'-10"	21'-8"	21'-3"	20'-8"	15'-0"	14'-11"	14'-7"	14'-2"	17'-3"	17'-1"	16'-9"	16'-3"	18'-11"	18'-9"	18'-4"	17'-10"
No Snow 125%	20	10	21'-3"	20'-10"	19'-7"	18'-2"	25'-2"	24'-11"	23'-6"	21'-9"	27'-7"	27'-4"	26'-8"	24'-10"	19'-7"	19'-3"	18'-2"	16'-10"	22'-6"	22'-3"	21'-9"	20'-2"	24'-8"	24'-5"	23'-10"	23'-0"
	20	15	20'-2"	19'-8"	18'-6"	17'-1"	23'-3"	23'-0"	22'-2"	20'-5"	25'-6"	25'-3"	24'-6"	23'-3"	18'-2"	17'-11"	17'-1"	15'-9"	20'-10"	20'-7"	19'-11"	18'-11"	22'-10"	22'-6"	21'-10"	21'-0"
	20	20	19'-0"	18'-9"	17'-7"	16'-2"	21'-9"	21'-6"	20'-9"	19'-4"	23'-10"	23'-6"	22'-9"	21'-8"	16'-11"	16'-9"	16'-2"	14'-11"	19'-5"	19'-2"	18'-6"	17'-8"	21'-4"	21'-0"	20'-4"	19'-5"
Snow 115%	25	10	19'-6"	19'-4"	18'-8"	17'-4"	22'-4"	22'-2"	21'-8"	20'-9"	24'-6"	24'-3"	23'-9"	23'-2"	17'-5"	17'-3"	16'-11"	16'-1"	19'-11"	19'-9"	19'-5"	18'-10"	21'-10"	21'-8"	21'-3"	20'-8"
	25	15	18'-2"	18'-0"	17'-6"	16'-5"	20'-10"	20'-8"	20'-1"	19'-5"	22'-10"	22'-8"	22'-1"	21'-3"	16'-3"	16'-1"	15'-8"	15'-1"	18'-8"	18'-5"	17'-11"	17'-4"	20'-5"	20'-3"	19'-8"	19'-0"
	25	20	17'-2"	16'-11"	16'-5"	15'-7"	19'-8"	19'-5"	18'-10"	18'-0"	21'-7"	21'-4"	20'-8"	19'-9"	15'-4"	15'-1"	14'-8"	14'-0"	17'-7"	17'-4"	16'-10"	16'-1"	19'-3"	19'-0"	18'-5"	17'-8"
	30	10	18'-2"	18'-1"	17'-9"	16'-8"	20'-10"	20'-9"	20'-4"	19'-10"	22'-10"	22'-9"	22'-4"	21'-9"	16'-3"	16'-2"	15'-10"	15'-5"	18'-8"	18'-6"	18'-2"	17'-9"	20'-5"	20'-4"	19'-11"	19'-5"
	30	15	17'-2"	17'-0"	16'-7"	15'-10"	19'-8"	19'-6"	19'-0"	18'-5"	21'-7"	21'-4"	20'-10"	20'-2"	15'-4"	15'-2"	14'-10"	14'-4"	17'-7"	17'-5"	17'-0"	16'-5"	19'-3"	19'-1"	18'-8"	18'-0"
	30	20	16'-3"	16'-1"	15'-7"	15'-0"	18'-8"	18'-5"	17'-11"	17'-3"	20'-5"	20'-3"	19'-8"	18'-11"	14'-6"	14'-4"	13'-11"	13'-5"	16'-8"	16'-5"	16'-0"	15'-5"	18'-3"	18'-1"	17'-7"	16'-11"
	40	10	16'-3"	16'-2"	15'-11"	15'-6"	18'-8"	18'-6"	18'-3"	17'-11"	20'-5"	20'-4"	20'-0"	19'-8"	14'-6"	14'-5"	14'-3"	13'-11"	16'-8"	16'-7"	16'-4"	16'-0"	18'-3"	18'-2"	17'-11"	17'-6"
	40	15	15'-6"	15'-4"	15'-1"	14'-8"	17'-9"	17'-7"	17'-3"	16'-10"	19'-6"	19'-4"	18'-11"	18'-5"	13'-10"	13'-9"	13'-5"	13'-1"	15'-10"	15'-9"	15'-5"	15'-0"	17'-5"	17'-3"	16'-11"	16'-6"
	40	20	14'-10"	14'-8"	14'-4"	13'-10"	17'-0"	16'-10"	16'-5"	15'-11"	18'-8"	18'-6"	18'-0"	17'-5"	13'-3"	13'-1"	12'-9"	12'-4"	15'-2"	15'-0"	14'-8"	14'-2"	16'-6"	16'-6"	15'-11"	14'-11"
	50	10	14'-10"	14'-9"	14'-7"	14'-4"	17'-0"	16'-11"	16'-8"	16'-5"	18'-8"	18'-7"	18'-4"	18'-0"	13'-3"	13'-2"	13'-0"	12'-9"	15'-2"	15'-1"	14'-11"	14'-8"	16'-6"	16'-7"	16'-4"	15'-11"
	50	15	14'-3"	14'-1"	13'-11"	13'-7"	16'-4"	16'-2"	15'-11"	15'-7"	17'-11"	17'-9"	17'-6"	17'-1"	12'-8"	12'-7"	12'-5"	12'-1"	14'-7"	14'-6"	14'-3"	13'-11"	15'-2"	15'-6"	15'-0"	14'-3"
	50	20	13'-8"	13'-7"	13'-4"	12'-11"	15'-8"	15'-7"	15'-3"	14'-10"	17'-3"	17'-1"	16'-9"	16'-3"	12'-3"	12'-1"	11'-10"	11'-6"	14'-0"	13'-11"	13'-8"	13'-0"	14'-7"	14'-4"	13'-9"	13'-0"

# PKI 20 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 20-10				PKI 20-12				PKI 20-14				PKI 20-16			
				≤¼ :12 >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	12" o.c.	26'-2"	25'-7"	24'-2"	22'-5"	31'-4"	30'-7"	28'-10"	26'-9"	35'-7"	34'-9"	32'-10"	30'-5"	39'-6"	38'-7"	36'-5"	33'-9"
	20	15		24'-10"	24'-3"	22'-9"	21'-0"	29'-8"	29'-0"	27'-2"	25'-1"	33'-9"	32'-11"	30'-11"	28'-6"	37'-5"	36'-6"	34'-4"	31'-8"
	20	20		23'-9"	23'-1"	21'-8"	19'-11"	28'-4"	27'-8"	25'-10"	23'-9"	32'-3"	31'-5"	29'-5"	27'-0"	35'-4"	34'-10"	32'-8"	30'-0"
Snow 115%	25	10		24'-10"	24'-4"	23'-0"	21'-4"	29'-8"	29'-0"	27'-5"	25'-6"	33'-9"	33'-0"	31'-3"	29'-0"	36'-3"	35'-11"	34'-7"	32'-3"
	25	15		23'-9"	23'-2"	21'-10"	20'-2"	28'-4"	27'-8"	26'-1"	24'-1"	31'-7"	31'-3"	29'-8"	27'-5"	33'-10"	33'-6"	32'-8"	30'-5"
	25	20		22'-9"	22'-3"	20'-10"	19'-3"	27'-3"	26'-7"	24'-11"	23'-0"	29'-9"	29'-5"	28'-4"	26'-2"	31'-11"	31'-6"	30'-7"	29'-0"
	30	10		23'-9"	23'-3"	22'-0"	20'-6"	28'-4"	27'-9"	26'-3"	24'-6"	31'-7"	31'-4"	29'-11"	27'-10"	33'-10"	33'-8"	33'-0"	30'-11"
	30	15		22'-9"	22'-3"	21'-0"	19'-6"	27'-3"	26'-7"	25'-1"	23'-3"	29'-9"	29'-6"	28'-7"	26'-6"	31'-11"	31'-8"	30'-11"	29'-5"
	30	20		22'-0"	21'-5"	20'-2"	18'-8"	26'-0"	25'-8"	24'-1"	22'-3"	28'-3"	27'-11"	27'-2"	25'-4"	30'-3"	29'-11"	29'-1"	28'-0"
	40	10		21'-6"	21'-2"	20'-3"	19'-1"	25'-8"	25'-3"	24'-3"	22'-10"	28'-3"	28'-1"	27'-7"	26'-0"	30'-3"	30'-1"	29'-8"	28'-10"
	40	15		21'-3"	20'-10"	19'-8"	18'-4"	24'-10"	24'-8"	23'-6"	21'-11"	26'-11"	26'-8"	26'-2"	24'-11"	28'-10"	28'-8"	28'-1"	27'-4"
	40	20		20'-6"	20'-2"	19'-0"	17'-8"	23'-9"	23'-6"	22'-9"	21'-1"	25'-9"	25'-6"	24'-11"	24'-0"	27'-7"	27'-4"	26'-9"	25'-10"
	50	10	19'-11"	19'-7"	18'-9"	17'-10"	23'-9"	23'-5"	22'-5"	21'-3"	25'-9"	25'-7"	25'-4"	24'-2"	27'-7"	27'-6"	27'-2"	26'-8"	
	50	15	19'-8"	19'-7"	18'-7"	17'-5"	22'-10"	22'-8"	22'-3"	20'-10"	24'-9"	24'-7"	24'-2"	23'-7"	26'-6"	26'-4"	25'-11"	25'-4"	
	50	20	19'-0"	18'-10"	18'-1"	16'-10"	22'-0"	21'-10"	21'-4"	20'-2"	23'-10"	23'-8"	23'-2"	22'-6"	25'-6"	25'-4"	24'-10"	24'-2"	
No Snow 125%	20	10	16" o.c.	23'-9"	23'-2"	21'-10"	20'-4"	28'-4"	27'-9"	26'-2"	24'-3"	32'-3"	31'-6"	29'-9"	27'-7"	35'-4"	35'-0"	33'-0"	30'-7"
	20	15		22'-6"	21'-11"	20'-7"	19'-0"	26'-11"	26'-3"	24'-8"	22'-9"	30'-6"	29'-10"	28'-0"	25'-10"	32'-8"	32'-4"	31'-1"	28'-8"
	20	20		21'-6"	20'-11"	19'-7"	18'-0"	25'-8"	25'-0"	23'-5"	21'-6"	28'-6"	28'-1"	26'-8"	24'-6"	30'-7"	30'-2"	29'-1"	27'-2"
Snow 115%	25	10		22'-6"	22'-0"	20'-10"	19'-4"	26'-11"	26'-4"	24'-10"	23'-2"	29'-3"	29'-0"	28'-3"	26'-4"	31'-4"	31'-1"	30'-6"	29'-2"
	25	15		21'-6"	21'-0"	19'-9"	18'-3"	25'-2"	24'-11"	23'-7"	21'-10"	27'-4"	27'-0"	26'-4"	24'-10"	29'-4"	29'-0"	28'-3"	27'-3"
	25	20		20'-6"	20'-1"	18'-11"	17'-5"	23'-9"	23'-6"	22'-7"	20'-10"	25'-9"	25'-5"	24'-8"	23'-8"	27'-7"	27'-3"	26'-5"	25'-4"
	30	10		21'-6"	21'-0"	19'-11"	18'-7"	25'-2"	25'-0"	23'-10"	22'-2"	27'-4"	27'-2"	26'-8"	25'-3"	29'-4"	29'-1"	28'-7"	27'-10"
	30	15		20'-6"	20'-2"	19'-0"	17'-8"	23'-9"	23'-6"	22'-9"	21'-1"	25'-9"	25'-6"	24'-11"	24'-0"	27'-7"	27'-4"	26'-9"	25'-10"
	30	20		19'-5"	19'-3"	18'-3"	16'-11"	22'-6"	22'-3"	21'-8"	20'-2"	24'-5"	24'-2"	23'-6"	22'-7"	26'-2"	25'-11"	25'-2"	24'-3"
	40	10		19'-5"	19'-1"	18'-4"	17'-4"	22'-6"	22'-5"	21'-11"	20'-8"	24'-5"	24'-3"	23'-11"	23'-5"	26'-2"	26'-0"	25'-8"	25'-2"
	40	15		18'-6"	18'-5"	17'-10"	16'-7"	21'-5"	21'-4"	20'-11"	19'-10"	23'-3"	23'-1"	22'-8"	22'-0"	24'-11"	24'-9"	24'-3"	23'-8"
	40	20		17'-9"	17'-7"	17'-2"	16'-0"	20'-6"	20'-4"	19'-10"	19'-1"	22'-3"	22'-1"	21'-6"	20'-10"	23'-10"	23'-8"	23'-1"	22'-4"
	50	10	17'-9"	17'-8"	17'-0"	16'-1"	20'-6"	20'-5"	20'-2"	19'-3"	22'-3"	22'-2"	21'-11"	21'-6"	23'-10"	23'-9"	23'-6"	23'-1"	
	50	15	17'-0"	16'-11"	16'-8"	15'-9"	19'-9"	19'-7"	19'-3"	18'-10"	21'-4"	21'-3"	20'-11"	20'-5"	22'-11"	22'-9"	22'-5"	21'-11"	
	50	20	16'-5"	16'-3"	15'-11"	15'-3"	19'-0"	18'-10"	18'-5"	17'-11"	20'-7"	20'-5"	20'-0"	19'-5"	22'-1"	21'-11"	21'-6"	20'-10"	

# PKI 20 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 20-10				PKI 20-12				PKI 20-14				PKI 20-16			
				≤¼ to >¼	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	19.2" o.c.	22'-3"	21'-9"	20'-6"	19'-1"	26'-8"	26'-0"	24'-7"	22'-9"	30'-1"	29'-7"	27'-11"	25'-11"	32'-3"	31'-11"	31'-0"	28'-9"
	20	15		21'-1"	20'-7"	19'-4"	17'-10"	25'-3"	24'-8"	23'-2"	21'-4"	27'-10"	27'-6"	26'-4"	24'-4"	29'-10"	29'-6"	28'-7"	27'-0"
	20	20		20'-2"	19'-8"	18'-5"	16'-11"	24'-0"	23'-6"	22'-0"	20'-3"	26'-0"	25'-8"	24'-9"	23'-0"	27'-10"	27'-6"	26'-7"	25'-4"
Snow 115%	25	10		21'-1"	20'-8"	19'-6"	18'-2"	24'-7"	24'-5"	23'-4"	21'-9"	26'-8"	26'-5"	25'-11"	24'-9"	28'-7"	28'-4"	27'-9"	27'-0"
	25	15		19'-10"	19'-8"	18'-7"	17'-2"	23'-0"	22'-9"	22'-2"	20'-6"	24'-11"	24'-8"	24'-0"	23'-2"	26'-9"	26'-5"	25'-9"	24'-10"
	25	20		18'-8"	18'-6"	17'-9"	16'-4"	21'-8"	21'-5"	20'-9"	19'-7"	23'-6"	23'-2"	22'-6"	21'-7"	25'-2"	24'-11"	24'-1"	23'-1"
	30	10		19'-10"	19'-9"	18'-8"	17'-5"	23'-0"	22'-10"	22'-4"	20'-10"	24'-11"	24'-9"	24'-4"	23'-8"	26'-9"	26'-6"	26'-1"	25'-5"
	30	15		18'-8"	18'-6"	17'-10"	16'-7"	21'-8"	21'-6"	20'-11"	19'-10"	23'-6"	23'-3"	22'-9"	22'-0"	25'-2"	24'-11"	24'-4"	23'-7"
	30	20		17'-9"	17'-6"	17'-1"	15'-10"	20'-6"	20'-4"	19'-9"	18'-11"	22'-3"	22'-0"	21'-5"	20'-7"	23'-10"	23'-7"	22'-11"	22'-1"
	40	10		17'-9"	17'-8"	17'-3"	16'-3"	20'-6"	20'-5"	20'-1"	19'-5"	22'-3"	22'-2"	21'-10"	21'-5"	23'-10"	23'-9"	23'-5"	22'-11"
	40	15		16'-11"	16'-9"	16'-5"	15'-7"	19'-7"	19'-5"	19'-0"	18'-6"	21'-3"	21'-1"	20'-8"	20'-1"	22'-9"	22'-7"	22'-2"	21'-7"
	40	20		16'-2"	16'-0"	15'-8"	15'-0"	18'-9"	18'-7"	18'-1"	17'-6"	20'-4"	20'-1"	19'-8"	19'-0"	21'-9"	21'-7"	21'-1"	20'-2"
	50	10	16'-2"	16'-1"	15'-11"	15'-1"	18'-9"	18'-8"	18'-5"	18'-1"	20'-4"	20'-2"	20'-0"	19'-7"	21'-9"	21'-8"	21'-5"	21'-1"	
	50	15	15'-6"	15'-5"	15'-2"	14'-9"	18'-0"	17'-10"	17'-7"	17'-2"	19'-6"	19'-4"	19'-1"	18'-7"	20'-11"	20'-9"	20'-3"	19'-4"	
	50	20	14'-11"	14'-10"	14'-6"	14'-1"	17'-4"	17'-2"	16'-10"	16'-4"	18'-9"	18'-8"	18'-3"	17'-7"	19'-8"	19'-4"	18'-7"	17'-7"	
No Snow 125%	20	10	24" o.c.	20'-7"	20'-2"	19'-0"	17'-8"	24'-8"	24'-1"	22'-9"	21'-1"	26'-10"	26'-7"	25'-10"	24'-0"	28'-9"	28'-6"	27'-10"	26'-8"
	20	15		19'-7"	19'-1"	17'-11"	16'-6"	22'-11"	22'-8"	21'-5"	19'-9"	24'-10"	24'-7"	23'-10"	22'-6"	26'-8"	26'-4"	25'-7"	24'-6"
	20	20		18'-6"	18'-2"	17'-0"	15'-8"	21'-5"	21'-2"	20'-4"	18'-9"	23'-3"	22'-11"	22'-1"	21'-1"	24'-11"	24'-7"	23'-9"	22'-8"
Snow 115%	25	10		19'-0"	18'-10"	18'-1"	16'-10"	22'-0"	21'-10"	21'-4"	20'-2"	23'-10"	23'-8"	23'-2"	22'-6"	25'-6"	25'-4"	24'-10"	24'-2"
	25	15		17'-9"	17'-7"	17'-1"	15'-11"	20'-6"	20'-4"	19'-9"	19'-0"	22'-3"	22'-0"	21'-5"	20'-8"	23'-10"	23'-8"	23'-0"	22'-2"
	25	20		16'-8"	16'-6"	16'-0"	15'-1"	19'-4"	19'-1"	18'-6"	17'-9"	21'-0"	20'-9"	20'-1"	19'-3"	22'-6"	22'-3"	21'-6"	20'-8"
	30	10		17'-9"	17'-7"	17'-3"	16'-2"	20'-6"	20'-5"	20'-0"	19'-4"	22'-3"	22'-1"	21'-9"	21'-2"	23'-10"	23'-9"	23'-3"	22'-9"
	30	15		16'-8"	16'-7"	16'-2"	15'-4"	19'-4"	19'-2"	18'-9"	18'-1"	21'-0"	20'-9"	20'-3"	19'-8"	22'-6"	22'-3"	21'-9"	21'-1"
	30	20		15'-10"	15'-8"	15'-3"	14'-8"	18'-4"	18'-2"	17'-8"	17'-0"	19'-11"	19'-8"	19'-1"	18'-5"	21'-4"	21'-1"	20'-5"	18'-11"
	40	10		15'-10"	15'-9"	15'-6"	15'-0"	18'-4"	18'-3"	18'-0"	17'-7"	19'-11"	19'-9"	19'-6"	19'-1"	21'-4"	21'-3"	20'-11"	20'-4"
	40	15		15'-1"	15'-0"	14'-8"	14'-3"	17'-6"	17'-4"	17'-0"	16'-7"	18'-11"	18'-10"	18'-5"	17'-11"	20'-0"	19'-9"	19'-0"	18'-0"
	40	20		14'-5"	14'-4"	13'-11"	13'-6"	16'-9"	16'-7"	16'-2"	15'-8"	18'-2"	18'-0"	17'-2"	16'-1"	18'-4"	18'-0"	17'-2"	16'-1"
	50	10	14'-5"	14'-4"	14'-2"	13'-11"	16'-9"	16'-8"	16'-5"	16'-2"	18'-2"	18'-1"	17'-9"	17'-2"	18'-4"	18'-2"	17'-9"	17'-2"	
	50	15	13'-10"	13'-9"	13'-6"	13'-3"	16'-1"	15'-11"	15'-8"	15'-4"	16'-11"	16'-8"	16'-2"	15'-5"	16'-11"	16'-8"	16'-2"	15'-5"	
	50	20	13'-4"	13'-3"	13'-0"	12'-7"	15'-0"	15'-4"	14'-10"	14'-0"	15'-8"	15'-5"	14'-10"	14'-0"	15'-8"	15'-5"	14'-10"	14'-0"	

# PKI 23 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 23-10				PKI 23-12				PKI 23-14				PKI 23-16			
				≤¼ :12 >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	12" o.c.	27'-7"	27'-0"	25'-5"	23'-7"	32'-11"	32'-2"	30'-4"	28'-2"	37'-5"	36'-6"	34'-5"	31'-11"	41'-5"	40'-5"	38'-2"	35'-5"
	20	15		26'-2"	25'-7"	24'-0"	22'-2"	31'-2"	30'-5"	28'-7"	26'-5"	35'-5"	34'-7"	32'-6"	30'-0"	39'-3"	38'-4"	36'-0"	33'-2"
	20	20		25'-0"	24'-4"	22'-10"	21'-0"	29'-10"	29'-1"	27'-2"	25'-0"	33'-10"	33'-0"	30'-11"	28'-5"	37'-6"	36'-7"	34'-3"	31'-5"
Snow 115%	25	10		26'-2"	25'-7"	24'-3"	22'-6"	31'-2"	30'-6"	28'-10"	26'-10"	35'-5"	34'-8"	32'-9"	30'-6"	39'-3"	38'-5"	36'-4"	33'-9"
	25	15		25'-0"	24'-5"	23'-0"	21'-3"	29'-10"	29'-1"	27'-5"	25'-4"	33'-10"	33'-1"	31'-2"	28'-10"	37'-0"	36'-7"	34'-6"	31'-11"
	25	20		24'-0"	23'-5"	22'-0"	20'-3"	28'-7"	27'-11"	26'-2"	24'-2"	32'-4"	31'-9"	29'-9"	27'-5"	34'-10"	34'-5"	33'-0"	30'-5"
	30	10		25'-0"	24'-6"	23'-2"	21'-7"	29'-10"	29'-2"	27'-8"	25'-9"	33'-10"	33'-2"	31'-5"	29'-3"	37'-0"	36'-9"	34'-9"	32'-5"
	30	15		24'-0"	23'-6"	22'-2"	20'-7"	28'-7"	28'-0"	26'-5"	24'-6"	32'-4"	31'-9"	30'-0"	27'-10"	34'-10"	34'-7"	33'-3"	30'-10"
	30	20		23'-2"	22'-7"	21'-3"	19'-8"	27'-7"	26'-11"	25'-4"	23'-5"	30'-8"	30'-4"	28'-10"	26'-7"	33'-1"	32'-8"	31'-9"	29'-6"
	40	10		22'-8"	22'-3"	21'-4"	20'-2"	27'-0"	26'-7"	25'-5"	24'-0"	30'-8"	30'-2"	28'-11"	27'-4"	33'-1"	32'-11"	32'-1"	30'-3"
	40	15		22'-5"	21'-11"	20'-9"	19'-4"	26'-8"	26'-2"	24'-9"	23'-0"	29'-3"	29'-0"	28'-1"	26'-2"	31'-6"	31'-3"	30'-8"	29'-0"
	40	20		21'-9"	21'-3"	20'-1"	18'-7"	25'-6"	25'-3"	23'-11"	22'-2"	28'-0"	27'-9"	27'-1"	25'-3"	30'-2"	29'-11"	29'-2"	27'-11"
	50	10	20'-11"	20'-7"	19'-9"	18'-9"	25'-0"	24'-7"	23'-7"	22'-4"	28'-0"	27'-10"	26'-9"	25'-5"	30'-2"	30'-0"	29'-8"	28'-2"	
	50	15	20'-11"	20'-7"	19'-8"	18'-4"	24'-6"	24'-4"	23'-5"	21'-10"	26'-11"	26'-9"	26'-3"	24'-10"	29'-0"	28'-9"	28'-4"	27'-6"	
	50	20	20'-7"	20'-2"	19'-1"	17'-9"	23'-7"	23'-5"	22'-9"	21'-2"	25'-11"	25'-8"	25'-2"	24'-1"	27'-11"	27'-8"	27'-1"	26'-4"	
No Snow 125%	20	10	16" o.c.	25'-0"	24'-5"	23'-1"	21'-5"	29'-10"	29'-2"	27'-6"	25'-6"	33'-10"	33'-1"	31'-3"	29'-0"	37'-6"	36'-8"	34'-7"	32'-1"
	20	15		23'-9"	23'-2"	21'-9"	20'-1"	28'-3"	27'-7"	25'-11"	23'-11"	32'-1"	31'-4"	29'-5"	27'-2"	35'-7"	34'-9"	32'-7"	30'-1"
	20	20		22'-8"	22'-1"	20'-8"	19'-0"	27'-0"	26'-4"	24'-7"	22'-8"	30'-8"	29'-11"	28'-0"	25'-9"	33'-4"	32'-11"	31'-0"	28'-6"
Snow 115%	25	10		23'-9"	23'-2"	21'-11"	20'-5"	28'-3"	27'-8"	26'-2"	24'-4"	31'-9"	31'-5"	29'-8"	27'-8"	34'-3"	34'-0"	32'-11"	30'-8"
	25	15		22'-8"	22'-1"	20'-10"	19'-3"	27'-0"	26'-4"	24'-10"	23'-0"	29'-8"	29'-5"	28'-3"	26'-1"	32'-0"	31'-8"	30'-10"	28'-11"
	25	20		21'-9"	21'-2"	19'-11"	18'-4"	25'-6"	25'-2"	23'-9"	21'-11"	28'-0"	27'-8"	26'-10"	24'-10"	30'-2"	29'-10"	28'-11"	27'-7"
	30	10		22'-8"	22'-2"	21'-0"	19'-7"	27'-0"	26'-5"	25'-0"	23'-4"	29'-8"	29'-6"	28'-5"	26'-6"	32'-0"	31'-9"	31'-3"	29'-5"
	30	15		21'-9"	21'-3"	20'-1"	18'-7"	25'-6"	25'-3"	23'-11"	22'-2"	28'-0"	27'-9"	27'-1"	25'-3"	30'-2"	29'-11"	29'-2"	27'-11"
	30	20		20'-11"	20'-5"	19'-3"	17'-10"	24'-2"	23'-11"	22'-11"	21'-3"	26'-6"	26'-3"	25'-6"	24'-1"	28'-7"	28'-3"	27'-6"	26'-6"
	40	10		20'-6"	20'-2"	19'-4"	18'-3"	24'-2"	24'-0"	23'-1"	21'-9"	26'-6"	26'-5"	26'-0"	24'-9"	28'-7"	28'-5"	28'-0"	27'-5"
	40	15		20'-2"	19'-10"	18'-9"	17'-6"	23'-0"	22'-10"	22'-5"	20'-10"	25'-3"	25'-1"	24'-7"	23'-9"	27'-3"	27'-1"	26'-6"	25'-10"
	40	20		19'-4"	19'-2"	18'-2"	16'-10"	22'-0"	21'-10"	21'-4"	20'-1"	24'-2"	24'-0"	23'-5"	22'-8"	26'-1"	25'-10"	25'-3"	24'-3"
	50	10	18'-11"	18'-8"	17'-11"	17'-0"	22'-0"	21'-11"	21'-4"	20'-3"	24'-2"	24'-1"	23'-10"	23'-0"	26'-1"	26'-0"	25'-8"	25'-3"	
	50	15	18'-7"	18'-5"	17'-9"	16'-7"	21'-2"	21'-0"	20'-8"	19'-10"	23'-3"	23'-1"	22'-9"	22'-2"	25'-1"	24'-11"	24'-4"	23'-3"	
	50	20	17'-10"	17'-9"	17'-3"	16'-1"	20'-5"	20'-3"	19'-10"	19'-2"	22'-5"	22'-3"	21'-9"	21'-1"	23'-8"	23'-3"	22'-4"	21'-1"	

# PKI 23

## ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 23-10				PKI 23-12				PKI 23-14				PKI 23-16			
				≤¼ to >¼	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	19.2" o.c.	23'-6"	22'-11"	21'-8"	20'-1"	28'-0"	27'-4"	25'-10"	23'-11"	31'-10"	31'-1"	29'-4"	27'-3"	35'-2"	34'-5"	32'-6"	30'-2"
	20	15		22'-3"	21'-9"	20'-5"	18'-10"	26'-6"	25'-11"	24'-4"	22'-5"	30'-2"	29'-5"	27'-8"	25'-6"	32'-7"	32'-2"	30'-8"	28'-3"
	20	20		21'-3"	20'-8"	19'-5"	17'-10"	25'-4"	24'-8"	23'-1"	21'-3"	28'-3"	27'-11"	26'-3"	24'-2"	30'-5"	30'-0"	29'-0"	26'-9"
Snow 115%	25	10		22'-3"	21'-9"	20'-7"	19'-2"	26'-5"	26'-0"	24'-7"	22'-10"	29'-0"	28'-9"	27'-11"	26'-0"	31'-3"	31'-0"	30'-4"	28'-9"
	25	15		21'-3"	20'-9"	19'-7"	18'-1"	24'-8"	24'-5"	23'-4"	21'-7"	27'-1"	26'-10"	26'-1"	24'-6"	29'-2"	28'-11"	28'-2"	27'-2"
	25	20		20'-5"	19'-11"	18'-8"	17'-3"	23'-3"	23'-0"	22'-3"	20'-7"	25'-6"	25'-3"	24'-5"	23'-4"	27'-6"	27'-2"	26'-4"	25'-3"
	30	10		21'-3"	20'-10"	19'-9"	18'-5"	24'-8"	24'-6"	23'-6"	21'-11"	27'-1"	26'-11"	26'-5"	24'-11"	29'-2"	29'-0"	28'-6"	27'-7"
	30	15		20'-5"	19'-11"	18'-10"	17'-6"	23'-3"	23'-0"	22'-5"	20'-10"	25'-6"	25'-4"	24'-8"	23'-8"	27'-6"	27'-3"	26'-7"	25'-9"
	30	20		19'-4"	19'-1"	18'-1"	16'-8"	22'-0"	21'-10"	21'-2"	19'-11"	24'-2"	23'-11"	23'-3"	22'-5"	26'-1"	25'-10"	25'-1"	23'-8"
	40	10		19'-3"	18'-11"	18'-2"	17'-2"	22'-0"	21'-11"	21'-7"	20'-5"	24'-2"	24'-1"	23'-9"	23'-3"	26'-1"	25'-11"	25'-7"	25'-1"
	40	15		18'-5"	18'-3"	17'-7"	16'-5"	21'-0"	20'-10"	20'-5"	19'-7"	23'-1"	22'-11"	22'-5"	21'-10"	24'-10"	24'-8"	23'-9"	22'-6"
	40	20		17'-7"	17'-5"	17'-0"	15'-10"	20'-1"	19'-11"	19'-5"	18'-10"	22'-1"	21'-10"	21'-4"	20'-2"	23'-0"	22'-7"	21'-6"	20'-2"
	50	10	17'-7"	17'-6"	16'-9"	15'-11"	20'-1"	20'-0"	19'-9"	19'-0"	22'-1"	22'-0"	21'-8"	21'-4"	23'-0"	22'-9"	22'-3"	21'-6"	
	50	15	16'-11"	16'-10"	16'-6"	15'-7"	19'-4"	19'-2"	18'-10"	18'-5"	21'-2"	20'-11"	20'-3"	19'-4"	21'-2"	20'-11"	20'-3"	19'-4"	
	50	20	16'-3"	16'-2"	15'-10"	15'-1"	18'-7"	18'-5"	18'-1"	17'-7"	19'-8"	19'-4"	18'-7"	17'-7"	19'-8"	19'-4"	18'-7"	17'-7"	
No Snow 125%	20	10	24" o.c.	21'-9"	21'-3"	20'-1"	18'-7"	25'-11"	25'-4"	23'-11"	22'-2"	29'-2"	28'-9"	27'-2"	25'-3"	31'-5"	31'-2"	30'-1"	27'-11"
	20	15		20'-7"	20'-1"	18'-11"	17'-5"	24'-7"	24'-0"	22'-6"	20'-9"	27'-0"	26'-8"	25'-7"	23'-8"	29'-1"	28'-9"	27'-11"	26'-2"
	20	20		19'-8"	19'-2"	17'-11"	16'-6"	23'-0"	22'-8"	21'-5"	19'-8"	25'-3"	24'-11"	24'-1"	22'-4"	27'-2"	26'-10"	25'-11"	24'-9"
Snow 115%	25	10		20'-7"	20'-2"	19'-1"	17'-9"	23'-7"	23'-5"	22'-9"	21'-2"	25'-11"	25'-8"	25'-2"	24'-1"	27'-11"	27'-8"	27'-1"	26'-4"
	25	15		19'-4"	19'-1"	18'-1"	16'-9"	22'-0"	21'-10"	21'-3"	20'-0"	24'-2"	24'-0"	23'-4"	22'-6"	26'-1"	25'-10"	25'-2"	23'-11"
	25	20		18'-2"	18'-0"	17'-3"	15'-11"	20'-9"	20'-6"	19'-11"	19'-0"	22'-10"	22'-6"	21'-10"	20'-8"	24'-6"	23'-11"	22'-6"	20'-8"
	30	10		19'-4"	19'-2"	18'-3"	17'-0"	22'-0"	21'-11"	21'-6"	20'-4"	24'-2"	24'-0"	23'-7"	23'-0"	26'-1"	25'-11"	25'-5"	24'-10"
	30	15		18'-2"	18'-0"	17'-5"	16'-2"	20'-9"	20'-7"	20'-1"	19'-3"	22'-10"	22'-7"	22'-1"	21'-4"	24'-6"	24'-1"	23'-0"	21'-6"
	30	20		17'-3"	17'-1"	16'-7"	15'-5"	19'-8"	19'-6"	18'-11"	18'-3"	21'-7"	21'-5"	20'-5"	18'-11"	22'-1"	21'-7"	20'-5"	18'-11"
	40	10		17'-3"	17'-2"	16'-9"	15'-10"	19'-8"	19'-7"	19'-4"	18'-11"	21'-7"	21'-6"	21'-2"	20'-4"	22'-1"	21'-10"	21'-2"	20'-4"
	40	15		16'-5"	16'-4"	16'-0"	15'-2"	18'-9"	18'-7"	18'-3"	17'-9"	20'-0"	19'-9"	19'-0"	18'-0"	20'-0"	19'-9"	19'-0"	18'-0"
	40	20		15'-9"	15'-7"	15'-3"	14'-7"	17'-6"	17'-9"	17'-2"	16'-1"	18'-4"	18'-0"	17'-2"	16'-1"	18'-4"	18'-0"	17'-2"	16'-1"
	50	10	15'-9"	15'-8"	15'-6"	14'-9"	17'-6"	17'-10"	17'-8"	17'-2"	18'-4"	18'-2"	17'-9"	17'-2"	18'-4"	18'-2"	17'-9"	17'-2"	
	50	15	15'-1"	15'-0"	14'-9"	14'-5"	16'-2"	16'-8"	16'-2"	15'-5"	16'-11"	16'-8"	16'-2"	15'-5"	16'-11"	16'-8"	16'-2"	15'-5"	
	50	20	14'-1"	14'-5"	14'-2"	13'-9"	15'-0"	15'-5"	14'-10"	14'-0"	15'-8"	15'-5"	14'-10"	14'-0"	15'-8"	15'-5"	14'-10"	14'-0"	

# PKI 35-PLUS ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 35-PLUS-10				PKI 35-PLUS-12				PKI 35-PLUS-14				PKI 35-PLUS-16			
				≤¼ :12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¼ >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¼ :12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¼ :12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12
No Snow 125%	20	10	12" o.c.	27'-11"	27'-4"	25'-9"	23'-11"	33'-4"	32'-7"	30'-9"	28'-6"	37'-11"	37'-1"	34'-11"	32'-5"	42'-0"	41'-1"	38'-9"	35'-11"
	20	15		26'-6"	25'-10"	24'-3"	22'-5"	31'-8"	30'-10"	29'-0"	26'-9"	36'-0"	35'-1"	33'-0"	30'-5"	39'-10"	38'-11"	36'-6"	33'-8"
	20	20		25'-4"	24'-8"	23'-1"	21'-3"	30'-3"	29'-5"	27'-7"	25'-4"	34'-4"	33'-6"	31'-4"	28'-10"	38'-1"	37'-1"	34'-9"	31'-11"
Snow 115%	25	10		26'-6"	25'-11"	24'-6"	22'-10"	31'-8"	30'-11"	29'-3"	27'-3"	36'-0"	35'-2"	33'-3"	30'-11"	39'-5"	39'-0"	36'-10"	34'-4"
	25	15		25'-4"	24'-9"	23'-3"	21'-6"	30'-3"	29'-6"	27'-9"	25'-9"	34'-4"	33'-7"	31'-7"	29'-3"	36'-10"	36'-6"	35'-0"	32'-5"
	25	20		24'-4"	23'-8"	22'-3"	20'-6"	29'-0"	28'-4"	26'-7"	24'-6"	32'-7"	32'-2"	30'-3"	27'-10"	34'-9"	34'-4"	33'-3"	30'-11"
	30	10		25'-4"	24'-9"	23'-5"	21'-10"	30'-3"	29'-7"	28'-0"	26'-1"	34'-4"	33'-8"	31'-10"	29'-9"	36'-10"	36'-7"	35'-4"	32'-11"
	30	15		24'-4"	23'-9"	22'-5"	20'-9"	29'-0"	28'-4"	26'-9"	24'-10"	32'-7"	32'-3"	30'-5"	28'-3"	34'-9"	34'-5"	33'-7"	31'-4"
	30	20		23'-5"	22'-10"	21'-6"	19'-11"	28'-0"	27'-4"	25'-8"	23'-9"	30'-11"	30'-7"	29'-3"	27'-0"	32'-11"	32'-7"	31'-8"	29'-11"
	40	10		22'-11"	22'-6"	21'-7"	20'-5"	27'-4"	26'-11"	25'-10"	24'-4"	30'-11"	30'-7"	29'-4"	27'-8"	32'-11"	32'-9"	32'-4"	30'-9"
	40	15		22'-8"	22'-2"	21'-0"	19'-7"	26'-10"	26'-6"	25'-1"	23'-4"	29'-5"	29'-3"	28'-6"	26'-7"	31'-5"	31'-2"	30'-7"	29'-5"
	40	20		22'-0"	21'-6"	20'-3"	18'-10"	25'-9"	25'-6"	24'-3"	22'-6"	28'-2"	27'-11"	27'-3"	25'-7"	30'-1"	29'-9"	29'-1"	28'-2"
	50	10	21'-2"	20'-10"	20'-0"	19'-0"	25'-4"	24'-11"	23'-11"	22'-8"	28'-2"	28'-1"	27'-2"	25'-10"	30'-1"	29'-11"	29'-7"	28'-7"	
	50	15	21'-2"	20'-10"	19'-10"	18'-7"	24'-8"	24'-6"	23'-9"	22'-2"	27'-1"	26'-11"	26'-5"	25'-3"	28'-10"	28'-8"	28'-3"	27'-7"	
	50	20	20'-10"	20'-5"	19'-3"	17'-11"	23'-9"	23'-7"	23'-0"	21'-5"	26'-1"	25'-10"	25'-4"	24'-5"	27'-10"	27'-7"	27'-0"	26'-2"	
No Snow 125%	20	10	16" o.c.	25'-4"	24'-9"	23'-4"	21'-8"	30'-3"	29'-6"	27'-10"	25'-10"	34'-4"	33'-7"	31'-8"	29'-5"	38'-1"	37'-3"	35'-1"	32'-7"
	20	15		24'-0"	23'-5"	22'-0"	20'-3"	28'-8"	27'-11"	26'-3"	24'-3"	32'-7"	31'-10"	29'-10"	27'-7"	35'-7"	35'-2"	33'-1"	30'-7"
	20	20		22'-11"	22'-4"	20'-11"	19'-3"	27'-4"	26'-8"	25'-0"	22'-11"	31'-1"	30'-4"	28'-5"	26'-1"	33'-3"	32'-10"	31'-6"	28'-11"
Snow 115%	25	10		24'-0"	23'-6"	22'-2"	20'-8"	28'-8"	28'-0"	26'-6"	24'-8"	32'-0"	31'-9"	30'-2"	28'-1"	34'-1"	33'-10"	33'-2"	31'-1"
	25	15		22'-11"	22'-4"	21'-1"	19'-6"	27'-3"	26'-9"	25'-2"	23'-4"	29'-11"	29'-7"	28'-7"	26'-6"	31'-1"	31'-7"	30'-9"	29'-5"
	25	20		22'-0"	21'-5"	20'-2"	18'-7"	25'-9"	25'-5"	24'-1"	22'-2"	28'-2"	27'-10"	27'-0"	25'-3"	30'-1"	29'-8"	28'-9"	27'-7"
	30	10		22'-11"	22'-5"	21'-3"	19'-10"	27'-3"	26'-9"	25'-4"	23'-8"	29'-11"	29'-8"	28'-10"	26'-11"	31'-11"	31'-8"	31'-1"	29'-10"
	30	15		22'-0"	21'-6"	20'-3"	18'-10"	25'-9"	25'-6"	24'-3"	22'-6"	28'-2"	27'-11"	27'-3"	25'-7"	30'-1"	29'-9"	29'-1"	28'-2"
	30	20		21'-2"	20'-8"	19'-6"	18'-0"	24'-5"	24'-1"	23'-3"	21'-6"	26'-9"	26'-5"	25'-8"	24'-6"	28'-6"	28'-2"	27'-5"	26'-5"
	40	10		20'-9"	20'-5"	19'-7"	18'-6"	24'-5"	24'-3"	23'-4"	22'-1"	26'-9"	26'-7"	26'-2"	25'-1"	28'-6"	28'-4"	27'-11"	27'-5"
	40	15		20'-5"	20'-1"	19'-0"	17'-8"	23'-3"	23'-1"	22'-7"	21'-2"	25'-6"	25'-3"	24'-9"	24'-1"	27'-2"	27'-0"	26'-5"	25'-1"
	40	20		19'-6"	19'-4"	18'-4"	17'-0"	22'-3"	22'-0"	21'-6"	20'-4"	24'-4"	24'-2"	23'-7"	22'-6"	24'-11"	25'-2"	24'-0"	22'-6"
	50	10	19'-2"	18'-10"	18'-1"	17'-2"	22'-3"	22'-2"	21'-7"	20'-6"	24'-4"	24'-3"	24'-0"	23'-4"	24'-11"	25'-5"	24'-9"	23'-11"	
	50	15	18'-9"	18'-7"	18'-0"	16'-9"	21'-4"	21'-3"	20'-10"	20'-1"	23'-0"	23'-3"	22'-7"	21'-7"	23'-0"	23'-4"	22'-7"	21'-7"	
	50	20	18'-1"	17'-11"	17'-5"	16'-3"	20'-7"	20'-5"	20'-0"	19'-5"	21'-4"	21'-7"	20'-9"	19'-7"	21'-4"	21'-7"	20'-9"	19'-7"	

# PKI 35-PLUS ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 35-PLUS-10				PKI 35-PLUS-12				PKI 35-PLUS-14				PKI 35-PLUS-16			
				≤¼ :12 >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	19.2" o.c.	23'-9"	23'-3"	21'-11"	20'-4"	28'-5"	27'-9"	26'-2"	24'-3"	32'-3"	31'-7"	29'-9"	27'-7"	35'-1"	34'-9"	33'-0"	30'-7"
	20	15		22'-6"	22'-0"	20'-8"	19'-1"	26'-11"	26'-3"	24'-8"	22'-9"	30'-5"	29'-10"	28'-1"	25'-11"	32'-5"	32'-1"	31'-1"	28'-8"
	20	20		21'-6"	20'-11"	19'-7"	18'-0"	25'-8"	25'-0"	23'-5"	21'-7"	28'-5"	28'-1"	26'-8"	24'-6"	30'-4"	29'-11"	28'-11"	27'-2"
Snow 115%	25	10		22'-6"	22'-0"	20'-10"	19'-5"	26'-7"	26'-4"	24'-11"	23'-2"	29'-2"	28'-11"	28'-4"	26'-4"	31'-1"	30'-11"	30'-3"	29'-3"
	25	15		21'-6"	21'-0"	19'-9"	18'-4"	24'-11"	24'-8"	23'-8"	21'-11"	27'-3"	27'-0"	26'-3"	24'-11"	29'-1"	28'-10"	28'-1"	27'-1"
	25	20		20'-7"	20'-1"	18'-11"	17'-5"	23'-5"	23'-2"	22'-5"	20'-10"	25'-8"	25'-5"	24'-7"	23'-7"	27'-5"	27'-1"	26'-2"	24'-0"
	30	10		21'-6"	21'-1"	19'-11"	18'-7"	24'-11"	24'-9"	23'-10"	22'-3"	27'-3"	27'-1"	26'-7"	25'-4"	29'-1"	28'-11"	28'-5"	27'-8"
	30	15		20'-7"	20'-2"	19'-0"	17'-8"	23'-5"	23'-3"	22'-8"	21'-1"	25'-8"	25'-6"	24'-10"	24'-0"	27'-5"	27'-2"	26'-6"	25'-0"
	30	20		19'-6"	19'-4"	18'-3"	16'-11"	22'-3"	22'-0"	21'-5"	20'-2"	24'-4"	24'-1"	23'-5"	21'-11"	24'-11"	25'-1"	23'-8"	21'-11"
	40	10		19'-5"	19'-1"	18'-4"	17'-4"	22'-3"	22'-1"	21'-9"	20'-9"	24'-4"	24'-3"	23'-11"	23'-5"	24'-11"	25'-4"	24'-7"	23'-8"
	40	15		18'-7"	18'-5"	17'-10"	16'-7"	21'-2"	21'-0"	20'-7"	19'-10"	22'-7"	22'-11"	22'-1"	20'-11"	22'-7"	22'-11"	22'-1"	20'-11"
	40	20		17'-9"	17'-8"	17'-3"	16'-0"	20'-3"	20'-1"	19'-7"	18'-8"	20'-8"	20'-11"	19'-11"	18'-8"	20'-8"	20'-11"	19'-11"	18'-8"
	50	10	17'-9"	17'-8"	17'-0"	16'-1"	20'-3"	20'-2"	19'-11"	19'-3"	20'-8"	21'-1"	20'-7"	19'-11"	20'-8"	21'-1"	20'-7"	19'-11"	
	50	15	17'-1"	17'-0"	16'-8"	15'-9"	19'-1"	19'-4"	18'-9"	17'-11"	19'-1"	19'-5"	18'-9"	17'-11"	19'-1"	19'-5"	18'-9"	17'-11"	
	50	20	16'-5"	16'-4"	16'-0"	15'-3"	17'-8"	17'-11"	17'-3"	16'-3"	17'-8"	17'-11"	17'-3"	16'-3"	17'-8"	17'-11"	17'-3"	16'-3"	
No Snow 125%	20	10	24" o.c.	22'-0"	21'-6"	20'-3"	18'-10"	26'-3"	25'-8"	24'-3"	22'-6"	29'-5"	29'-1"	27'-7"	25'-7"	31'-4"	31'-1"	30'-4"	28'-4"
	20	15		20'-10"	20'-4"	19'-1"	17'-8"	24'-10"	24'-4"	22'-10"	21'-1"	27'-2"	26'-11"	26'-0"	24'-0"	29'-0"	28'-8"	27'-10"	26'-7"
	20	20		19'-11"	19'-5"	18'-2"	16'-8"	23'-2"	22'-11"	21'-8"	19'-11"	25'-5"	25'-1"	24'-3"	22'-8"	27'-1"	26'-9"	25'-4"	23'-1"
Snow 115%	25	10		20'-10"	20'-5"	19'-3"	17'-11"	23'-9"	23'-7"	23'-0"	21'-5"	26'-1"	25'-10"	25'-4"	24'-5"	27'-10"	27'-7"	27'-0"	26'-2"
	25	15		19'-6"	19'-4"	18'-4"	16'-11"	22'-3"	22'-0"	21'-5"	20'-3"	24'-4"	24'-1"	23'-6"	22'-2"	24'-11"	25'-1"	23'-10"	22'-2"
	25	20		18'-5"	18'-2"	17'-6"	16'-2"	20'-11"	20'-8"	20'-1"	19'-2"	22'-1"	22'-3"	20'-10"	19'-2"	22'-1"	22'-3"	20'-10"	19'-2"
	30	10		19'-6"	19'-5"	18'-5"	17'-3"	22'-3"	22'-1"	21'-8"	20'-7"	24'-4"	24'-2"	23'-9"	23'-2"	24'-11"	25'-3"	24'-5"	23'-2"
	30	15		18'-5"	18'-3"	17'-7"	16'-4"	20'-11"	20'-9"	20'-3"	19'-7"	22'-1"	22'-4"	21'-4"	20'-0"	22'-1"	22'-4"	21'-4"	20'-0"
	30	20		17'-5"	17'-3"	16'-9"	15'-8"	19'-10"	19'-8"	18'-11"	17'-6"	19'-10"	20'-0"	18'-11"	17'-6"	19'-10"	20'-0"	18'-11"	17'-6"
	40	10		17'-5"	17'-4"	17'-0"	16'-0"	19'-10"	19'-9"	19'-6"	18'-10"	19'-10"	20'-3"	19'-8"	18'-10"	19'-10"	20'-3"	19'-8"	18'-10"
	40	15		16'-7"	16'-6"	16'-2"	15'-4"	18'-0"	18'-4"	17'-7"	16'-8"	18'-0"	18'-4"	17'-7"	16'-8"	18'-0"	18'-4"	17'-7"	16'-8"
	40	20		15'-11"	15'-9"	15'-4"	14'-9"	16'-6"	16'-8"	15'-11"	14'-11"	16'-6"	16'-8"	15'-11"	14'-11"	16'-6"	16'-8"	15'-11"	14'-11"
	50	10	15'-11"	15'-10"	15'-7"	14'-11"	16'-6"	16'-10"	16'-5"	15'-11"	16'-6"	16'-10"	16'-5"	15'-11"	16'-6"	16'-10"	16'-5"	15'-11"	
	50	15	15'-3"	15'-2"	14'-11"	14'-3"	15'-2"	15'-6"	15'-0"	14'-3"	15'-2"	15'-6"	15'-0"	14'-3"	15'-2"	15'-6"	15'-0"	14'-3"	
	50	20	14'-1"	14'-4"	13'-9"	13'-0"	14'-1"	14'-4"	13'-9"	13'-0"	14'-1"	14'-4"	13'-9"	13'-0"	14'-1"	14'-4"	13'-9"	13'-0"	

# PKI 40 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 40-10				PKI 40-12				PKI 40-14				PKI 40-16			
				≤¼ :12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¼ >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¼ :12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12	≤¼ :12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12
No Snow 125%	20	10	12" o.c.	31'-3"	30'-7"	28'-10"	26'-9"	37'-3"	36'-5"	34'-4"	31'-11"	42'-4"	41'-4"	39'-0"	36'-2"	46'-10"	45'-10"	43'-2"	39'-10"
	20	15		29'-8"	28'-11"	27'-2"	25'-1"	35'-4"	34'-6"	32'-5"	29'-11"	40'-2"	39'-2"	36'-9"	33'-11"	44'-5"	43'-4"	40'-9"	37'-7"
	20	20		28'-4"	27'-7"	25'-10"	23'-9"	33'-9"	32'-11"	30'-10"	28'-4"	38'-4"	37'-4"	35'-0"	32'-2"	42'-5"	41'-4"	38'-9"	35'-7"
Snow 115%	25	10		29'-8"	29'-0"	27'-5"	25'-6"	35'-4"	34'-7"	32'-8"	30'-5"	40'-2"	39'-3"	37'-2"	34'-7"	44'-5"	43'-6"	41'-1"	38'-3"
	25	15		28'-4"	27'-8"	26'-0"	24'-1"	33'-9"	33'-0"	31'-1"	28'-9"	38'-4"	37'-5"	35'-3"	32'-8"	42'-5"	41'-6"	39'-1"	36'-2"
	25	20		27'-2"	26'-6"	24'-11"	22'-11"	32'-5"	31'-7"	29'-8"	27'-5"	36'-10"	35'-11"	33'-9"	31'-1"	40'-9"	39'-9"	37'-4"	34'-5"
	30	10		28'-4"	27'-8"	26'-3"	24'-6"	33'-9"	33'-1"	31'-4"	29'-2"	38'-4"	37'-6"	35'-7"	33'-2"	42'-5"	41'-7"	39'-4"	36'-9"
	30	15		27'-2"	26'-7"	25'-1"	23'-3"	32'-5"	31'-8"	29'-11"	27'-9"	36'-10"	36'-0"	33'-11"	31'-6"	40'-9"	39'-10"	37'-7"	34'-11"
	30	20		26'-2"	25'-7"	24'-1"	22'-3"	31'-3"	30'-6"	28'-8"	26'-7"	35'-6"	34'-8"	32'-7"	30'-2"	39'-4"	38'-5"	36'-1"	33'-5"
	40	10		25'-7"	25'-2"	24'-2"	22'-10"	30'-7"	30'-1"	28'-10"	27'-3"	34'-9"	34'-2"	32'-9"	30'-11"	38'-5"	37'-10"	36'-3"	34'-3"
	40	15		25'-4"	24'-10"	23'-6"	21'-11"	30'-3"	29'-7"	28'-0"	26'-1"	34'-4"	33'-7"	31'-10"	29'-8"	38'-0"	37'-3"	35'-3"	32'-10"
	40	20		24'-7"	24'-0"	22'-8"	21'-1"	29'-4"	28'-8"	27'-1"	25'-2"	33'-4"	32'-7"	30'-9"	28'-7"	36'-11"	36'-1"	34'-1"	31'-8"
	50	10	23'-8"	23'-4"	22'-4"	21'-3"	28'-3"	27'-10"	26'-8"	25'-4"	32'-2"	31'-7"	30'-4"	28'-10"	35'-7"	35'-0"	33'-7"	31'-11"	
	50	15	23'-8"	23'-4"	22'-3"	20'-9"	28'-3"	27'-10"	26'-6"	24'-9"	32'-2"	31'-7"	30'-1"	28'-2"	35'-7"	35'-0"	33'-4"	31'-2"	
	50	20	23'-3"	22'-10"	21'-7"	20'-1"	27'-10"	27'-2"	25'-9"	24'-0"	31'-7"	30'-11"	29'-3"	27'-3"	35'-0"	34'-3"	32'-5"	30'-2"	
No Snow 125%	20	10	12" o.c.	PKI 40-18				PKI 40-20				PKI 40-22				PKI 40-24			
	20	15		51'-2"	50'-0"	47'-2"	39'-8"	55'-4"	54'-1"	47'-1"	39'-7"	57'-8"	54'-2"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"
	20	20		48'-6"	47'-4"	44'-6"	39'-8"	52'-6"	51'-3"	47'-1"	39'-7"	56'-5"	54'-2"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"
Snow 115%	25	10		46'-4"	45'-2"	42'-3"	38'-10"	50'-2"	48'-11"	45'-9"	39'-7"	53'-11"	52'-6"	46'-11"	39'-5"	57'-6"	54'-1"	46'-10"	39'-4"
	25	15		48'-6"	47'-6"	44'-10"	39'-8"	52'-6"	51'-5"	47'-1"	39'-7"	56'-5"	54'-2"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"
	25	20		46'-4"	45'-3"	42'-7"	39'-6"	50'-2"	49'-0"	46'-2"	39'-7"	53'-11"	52'-8"	46'-11"	39'-5"	57'-5"	54'-1"	46'-10"	39'-4"
	30	10		44'-6"	43'-5"	40'-9"	37'-7"	48'-2"	47'-0"	44'-1"	39'-7"	51'-9"	50'-6"	46'-11"	39'-5"	54'-1"	53'-6"	46'-10"	39'-4"
	30	15		46'-4"	45'-4"	43'-0"	39'-8"	50'-2"	49'-1"	46'-6"	39'-7"	53'-11"	52'-9"	46'-11"	39'-5"	57'-5"	54'-1"	46'-10"	39'-4"
	30	20		44'-6"	43'-6"	41'-1"	38'-1"	48'-2"	47'-1"	44'-5"	39'-7"	51'-9"	50'-7"	46'-11"	39'-5"	54'-1"	53'-8"	46'-10"	39'-4"
	40	10		42'-11"	41'-11"	39'-5"	36'-5"	46'-6"	45'-4"	42'-8"	39'-6"	49'-3"	48'-9"	45'-10"	39'-5"	51'-4"	50'-9"	46'-10"	39'-4"
	40	15		42'-0"	41'-3"	39'-7"	37'-5"	45'-5"	44'-8"	42'-10"	39'-7"	48'-10"	48'-0"	46'-1"	39'-5"	51'-4"	51'-1"	46'-10"	39'-4"
	40	20		41'-6"	40'-8"	38'-6"	35'-10"	44'-10"	44'-0"	41'-8"	38'-10"	46'-11"	46'-7"	44'-9"	39'-5"	48'-11"	48'-7"	46'-10"	39'-4"
	50	10	40'-4"	39'-5"	37'-2"	34'-6"	42'-11"	42'-6"	40'-3"	37'-5"	44'-11"	44'-6"	43'-3"	39'-5"	46'-10"	46'-5"	45'-4"	39'-4"	
	50	15	38'-10"	38'-3"	36'-8"	34'-10"	42'-1"	41'-5"	39'-8"	37'-8"	44'-11"	44'-5"	42'-8"	39'-5"	46'-10"	46'-7"	45'-6"	39'-4"	
	50	20	38'-10"	38'-3"	36'-5"	34'-0"	41'-3"	41'-0"	39'-5"	36'-10"	43'-2"	42'-11"	42'-2"	39'-5"	45'-0"	44'-8"	44'-0"	39'-4"	
50	20	37'-9"	37'-5"	35'-4"	32'-11"	39'-9"	39'-5"	38'-4"	35'-8"	41'-7"	41'-3"	40'-5"	38'-4"	43'-4"	43'-0"	42'-2"	39'-4"		

# PKI 40 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 40-10				PKI 40-12				PKI 40-14				PKI 40-16			
				≤¼ :12 >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	16" o.c.	28'-4"	27'-8"	26'-1"	24'-3"	33'-9"	33'-0"	31'-2"	28'-11"	38'-4"	37'-6"	35'-4"	32'-10"	42'-5"	41'-6"	39'-2"	36'-4"
	20	15		26'-10"	26'-2"	24'-7"	22'-8"	32'-0"	31'-3"	29'-4"	27'-1"	36'-4"	35'-6"	33'-4"	30'-9"	40'-3"	39'-3"	36'-11"	34'-1"
	20	20		25'-7"	25'-0"	23'-5"	21'-6"	30'-7"	29'-9"	27'-11"	25'-8"	34'-9"	33'-10"	31'-8"	29'-2"	38'-5"	37'-6"	35'-1"	32'-3"
Snow 115%	25	10		26'-10"	26'-3"	24'-10"	23'-1"	32'-0"	31'-4"	29'-7"	27'-7"	36'-4"	35'-7"	33'-8"	31'-4"	40'-3"	39'-5"	37'-3"	34'-8"
	25	15		25'-7"	25'-0"	23'-7"	21'-10"	30'-7"	29'-10"	28'-1"	26'-1"	34'-9"	33'-11"	31'-11"	29'-7"	38'-5"	37'-7"	35'-4"	32'-9"
	25	20		24'-7"	24'-0"	22'-6"	20'-9"	29'-4"	28'-7"	26'-10"	24'-10"	33'-4"	32'-6"	30'-6"	28'-2"	36'-11"	36'-0"	33'-10"	31'-2"
	30	10		25'-7"	25'-1"	23'-9"	22'-2"	30'-7"	29'-11"	28'-4"	26'-5"	34'-9"	34'-0"	32'-2"	30'-1"	38'-5"	37'-8"	35'-8"	33'-3"
	30	15		24'-7"	24'-0"	22'-8"	21'-1"	29'-4"	28'-8"	27'-1"	25'-2"	33'-4"	32'-7"	30'-9"	28'-7"	36'-11"	36'-1"	34'-1"	31'-8"
	30	20		23'-8"	23'-2"	21'-9"	20'-2"	28'-3"	27'-7"	26'-0"	24'-0"	32'-2"	31'-4"	29'-6"	27'-4"	35'-7"	34'-9"	32'-8"	30'-3"
	40	10		23'-2"	22'-9"	21'-10"	20'-8"	27'-8"	27'-2"	26'-1"	24'-8"	31'-5"	30'-11"	29'-8"	28'-0"	34'-10"	34'-3"	32'-10"	31'-0"
	40	15		22'-11"	22'-5"	21'-3"	19'-10"	27'-4"	26'-9"	25'-4"	23'-8"	31'-1"	30'-5"	28'-10"	26'-10"	34'-5"	33'-8"	31'-11"	29'-9"
	40	20		22'-3"	21'-9"	20'-6"	19'-1"	26'-6"	25'-11"	24'-6"	22'-9"	30'-2"	29'-6"	27'-10"	25'-10"	33'-2"	32'-8"	30'-10"	28'-8"
	50	10	21'-5"	21'-1"	20'-3"	19'-3"	25'-7"	25'-2"	24'-2"	22'-11"	29'-1"	28'-7"	27'-5"	26'-1"	32'-2"	31'-8"	30'-5"	28'-11"	
	50	15	21'-5"	21'-1"	20'-1"	18'-9"	25'-7"	25'-2"	24'-0"	22'-5"	29'-1"	28'-7"	27'-3"	25'-6"	31'-11"	31'-8"	30'-2"	28'-3"	
	50	20	21'-1"	20'-7"	19'-6"	18'-2"	25'-2"	24'-7"	23'-3"	21'-8"	28'-6"	27'-11"	26'-6"	24'-8"	30'-9"	30'-6"	29'-4"	27'-4"	
No Snow 125%	20	10	16" o.c.	PKI 40-18				PKI 40-20				PKI 40-22				PKI 40-24			
	20	15		46'-4"	45'-4"	42'-9"	39'-8"	50'-2"	49'-1"	46'-3"	39'-7"	53'-11"	52'-8"	46'-11"	39'-5"	57'-6"	54'-1"	46'-10"	39'-4"
	20	20		43'-11"	42'-11"	40'-3"	37'-2"	47'-7"	46'-5"	43'-7"	39'-7"	51'-1"	49'-10"	46'-10"	39'-5"	54'-7"	53'-3"	46'-10"	39'-4"
Snow 115%	25	10		42'-0"	40'-11"	38'-4"	35'-3"	45'-5"	44'-4"	41'-6"	38'-2"	48'-10"	47'-7"	44'-7"	39'-5"	51'-10"	50'-9"	46'-10"	39'-4"
	25	15		43'-11"	43'-0"	40'-8"	37'-10"	47'-7"	46'-7"	44'-0"	39'-7"	51'-0"	50'-0"	46'-11"	39'-5"	53'-2"	52'-9"	46'-10"	39'-4"
	25	20		42'-0"	41'-0"	38'-7"	35'-9"	45'-5"	44'-5"	41'-10"	38'-9"	47'-8"	47'-2"	44'-11"	39'-5"	49'-8"	49'-2"	46'-10"	39'-4"
	30	10		40'-4"	39'-4"	36'-11"	34'-1"	42'-11"	42'-5"	40'-0"	36'-10"	44'-11"	44'-5"	42'-11"	39'-5"	46'-10"	46'-3"	44'-10"	39'-4"
	30	15		42'-0"	41'-1"	38'-11"	36'-4"	45'-5"	44'-6"	42'-2"	39'-4"	47'-8"	47'-4"	45'-3"	39'-5"	49'-8"	49'-4"	46'-10"	39'-4"
	30	20		40'-4"	39'-5"	37'-2"	34'-6"	42'-11"	42'-6"	40'-3"	37'-5"	44'-11"	44'-6"	43'-3"	39'-5"	46'-10"	46'-5"	45'-4"	39'-4"
	40	10		38'-8"	37'-11"	35'-8"	33'-0"	40'-8"	40'-3"	38'-8"	35'-9"	42'-7"	42'-2"	41'-0"	38'-5"	44'-5"	43'-11"	42'-8"	39'-4"
	40	15		38'-0"	37'-4"	35'-10"	33'-10"	40'-8"	40'-6"	38'-10"	36'-8"	42'-7"	42'-5"	41'-9"	39'-5"	44'-5"	44'-2"	43'-6"	39'-4"
	40	20		36'-10"	36'-7"	34'-10"	32'-6"	38'-9"	38'-6"	37'-9"	35'-2"	40'-7"	40'-4"	39'-6"	37'-9"	42'-4"	42'-0"	41'-2"	39'-4"
	50	10	35'-3"	35'-0"	33'-8"	31'-3"	37'-2"	36'-10"	35'-11"	33'-10"	38'-10"	38'-6"	37'-7"	36'-4"	40'-6"	40'-2"	39'-2"	38'-0"	
	50	15	35'-2"	34'-7"	33'-2"	31'-6"	37'-2"	37'-0"	35'-11"	34'-2"	38'-10"	38'-8"	38'-3"	36'-8"	40'-6"	40'-4"	39'-10"	39'-2"	
	50	20	33'-11"	33'-8"	32'-11"	30'-10"	35'-8"	35'-5"	34'-10"	33'-4"	37'-4"	37'-1"	36'-6"	35'-8"	38'-11"	38'-8"	38'-0"	37'-2"	
50	20	32'-8"	32'-5"	31'-9"	29'-10"	34'-4"	34'-1"	33'-5"	32'-4"	36'-0"	35'-8"	35'-0"	34'-0"	37'-6"	37'-2"	36'-5"	35'-5"		

# PKI 40 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 40-10				PKI 40-12				PKI 40-14				PKI 40-16			
				≤¼ to >¼	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	192" o.c.	26'-7"	26'-0"	24'-6"	22'-9"	31'-8"	31'-0"	29'-3"	27'-2"	36'-0"	35'-2"	33'-3"	30'-10"	39'-10"	39'-0"	36'-9"	34'-2"
	20	15		25'-2"	24'-7"	23'-1"	21'-4"	30'-1"	29'-4"	27'-7"	25'-5"	34'-2"	33'-4"	31'-4"	28'-11"	37'-10"	36'-11"	34'-8"	32'-0"
	20	20		24'-0"	23'-5"	21'-11"	20'-2"	28'-8"	27'-11"	26'-2"	24'-1"	32'-7"	31'-9"	29'-9"	27'-4"	36'-1"	35'-2"	32'-11"	30'-4"
Snow 115%	25	10		25'-2"	24'-8"	23'-4"	21'-8"	30'-1"	29'-5"	27'-10"	25'-11"	34'-2"	33'-5"	31'-7"	29'-5"	37'-10"	37'-0"	35'-0"	32'-7"
	25	15		24'-0"	23'-6"	22'-1"	20'-6"	28'-8"	28'-0"	26'-5"	24'-5"	32'-7"	31'-10"	30'-0"	27'-9"	36'-1"	35'-3"	33'-3"	30'-9"
	25	20		23'-1"	22'-6"	21'-2"	19'-6"	27'-6"	26'-10"	25'-3"	23'-3"	31'-3"	30'-6"	28'-8"	26'-5"	34'-8"	33'-10"	31'-9"	29'-4"
	30	10		24'-0"	23'-6"	22'-4"	20'-10"	28'-8"	28'-1"	26'-7"	24'-10"	32'-7"	31'-11"	30'-3"	28'-3"	36'-1"	35'-4"	33'-6"	31'-3"
	30	15		23'-1"	22'-7"	21'-3"	19'-9"	27'-6"	26'-11"	25'-5"	23'-7"	31'-3"	30'-7"	28'-10"	26'-10"	34'-8"	33'-10"	32'-0"	29'-8"
	30	20		22'-3"	21'-8"	20'-5"	18'-11"	26'-6"	25'-11"	24'-5"	22'-7"	30'-2"	29'-5"	27'-9"	25'-8"	33'-2"	32'-7"	30'-8"	28'-5"
	40	10		21'-9"	21'-5"	20'-6"	19'-5"	25'-11"	25'-6"	24'-6"	23'-2"	29'-6"	29'-0"	27'-10"	26'-4"	32'-8"	32'-1"	30'-10"	29'-2"
	40	15		21'-6"	21'-0"	19'-11"	18'-7"	25'-8"	25'-1"	23'-9"	22'-2"	29'-2"	28'-7"	27'-0"	25'-3"	31'-8"	31'-5"	29'-11"	27'-11"
	40	20		20'-10"	20'-5"	19'-3"	17'-11"	24'-11"	24'-4"	23'-0"	21'-4"	28'-1"	27'-8"	26'-1"	24'-3"	29'-10"	30'-0"	28'-10"	26'-11"
	50	10	20'-1"	19'-9"	19'-0"	18'-0"	24'-0"	23'-7"	22'-8"	21'-6"	27'-3"	26'-10"	25'-9"	24'-6"	29'-10"	29'-9"	28'-6"	27'-1"	
	50	15	20'-1"	19'-9"	18'-10"	17'-8"	24'-0"	23'-7"	22'-6"	21'-1"	27'-0"	26'-10"	25'-7"	23'-11"	27'-6"	28'-0"	27'-1"	25'-11"	
	50	20	19'-9"	19'-4"	18'-3"	17'-1"	23'-7"	23'-1"	21'-10"	20'-4"	25'-0"	25'-8"	24'-7"	23'-2"	25'-6"	25'-11"	24'-11"	23'-6"	
No Snow 125%	20	10	192" o.c.	PKI 40-18				PKI 40-20				PKI 40-22				PKI 40-24			
	20	15		43'-6"	42'-7"	40'-2"	37'-3"	47'-2"	46'-1"	43'-6"	39'-7"	50'-7"	49'-6"	46'-8"	39'-5"	54'-0"	52'-10"	46'-10"	39'-4"
	20	20		41'-3"	40'-3"	37'-10"	34'-11"	44'-8"	43'-7"	41'-0"	37'-10"	48'-0"	46'-10"	44'-0"	39'-5"	50'-7"	50'-0"	46'-10"	39'-4"
Snow 115%	25	10		39'-5"	38'-5"	36'-0"	33'-1"	42'-8"	41'-7"	38'-11"	35'-10"	45'-4"	44'-8"	41'-10"	38'-6"	47'-3"	46'-8"	44'-8"	39'-4"
	25	15		41'-3"	40'-5"	38'-2"	35'-7"	44'-5"	43'-9"	41'-4"	38'-6"	46'-6"	46'-2"	44'-5"	39'-5"	48'-6"	48'-1"	46'-10"	39'-4"
	25	20		39'-5"	38'-6"	36'-3"	33'-7"	41'-6"	41'-2"	39'-3"	36'-4"	43'-6"	43'-1"	41'-11"	39'-1"	45'-4"	44'-11"	43'-8"	39'-4"
	30	10		37'-2"	36'-9"	34'-8"	32'-0"	39'-2"	38'-8"	37'-6"	34'-8"	41'-0"	40'-6"	39'-3"	37'-2"	42'-9"	42'-3"	40'-11"	39'-3"
	30	15		39'-5"	38'-7"	36'-7"	34'-1"	41'-7"	41'-3"	39'-7"	36'-11"	43'-6"	43'-2"	42'-5"	39'-5"	45'-4"	45'-0"	44'-3"	39'-4"
	30	20		37'-2"	36'-10"	34'-11"	32'-5"	39'-2"	38'-10"	37'-10"	35'-1"	41'-0"	40'-7"	39'-8"	37'-9"	42'-9"	42'-4"	41'-4"	39'-4"
	40	10		35'-3"	34'-11"	33'-6"	31'-0"	37'-2"	36'-9"	35'-8"	33'-7"	38'-10"	38'-5"	37'-5"	36'-0"	40'-6"	40'-1"	39'-0"	37'-6"
	40	15		35'-3"	35'-1"	33'-8"	31'-10"	37'-2"	36'-11"	36'-5"	34'-5"	38'-10"	38'-8"	38'-1"	37'-0"	40'-6"	40'-4"	39'-9"	38'-11"
	40	20		33'-8"	33'-5"	32'-8"	30'-6"	35'-5"	35'-2"	34'-5"	33'-0"	37'-1"	36'-9"	36'-1"	35'-1"	38'-7"	38'-4"	37'-7"	36'-7"
	50	10	32'-2"	31'-11"	31'-2"	29'-4"	33'-10"	33'-7"	32'-9"	31'-9"	35'-5"	35'-2"	34'-4"	33'-3"	37'-0"	36'-8"	35'-9"	34'-8"	
	50	15	32'-2"	32'-0"	31'-2"	29'-7"	33'-10"	33'-9"	33'-4"	32'-1"	35'-5"	35'-4"	34'-10"	34'-3"	37'-0"	36'-10"	36'-4"	35'-9"	
	50	20	30'-11"	30'-9"	30'-2"	28'-11"	32'-6"	32'-4"	31'-9"	31'-1"	34'-1"	33'-10"	33'-3"	32'-6"	35'-6"	35'-3"	34'-8"	33'-7"	
				29'-9"	29'-7"	28'-11"	28'-0"	31'-4"	31'-1"	30'-5"	29'-7"	32'-10"	32'-7"	31'-11"	30'-7"				

# PKI 40 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 40-10				PKI 40-12				PKI 40-14				PKI 40-16			
				≤¼ to >¼	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	24" OC	24'-7"	24'-0"	22'-8"	21'-1"	29'-4"	28'-8"	27'-1"	25'-2"	33'-4"	32'-7"	30'-9"	28'-7"	36'-11"	36'-1"	34'-1"	31'-8"
	20	15		23'-3"	22'-9"	21'-4"	19'-9"	27'-10"	27'-2"	25'-6"	23'-7"	31'-7"	30'-10"	29'-0"	26'-9"	35'-0"	34'-2"	32'-1"	29'-8"
	20	20		22'-3"	21'-8"	20'-4"	18'-8"	26'-6"	25'-10"	24'-3"	22'-4"	30'-2"	29'-5"	27'-6"	25'-4"	33'-5"	32'-7"	30'-6"	28'-1"
Snow 115%	25	10		23'-3"	22'-10"	21'-7"	20'-1"	27'-10"	27'-2"	25'-9"	24'-0"	31'-7"	30'-11"	29'-3"	27'-3"	35'-0"	34'-3"	32'-5"	30'-2"
	25	15		22'-3"	21'-9"	20'-6"	19'-0"	26'-6"	25'-11"	24'-5"	22'-8"	30'-2"	29'-5"	27'-9"	25'-9"	33'-2"	32'-8"	30'-9"	28'-6"
	25	20		21'-4"	20'-10"	19'-7"	18'-1"	25'-5"	24'-10"	23'-4"	21'-7"	28'-11"	28'-3"	26'-6"	24'-6"	31'-3"	30'-11"	29'-5"	27'-1"
	30	10		22'-3"	21'-9"	20'-8"	19'-3"	26'-6"	26'-0"	24'-8"	23'-0"	30'-2"	29'-6"	28'-0"	26'-2"	33'-2"	32'-8"	31'-0"	28'-11"
	30	15		21'-4"	20'-10"	19'-8"	18'-4"	25'-5"	24'-11"	23'-6"	21'-10"	28'-11"	28'-3"	26'-9"	24'-10"	31'-3"	31'-0"	29'-7"	27'-6"
	30	20		20'-6"	20'-1"	18'-11"	17'-6"	24'-6"	23'-11"	22'-7"	20'-11"	27'-6"	27'-3"	25'-8"	23'-9"	28'-7"	28'-11"	27'-4"	25'-4"
	40	10		20'-1"	19'-9"	19'-0"	17'-11"	24'-0"	23'-7"	22'-8"	21'-5"	27'-3"	26'-10"	25'-9"	24'-4"	28'-7"	29'-3"	28'-5"	27'-0"
	40	15		19'-10"	19'-5"	18'-5"	17'-2"	23'-8"	23'-3"	22'-0"	20'-6"	25'-6"	26'-1"	25'-0"	23'-4"	26'-0"	26'-5"	25'-5"	24'-1"
	40	20		19'-3"	18'-10"	17'-9"	16'-7"	22'-10"	22'-6"	21'-3"	19'-9"	23'-4"	23'-10"	22'-9"	21'-4"	23'-9"	24'-2"	23'-0"	21'-7"
	50	10	18'-6"	18'-3"	17'-6"	16'-8"	22'-2"	21'-10"	20'-11"	19'-11"	23'-4"	24'-1"	23'-6"	22'-8"	23'-9"	24'-4"	23'-9"	23'-0"	
	50	15	18'-6"	18'-3"	17'-5"	16'-4"	21'-1"	21'-6"	20'-10"	19'-6"	21'-6"	22'-1"	21'-5"	20'-5"	21'-11"	22'-5"	21'-8"	20'-8"	
	50	20	17'-4"	17'-10"	16'-11"	15'-9"	19'-7"	19'-11"	19'-1"	18'-0"	19'-11"	20'-6"	19'-8"	18'-7"	20'-4"	20'-8"	19'-10"	18'-9"	
No Snow 125%	20	10	24" OC	PKI 40-18				PKI 40-20				PKI 40-22				PKI 40-24			
	20	15		40'-4"	39'-5"	37'-2"	34'-6"	43'-8"	42'-8"	40'-3"	37'-5"	46'-10"	45'-10"	43'-3"	39'-5"	48'-10"	48'-5"	46'-2"	39'-4"
	20	20		38'-2"	37'-3"	35'-0"	32'-4"	41'-4"	40'-4"	37'-11"	35'-0"	43'-4"	42'-10"	40'-9"	37'-8"	45'-2"	44'-8"	43'-4"	39'-4"
Snow 115%	25	10		36'-6"	35'-6"	33'-4"	30'-8"	38'-9"	38'-2"	36'-1"	33'-2"	40'-6"	40'-0"	38'-7"	35'-8"	42'-3"	41'-8"	40'-3"	38'-0"
	25	15		37'-9"	37'-5"	35'-4"	32'-11"	39'-9"	39'-5"	38'-4"	35'-8"	41'-7"	41'-3"	40'-5"	38'-4"	43'-4"	43'-0"	42'-2"	39'-4"
	25	20		35'-3"	34'-11"	33'-7"	31'-1"	37'-2"	36'-9"	35'-9"	33'-8"	38'-10"	38'-6"	37'-6"	36'-2"	40'-6"	40'-1"	39'-1"	37'-8"
	30	10		33'-3"	32'-10"	31'-10"	29'-7"	35'-0"	34'-7"	33'-6"	32'-1"	36'-8"	36'-2"	35'-1"	33'-8"	38'-2"	37'-9"	36'-7"	35'-1"
	30	15		35'-3"	35'-1"	33'-10"	31'-7"	37'-2"	36'-11"	36'-3"	34'-3"	38'-10"	38'-7"	37'-11"	36'-9"	40'-6"	40'-3"	39'-6"	38'-7"
	30	20		33'-3"	32'-11"	32'-2"	30'-0"	35'-0"	34'-8"	33'-10"	32'-6"	36'-8"	36'-4"	35'-5"	34'-4"	38'-2"	37'-10"	36'-11"	35'-9"
	40	10		31'-6"	31'-2"	30'-4"	28'-8"	33'-2"	32'-10"	31'-11"	30'-8"	34'-9"	34'-4"	33'-5"	32'-2"	36'-2"	35'-10"	34'-10"	32'-10"
	40	15		31'-6"	31'-4"	30'-11"	29'-5"	33'-2"	33'-0"	32'-6"	31'-10"	34'-9"	34'-7"	34'-1"	33'-4"	36'-2"	36'-0"	35'-6"	34'-9"
	40	20		30'-1"	29'-10"	29'-3"	28'-3"	31'-7"	31'-5"	30'-9"	29'-11"	33'-1"	32'-10"	32'-3"	31'-3"	34'-6"	34'-3"	33'-0"	31'-3"
	50	10	28'-9"	28'-6"	27'-10"	26'-11"	30'-3"	30'-0"	29'-3"	28'-0"	31'-8"	31'-4"	29'-10"	28'-0"	31'-11"	31'-4"	29'-10"	28'-0"	
	50	15	28'-9"	28'-8"	28'-3"	27'-5"	30'-3"	30'-1"	29'-9"	29'-3"	31'-8"	31'-6"	30'-10"	29'-10"	31'-11"	31'-7"	30'-10"	29'-10"	
	50	20	27'-7"	27'-5"	27'-0"	26'-4"	29'-1"	28'-11"	28'-1"	26'-10"	29'-5"	29'-1"	28'-1"	26'-10"	29'-5"	29'-1"	28'-1"	26'-10"	
50	20	26'-7"	26'-5"	25'-9"	24'-4"	27'-3"	26'-10"	25'-9"	24'-4"	27'-3"	26'-10"	25'-9"	24'-4"	27'-3"	26'-10"	25'-9"	24'-4"		

# PKI 50 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 50-12				PKI 50-14				PKI 50-16				PKI 50-18			
				≤¼ :12 >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	12" o.c.	38'-6"	37'-7"	35'-5"	32'-11"	43'-6"	42'-7"	40'-2"	37'-3"	48'-1"	47'-0"	44'-4"	39'-10"	52'-6"	51'-4"	47'-2"	39'-8"
	20	15		36'-6"	35'-7"	33'-5"	30'-10"	41'-4"	40'-4"	37'-10"	34'-11"	45'-8"	44'-6"	41'-10"	38'-7"	49'-10"	48'-7"	45'-8"	39'-8"
	20	20		34'-10"	33'-11"	31'-9"	29'-3"	39'-5"	38'-5"	36'-0"	33'-1"	43'-7"	42'-6"	39'-9"	36'-7"	47'-7"	46'-4"	43'-5"	39'-8"
Snow 115%	25	10		36'-6"	35'-8"	33'-9"	31'-5"	41'-4"	40'-5"	38'-2"	35'-7"	45'-8"	44'-8"	42'-2"	39'-3"	49'-10"	48'-9"	46'-1"	39'-8"
	25	15		34'-10"	34'-0"	32'-0"	29'-8"	39'-5"	38'-6"	36'-3"	33'-7"	43'-7"	42'-7"	40'-1"	37'-1"	47'-7"	46'-6"	43'-9"	39'-8"
	25	20		33'-5"	32'-8"	30'-8"	28'-3"	37'-10"	36'-11"	34'-8"	32'-0"	41'-10"	40'-10"	38'-4"	35'-4"	45'-8"	44'-7"	41'-10"	38'-7"
	30	10		34'-10"	34'-1"	32'-4"	30'-2"	39'-5"	38'-7"	36'-7"	34'-1"	43'-7"	42'-8"	40'-5"	37'-8"	47'-7"	46'-7"	44'-1"	39'-8"
	30	15		33'-5"	32'-8"	30'-10"	28'-8"	37'-10"	37'-0"	34'-11"	32'-5"	41'-10"	40'-11"	38'-7"	35'-10"	45'-8"	44'-8"	42'-2"	39'-1"
	30	20		32'-3"	31'-6"	29'-7"	27'-5"	36'-6"	35'-8"	33'-7"	31'-0"	40'-4"	39'-5"	37'-1"	34'-3"	44'-1"	43'-0"	40'-6"	37'-5"
	40	10		31'-6"	31'-0"	29'-9"	28'-1"	35'-9"	35'-2"	33'-8"	31'-10"	39'-6"	38'-10"	37'-3"	35'-2"	43'-1"	42'-5"	40'-8"	38'-5"
	40	15		31'-2"	30'-6"	28'-11"	26'-11"	35'-4"	34'-7"	32'-9"	30'-6"	39'-1"	38'-3"	36'-2"	33'-9"	42'-8"	41'-9"	39'-6"	36'-10"
	40	20		30'-3"	29'-7"	27'-11"	25'-11"	34'-3"	33'-6"	31'-8"	29'-5"	37'-11"	37'-0"	35'-0"	32'-6"	41'-4"	40'-5"	38'-2"	35'-5"
	50	10	29'-2"	28'-8"	27'-7"	26'-2"	33'-1"	32'-6"	31'-2"	29'-7"	36'-6"	35'-11"	34'-6"	32'-9"	39'-11"	39'-3"	37'-8"	35'-9"	
	50	15	29'-2"	28'-8"	27'-4"	25'-7"	33'-1"	32'-6"	31'-0"	29'-0"	36'-6"	35'-11"	34'-3"	32'-0"	39'-11"	39'-3"	37'-5"	34'-11"	
	50	20	28'-8"	28'-1"	26'-7"	24'-9"	32'-6"	31'-10"	30'-1"	28'-0"	35'-11"	35'-2"	33'-3"	31'-0"	39'-3"	38'-4"	36'-4"	33'-10"	
No Snow 125%	20	10	12" o.c.	PKI 50-20				PKI 50-22				PKI 50-24							
	20	15		55'-9"	54'-2"	47'-1"	39'-7"	57'-8"	54'-2"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"				
	20	20		52'-11"	51'-8"	47'-1"	39'-7"	56'-10"	54'-2"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"				
Snow 115%	25	10		50'-7"	49'-3"	46'-1"	39'-7"	54'-3"	52'-11"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"				
	25	15		52'-11"	51'-9"	47'-1"	39'-7"	56'-10"	54'-2"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"				
	25	20		50'-7"	49'-4"	46'-6"	39'-7"	54'-3"	53'-0"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"				
	30	10		48'-6"	47'-4"	44'-5"	39'-7"	52'-2"	50'-10"	46'-11"	39'-5"	55'-8"	54'-1"	46'-10"	39'-4"				
	30	15		50'-7"	49'-6"	46'-10"	39'-7"	54'-3"	53'-2"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"				
	30	20		48'-6"	47'-5"	44'-9"	39'-7"	52'-2"	50'-11"	46'-11"	39'-5"	55'-8"	54'-1"	46'-10"	39'-4"				
	40	10		46'-10"	45'-8"	43'-0"	39'-7"	50'-3"	49'-1"	46'-2"	39'-5"	53'-8"	52'-5"	46'-10"	39'-4"				
	40	15		45'-9"	45'-0"	43'-2"	39'-7"	49'-2"	48'-4"	46'-5"	39'-5"	52'-6"	51'-7"	46'-10"	39'-4"				
	40	20		45'-4"	44'-4"	41'-11"	39'-1"	48'-8"	47'-7"	45'-1"	39'-5"	51'-2"	50'-10"	46'-10"	39'-4"				
	50	10	43'-11"	43'-0"	40'-7"	37'-8"	47'-0"	46'-2"	43'-7"	39'-5"	49'-0"	48'-7"	46'-6"	39'-4"					
	50	15	42'-5"	41'-8"	40'-0"	38'-0"	45'-6"	44'-9"	42'-11"	39'-5"	48'-7"	47'-9"	45'-10"	39'-4"					
	50	20	42'-5"	41'-8"	39'-9"	37'-1"	45'-2"	44'-9"	42'-8"	39'-5"	47'-1"	46'-9"	45'-6"	39'-4"					
50	20	41'-8"	40'-9"	38'-7"	35'-11"	43'-6"	43'-2"	41'-5"	38'-7"	45'-4"	45'-0"	44'-1"	39'-4"						

# PKI 50 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 50-12				PKI 50-14				PKI 50-16				PKI 50-18			
				≤¼ :12 >¼	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	16" o.c.	34'-10"	34'-1"	32'-2"	29'-10"	39'-5"	38'-7"	36'-4"	33'-9"	43'-7"	42'-7"	40'-2"	37'-4"	47'-7"	46'-6"	43'-11"	39'-8"
	20	15		33'-0"	32'-3"	30'-3"	27'-11"	37'-5"	36'-6"	34'-3"	31'-8"	41'-4"	40'-4"	37'-11"	35'-0"	45'-2"	44'-0"	41'-4"	38'-2"
	20	20		31'-6"	30'-9"	28'-9"	26'-6"	35'-9"	34'-10"	32'-7"	30'-0"	39'-6"	38'-6"	36'-0"	33'-2"	43'-1"	42'-0"	39'-4"	36'-2"
Snow 115%	25	10		33'-0"	32'-4"	30'-7"	28'-5"	37'-5"	36'-7"	34'-7"	32'-3"	41'-4"	40'-5"	38'-3"	35'-7"	45'-2"	44'-2"	41'-9"	38'-10"
	25	15		31'-6"	30'-10"	29'-0"	26'-11"	35'-9"	34'-11"	32'-10"	30'-5"	39'-6"	38'-7"	36'-4"	33'-8"	43'-1"	42'-1"	39'-8"	36'-9"
	25	20		30'-3"	29'-6"	27'-9"	25'-7"	34'-3"	33'-5"	31'-5"	29'-0"	37'-11"	37'-0"	34'-9"	32'-0"	41'-4"	40'-4"	37'-11"	35'-0"
	30	10		31'-6"	30'-10"	29'-3"	27'-4"	35'-9"	35'-0"	33'-2"	30'-11"	39'-6"	38'-8"	36'-7"	34'-2"	43'-1"	42'-2"	40'-0"	37'-4"
	30	15		30'-3"	29'-7"	27'-11"	25'-11"	34'-3"	33'-6"	31'-8"	29'-5"	37'-11"	37'-0"	35'-0"	32'-6"	41'-4"	40'-5"	38'-2"	35'-5"
	30	20		29'-2"	28'-6"	26'-10"	24'-10"	33'-1"	32'-3"	30'-4"	28'-1"	36'-6"	35'-8"	33'-7"	31'-1"	39'-11"	38'-11"	36'-8"	33'-11"
	40	10		28'-6"	28'-1"	26'-11"	25'-5"	32'-4"	31'-9"	30'-6"	28'-10"	35'-9"	35'-2"	33'-9"	31'-10"	39'-0"	38'-4"	36'-10"	34'-9"
	40	15		28'-3"	27'-7"	26'-2"	24'-5"	32'-0"	31'-3"	29'-8"	27'-8"	35'-4"	34'-7"	32'-9"	30'-6"	38'-7"	37'-9"	35'-9"	33'-4"
	40	20		27'-4"	26'-9"	25'-3"	23'-6"	31'-0"	30'-4"	28'-8"	26'-7"	34'-3"	33'-6"	31'-8"	29'-5"	37'-5"	36'-7"	34'-7"	32'-1"
	50	10	26'-4"	25'-11"	24'-11"	23'-8"	29'-11"	29'-5"	28'-3"	26'-10"	33'-0"	32'-6"	31'-3"	29'-8"	36'-1"	35'-6"	34'-1"	32'-4"	
	50	15	26'-4"	25'-11"	24'-9"	23'-2"	29'-11"	29'-5"	28'-0"	26'-3"	33'-0"	32'-6"	31'-0"	29'-0"	36'-1"	35'-6"	33'-10"	31'-8"	
	50	20	25'-11"	25'-4"	24'-0"	22'-5"	29'-4"	28'-9"	27'-3"	25'-4"	30'-8"	31'-2"	29'-11"	28'-1"	35'-2"	34'-9"	32'-10"	30'-7"	
No Snow 125%	20	10	16" o.c.	PKI 50-20				PKI 50-22				PKI 50-24							
	20	15		50'-7"	49'-5"	46'-7"	39'-7"	54'-3"	53'-1"	46'-11"	39'-5"	57'-8"	54'-1"	46'-10"	39'-4"				
	20	20		47'-11"	46'-9"	43'-11"	39'-7"	51'-6"	50'-3"	46'-11"	39'-5"	54'-11"	53'-7"	46'-10"	39'-4"				
Snow 115%	25	10		45'-9"	44'-7"	41'-9"	38'-5"	49'-2"	47'-11"	44'-10"	39'-5"	52'-6"	51'-2"	46'-10"	39'-4"				
	25	15		47'-11"	46'-11"	44'-4"	39'-7"	51'-6"	50'-4"	46'-11"	39'-5"	54'-11"	53'-9"	46'-10"	39'-4"				
	25	20		45'-9"	44'-9"	42'-1"	39'-0"	49'-2"	48'-0"	45'-3"	39'-5"	52'-0"	51'-3"	46'-10"	39'-4"				
	30	10		43'-11"	42'-11"	40'-3"	37'-2"	47'-0"	46'-1"	43'-3"	39'-5"	49'-0"	48'-5"	46'-2"	39'-4"				
	30	15		45'-9"	44'-10"	42'-6"	39'-7"	49'-2"	48'-2"	45'-7"	39'-5"	52'-0"	51'-4"	46'-10"	39'-4"				
	30	20		43'-11"	43'-0"	40'-7"	37'-8"	47'-0"	46'-2"	43'-7"	39'-5"	49'-0"	48'-7"	46'-6"	39'-4"				
	40	10		42'-5"	41'-5"	38'-11"	36'-0"	44'-7"	44'-1"	41'-10"	38'-8"	46'-6"	46'-0"	44'-8"	39'-4"				
	40	15		41'-5"	40'-9"	39'-1"	36'-11"	44'-6"	43'-9"	42'-0"	39'-5"	46'-6"	46'-3"	44'-10"	39'-4"				
	40	20		41'-0"	40'-2"	38'-0"	35'-5"	42'-6"	42'-2"	40'-10"	38'-0"	44'-4"	44'-0"	43'-1"	39'-4"				
	50	10	39'-9"	38'-11"	36'-9"	34'-1"	40'-8"	40'-4"	39'-4"	36'-8"	42'-5"	42'-0"	41'-0"	39'-1"					
	50	15	38'-4"	37'-9"	36'-2"	34'-5"	40'-8"	40'-6"	38'-11"	36'-11"	42'-5"	42'-2"	41'-6"	39'-4"					
	50	20	38'-4"	37'-9"	35'-11"	33'-7"	39'-1"	38'-10"	38'-2"	36'-1"	40'-9"	40'-6"	39'-10"	38'-6"					
50	20	37'-1"	36'-10"	34'-11"	32'-6"	37'-8"	37'-4"	36'-7"	34'-11"	39'-3"	38'-11"	38'-2"	36'-9"						

# PKI 50 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 50-12				PKI 50-14				PKI 50-16				PKI 50-18			
				≤¼ :12 >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	192" o.c.	32'-8"	32'-0"	30'-2"	28'-0"	37'-0"	36'-2"	34'-2"	31'-9"	40'-11"	40'-0"	37'-9"	35'-1"	44'-8"	43'-8"	41'-3"	38'-3"
	20	15		31'-0"	30'-3"	28'-5"	26'-3"	35'-1"	34'-3"	32'-2"	29'-9"	38'-10"	37'-10"	35'-7"	32'-10"	42'-4"	41'-4"	38'-10"	35'-11"
	20	20		29'-7"	28'-10"	27'-0"	24'-10"	33'-6"	32'-8"	30'-7"	28'-2"	37'-1"	36'-1"	33'-10"	31'-1"	40'-5"	39'-5"	36'-11"	34'-0"
Snow 115%	25	10		31'-0"	30'-4"	28'-8"	26'-9"	35'-1"	34'-4"	32'-6"	30'-3"	38'-10"	38'-0"	35'-11"	33'-5"	42'-4"	41'-6"	39'-3"	36'-6"
	25	15		29'-7"	28'-11"	27'-3"	25'-3"	33'-6"	32'-9"	30'-10"	28'-7"	37'-1"	36'-2"	34'-1"	31'-7"	40'-5"	39'-6"	37'-3"	34'-6"
	25	20		28'-5"	27'-9"	26'-0"	24'-0"	32'-2"	31'-5"	29'-6"	27'-3"	35'-7"	34'-8"	32'-7"	30'-1"	38'-10"	37'-11"	35'-7"	32'-10"
	30	10		29'-7"	29'-0"	27'-6"	25'-8"	33'-6"	32'-10"	31'-1"	29'-0"	37'-1"	36'-3"	34'-5"	32'-1"	40'-5"	39'-7"	37'-6"	35'-0"
	30	15		28'-5"	27'-9"	26'-3"	24'-4"	32'-2"	31'-5"	29'-8"	27'-7"	35'-7"	34'-9"	32'-10"	30'-6"	38'-10"	38'-0"	35'-10"	33'-4"
	30	20		27'-4"	26'-9"	25'-2"	23'-3"	31'-0"	30'-3"	28'-6"	26'-5"	34'-3"	33'-6"	31'-6"	29'-2"	37'-5"	36'-7"	34'-5"	31'-10"
	40	10		26'-9"	26'-4"	25'-3"	23'-11"	30'-4"	29'-10"	28'-8"	27'-1"	33'-6"	33'-0"	31'-8"	29'-11"	36'-7"	36'-0"	34'-7"	32'-8"
	40	15		26'-6"	25'-11"	24'-7"	22'-11"	30'-0"	29'-4"	27'-10"	25'-11"	32'-7"	32'-5"	30'-9"	28'-8"	36'-2"	35'-5"	33'-7"	31'-4"
	40	20		25'-8"	25'-1"	23'-9"	22'-0"	29'-1"	28'-5"	26'-10"	25'-0"	29'-10"	30'-3"	28'-10"	27'-0"	34'-8"	34'-4"	32'-5"	30'-2"
	50	10	24'-9"	24'-4"	23'-5"	22'-3"	28'-0"	27'-7"	26'-6"	25'-2"	29'-10"	30'-6"	29'-3"	27'-10"	33'-10"	33'-4"	32'-0"	30'-5"	
	50	15	24'-9"	24'-4"	23'-3"	21'-9"	27'-0"	27'-7"	26'-4"	24'-7"	27'-6"	28'-0"	27'-1"	25'-11"	33'-4"	33'-1"	31'-9"	29'-8"	
	50	20	24'-4"	23'-9"	22'-6"	21'-0"	25'-0"	25'-8"	24'-7"	23'-3"	25'-6"	25'-11"	24'-11"	23'-6"	32'-1"	31'-10"	30'-10"	28'-9"	
No Snow 125%	20	10	192" o.c.	PKI 50-20				PKI 50-22				PKI 50-24							
	20	15		47'-6"	46'-5"	43'-9"	39'-7"	51'-0"	49'-10"	46'-11"	39'-5"	54'-5"	53'-2"	46'-10"	39'-4"				
	20	20		45'-0"	43'-11"	41'-3"	38'-1"	48'-4"	47'-2"	44'-4"	39'-5"	51'-7"	50'-4"	46'-10"	39'-4"				
Snow 115%	25	10		43'-0"	41'-11"	39'-3"	36'-1"	46'-2"	45'-0"	42'-2"	38'-9"	49'-3"	48'-0"	45'-0"	39'-4"				
	25	15		45'-0"	44'-1"	41'-8"	38'-9"	48'-4"	47'-4"	44'-9"	39'-5"	50'-9"	50'-4"	46'-10"	39'-4"				
	25	20		43'-0"	42'-0"	39'-7"	36'-8"	45'-6"	45'-1"	42'-6"	39'-4"	47'-5"	46'-11"	45'-4"	39'-4"				
	30	10		41'-3"	40'-3"	37'-10"	34'-11"	42'-11"	42'-5"	40'-7"	37'-6"	44'-8"	44'-2"	42'-10"	39'-4"				
	30	15		43'-0"	42'-1"	39'-11"	37'-3"	45'-6"	45'-2"	42'-10"	39'-5"	47'-5"	47'-1"	45'-9"	39'-4"				
	30	20		41'-3"	40'-4"	38'-1"	35'-4"	42'-11"	42'-6"	40'-11"	38'-0"	44'-8"	44'-4"	43'-3"	39'-4"				
	40	10		39'-9"	38'-10"	36'-7"	33'-10"	40'-8"	40'-3"	39'-1"	36'-4"	42'-5"	41'-11"	40'-9"	38'-9"				
	40	15		38'-11"	38'-3"	36'-9"	34'-8"	40'-8"	40'-5"	39'-5"	37'-3"	42'-5"	42'-2"	41'-7"	39'-4"				
	40	20		38'-2"	37'-8"	35'-8"	33'-3"	38'-9"	38'-6"	37'-9"	35'-9"	40'-5"	40'-1"	39'-4"	38'-2"				
	50	10	36'-7"	36'-3"	34'-6"	32'-0"	37'-1"	36'-9"	35'-11"	34'-5"	38'-8"	38'-4"	37'-5"	35'-1"					
	50	15	36'-0"	35'-5"	34'-0"	32'-3"	37'-1"	36'-11"	36'-6"	34'-8"	38'-8"	38'-6"	38'-0"	37'-0"					
	50	20	35'-1"	34'-11"	33'-9"	31'-7"	35'-8"	35'-5"	34'-10"	33'-7"	36'-10"	36'-5"	35'-2"	33'-7"					
50	20	33'-10"	33'-7"	32'-4"	30'-6"	34'-2"	33'-8"	32'-4"	30'-7"	34'-2"	33'-8"	32'-4"	30'-7"						

# PKI 50 ROOF SPAN TABLE 115% and 125% Load Duration. Maximum clear span in feet and inches, based on horizontal spans.

	LL (psf)	DL (psf)		PKI 50-12				PKI 50-14				PKI 50-16				PKI 50-18			
				≤¼ :12 >12	≤¼:12 to >4:12	≤4:12 to >8:12	≤8:12 to >12:12												
No Snow 125%	20	10	24" o.c.	30'-3"	29'-7"	27'-11"	25'-11"	34'-3"	33'-6"	31'-8"	29'-5"	37'-11"	37'-0"	35'-0"	32'-6"	41'-4"	40'-5"	38'-2"	35'-5"
	20	15		28'-8"	28'-0"	26'-4"	24'-4"	32'-6"	31'-9"	29'-10"	27'-6"	35'-11"	35'-1"	32'-11"	30'-5"	39'-3"	38'-3"	36'-0"	33'-3"
	20	20		27'-4"	26'-8"	25'-0"	23'-0"	31'-0"	30'-3"	28'-4"	26'-1"	34'-3"	33'-5"	31'-4"	28'-10"	37'-5"	36'-6"	34'-2"	31'-5"
Snow 115%	25	10		28'-8"	28'-1"	26'-7"	24'-9"	32'-6"	31'-10"	30'-1"	28'-0"	35'-11"	35'-2"	33'-3"	31'-0"	39'-3"	38'-4"	36'-4"	33'-10"
	25	15		27'-4"	26'-9"	25'-2"	23'-4"	31'-0"	30'-4"	28'-7"	26'-6"	34'-3"	33'-6"	31'-7"	29'-3"	37'-5"	36'-7"	34'-6"	31'-11"
	25	20		26'-3"	25'-7"	24'-1"	22'-3"	29'-9"	29'-0"	27'-3"	25'-2"	31'-10"	32'-1"	30'-1"	27'-8"	35'-10"	35'-1"	32'-11"	30'-5"
	30	10		27'-4"	26'-10"	25'-5"	23'-9"	31'-0"	30'-4"	28'-9"	26'-11"	34'-3"	33'-7"	31'-10"	29'-9"	37'-5"	36'-8"	34'-9"	32'-5"
	30	15		26'-3"	25'-8"	24'-3"	22'-6"	29'-9"	29'-1"	27'-6"	25'-6"	31'-10"	32'-2"	30'-5"	28'-3"	35'-10"	35'-1"	33'-2"	30'-10"
	30	20		25'-4"	24'-9"	23'-3"	21'-7"	28'-1"	28'-0"	26'-4"	24'-5"	28'-7"	28'-11"	27'-4"	25'-4"	34'-0"	33'-7"	31'-10"	29'-6"
	40	10		24'-9"	24'-4"	23'-5"	22'-1"	28'-0"	27'-7"	26'-6"	25'-1"	28'-7"	29'-3"	28'-5"	27'-3"	33'-10"	33'-4"	32'-0"	30'-3"
	40	15		24'-5"	23'-11"	22'-8"	21'-2"	25'-6"	26'-1"	25'-1"	23'-10"	26'-0"	26'-5"	25'-5"	24'-1"	32'-5"	32'-2"	31'-1"	29'-0"
	40	20		22'-10"	23'-2"	21'-11"	20'-5"	23'-4"	23'-10"	22'-9"	21'-4"	23'-9"	24'-2"	23'-0"	21'-7"	31'-0"	30'-9"	29'-10"	27'-11"
	50	10		22'-10"	22'-6"	21'-7"	20'-7"	23'-4"	24'-1"	23'-6"	22'-8"	23'-9"	24'-4"	23'-9"	23'-0"	31'-0"	30'-9"	29'-7"	28'-1"
	50	15		21'-1"	21'-6"	20'-10"	19'-10"	21'-6"	22'-1"	21'-5"	20'-5"	21'-11"	22'-5"	21'-8"	20'-8"	29'-5"	29'-1"	28'-1"	26'-10"
	50	20		19'-7"	19'-11"	19'-1"	18'-0"	19'-11"	20'-6"	19'-8"	18'-7"	20'-4"	20'-8"	19'-10"	18'-9"	27'-3"	26'-10"	25'-9"	24'-4"
No Snow 125%	20	10	24" o.c.	PKI 50-20				PKI 50-22				PKI 50-24							
	20	15		43'-11"	43'-0"	40'-7"	37'-8"	47'-3"	46'-2"	43'-7"	39'-5"	50'-5"	49'-3"	46'-6"	39'-4"				
	20	20		41'-8"	40'-8"	38'-3"	35'-4"	44'-9"	43'-8"	41'-1"	37'-11"	47'-3"	46'-7"	43'-10"	39'-4"				
Snow 115%	25	10		39'-9"	38'-9"	36'-4"	33'-5"	42'-5"	41'-8"	39'-0"	35'-11"	44'-3"	43'-7"	41'-8"	38'-4"				
	25	15		41'-8"	40'-9"	38'-7"	35'-11"	43'-6"	43'-2"	41'-5"	38'-7"	45'-4"	45'-0"	44'-1"	39'-4"				
	25	20		39'-9"	38'-10"	36'-7"	33'-11"	40'-8"	40'-3"	39'-2"	36'-5"	42'-5"	42'-0"	40'-10"	38'-11"				
	30	10		37'-9"	37'-3"	35'-0"	32'-4"	38'-4"	37'-10"	36'-8"	34'-8"	39'-11"	39'-6"	38'-3"	35'-11"				
	30	15		39'-9"	38'-11"	36'-11"	34'-6"	40'-8"	40'-5"	39'-8"	37'-0"	42'-5"	42'-1"	41'-4"	39'-4"				
	30	20		37'-9"	37'-4"	35'-3"	32'-9"	38'-4"	38'-0"	37'-1"	35'-2"	39'-11"	39'-7"	38'-8"	37'-5"				
	40	10		35'-10"	35'-5"	33'-10"	31'-4"	36'-4"	35'-11"	34'-11"	32'-10"	37'-11"	37'-6"	35'-5"	32'-10"				
	40	15		35'-10"	35'-5"	34'-0"	32'-1"	36'-4"	36'-2"	35'-8"	34'-6"	37'-11"	37'-8"	36'-10"	35'-5"				
	40	20		34'-2"	33'-11"	33'-0"	30'-9"	34'-8"	34'-4"	33'-0"	31'-3"	34'-10"	34'-4"	33'-0"	31'-3"				
	50	10		31'-11"	31'-4"	29'-10"	28'-0"	31'-11"	31'-4"	29'-10"	28'-0"	31'-11"	31'-4"	29'-10"	28'-0"				
	50	15		31'-11"	31'-7"	30'-10"	29'-10"	31'-11"	31'-7"	30'-10"	29'-10"	31'-11"	31'-7"	30'-10"	29'-10"				
	50	20		29'-5"	29'-1"	28'-1"	26'-10"	29'-5"	29'-1"	28'-1"	26'-10"	29'-5"	29'-1"	28'-1"	26'-10"				
50	20	27'-3"	26'-10"	25'-9"	24'-4"	27'-3"	26'-10"	25'-9"	24'-4"	27'-3"	26'-10"	25'-9"	24'-4"						

## GENERAL NOTES FOR ROOF LOAD TABLES:

# ROOF LOAD TABLES

Values shown are maximum allowable load capacities based on the following assumptions:

- Simple span; horizontal clear distance between supports
- Uniformly loaded conditions with minimum 1 ½" bearing length and no web stiffeners. Other capacities may be possible with different criteria; contact your PK-USA representative.
- Positive drainage in roof applications (minimum ¼" per foot slope).
- Composite action with horizontal diaphragm sheathing is not considered for joist deflection.
- Roof Total Load deflection limit is L/180 with no finished ceiling attached to the rafters.
- (-) Indicates Total Load (TL) value controls.
- For multi-span joist design, analyze using Simpson Strong Tie or MiTek software.



# NO SNOW

## PKI 10

Allowable Uniform Roof Loading  
(100% Load Duration) **NO SNOW**

Span Length (ft)	PKI 10-10		PKI 10-12		PKI 10-14	
	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)
6	-	485	-	572	-	647
7	-	416	-	490	-	554
8	-	341	-	429	-	485
9	-	270	-	354	-	424
10	-	219	-	286	-	344
11	-	181	-	237	-	284
12	-	152	-	199	-	239
13	-	129	-	169	-	203
14	-	111	-	146	-	175
15	-	97	-	127	-	153
16	85	85	-	112	-	134
17	72	76	-	99	-	119
18	61	67	-	88	-	106
19	52	61	-	79	-	95
20	45	55	-	72	-	86
21	39	50	-	65	-	78
22	34	45	57	59	-	71
23	-	-	50	54	-	65
24	-	-	44	50	-	60
25	-	-	39	46	-	55
26	-	-	35	42	51	51
27	-	-	31	39	45	47
28	-	-	28	37	41	44
29	-	-	-	-	37	41
30	-	-	-	-	33	38

# SNOW 25psf

## PKI 10

Allowable Uniform Roof Loading  
(100% Load Duration) **SNOW (25 psf)**

Span Length (ft)	PKI 10-10		PKI 10-12		PKI 10-14	
	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)
6	-	461	-	543	-	615
7	-	395	-	466	-	527
8	-	325	-	408	-	461
9	-	256	-	336	-	403
10	-	208	-	272	-	327
11	-	172	-	225	-	270
12	-	144	-	189	-	227
13	-	123	-	161	-	193
14	-	106	-	139	-	167
15	-	92	-	121	-	145
16	-	81	-	106	-	128
17	72	72	-	94	-	113
18	61	64	-	84	-	101
19	52	58	-	75	-	90
20	45	52	-	68	-	82
21	39	47	-	62	-	74
22	34	43	-	56	-	67
23	-	-	50	51	-	62
24	-	-	44	47	-	57
25	-	-	39	44	-	52
26	-	-	-	-	-	48
27	-	-	-	-	-	45
28	-	-	-	-	41	42
29	-	-	-	-	-	-
30	-	-	-	-	-	-

# NO SNOW

## PKI 20

Allowable Uniform Roof Loading  
(100% Load Duration) **NO SNOW**

Span Length (ft)	PKI 20-10		PKI 20-12		PKI 20-14		PKI 20-16	
	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)
6	-	485	-	572	-	647	-	720
7	-	416	-	490	-	554	-	617
8	-	364	-	429	-	485	-	540
9	-	321	-	381	-	431	-	480
10	-	260	-	343	-	388	-	432
11	-	215	-	287	-	336	-	386
12	-	180	-	241	-	283	-	325
13	-	154	-	205	-	241	-	277
14	-	132	-	177	-	208	-	239
15	-	115	-	154	-	181	-	208
16	97	101	-	136	-	159	-	183
17	81	90	-	120	-	141	-	162
18	69	80	-	107	-	126	-	144
19	59	72	-	96	-	113	-	130
20	51	65	85	87	-	102	-	117
21	44	58	74	79	-	92	-	106
22	39	51	64	72	-	84	-	97
23	-	-	57	66	-	77	-	88
24	-	-	50	60	-	71	-	81
25	-	-	44	56	65	65	-	75
26	-	-	40	51	58	60	-	69
27	-	-	36	47	52	56	-	64
28	-	-	32	42	46	52	-	60
29	-	-	-	-	42	48	-	56
30	-	-	-	-	38	45	51	52

# SNOW 25psf

## PKI 20

Allowable Uniform Roof Loading  
(100% Load Duration) **SNOW (25 psf)**

Span Length (ft)	PKI 20-10		PKI 20-12		PKI 20-14		PKI 20-16	
	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)
6	-	461	-	543	-	615	-	684
7	-	395	-	466	-	527	-	586
8	-	346	-	408	-	461	-	513
9	-	305	-	362	-	410	-	456
10	-	247	-	326	-	369	-	411
11	-	204	-	273	-	320	-	367
12	-	171	-	229	-	269	-	309
13	-	146	-	195	-	229	-	263
14	-	126	-	168	-	197	-	227
15	-	110	-	147	-	172	-	197
16	-	96	-	129	-	151	-	174
17	81	85	-	114	-	134	-	154
18	69	76	-	102	-	119	-	137
19	59	68	-	91	-	107	-	123
20	51	62	-	82	-	97	-	111
21	44	56	74	75	-	88	-	101
22	39	51	64	68	-	80	-	92
23	-	-	57	62	-	73	-	84
24	-	-	50	57	-	67	-	77
25	-	-	44	53	-	62	-	71
26	-	-	-	-	-	57	-	66
27	-	-	-	-	52	53	-	61
28	-	-	-	-	46	49	-	57
29	-	-	-	-	-	-	-	53
30	-	-	-	-	-	-	-	49

# NO SNOW

## PKI 23

Allowable Uniform Roof Loading  
(100% Load Duration) **NO SNOW**

Span Length (ft)	PKI 23-10		PKI 23-12		PKI 23-14		PKI 23-16	
	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)
6	-	610	-	695	-	772	-	843
7	-	523	-	596	-	662	-	723
8	-	458	-	521	-	579	-	632
9	-	380	-	463	-	515	-	562
10	-	308	-	399	-	463	-	506
11	-	254	-	330	-	397	-	460
12	-	214	-	277	-	334	-	387
13	-	182	-	236	-	284	-	330
14	-	157	-	204	-	245	-	284
15	134	137	-	177	-	214	-	248
16	112	120	-	156	-	188	-	218
17	94	106	-	138	-	166	-	193
18	80	95	-	123	-	148	-	172
19	69	85	-	111	-	133	-	154
20	59	77	98	100	-	120	-	139
21	51	68	85	91	-	109	-	126
22	45	59	74	82	-	99	-	115
23	39	52	65	75	-	91	-	105
24	35	46	58	69	83	83	-	97
25	31	41	51	64	74	77	-	89
26	28	36	46	59	66	71	-	82
27	25	33	41	54	59	66	-	76
28	22	29	37	49	53	61	-	71
29	20	26	33	44	48	57	65	66
30	18	24	30	40	44	53	59	62

# SNOW 25psf

## PKI 23

Allowable Uniform Roof Loading  
(100% Load Duration) **SNOW (25 psf)**

Span Length (ft)	PKI 23-10		PKI 23-12		PKI 23-14		PKI 23-16	
	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)
6	-	580	-	660	-	734	-	801
7	-	497	-	566	-	629	-	687
8	-	435	-	495	-	550	-	601
9	-	361	-	440	-	489	-	534
10	-	292	-	379	-	440	-	481
11	-	242	-	314	-	377	-	437
12	-	203	-	263	-	317	-	368
13	-	173	-	224	-	270	-	313
14	-	149	-	194	-	233	-	270
15	-	130	-	169	-	203	-	235
16	112	114	-	148	-	178	-	207
17	94	101	-	131	-	158	-	183
18	80	90	-	117	-	141	-	163
19	69	81	-	105	-	126	-	147
20	59	73	-	95	-	114	-	132
21	51	66	85	86	-	104	-	120
22	45	59	74	78	-	94	-	109
23	39	52	65	72	-	86	-	100
24	35	46	58	66	-	79	-	92
25	31	41	51	61	-	73	-	85
26	28	36	46	56	66	68	-	78
27	25	33	41	52	59	63	-	73
28	22	29	37	48	53	58	-	68
29	20	26	33	44	48	54	-	63
30	18	24	30	40	44	51	59	59

# NO SNOW

## PKI 35-PLUS

Allowable Uniform Roof Loading  
(100% Load Duration) **NO SNOW**

Span Length (ft)	PKI 35-PLUS-10		PKI 35-PLUS-12		PKI 35-PLUS-14		PKI 35-PLUS-16	
	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)
6	-	485	-	572	-	647	-	720
7	-	416	-	490	-	554	-	617
8	-	364	-	429	-	485	-	540
9	-	323	-	381	-	431	-	480
10	-	291	-	343	-	388	-	432
11	-	259	-	312	-	353	-	393
12	-	218	-	282	-	323	-	360
13	-	186	-	240	-	288	-	328
14	-	160	-	207	-	248	-	282
15	139	139	-	180	-	216	-	246
16	116	123	-	159	-	190	-	216
17	97	109	-	141	-	169	-	192
18	83	97	-	125	-	150	-	171
19	71	87	-	112	-	135	-	153
20	61	78	101	102	-	122	-	138
21	53	70	88	92	-	110	-	126
22	46	61	77	84	-	101	-	114
23	41	54	68	77	-	92	-	105
24	36	48	60	71	-	85	-	96
25	32	42	53	65	77	78	-	89
26	29	38	48	60	69	72	-	82
27	26	34	43	56	62	67	-	76
28	23	30	38	51	56	62	-	71
29	21	27	35	46	50	58	-	66
30	19	25	31	41	46	54	61	62

# SNOW 25psf

## PKI 35-PLUS

Allowable Uniform Roof Loading  
(100% Load Duration) **SNOW (25 psf)**

Span Length (ft)	PKI 35-PLUS-10		PKI 35-PLUS-12		PKI 35-PLUS-14		PKI 35-PLUS-16	
	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)
6	-	461	-	543	-	615	-	684
7	-	395	-	466	-	527	-	586
8	-	346	-	408	-	461	-	513
9	-	307	-	362	-	410	-	456
10	-	277	-	326	-	369	-	411
11	-	246	-	296	-	335	-	373
12	-	207	-	268	-	307	-	342
13	-	176	-	228	-	274	-	311
14	-	152	-	197	-	236	-	268
15	-	133	-	172	-	206	-	234
16	116	116	-	151	-	181	-	205
17	97	103	-	134	-	160	-	182
18	83	92	-	119	-	143	-	162
19	71	83	-	107	-	128	-	146
20	61	75	-	96	-	116	-	132
21	53	68	-	88	-	105	-	119
22	46	61	77	80	-	96	-	109
23	41	54	68	73	-	87	-	99
24	36	48	60	67	-	80	-	91
25	32	42	53	62	-	74	-	84
26	29	38	48	57	-	68	-	78
27	26	34	43	53	62	63	-	72
28	23	30	38	49	56	59	-	67
29	21	27	35	46	50	55	-	63
30	19	25	31	42	46	51	-	58

# NO SNOW

## PKI 40

Allowable Uniform Roof Loading  
(100% Load Duration) **NO SNOW**

Span Length (ft)	PKI 40-10		PKI 40-12		PKI 40-14		PKI 40-16		PKI 40-18		PKI 40-20		PKI 40-22		PKI 40-24	
	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)
6	-	516	-	626	-	722	-	814	-	976	-	1032	-	1084	-	1084
7	-	442	-	536	-	619	-	698	-	837	-	884	-	929	-	929
8	-	387	-	469	-	541	-	611	-	732	-	774	-	813	-	813
9	-	344	-	417	-	481	-	543	-	651	-	688	-	723	-	723
10	-	310	-	375	-	433	-	489	-	586	-	619	-	650	-	650
11	-	281	-	341	-	394	-	444	-	532	-	563	-	591	-	591
12	-	258	-	313	-	361	-	407	-	488	-	516	-	542	-	542
13	-	238	-	289	-	333	-	376	-	450	-	476	-	500	-	500
14	-	221	-	268	-	309	-	349	-	418	-	442	-	464	-	464
15	187	206	-	250	-	289	-	326	-	390	-	413	-	434	-	434
16	156	193	-	235	-	271	-	305	-	366	-	387	-	406	-	406
17	132	172	215	221	-	255	-	287	-	344	-	364	-	383	-	383
18	113	149	184	199	-	239	-	271	-	314	-	344	-	361	-	361
19	97	128	158	178	-	215	-	249	-	282	-	312	-	341	-	341
20	84	110	137	161	-	194	-	225	-	254	-	281	-	308	-	308
21	73	96	120	146	171	176	-	204	-	231	-	255	-	279	-	279
22	64	84	105	133	150	160	-	186	-	210	-	232	-	255	-	255
23	56	74	93	122	133	147	-	170	-	192	-	213	-	233	-	233
24	50	66	82	108	118	135	-	156	-	177	-	195	-	214	-	214
25	44	58	73	96	105	124	140	144	140	163	-	180	-	197	-	197
26	39	52	65	86	94	115	125	133	125	150	-	166	-	182	-	182
27	35	47	59	77	84	106	112	123	112	139	-	154	-	169	-	169
28	32	42	53	70	76	99	101	115	101	130	-	143	-	157	-	157
29	29	38	48	63	69	91	92	107	92	121	-	134	-	147	-	147
30	26	34	43	57	62	82	83	100	83	113	-	125	-	137	-	137

# SNOW 25psf

## PKI 40

Allowable Uniform Roof Loading  
(100% Load Duration) SNOW

Span Length (ft)	PKI 40-10		PKI 40-12		PKI 40-14		PKI 40-16		PKI 40-18		PKI 40-20		PKI 40-22		PKI 40-24	
	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)
6	-	490	-	595	-	686	-	774	-	928	-	981	-	1030	-	1030
7	-	420	-	510	-	588	-	663	-	795	-	841	-	883	-	883
8	-	368	-	446	-	515	-	580	-	696	-	735	-	773	-	773
9	-	327	-	396	-	457	-	516	-	618	-	654	-	687	-	687
10	-	294	-	357	-	412	-	464	-	557	-	588	-	618	-	618
11	-	267	-	324	-	374	-	422	-	506	-	535	-	562	-	562
12	-	245	-	297	-	343	-	387	-	464	-	490	-	515	-	515
13	-	226	-	274	-	317	-	357	-	428	-	453	-	475	-	475
14	-	210	-	255	-	294	-	332	-	398	-	420	-	441	-	441
15	187	196	-	238	-	274	-	310	-	371	-	392	-	412	-	412
16	156	184	-	223	-	257	-	290	-	348	-	368	-	386	-	386
17	132	164	-	210	-	242	-	273	-	327	-	346	-	364	-	364
18	113	146	184	189	-	228	-	258	-	298	-	327	-	343	-	343
19	97	128	158	170	-	204	-	237	-	268	-	296	-	324	-	324
20	84	111	137	153	-	184	-	214	-	242	-	267	-	293	-	293
21	73	96	120	139	-	167	-	194	-	219	-	242	-	266	-	266
22	64	84	105	126	150	152	-	177	-	200	-	221	-	242	-	242
23	56	74	93	116	133	139	-	162	-	183	-	202	-	221	-	221
24	50	66	82	106	118	128	-	148	-	168	-	186	-	203	-	203
25	44	58	73	97	105	118	-	137	-	155	-	171	-	187	-	187
26	39	52	65	86	94	109	125	126	125	143	-	158	-	173	-	173
27	35	47	59	77	84	101	112	117	112	133	-	147	-	161	-	161
28	32	42	53	70	76	94	101	109	101	123	-	136	-	149	-	149
29	29	38	48	63	69	88	92	102	92	115	-	127	-	139	-	139
30	26	34	43	57	62	82	83	95	83	107	-	119	-	130	-	130

# NO SNOW

## PKI 50

Allowable Uniform Roof Loading  
(100% Load Duration) **NO SNOW**

Span Length (ft)	PKI 50-12		PKI 50-14		PKI 50-16		PKI 50-18		PKI 50-20		PKI 50-22		PKI 50-24	
	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)	Live Load Defl (plf)	125% No Snow Total Load (plf)
6	-	822	-	878	-	930	-	976	-	1032	-	1084	-	1134
7	-	705	-	752	-	797	-	837	-	884	-	929	-	972
8	-	617	-	658	-	697	-	732	-	774	-	813	-	850
9	-	548	-	585	-	620	-	651	-	688	-	723	-	756
10	-	493	-	527	-	558	-	586	-	619	-	650	-	680
11	-	448	-	479	-	507	-	532	-	563	-	591	-	618
12	-	411	-	439	-	465	-	488	-	516	-	542	-	567
13	-	379	-	405	-	429	-	450	-	476	-	500	-	523
14	-	352	-	376	-	398	-	418	-	442	-	464	-	486
15	325	327	-	351	-	372	-	390	-	413	-	434	-	454
16	274	287	-	329	-	349	-	366	-	387	-	406	-	425
17	233	254	-	294	-	328	-	344	-	364	-	383	-	400
18	199	227	-	262	-	304	-	325	-	344	-	361	-	378
19	172	204	-	235	-	273	-	308	-	326	-	342	-	358
20	149	184	210	213	-	246	-	293	-	310	-	325	-	340
21	130	167	184	193	-	223	-	268	-	295	-	306	-	324
22	114	151	162	176	-	203	-	244	-	271	-	279	-	303
23	101	133	143	161	-	186	-	223	-	248	-	255	-	277
24	90	118	127	148	168	171	-	205	-	227	-	234	-	254
25	80	105	113	136	150	158	-	189	-	210	-	216	-	234
26	71	94	101	126	134	146	172	175	172	194	-	199	-	217
27	64	85	91	117	121	135	155	162	155	180	-	185	-	201
28	58	76	82	108	109	126	140	151	140	167	-	172	-	187
29	52	69	74	98	99	117	127	140	127	156	-	160	-	174
30	47	62	68	89	90	109	115	131	115	146	-	150	-	163

# SNOW 25psf

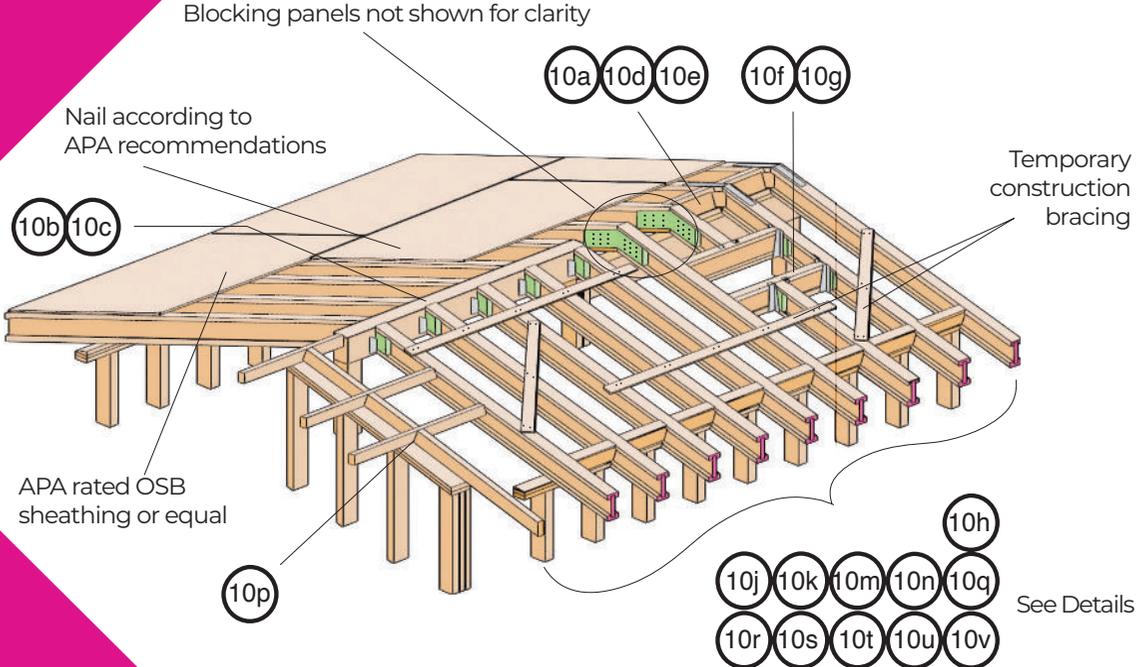
## PKI 50

Allowable Uniform Roof Loading  
(100% Load Duration) SNOW

Span Length (ft)	PKI 50-12		PKI 50-14		PKI 50-16		PKI 50-18		PKI 50-20		PKI 50-22		PKI 50-24	
	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)	Live Load Defl (plf)	115% Snow Total Load (plf)
6	-	781	-	834	-	884	-	928	-	981	-	1030	-	1078
7	-	670	-	715	-	757	-	795	-	841	-	883	-	924
8	-	586	-	626	-	663	-	696	-	735	-	773	-	808
9	-	521	-	556	-	589	-	618	-	654	-	687	-	718
10	-	469	-	501	-	530	-	557	-	588	-	618	-	647
11	-	426	-	455	-	482	-	506	-	535	-	562	-	588
12	-	391	-	417	-	442	-	464	-	490	-	515	-	539
13	-	361	-	385	-	408	-	428	-	453	-	475	-	497
14	-	335	-	358	-	379	-	398	-	420	-	441	-	462
15	-	310	-	334	-	353	-	371	-	392	-	412	-	431
16	-	273	-	313	-	331	-	348	-	368	-	386	-	404
17	233	242	-	280	-	312	-	327	-	346	-	364	-	380
18	199	216	-	249	-	289	-	309	-	327	-	343	-	359
19	172	194	-	224	-	259	-	293	-	310	-	325	-	340
20	149	175	-	202	-	234	-	278	-	294	-	309	-	323
21	130	158	-	183	-	212	-	254	-	280	-	291	-	308
22	114	144	162	167	-	193	-	232	-	257	-	265	-	287
23	101	132	143	153	-	177	-	212	-	235	-	242	-	263
24	90	118	127	140	-	162	-	195	-	216	-	222	-	242
25	80	105	113	129	-	150	-	179	-	199	-	205	-	223
26	71	94	101	120	134	138	-	166	-	184	-	190	-	206
27	64	85	91	111	121	128	-	154	-	171	-	176	-	191
28	58	76	82	103	109	119	140	143	140	159	-	163	-	177
29	52	69	74	96	99	111	127	133	127	148	-	152	-	165
30	47	63	68	89	90	104	115	125	115	138	-	142	-	155

**GENERAL NOTES FOR ROOF INSTALLATION DETAILS:**

**ROOF**  
**INSTALLATION**  
**DETAILS**



## ROOF INSTALLATION ILLUSTRATIONS

### 10a Upper End, Bearing on Wall

Blocking panel, x-bridging, or  $2\frac{3}{32}$ " APA Rated Sheathing 48/24 as continuous closure.  
(Validate use of x-bridging with local building code.)

Minimum attachment: For slope  $\frac{1}{4}$ :12, one 3" 10d box nail only, face nail at each side of bearing. For slope  $> \frac{1}{4}$ :12 design joist attachment to beveled plate to transfer lateral thrust.

Attach beveled plate to framing with 1 - 3  $\frac{1}{2}$ " at 16" o.c.

Beveled plate for slopes greater than  $\frac{1}{4}$ :12. Code-recognized connectors may be substituted. For slopes greater than 4:12 connectors are required to resist lateral thrust.

Bearing stiffener required when factored and reaction exceeds 2440 lbs.

2  $\frac{1}{2}$ " nails at 6" o.c. - minimum 3 - 2  $\frac{1}{2}$ " nails per blocking panel.  
When used for lateral shear transfer match nail type and sheathing edge nailing ("boundary nailing" for engineered diaphragm applications). Use minimum 2  $\frac{1}{2}$ " nails.

**NOTE:** Additional connection may be required for wind uplift.

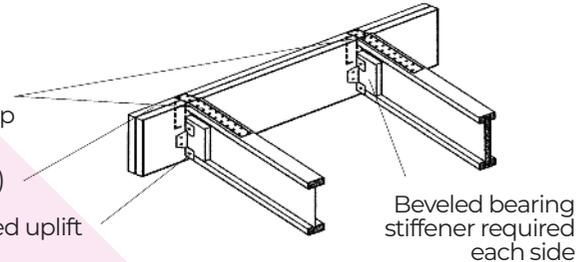
### 10b Peak Connection

For roof slopes between  $\frac{1}{4}$ :12 and 12:12, provide a strap tie nailed at a minimum of 3" spacing or in accordance with the recommendation of the strap manufacturer.

Ridge beam (Glulam or LVL)

Adjustable Slope Hangar with a minimum factored uplift resistance of 450 lbs.

**NOTE:** Additional connection may be required for wind uplift.



# ROOF INSTALLATION ILLUSTRATIONS

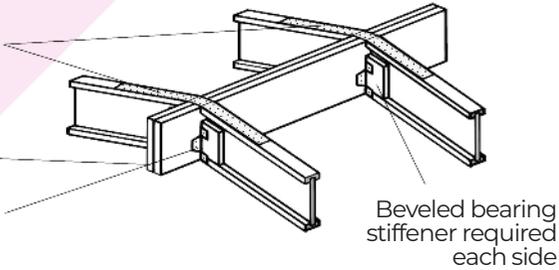
10c

## I-Joist to Ridge Beam Connection

For roof slopes between 1/4:12 and 12:12, provide a strap tie nailed at a minimum of 3" spacing on each side of roof of the strap manufacturer.

Ridge beam (Glulam or LVL)

Adjustable Slope Hangar with a minimum factored uplift resistance of 450 lbs.



**NOTE:** Additional connection may be required for wind uplift.

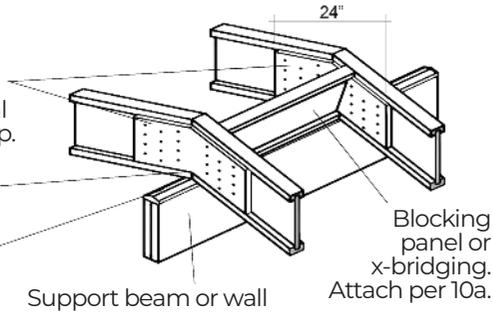
10d

## I-Joist Connection with Wood Structural Panel Gussets

2<sup>3</sup>/<sub>32</sub>" x 2'-0" wood structural panel (front and back sides) with 12 - 2 1/2" nails into each joist with nails clinched. When unfactored roof live load exceeds 40 psf, horizontal orientation of gusset strong axis is required. Gap 1/8" at top.

Attach per 10a

Attach beveled plate to framing with 1 - 3 1/2" at 16" o.c.



**NOTE:** Additional connection may be required for wind uplift.

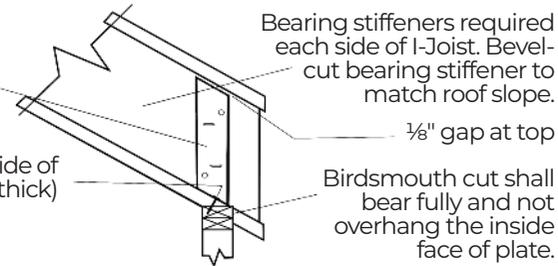
## REINFORCED LOAD BEARING CANTILEVER ILLUSTRATIONS

### 10h Birdsmouth Cut & Bevel Cut Bearing Stiffeners (Permitted on low end of I-Joist only)

4 - 2 1/2" nails (two each side)  
clinched when possible.

One 3" box nail, face nail at each side of  
bearing (face nail where flange is 7/8" to 1" thick)

**NOTE:** Additional connection may be required for wind uplift.



### 10j Birdsmouth Cut with Overhang (Permitted on low end of I-Joist only)

Blocking I-Joist or panel or x-bridging. (Validate use of x-bridging with local building code.)

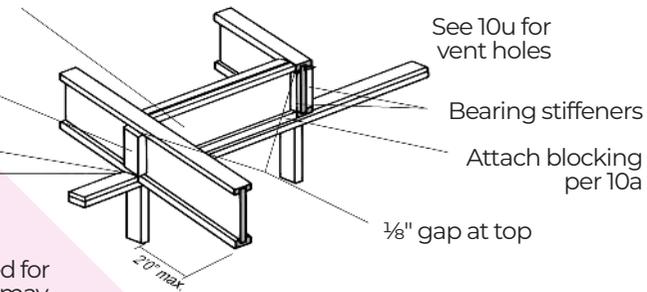
Bearing stiffener required each  
side (attach per 10h)

Attach joist to top  
plate per 10h

Birdsmouth cut at bearing

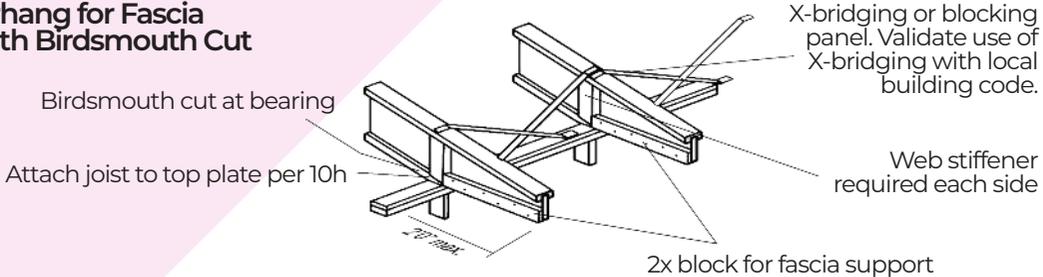
**NOTE:** Additional connection may be required for  
wind uplift. Outside corner of blocking panel may  
be trimmed if it interferes with roof sheathing.

In such cases, position blocking panel on top plate to minimize trimming and still allow  
required nailing into top plate.

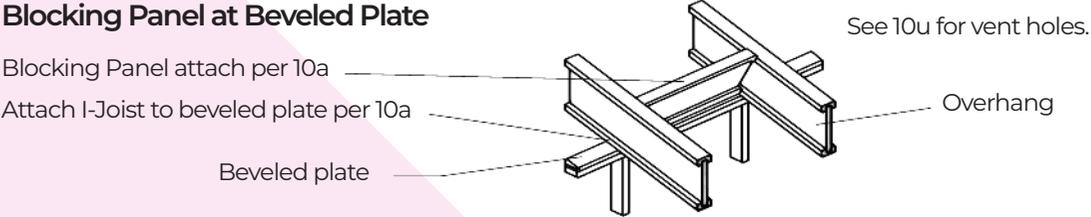


**REINFORCED LOAD BEARING CANTILEVER ILLUSTRATIONS**

**10k I-Joist Overhang for Fascia Support with Birdsmouth Cut**



**10m Blocking Panel at Beveled Plate**



**NOTE:** Additional connection may be required for wind uplift.

# REINFORCED LOAD BEARING CANTILEVER ILLUSTRATIONS

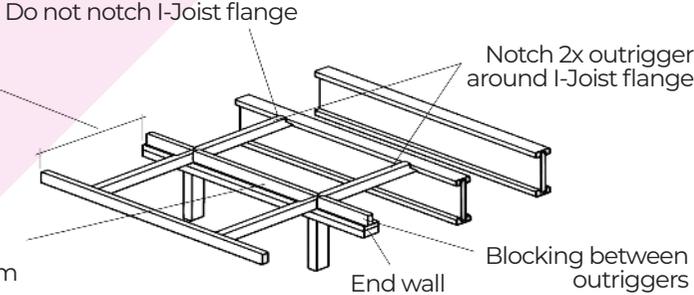
**10p** **Outrigger**

Maximum overhang same as rafter spacing (not to exceed 2'-0")

Toe nail blocking to end wall for roof sheathing  $\frac{5}{8}$ ". Match nail type and spacing with roof sheathing edge nailing.

("Boundary nailing" for engineered diaphragm applications.) Use minimum 2 ½" nails.

**NOTE:** Additional connection may be required for wind uplift.



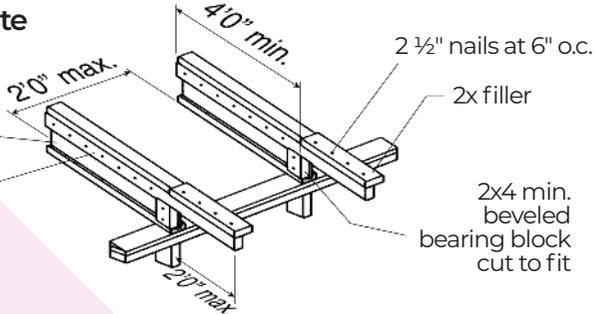
**10r** **Lumber Overhang with Beveled Plate**

(Blocking panel or x-bridging not shown for clarity)

Attach per 10a

2x4 overhang attached to web of I-Joist with 1 row of 2 ½" nails at 8" o.c. clinched

**NOTE:** Additional connection may be required for wind uplift. Lumber overhang shall be 2x4 Spruce-Pine-Fir #2 or better, or stronger species.



**PK FIRE SYSTEMS AND ASSEMBLIES**

**FIRE**



# SAFEJOIST FIRE ASSEMBLY FIRE PROTECTION OF FLOORS – IRC 302.13 IAPMO UES ER-431

**FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal weight concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used. Reference sound rating if applicable. .

**2. FLOOR SHEATHING:** Min 5/8 in. Thick wood sheathing, designed and installed per IBC or IRC. When used as a roof assembly, min 1/2 in. thick wood sheathing may be used when designed and installed per IBC or IRC requirements.

**3. INSULATION:** Optional (not shown) when installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (o.c.).

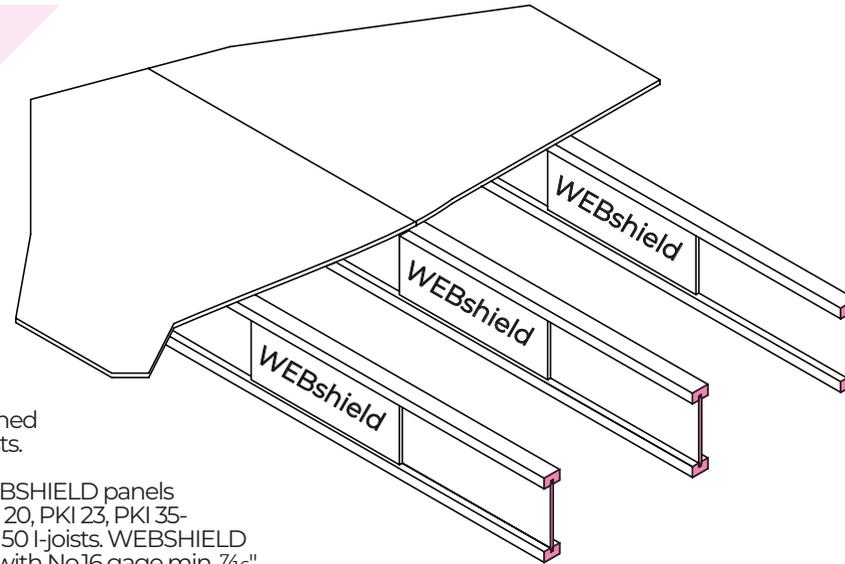
**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** PK-USA Wood I-Joists

**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35-PLUS, PKI 40, and PKI 50 series I-joists 9½" to 16" depths with fire protective panels spaced a max of 48" o.c. installed in accordance with the IBC or IRC. Certified models for FRI Assembly only allows joist spacing up to 24".

**5. FIRE PROTECTION MEMBER:** PK-USA WEBSHIELD panels. WEBSHIELD panels consist of 1½½" Certified OSB panels attached at max. spacing 48" o.c. down the length of joist span. Panels shall be attached on both sides of I-joists.

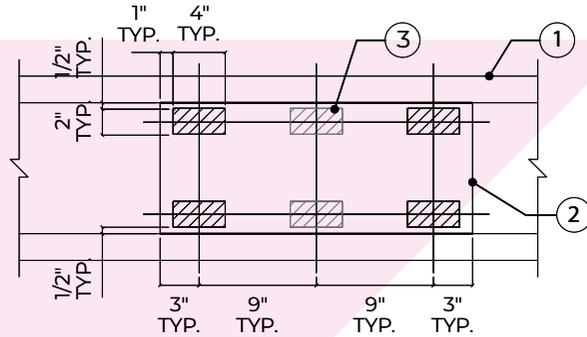
**Certified Panels:** WEBSHIELD panels applied to PKI 10, PKI 20, PKI 23, PKI 35-Plus, PKI 40, and PKI 50 I-joists. WEBSHIELD panels are attached with No.16 gage min, 7/16" crown staple attached at min 4 corners of panel.



## SAFEJOIST FIRE PROTECTION OF FLOORS – IRC 302.13

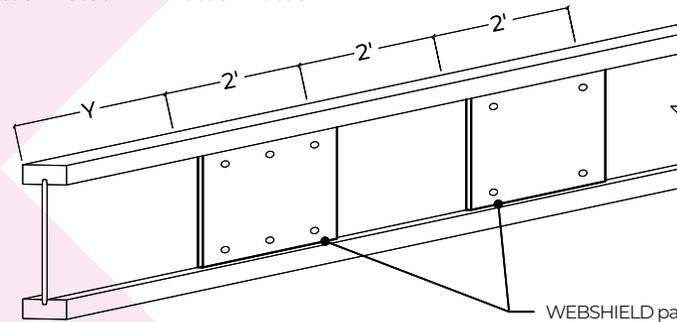


# SAFEJOIST WEBSHIELD ATTACHMENT REQUIREMENTS



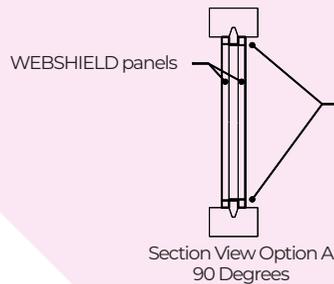
1. PKI Series 10, 20, 23, 35-PLUS, 40 and 50
2. WEBSHIELD panels
3. Fastener zones - one fastener to be installed in each of the required zones

WEBSHIELD panels shall be installed tightly against the I-joist web at prescribed intervals, back-to-back on each side, to protect the web against exposure to flame. Fasten each panel according to Option A or Option B.

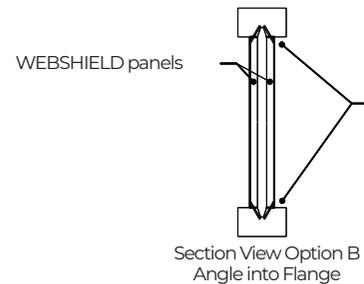


WEBSHIELD panels shall be installed at 4-foot-on-center spacing intervals with a maximum 1/2" spacing tolerance. End panels shall begin with the panel edge within 2 feet from the ends of the I-joists (dimension Y).

WEBSHIELD panels - Fastening option A and B



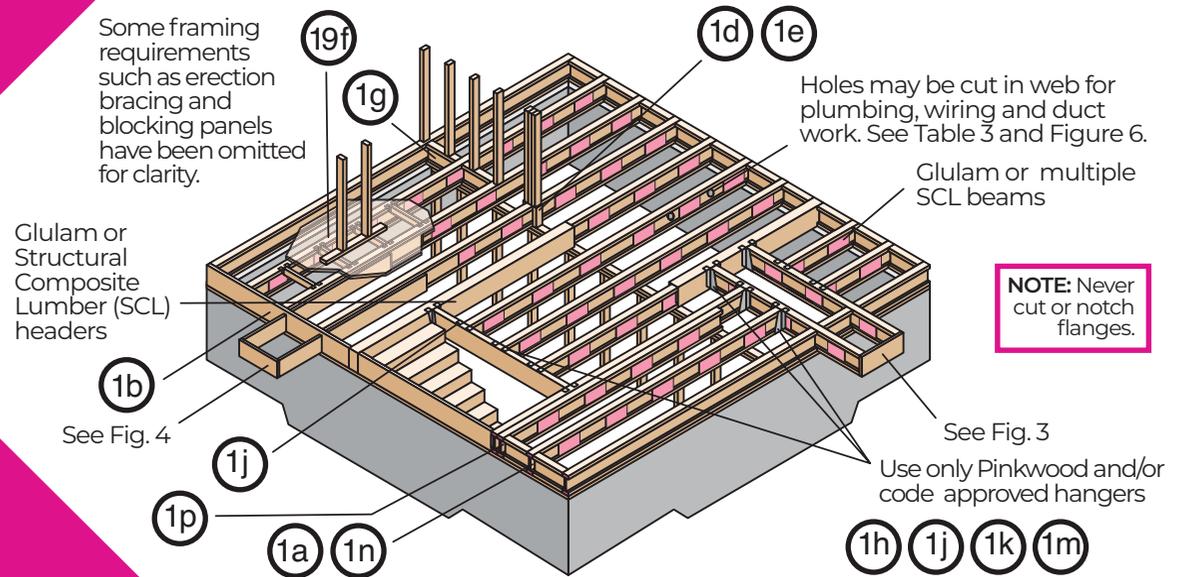
(6) 3/4" long staples shall be installed at 90 Degrees in WEBSHIELD panels on opposite sides of the web. Staples shall be staggered to avoid interference.



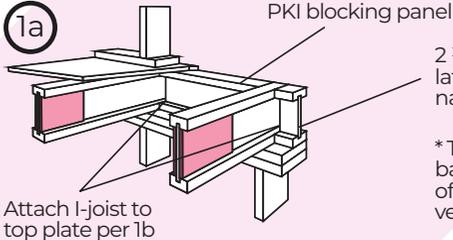
(4) 1 3/4" long staples are permissible provided the fasteners are installed at an angle. Care must be taken to ensure the fasteners penetrate sufficiently into the I-joist to secure the panels, and also to avoid punching through and detaching the WEBSHIELD panels on the opposite side of the web.

## SAFEJOIST FLOOR INSTALLATION DETAILS:

**FIRE**  
 INSTALLATION DETAILS

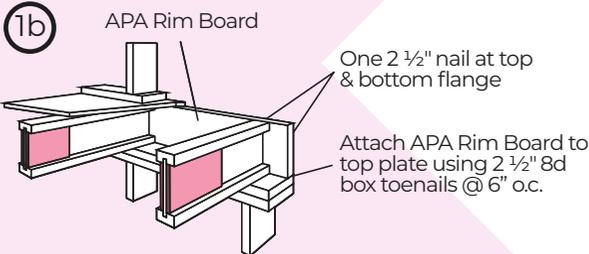


**SAFEJOIST FLOOR INSTALLATION DETAILS - 1a, 1b, 1d**



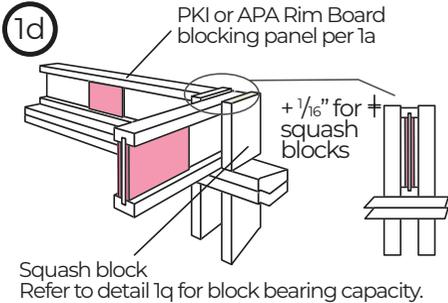
2 1/2" 8d box nails at 6" o.c. to top plate (when used for lateral shear transfer, nail to bearing plate with same nailing as required for decking).

\* The uniform vertical load is limited to a joist depth of 16" or less and is based on standard term load duration. It shall not be used in the design of a bending member such as joist, header or rafter. For concentrated vertical load transfer capacity, "see IAPMO UES ER-431.



\*The uniform vertical load capacity is limited to a rim board depth of 16" or less and is based on standard term load duration. It shall not be used in the design of a bending member, such as joist, header or rafter. For concentrated vertical load transfer capacity, see 1d.

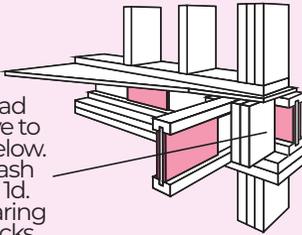
One 8d face nail at each side at bearing. To avoid splitting flange, start nails at least 1 1/2" from end of i-joist. Nails may be driven at an angle to avoid splitting of bearing plate.



**SAFEJOIST FLOOR INSTALLATION DETAILS - 1e, 1f, 1g**

1e

Transfer load from above to bearing below. Install squash blocks per 1d. Match bearing area of blocks below to post above.

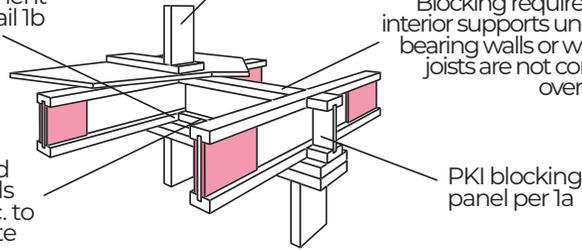


1g

Joist attachment per detail 1b  
2 1/2" 10d box nails at 6" o.c. to top plate

Load bearing wall above shall align vertically with the wall below. Other conditions, such as offset walls, are not covered by this detail.

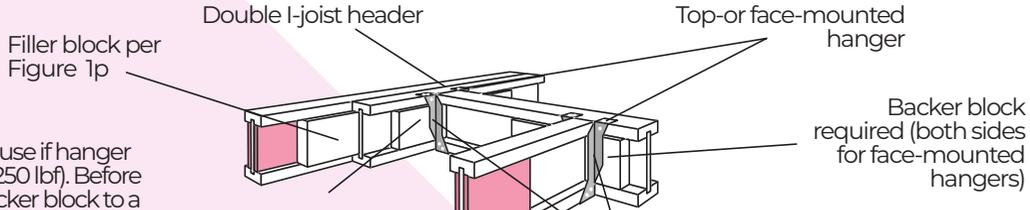
Blocking required over all interior supports under load-bearing walls or when floor joists are not continuous over support.



1h

Backer block (use if hanger load exceeds 250 lbf). Before installing a backer block to a double I-joist, drive (3) additional, 3" 10d common nails through the webs and filler block where the backer block will fit. Clinch. Install backer tight to top flange. Use (12) 3" 10d common nails, clinched when possible. Maximum capacity for hanger for this detail = 1280 lbf.

**BACKER BLOCKS** (Blocks must be long enough to permit required nailing without splitting)

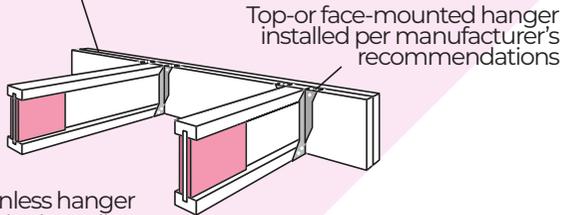


Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

For hanger capacity, see hanger manufacturer's recommendations. Verify double I-joist capacity to support concentrated loads.

**SAFEJOIST FLOOR INSTALLATION DETAILS - 1j, 1k, 1m**

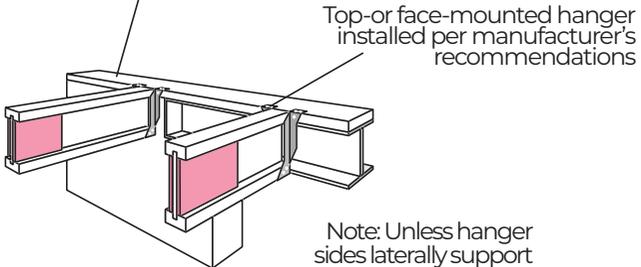
1j Glulam or multiple structural composite lumber (SCL) beams



Top-or face-mounted hanger installed per manufacturer's recommendations

Unless hanger sides laterally support the top flange, bearing stiffeners shall be used. For nailing schedules for multiple SCL beams, see manufacturer's recommendations.

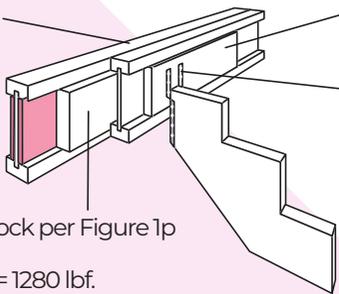
1k 2x plate flush with inside face of wall or beam



Top-or face-mounted hanger installed per manufacturer's recommendations

Note: Unless hanger sides laterally support the top flange, bearing stiffeners shall be used.

1m Multiple I-joist header with full depth filler block shown. Glulam and multiple SCL headers may also be used. Verify double I-joist capacity to support concentrated loads.



Backer block attach per 1h. Nail with (12) 3"10d common nails, clinch when possible.

Install hanger per manufacturer's recommendations.

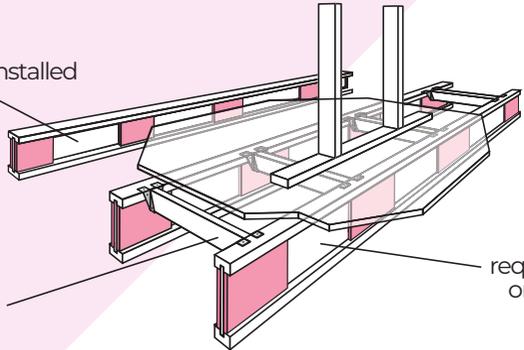
Filler block per Figure 1p

Maximum support capacity = 1280 lbf.

**SAFEJOIST FLOOR INSTALLATION DETAILS - 1l, 1p**

1l

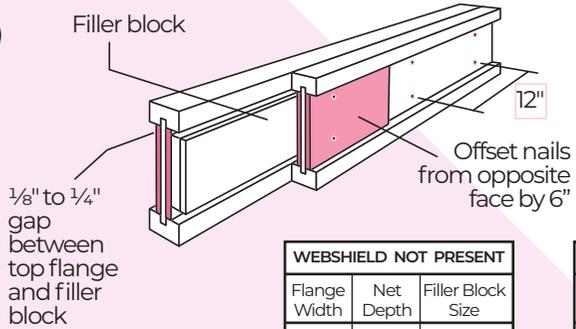
Top-mounted hanger may be required and installed per manufacturer's recommendations.



2x4 at 24" o.c. may be required to support load or as required per local building code.

Double joists may be required to support load or as required per local building code.

1p



1/8" to 1/4" gap between top flange and filler block

Offset nails from opposite face by 6"

WEBSHIELD NOT PRESENT		
Flange Width	Net Depth	Filler Block Size
2 1/2"	9 1/2"	2 1/8" x 6"
	11 7/8"	2 3/8" x 8"
	14"	2 1/2" x 10"
	16"	2 3/8" x 12"
3 1/2"	9 1/2"	3" x 6"
	11 7/8"	3" x 8"
	14"	3" x 10"
	16"	3" x 12"

WEBSHIELD PRESENT		
Flange Width	Net Depth	Filler Block Size
2 1/2"	9 1/2"	1 1/8" x 6"
	11 7/8"	1 1/8" x 8"
	14"	1 1/8" x 10"
	16"	1 1/8" x 12"
3 1/2"	9 1/2"	2" x 6"
	11 7/8"	2" x 8"
	14"	2" x 10"
	16"	2" x 12"

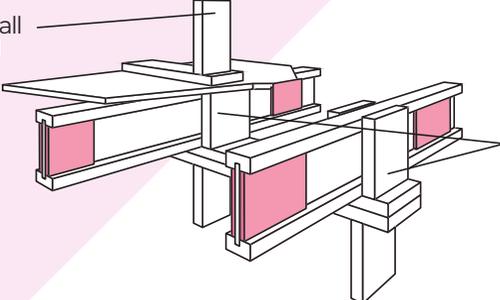
**NOTES:**

1. Support back of I-joist web during nailing to prevent damage to web/flange connection.
2. Leave a 1/8" gap between top of filler block and bottom of top I-joist flange.
3. Filler block is required between joists for full length of span.
4. For flange widths of 2 1/2" or less, nail joists together with two rows of 3" 10d common nails, 12" o.c. (clinched when possible) on each side of the double I-joist (total 4 nails per ft.). For flange widths greater than 2 1/2" use two rows of 3" 10d common nails at 6" o.c. on each side of the double I-joist (total 8 nails per ft.).
5. The maximum load that may be applied to one side of the double joist using this detail is 620 lb./ft.
6. For I-joist depths greater than 16 inches, please contact your PK Joist representative for details.
7. Web fill may be omitted for some loading conditions. Please contact your PK Joist representative for details.

**SAFEJOIST FLOOR INSTALLATION DETAILS - 1q**

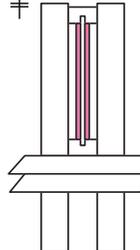
1q

Load bearing wall above shall align vertically with the wall below. Other conditions, such as offset walls, are not covered by this detail.



Squash blocks (+1/16" height over joist)

+ 1/16" for squash blocks



Pair of Squash Blocks	Vertical load transfer capacity pr of squash blocks (lbf) (a)	
	3 1/2" wide	5 1/2" wide
2x lumber	3800	5900
1 1/8" APA Rim Board, Rim Board Plus, or Rated Sturd-I-Floor 32 o.c.	2600	4000
1" APA Rim Board, or Rated Sturd-I-Floor 32 o.c.	1900	3000

Blocking may be required at intermediate bearing for floor diaphragm. Consult local building regulations. See ANSI/APA PRR 410. Squash blocks are assumed to be in full bearing on the plate below.

# SAFEJOIST WEB STIFFENER ATTACHMENTS DETAILS

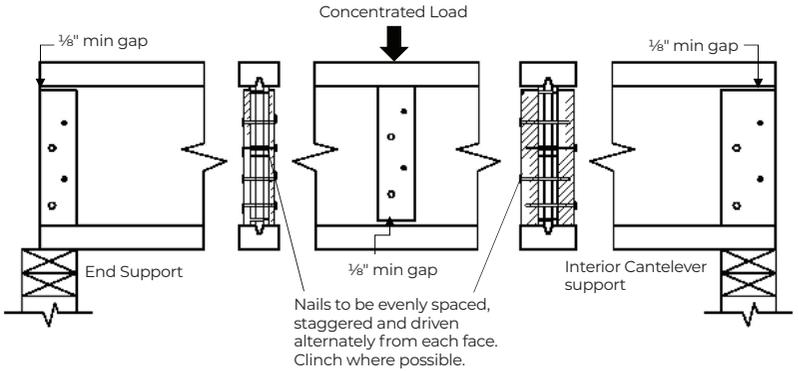
## Using WEBSHIELD with Web Stiffeners

**NOTES:**

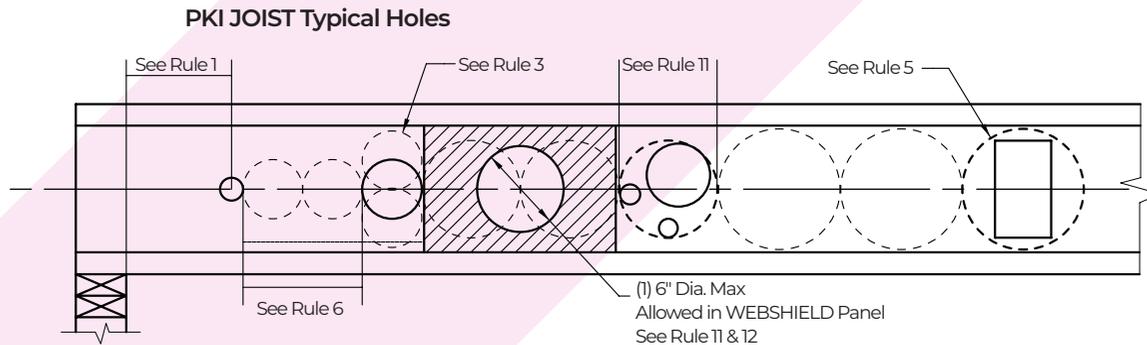
1. Web stiffeners are to be installed per the instructions listed in this guide.
2. When installing web stiffeners in non-WEBSHIELD protected areas, refer to page 6 of this manual.
3. When installing web stiffeners over WEBSHIELD panels, utilize PS-1 or PS-2 rated sheathing with the face grain parallel to the long axis of the stiffener.
4. Web stiffener thickness is as outlined below.
5. Fasten web stiffeners with the indicated type and quantity of fasteners listed below. Nails must be evenly spaced, staggered and driven alternately from each face.
6. Web stiffeners, when required, must be installed in pairs -one to each side of the web.
7. Some hangers require web stiffeners to comply with nailing requirements through side plates. In the even web stiffeners are not used in hanger supports, the sides of the hanger must extend up to laterally support the joist top flange.

**WEB STIFFENER REQUIREMENTS**

JOIST DEPTH	MAXIMUM WEB STIFFENER HEIGHT	Joist Series			
		Solid Sawn Lumber Flange			
		2 1/2" Wide Flange		3 1/2" Wide Flange	
		3/8" Thick Web	-	3/8" Thick Web	7/16" Thick Web
		WEBSHIELD Thickness			
		15/32"	-	15/32"	15/32"
		Minimum Web Stiffener Thickness over WEBSHIELD			
		3/8"	-	1"	1"
		NAIL SIZE			
		8d Box 2 1/2" x 0.113"	-	10d Box 3" x 0.128"	10d Box 3" x 0.128"
TOTAL NAILS REQUIRED					
9 1/2"	6 3/8"	4	-	4	4
11 7/8"	6 3/4"	4	-	4	4
14"	10 7/8"	4	-	4	4
16"	12 7/8"	4	-	4	4



## SAFEJOIST ALLOWABLE HOLES IN WEB - Size and spacing



One of the benefits of using I-joists in residential construction is that holes may be cut in the joist webs to accommodate electrical wiring, plumbing lines and other mechanical systems, thereby minimizing the depth of the floor system.

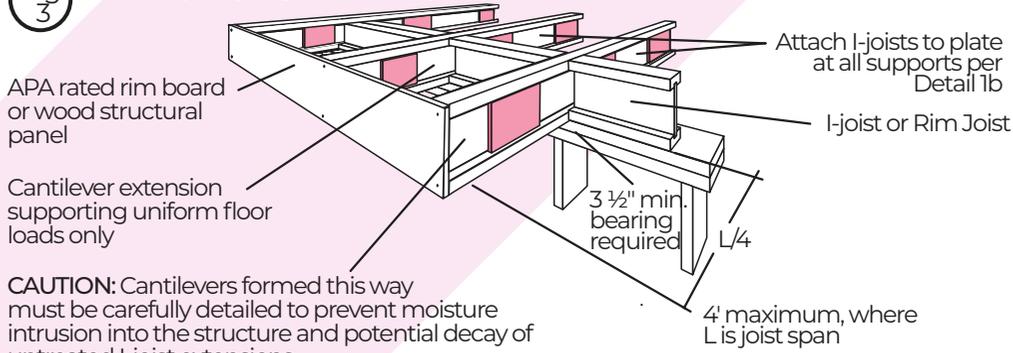
### Rules for cutting holes in PK Joists

1. The distance between the inside edge of the support and the centerline of any hole shall be in compliance with the requirements of Table 10 in IAPMO UES ER-431.
2. I-joist top and bottom flange should NEVER be cut, notched or otherwise modified.
3. Whenever possible, field-cut holes should be centered in the middle of the web.
4. The maximum size hole that can be cut into an I-joist web shall equal the clear distance between the flanges of the I-joist minus  $\frac{1}{4}$ ". A minimum of  $\frac{1}{8}$ " should always be maintained between the top or bottom of the hole and the adjacent I-joist flange.
5. Square and rectangular holes are permitted in the joist web. See the provided charts for location allowances.
6. Where more than one hole is necessary, the distance between adjacent hole edges shall exceed twice the diameter of the largest round hole or twice the size of the largest square hole (or twice the length of the longest side of the longest rectangular hole) and each hole must be sized and located in compliance with the requirements of Table 12 in IAPMO UES ER-431.
7. Holes measuring  $1\frac{1}{2}$ " or smaller shall be permitted anywhere in a cantilevered section of a PKI-joist. Holes of a greater size may be permitted subject to verification.
8. A  $1\frac{1}{2}$ " hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
9. All holes shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in the above image.
10. Limit three maximum-size holes per span.
11. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.
12. A single maximum 6" dia. hole or 6" circumscribed grouping of smaller holes are allowed in a WEBSHIELD panel provided they are permitted within the standard hole allowance rules. Refer to IAPMO UES ER-431 Section 3.5.2 for additional considerations.

**SAFEJOIST FLOOR INSTALLATION DETAILS - Figure 3, 4**

**Fig. 3**

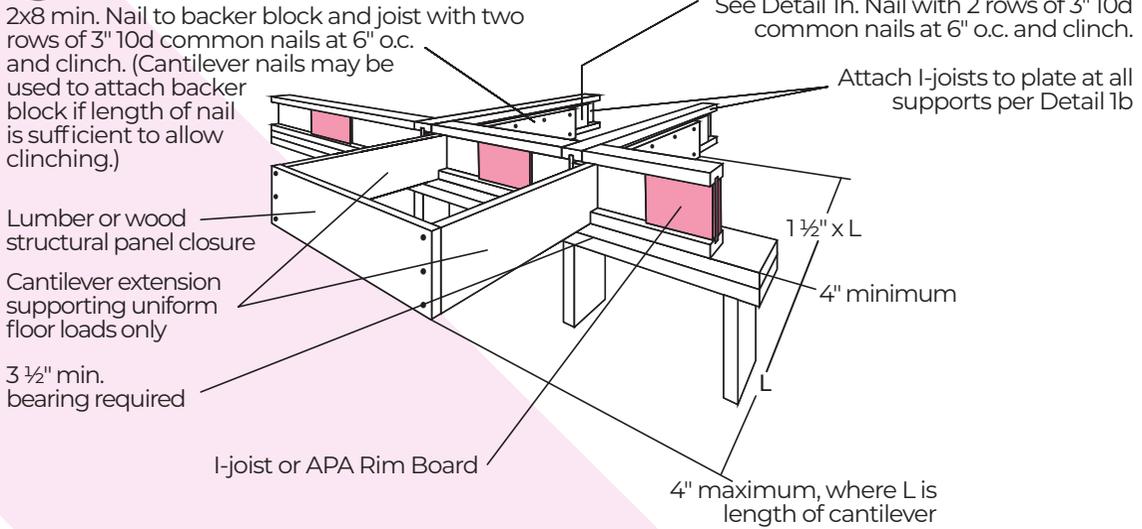
shear capacity = i-joist shear capacity



**CAUTION:** Cantilevers formed this way must be carefully detailed to prevent moisture intrusion into the structure and potential decay of untreated I-joist extensions.

**Fig. 4**

shear capacity = 2x8 min. shear capacity



## SAFEJOIST FLOOR INSTALLATION DETAILS - Figure 5a

**Fig. 5a** CANTILEVER DETAIL FOR VERTICAL BUILDING OFFSET

**Method 1**  
Sheathing Reinforcement One Side

Shear Capacity = i-Joist shear capacity +  $2\frac{3}{32}$ " OSB's

**Method 2**  
Sheathing Reinforcement Two Sides

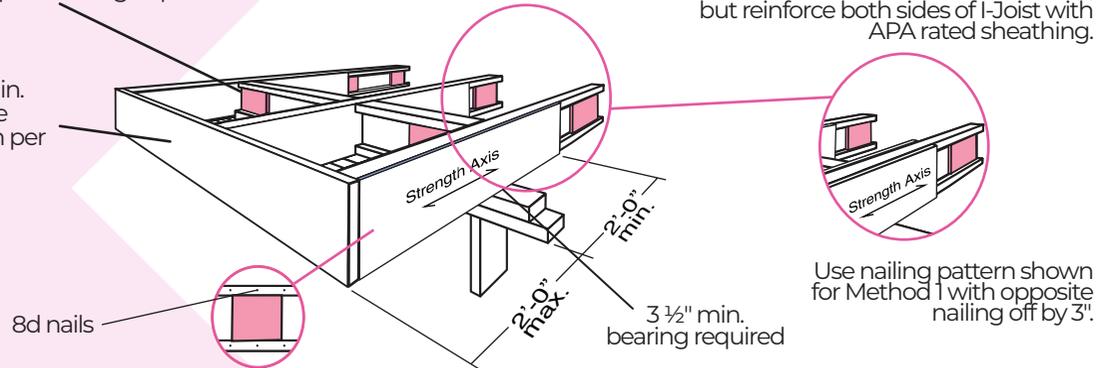
Shear Capacity = i-Joist shear capacity (2) +  $2\frac{3}{32}$ " OSB's

PKI blocking or Rim Joist blocking, attach per Detail 1g

Attach I-Joist to plate per Detail 1b

Wood structural panel closure (min.  $2\frac{3}{32}$  Performance Category), attach per Detail 1b.

Use same installation as Method 1, but reinforce both sides of I-Joist with APA rated sheathing.



APA RATED SHEATHING 48/24 OR APA RATED STURD-I-FLOOR 24 o.c. (min.  $2\frac{3}{32}$  Performance Category) required on sides of joist. Depth shall match the fill height of the joist. Nail with  $2\frac{1}{2}$ " 8d common nails at 6" o.c., top and bottom flange. Install with face grain horizontal. Attach I-Joist to plate at all supports per Detail 1b.

**Notes:**

- 1: Maximum load shall be : 15 psf roof dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3' - 0" maximum width window or door openings. For larger openings, or multiple 3' - 0" width opening spaced less than 6' - 0" o.c., additional joists beneath the opening's cripple studs may be required.
- 2: Table applies to joists 16" to 24" o.c.
- 3: For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.
- 4: Joists spaced at 12" o.c. require no reinforcement.

**SAFEJOIST FLOOR INSTALLATION DETAILS - Figure 5b**

Fig. 5b

**CANTILEVER DETAIL FOR VERTICAL BUILDING OFFSET**

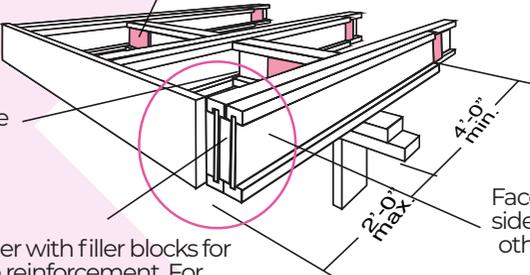
**Alternative Method 2 Double I-Joist**

Shear Capacity = (2) I-Joist shear capacity

Rim Joist, or wood structural panel closure (min. <sup>23</sup>/<sub>32</sub> Performance Category), attach per Detail 1b.

PKI blocking panel or Rim Joist blocking, attach per Detail 1g

Attach I-Joist to plate per Detail 1b



Block I-Joists together with filler blocks for the full length of the reinforcement. For I-Joist flange widths greater than 3" place an additional row of 3" 10d common nails along the centerline of the reinforcing panel from each side. Clinch when possible.

Face nail two rows 3" 10d common nails at 12" o.c. each side through one I-Joist web and the filler block to the other I-Joist web. Offset nails from opposite face by 6". Clinch if possible (four nails/ft. required).

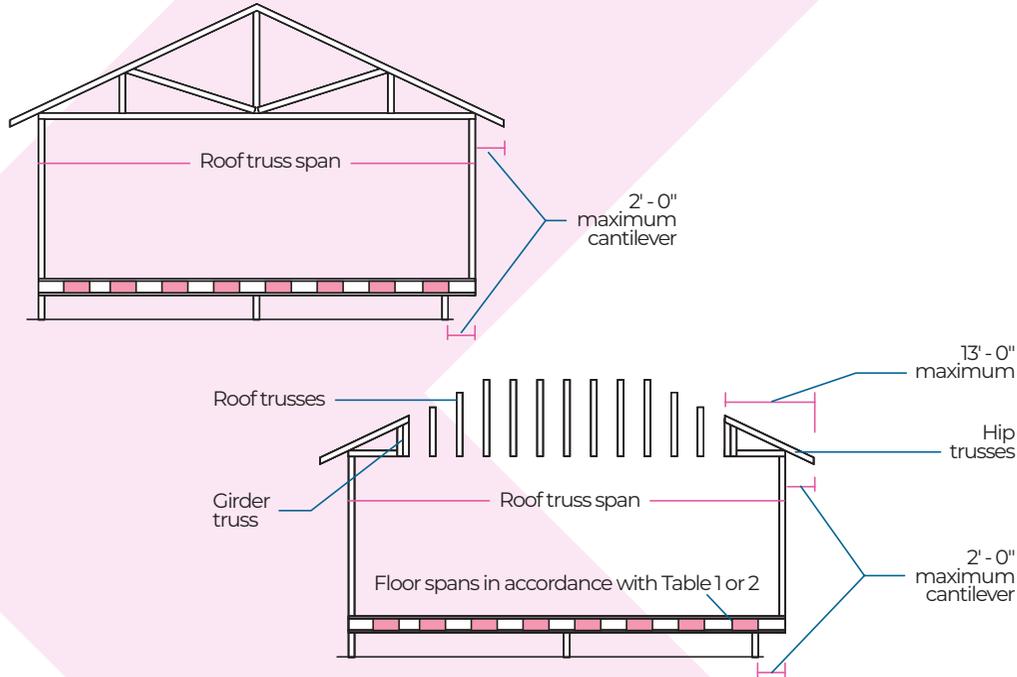
**Notes:**

- 1: Maximum load shall be : 15 psf roof dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3' - 0" maximum width window or door openings. For larger openings, or multiple 3' - 0" width opening spaced less than 6' - 0" o.c., additional joists beneath the opening's cripple studs may be required.
- 2: Table applies to joists 16" to 24" o.c.
- 3: For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof os framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.
- 4: Joists spaced at 12" o.c. require no reinforcement.

## SAFEJOIST REINFORCED LOAD BEARING CANTILEVER ILLUSTRATIONS

Note: PKI 20 and 40. Call for additional series.

See Table below for PKI reinforcement requirements at cantilever.



For hip roofs with the hip trusses running parallel to the cantilevered floor joists, the I-Joist reinforcements for a span of 26" shall be permitted to be used.

**NOTE:** In all roof and floor details, 10d common nails may be used where 10d is specified unless otherwise specified in IAPMO UES ER-431. 8d common nails may be used where 8d is specified unless otherwise specified in IAPMO UES ER-431.



# SAFEJOIST REINFORCED LOAD BEARING CANTILEVER TABLES

Note: PKI 20 and 40 only. Call for additional series.

Series	Joist Depth (IN)	Roof Truss Span (FT)	Roof Total Load (PSF)									
			35			45			55			
			Joist Spacing (IN)									
			16	19.22	24	16	19.22	24	16	19.22	24	
PKI 20	9 1/2"	24	0	0	0	0	0	2	0	2	X	
		26	0	0	1	0	1	X	1	2	X	
		28	0	0	1	0	1	X	1	X	X	
		30	0	0	2	0	2	X	2	X	X	
		32	0	0	2	0	2	X	2	X	X	
		34	0	0	X	1	X	X	X	X	X	
		36	0	1	X	1	X	X	X	X	X	
		38	0	1	X	2	X	X	X	X	X	
	40	0	2	X	2	X	X	X	X	X		
	11 3/8"	24	0	0	0	0	0	1	0	0	2	
		26	0	0	0	0	0	1	0	1	X	
		28	0	0	0	0	0	2	0	1	X	
		30	0	0	0	0	0	2	0	2	X	
		32	0	0	1	0	1	X	1	2	X	
		34	0	0	1	0	1	X	1	X	X	
		36	0	0	1	0	1	X	1	X	X	
		38	0	0	2	0	2	X	2	X	X	
	40	0	0	2	0	2	X	2	X	X		
	14"	24	0	0	0	0	0	0	0	0	1	
		26	0	0	0	0	0	0	0	0	2	
		28	0	0	0	0	0	1	0	0	2	
		30	0	0	0	0	0	1	0	1	X	
		32	0	0	0	0	0	1	0	1	X	
		34	0	0	0	0	0	2	0	1	X	
36		0	0	0	0	0	2	0	2	X		
38		0	0	1	0	1	X	1	2	X		
40	0	0	1	0	1	X	1	X	X			
16"	24	0	0	0	0	0	0	0	0	0		
	26	0	0	0	0	0	0	0	0	1		
	28	0	0	0	0	0	0	0	0	1		
	30	0	0	0	0	0	0	0	0	2		
	32	0	0	0	0	0	0	0	0	2		
	34	0	0	0	0	0	1	0	1	2		
	36	0	0	0	0	0	1	0	1	X		
	38	0	0	0	0	0	2	0	1	X		
40	0	0	0	0	0	2	0	2	X			

Series	Joist Depth (IN)	Roof Truss Span (FT)	Roof Total Load (PSF)									
			35			45			55			
			Joist Spacing (IN)									
			16	19.22	24	16	19.22	24	16	19.22	24	
PKI 40	9 1/2"	24	0	0	0	0	0	2	0	1	X	
		26	0	0	0	0	0	2	0	2	X	
		28	0	0	1	0	1	X	1	2	X	
		30	0	0	1	0	1	X	1	X	X	
		32	0	0	2	0	2	X	1	X	X	
		34	0	0	2	0	2	X	2	X	X	
		36	0	0	2	1	2	X	2	X	X	
		38	0	1	X	1	X	X	X	X	X	
	40	0	1	X	1	X	X	X	X	X		
	11 3/8"	24	0	0	0	0	0	0	0	0	1	
		26	0	0	0	0	0	0	0	0	2	
		28	0	0	0	0	0	1	0	0	X	
		30	0	0	0	0	0	1	0	1	X	
		32	0	0	0	0	0	2	0	1	X	
		34	0	0	0	0	0	2	0	2	X	
		36	0	0	1	0	1	X	1	2	X	
		38	0	0	1	0	1	X	1	X	X	
	40	0	0	1	0	1	X	1	X	X		
	14"	24	0	0	0	0	0	0	0	0	0	
		26	0	0	0	0	0	0	0	0	1	
		28	0	0	0	0	0	0	0	0	1	
		30	0	0	0	0	0	1	0	1	X	
		32	0	0	0	0	0	1	0	1	X	
		34	0	0	0	0	0	2	0	1	X	
36		0	0	0	0	0	2	0	2	X		
38		0	0	0	0	0	2	0	2	X		
40	0	0	1	0	1	X	1	X	X			
16"	24	0	0	0	0	0	0	0	0	0		
	26	0	0	0	0	0	0	0	0	0		
	28	0	0	0	0	0	0	0	0	0		
	30	0	0	0	0	0	0	0	0	0		
	32	0	0	0	0	0	0	0	0	0		
	34	0	0	0	0	0	1	0	1	X		
	36	0	0	0	0	0	1	0	1	X		
	38	0	0	0	0	0	2	0	1	X		
40	0	0	0	0	0	2	0	2	X			

**Table Legend:**

- 0 = No reinforcement required. 1 = PKI's reinforced with 2 3/2 Performance Category wood structural panel on one side only.
- 2 = PKI's reinforced with 2 3/2 Performance Category wood structural panel on both sides or double I-joist. X = Try a deeper joist or closer spacing.

**Notes:**

- Maximum load shall be : 15 psf roof dead load, 55 psf floor total load, and 80 plf wall load. Wall load is based on 3' - 0" maximum width window or door openings. For larger openings, or multiple 3' - 0" width opening spaced less than 6' - 0" o.c., additional joists beneath the opening's cripple studs may be required.
- Table applies to joists 16" to 24" o.c.
- For conventional roof construction using a ridge beam, the Roof Truss Span column above is equivalent to the distance between the supporting wall and the ridge beam. When the roof is framed using a ridge board, the Roof Truss Span is equivalent to the distance between the supporting walls as if a truss is used.
- Joists spaced at 12" o.c. require no reinforcement.

# FIRE RATED ASSEMBLIES

Standard	Rating	Design Number
ASTM E119 CAN/ULC S101	45-Minute	PWL/SFSW 45-01
	60-Minute	PWL/SFSW 60-01
	60-Minute	PWL/SFSW 60-02
	60-Minute	PWL/SFSW 60-03
	60-Minute	PWL/SFSW 60-04
	60-Minute	PWL/SFSW 60-05
	90-Minute	PWL/SFSW 90-01
	120-Minute	PWL/SFSW 120-01

Attribute	Value
Criteria	CAN / ULC S101 (2007)
Criteria	ASTM D5055 (2011)
Criteria	ASTM E119 (2012a)
CSI Code	06 17 33 Wood I-Joists
Intertek Services	Certification
Listed or Inspected	LISTED
Listing Section	PREFABRICATED JOISTS
Report Number	G101764711; G102758068; G103022163; G103028741; G103186626
Spec ID	34689



# FIRE RATED ASSEMBLIES

## PWL/SFSW 45-01

**intertek**  
Total Quality. Assured.

### 1. FLOOR TOPPING: (Optional, Not Shown)

Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{5}{8}$  in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** (Optional, Not Shown) When installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (o.c.).

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joists

**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

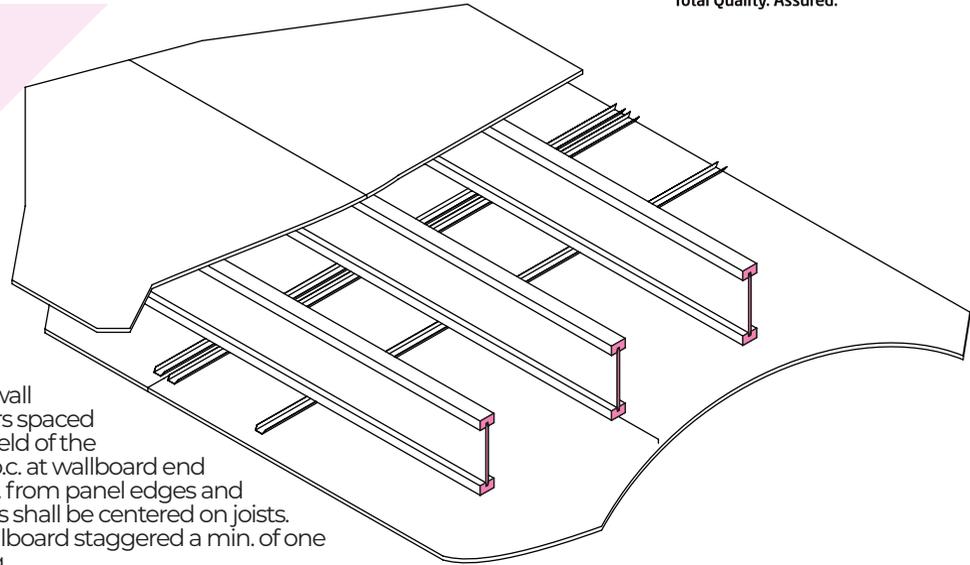
9  $\frac{1}{2}$  in. min. deep joists spaced a max. of 24 in. o.c. Installed in accordance with the Code.

**5. RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channel attached perpendicular to the bottom flange of the joists with one 1-5/8 in. drywall screw. Channels spaced 16 in. o.c. max. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel. These additional channels shall extend to the next joist on each side of the board end joint.

### 6. GYPSUM WALLBOARD:

Min.  $\frac{5}{8}$  in. thick Type X gypsum wallboard installed with long dimension perpendicular to resilient channels and fastened to each channel with min. 1  $\frac{1}{8}$  in. long Type S drywall screws. Fasteners spaced 12 in. o.c. in the field of the wallboard, 8 in. o.c. at wallboard end joints, and 1  $\frac{1}{2}$  in. from panel edges and ends. Edge joints shall be centered on joists. End joints of wallboard staggered a min. of one channel spacing.

**7. FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.



# FIRE RATED ASSEMBLIES

## PWL/SFSW 60-01

**intertek**  
Total Quality. Assured.

**1. FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{5}{8}$  in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** (Optional, Not Shown) When installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (o.c.).

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joist

**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

9  $\frac{1}{2}$  in. min. deep joists spaced a max. of 24 in. o.c.. Installed in accordance with the Code. The max. spacing may be increased to 48 in. o.c., when the ceiling is applied to stripping spaced a max. of 24 in. o.c.. The stripping must be a nominal 2x4 construction-grade lumber attached to the joists bottom flange using two 10d nails.

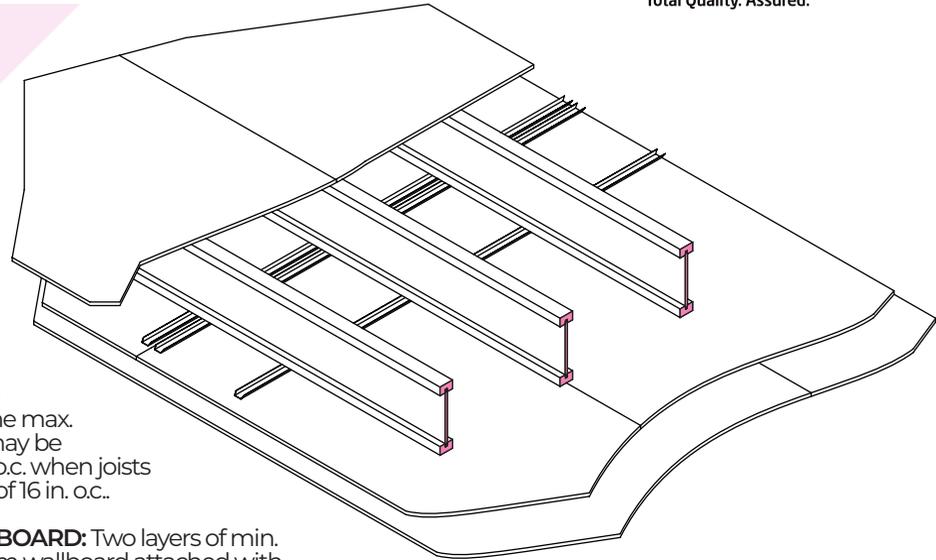
**5. RESILIENT CHANNELS:** (Optional) Min. 0.019 in. thick galvanized steel resilient channel attached perpendicular to the bottom flange of the joists with one 1  $\frac{3}{4}$  in. drywall screw. Channels spaced a max. of 16 in. o.c. The max. channel spacing may be increased to 24 in. o.c. when joists are spaced a max. of 16 in. o.c..

**6. GYPSUM WALLBOARD:** Two layers of min.  $\frac{1}{2}$  in. Type X gypsum wallboard attached with the long dimension perpendicular to the resilient channels (or joists) as follows:

**6a. WALLBOARD BASE LAYER** – Base layer of wallboard attached to resilient channels (or joists) using 1  $\frac{3}{4}$  in. Type S drywall screws at 12 in. o.c.. When resilient channels are installed, edge joints shall be centered on joists. End joints of wallboard staggered a min. of one channel (or joist) spacing.

**6b. WALLBOARD FACE LAYER** – Face layer of wallboard attached to resilient channels (or joists) through base layer using 1  $\frac{5}{8}$  in. Type S drywall screws spaced 12 in. o.c.. Edge joints of wallboard face layer offset a distance equal to the joist spacing, from those of base layer. End joints shall be offset from base layer joints by a min. of one channel (or joist) spacing and shall be centered in-between channel (or joist) spacing. Additionally, wallboard face layer attached to base layer with 1  $\frac{1}{2}$  in. Type G drywall screws spaced 8 in. o.c., placed 1  $\frac{1}{2}$  in. from face layer end joints.

**7. FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.



## FIRE RATED ASSEMBLIES

### PWL/SFSW 60-01 STC and IIC Ratings Table

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	65	53	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	66	54	5 mm Recycled Rubber Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	55	49	5 mm Recycled Rubber Underlayment	None	1 ½ in. thick mineral wool insulation
Hardwood	65	55	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Hardwood	66	56	2 mm Foam Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Hardwood	55	47	2 mm Foam Underlayment	None	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	65	55	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	66	56	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	55	46	None	None	1 ½ in. thick mineral wool insulation
Carpet with Pad	65	59	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	66	62	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	55	48	None	None	1 ½ in. thick mineral wool insulation

#### NOTE:

The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd. The ratings apply to assemblies with 1 9/32 in. thick floor sheathing or thicker.

#### Notes:

1. Sound (STC) and Impact (IIC) ratings listed above are per 2018 IBC Section 1206.2 and from tested assemblies in accordance with ASTM E90 – "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements" and ASTM E492 – "Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine".
2. Analysis to determine STC/IIC rating is permitted per 2018 IBC Section 1206.2 and 1206.3 in accordance with ASTM E413 – "Classification for Rating Sound Insulation" and ASTM E989 – "Standard Classification Determination of Impact Insulation Class".
3. Modeled STC/IIC ratings are permitted per AWC Technical Report 15 – "Calculation of Sound Transmission Parameters for Wood-Frame Assemblies".

## FIRE RATED ASSEMBLIES

# PWL/SFSW 60-02

**intertek**  
Total Quality. Assured.

**FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{5}{8}$  in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** Min.  $1\frac{1}{2}$  in. thick mineral wool insulation batts – 2.5 pcf (min.), friction fitted between the bottom flanges of the joists and supported by resilient channels. Ends of batts shall be centered over resilient channels and tightly butted.

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joists

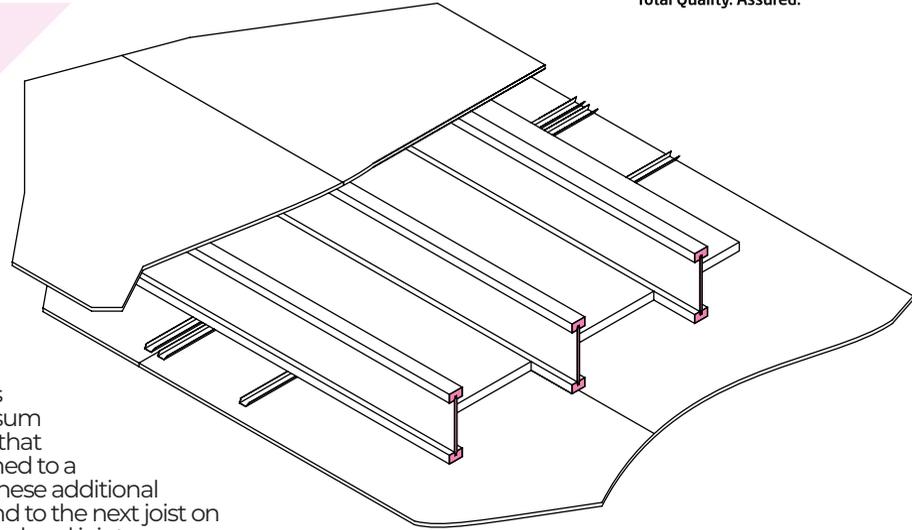
**CERTIFIED MODELS:** PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

9-1/2 in. min. deep joists spaced a max. of 24 in. on center (o.c.) (min.  $1\frac{1}{2}$  in.  $\times$   $3\frac{1}{2}$  in. bottom flange dimensions). Installed in accordance with the Code. The max. spacing may be increased to 48 in. o.c., when the ceiling is applied to stripping spaced a max. of 24 in. o.c. The stripping must be a nominal 2 $\times$ 4 construction-grade lumber attached to the joists bottom flange using two 10d nails.

**5. RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using  $1\frac{1}{8}$  in. long drywall screws. Resilient channels spaced a max. of 16 in. o.c.. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel. These additional channels shall extend to the next joist on each side of the board end joint.

**6. GYPSUM WALLBOARD:** Min.  $\frac{5}{8}$  in. thick Type C gypsum wallboard installed with long dimension perpendicular to resilient channels and fastened to each channel with min. 1 in. long Type S drywall screws. Fasteners spaced 12 in. o.c. in the field of the wallboard, 8 in. o.c. at wallboard end joints, and  $1\frac{1}{2}$  in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing.

**7. FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.



## FIRE RATED ASSEMBLIES

### PWL/SFSW 60-02 STC and IIC Ratings Table

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	62	50	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	63	52	5 mm Recycled Rubber Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	51	47	5 mm Recycled Rubber Underlayment	None	1 ½ in. thick mineral wool insulation
Hardwood	62	53	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Hardwood	64	54	2 mm Foam Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Hardwood	51	45	2 mm Foam Underlayment	None	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	62	52	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	63	55	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	51	44	None	None	1 ½ in. thick mineral wool insulation
Carpet with Pad	62	57	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	63	60	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	51	46	None	None	1 ½ in. thick mineral wool insulation

#### NOTE:

The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd. The ratings apply to assemblies with 1 ½ in. thick floor sheathing or thicker.

#### Notes:

1. Sound (STC) and Impact (IIC) ratings listed above are per 2018 IBC Section 1206.2 and from tested assemblies in accordance with ASTM E90 – "Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements" and ASTM E492 – "Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine".
2. Analysis to determine STC/IIC rating is permitted per 2018 IBC Section 1206.2 and 1206.3 in accordance with ASTM E413 – "Classification for Rating Sound Insulation" and ASTM E989 – "Standard Classification Determination of Impact Insulation Class".
3. Modeled STC/IIC ratings are permitted per AWC Technical Report 15 – "Calculation of Sound Transmission Parameters for Wood-Frame Assemblies".

## FIRE RATED ASSEMBLIES

# PWL/SFSW 60-03

**intertek**  
Total Quality. Assured.

**1. FLOOR TOPPING:** (Optional, Not Shown)  
Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{5}{8}$  in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** Min. 2 in. thick mineral wool insulation batts – 3.5 pcf (min.), supported by setting strip edges, friction-fitted between the sides of the joist flanges. Ends of batts shall be centered over resilient channels and tightly butted.

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joists

**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

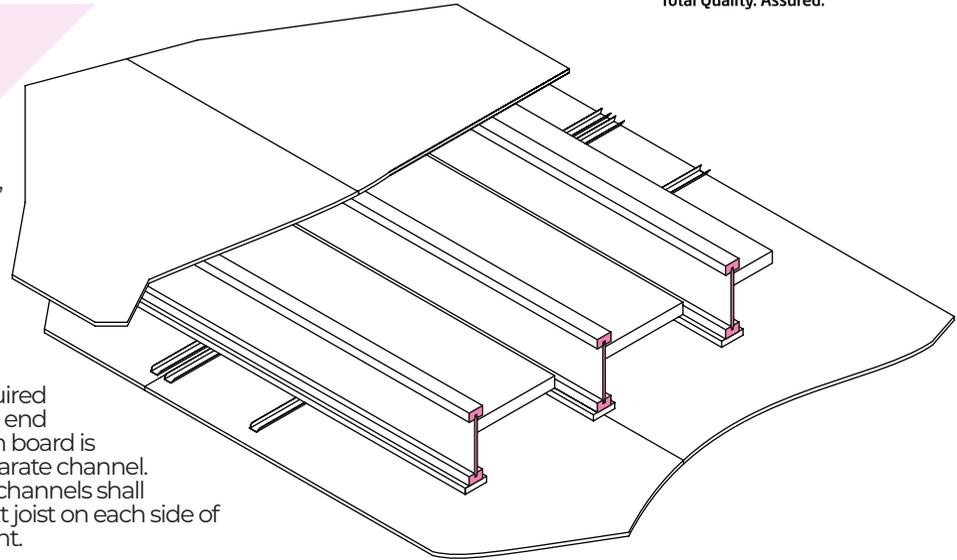
9  $\frac{1}{2}$  in. min. deep joists spaced a max. of 24 in. on center (o.c.). Installed in accordance with the Code.

**5. SETTING STRIPS:** Min. 1×4 (nominal) wood setting strips attached with 1  $\frac{1}{2}$  in. long drywall screws at 24 in. o.c. along the bottom flange of joist creating a ledge to support insulation.

**6. RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using 1  $\frac{5}{8}$  in. long drywall screws. Resilient channels spaced 16 in. o.c. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel. These additional channels shall extend to the next joist on each side of the board end joint.

**7. GYPSUM WALLBOARD:** Min.  $\frac{5}{8}$  in. thick Type C gypsum wallboard installed with long dimension perpendicular to resilient channels and fastened to each channel with min. 1  $\frac{1}{8}$  in. long Type S drywall screws. Fasteners spaced 7 in. o.c. and 1  $\frac{1}{2}$  in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing.

**8. FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.



## FIRE RATED ASSEMBLIES

### PWL/SFSW 60-03 STC and IIC Ratings Table

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	62	50	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	64	52	5 mm Recycled Rubber Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Hardwood	62	53	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Hardwood	64	54	2 mm Foam Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	62	52	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	64	55	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	62	57	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	64	60	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation

#### NOTE:

The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd. The ratings apply to assemblies with ½ in. thick floor sheathing or thicker.

#### Notes:

1. Sound (STC) and Impact (IIC) ratings listed above are per 2018 IBC Section 1206.2 and from tested assemblies in accordance with ASTM E90 – “Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements” and ASTM E492 – “Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine”.
2. Analysis to determine STC/IIC rating is permitted per 2018 IBC Section 1206.2 and 1206.3 in accordance with ASTM E413 – “Classification for Rating Sound Insulation” and ASTM E989 – “Standard Classification Determination of Impact Insulation Class”.
3. Modeled STC/IIC ratings are permitted per AWC Technical Report 15 – “Calculation of Sound Transmission Parameters for Wood-Frame Assemblies”.

## FIRE RATED ASSEMBLIES

# PWL/SFSW 60-04

**intertek**  
Total Quality. Assured.

### 1. FLOOR TOPPING: (Optional, Not Shown)

Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{23}{32}$  in. thick tongue-and-groove wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** Min. 1 in. thick mineral wool insulation batts – 6 pcf (min.). Batts installed on top of furring channels and under bottom flange of joists with the sides butted against support clips. The ends of the batts shall be centered over furring channels and tightly butted.

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joists

**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

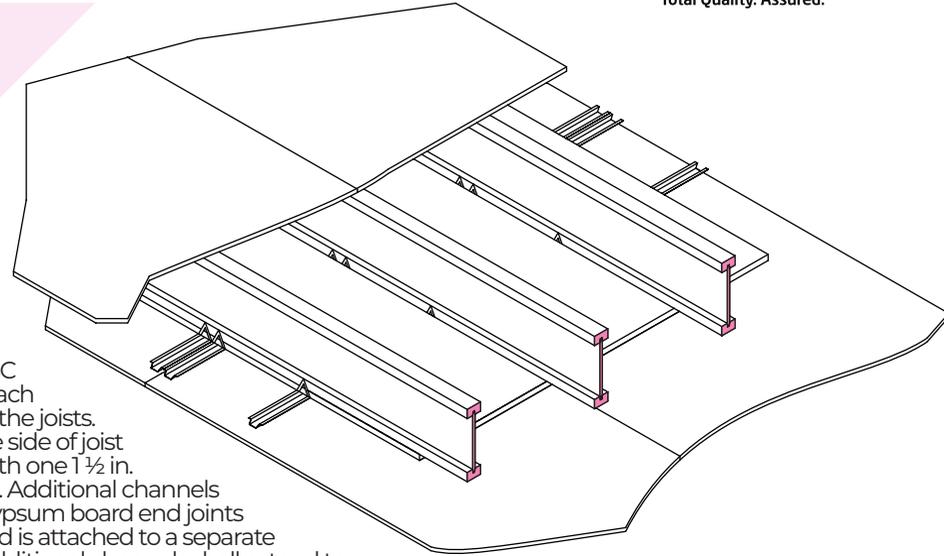
9  $\frac{1}{2}$  in. min. deep joists spaced a max. of 24 in. on center (o.c.) (min. 1  $\frac{1}{2}$  in.  $\times$  2  $\frac{1}{2}$  in. bottom flange dimensions). Installed in accordance with the Code.

### 5. FURRING CHANNELS:

Min. 0.0179 in. thick galvanized steel hat-shaped furring channels, attached perpendicular to joists spaced 24 in. o.c.. Channels secured to I-joists with Simpson Type CSC support clips at each intersection with the joists. Clips nailed to the side of joist bottom flange with one 1  $\frac{1}{2}$  in. long No 11 GA nail. Additional channels are required at gypsum board end joints so that each board is attached to a separate channel. These additional channels shall extend to the next joist on each side of the board end joint.

**6. GYPSUM WALLBOARD:** Min.  $\frac{1}{2}$  in. thick Type C gypsum wallboard. Wallboard installed with long dimension perpendicular to furring channels and fastened to each channel with min. 1 in. long Type S drywall screws. Fasteners spaced 12 in. o.c. in the field of the wallboard, 6 in. o.c. at wallboard end joints, and 11  $\frac{1}{2}$  in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing and offset from insulation joints by a min. of one channel spacing.

**7. FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.



## FIRE RATED ASSEMBLIES

### PWL/SFSW 60-04 STC and IIC Ratings Table

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	55	39	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	56	41	5 mm Recycled Rubber Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	44	43	5 mm Recycled Rubber Underlayment	None	1 ½ in. thick mineral wool insulation
Hardwood	55	42	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Hardwood	56	43	2 mm Foam Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Hardwood	44	44	2 mm Foam Underlayment	None	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	55	42	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	56	43	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	44	43	None	None	1 ½ in. thick mineral wool insulation
Carpet with Pad	55	48	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	56	50	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	44	44	None	None	1 ½ in. thick mineral wool insulation

#### NOTE:

The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd.

#### Notes:

1. Sound (STC) and Impact (IIC) ratings listed above are per 2018 IBC Section 1206.2 and from tested assemblies in accordance with ASTM E90 – “Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements” and ASTM E492 – “Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine”.
2. Analysis to determine STC/IIC rating is permitted per 2018 IBC Section 1206.2 and 1206.3 in accordance with ASTM E413 – “Classification for Rating Sound Insulation” and ASTM E989 – “Standard Classification Determination of Impact Insulation Class”.
3. Modeled STC/IIC ratings are permitted per AWC Technical Report 15 – “Calculation of Sound Transmission Parameters for Wood-Frame Assemblies”.

# FIRE RATED ASSEMBLIES

## PWL/SFSW 60-05

**intertek**  
Total Quality. Assured.

**1. FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{23}{32}$  in. thick tongue-and-groove wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** Min.  $1\frac{1}{2}$  in. thick mineral wool insulation batts – 6 pcf (min.). Batt installed on top of furring channels and under bottom flange of joists with the sides butted against support clips. The ends of the batts shall be centered over furring channels and tightly butted.

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joists

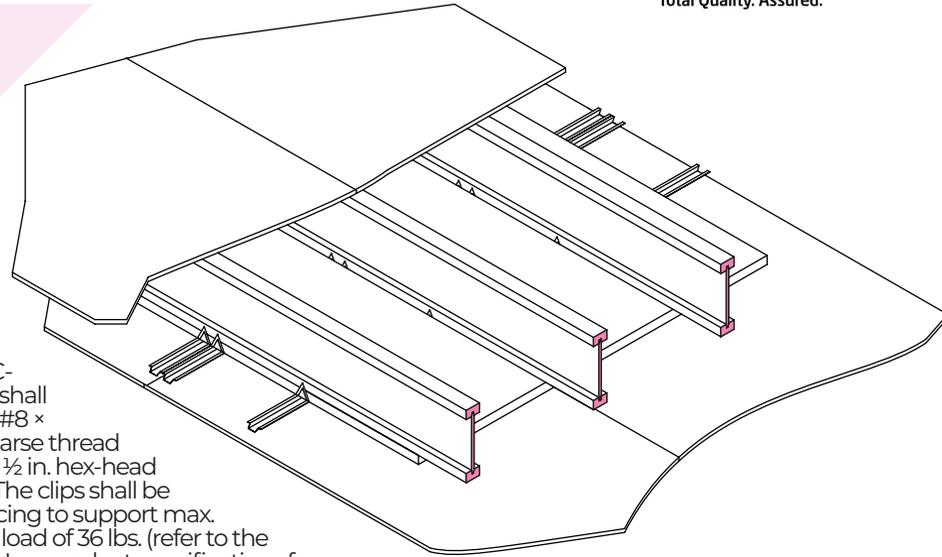
**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

$9\frac{1}{2}$  in. min. deep joists spaced a max. of 24 in. on center (o.c.) (min.  $1\frac{1}{2}$  in.  $\times$   $2\frac{1}{2}$  in. bottom flange dimensions). Installed in accordance with the Code.

### 5. FURRING CHANNELS:

Min 0.0218 in. thick galvanized steel hat-shaped furring channels, attached perpendicular to joists spaced 24 in. o.c.. Channels secured to I-joists with PAC International RSIC-1 EXT04. The clips shall be attached with #8  $\times$   $1\frac{1}{2}$  in. min. size coarse thread screw (#12 or #10  $\times$   $\frac{1}{2}$  in. hex-head recommended). The clips shall be attached at a spacing to support max. acoustical design load of 36 lbs. (refer to the PAC International Inc. product specifications for recommended clip spacing). The metal "L" bracket must be tight to the framing member. Locate the first row of RSIC-1 EXT04 clips within 8 in. of the wall at each end of a run. Snap in the furring channel into the RSIC-1 clip at right angles (perpendicular or parallel).

**6. GYPSUM WALLBOARD:** Min.  $\frac{5}{8}$  in. thick Type C gypsum wallboard. Wallboard installed with long dimension perpendicular to furring channels and fastened to each channel with min. 1 in. long Type S drywall screws. Fasteners spaced 12 in. o.c. in the field of the wallboard, 6 in. o.c. at wallboard end joints, and  $1\frac{1}{2}$  in. from panel edges and ends. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing and offset from insulation joints by a min. of one channel spacing.



**7. FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

## FIRE RATED ASSEMBLIES

### PWL/SFSW 60-05 STC and IIC Ratings Table

Components	STC Rating	IIC Rating	Acoustic Mat	Floor Topping	Insulation Thickness
Ceramic tile bonded with thinset adhesive	59	51	5 mm Recycled Rubber Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	60	54	5 mm Recycled Rubber Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Ceramic tile bonded with thinset adhesive	56	51	5 mm Recycled Rubber Underlayment	None	1 ½ in. thick mineral wool insulation
Hardwood	59	54	2 mm Foam Underlayment	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Hardwood	60	56	2 mm Foam Underlayment	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Hardwood	56	48	2 mm Foam Underlayment	None	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	59	53	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	60	56	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Cushioned Vinyl	56	47	None	None	1 ½ in. thick mineral wool insulation
Carpet with Pad	59	58	None	1 in. thick Gypsum Concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	60	61	None	1 ½ in. thick lightweight concrete	1 ½ in. thick mineral wool insulation
Carpet with Pad	56	49	None	None	1 ½ in. thick mineral wool insulation

#### NOTE:

The STC and IIC ratings are estimated by Swallow Acoustic Consultants Ltd.

#### Notes:

1. Sound (STC) and Impact (IIC) ratings listed above are per 2018 IBC Section 1206.2 and from tested assemblies in accordance with ASTM E90 – “Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements” and ASTM E492 – “Standard Test Method for Laboratory Measurement of Impact Sound Transmission Through Floor-Ceiling Assemblies Using the Tapping Machine”.
2. Analysis to determine STC/IIC rating is permitted per 2018 IBC Section 1206.2 and 1206.3 in accordance with ASTM E413 – “Classification for Rating Sound Insulation” and ASTM E989 – “Standard Classification Determination of Impact Insulation Class”.
3. Modeled STC/IIC ratings are permitted per AWC Technical Report 15 – “Calculation of Sound Transmission Parameters for Wood-Frame Assemblies”.

# FIRE RATED ASSEMBLIES

## PWL/SFSW 90-01

**intertek**  
Total Quality. Assured.

**1. FLOOR TOPPING:** (Optional, Not Shown) Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{5}{8}$  in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** Min.  $1\frac{1}{2}$  (min.). Batts installed on top of resilient channels with the sides butted against the sides of the joists. The ends of the batts shall be centered over resilient channels and tightly butted.

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joists

**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

$9\frac{1}{2}$  in. min. deep joists spaced a max. of 24 in. on center (o.c.) (min.  $1\frac{1}{2}$  in.  $\times$   $2\frac{5}{16}$  in. flange dimensions). Installed in accordance with the Code.

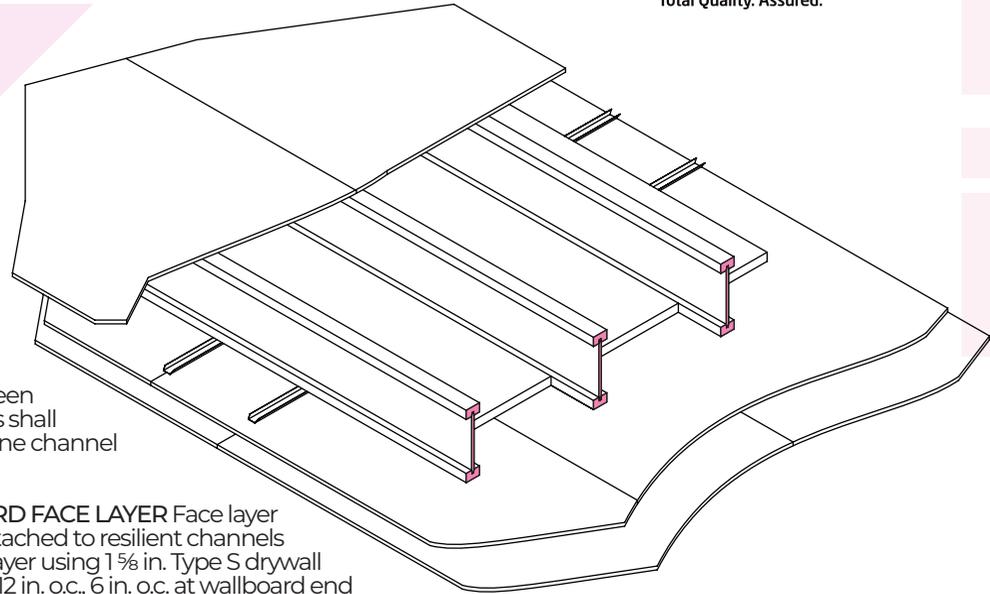
**5. RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using  $1\frac{5}{8}$  in. long drywall screws. Resilient channels spaced 12 in. o.c..

**6. GYPSUM WALLBOARD:** Two layers of min.  $\frac{5}{8}$  in. thick Type C gypsum wallboard as follows:

**6a. WALLBOARD BASE LAYER**  
– Base layer of wallboard attached to resilient channels using  $1\frac{1}{4}$  in. Type S drywall screws at 12 in. o.c.. Edge joints shall be centered between joists. End joints shall be staggered one channel spacing.

**6b. WALLBOARD FACE LAYER** Face layer of wallboard attached to resilient channels through base layer using  $1\frac{5}{8}$  in. Type S drywall screws spaced 12 in. o.c., 6 in. o.c. at wallboard end joints, and  $1\frac{1}{2}$  in. from panel edges and ends. Edge joints of wallboard face layer offset a distance equal to one joist spacing from those of base layer. End joints shall be offset from base layer joints by a min. of one channel spacing. Additionally, wallboard face layer attached to base layer with  $1\frac{1}{2}$  in. Type G drywall screws spaced 8 in. o.c., placed  $1\frac{1}{2}$  in. from face layer end joints.

**7. FINISH SYSTEM:** (Not Shown) Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.



# FIRE RATED ASSEMBLIES

## PWL/SFSW 120-01

**intertek**  
Total Quality. Assured.

### 1. FLOOR TOPPING: (Optional, Not Shown)

Gypsum concrete, lightweight or normal concrete topping. When used as a roof assembly, materials for a built-up roof covering that are described in an assembly that provides a Class A, B, or C rating on combustible wood decks may be used.

**2. FLOOR SHEATHING:** Min.  $\frac{5}{8}$  in. thick wood sheathing, designed and installed per Code requirements. When used as a roof assembly, min.  $\frac{1}{2}$  in. thick wood sheathing may be used, when designed and installed per Code requirements.

**3. INSULATION:** (Optional) When installed, insulation shall be installed above the joist flanges and supported by stay wires spaced 12 in. on center (o.c.).

**4. CERTIFIED COMPANY:** PK-USA

**CERTIFIED PRODUCT:** Wood I-Joists

**CERTIFIED MODELS:** PKI 10, PKI 20, PKI 23, PKI 35 PLUS, PKI 40, and PKI 50 I-joist Series

9  $\frac{1}{2}$  in. min. deep joists spaced a max. of 24 in. o.c. Installed in accordance with the Code.

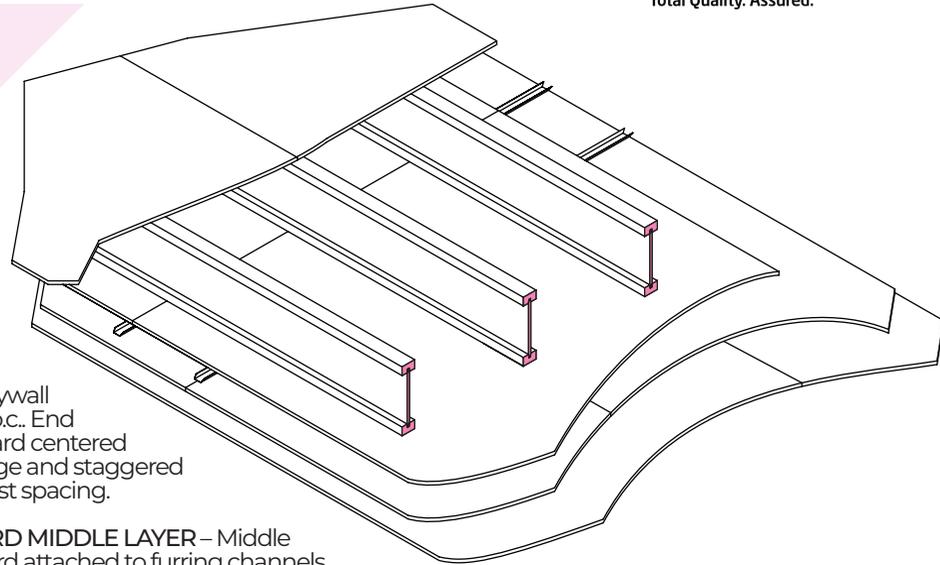
**5. RESILIENT CHANNELS:** Min. 0.019 in. thick galvanized steel resilient channels, attached perpendicular to joists using 1  $\frac{5}{8}$  in. long drywall screws. Resilient channels spaced 16 in. o.c. (channels installed after the first layer and used to support the second and third layers of gypsum wallboard).

**6. GYPSUM WALLBOARD:** Three layers of min.  $\frac{5}{8}$  in. Type C gypsum wallboard as follows:

**6a. WALLBOARD BASE LAYER –** Base layer of wallboard installed perpendicular to the joists and directly attached to the bottom flange using 1  $\frac{5}{8}$  in. Type S drywall screws at 12 in. o.c. End joints of wallboard centered on bottom flange and staggered a min. of one joist spacing.

**6b. WALLBOARD MIDDLE LAYER –** Middle layer of wallboard attached to furring channels using 1 in. Type S drywall screws spaced 12 in. o.c., with the long dimension of wallboard perpendicular to furring channels. Edge joints shall be centered on the joists and offset a min. of one joist space from base layer end joints. End joints staggered a min. of one channel spacing and offset from the edge joints in the base layer a min. of one channel spacing.

**6c. WALLBOARD FACE LAYER –** Face layer of wallboard attached to channels through middle layer using 1  $\frac{5}{8}$  in. Type S drywall screws spaced 8 in. o.c. Edge joints of face layer of wallboard shall be centered on the joists and offset a min. distance equal to the joist spacing from those of middle layer. End joints of face layer of wallboard staggered

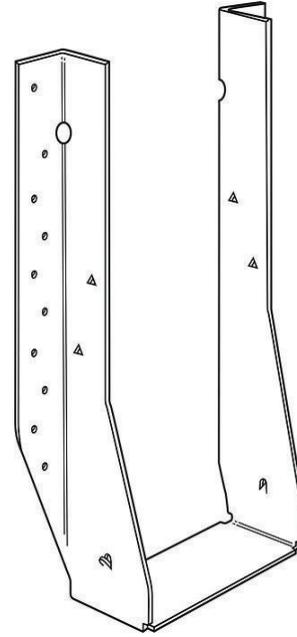
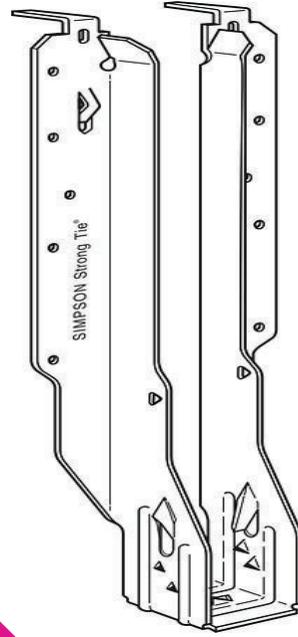


a min. of one channel spacing with respect to the middle layer end joint and base layer edge joint.

**7. FINISH SYSTEM: (Not Shown)** Face layer joints covered with tape and coated with joint compound. Screw heads covered with joint compound.

# FRAMING CONNECTORS

## FLOOR AND ROOF CONNECTORS:



# FRAMING CONNECTORS - SIMPSON STRONG-TIE®

## SINGLE I-JOISTS – US Allowable Loads (lb.)



Joist Height	Top Flange					Face Mount					45° Skew				
	Model	Fastener Type		Download		Model	Fastener Type		Download		Model	Fastener Type		Download	
		Header	Joist	DF	SPF		Header	Joist	DF	SPF		Header	Joist	DF	SPF
<b>Single</b>		<b>PKI 10, PKI 20, PKI 23</b>					<b>Joist Width = 2 1/2"</b>								
9 1/2	ITS2.56/9.5	(6) 10d	–	940	960	IUS2.56/9.5	(8) 10d	–	940	815	SUR/L2.56/9	(14) 16d	(2) N10	1,040	1,040
11 7/8	ITS2.56/11.88	(6) 10d	–	950	950	IUS2.56/11.88	(10) 10d	–	950	950	SUR/L2.56/11	(16) 16d	(2) N10	1,075	1,075
14	ITS2.56/14	(6) 10d	–	960	960	IUS2.56/14	(12) 10d	–	960	960	SUR/L2.56/14	(18) 16d	(2) N10	1,105	1,105
16	ITS2.56/16	(6) 10d	–	1,025	1,025	IUS2.56/16	(14) 10d	–	1,025	1,025	SUR/L2.56/14	(18) 16d	(2) N10	1,755	1,755
<b>Single</b>		<b>PKI 35-PLUS, PKI 40, PKI 50</b>					<b>Joist Width = 3 1/2"</b>								
9 1/2	ITS3.56/9.5	(6) 10d	–	940	2,425	IUS3.56/9.5	(10) 10d	–	940	940	SUR/L410	(14) 16d	(6) 16d	1,195	1,195
11 7/8	ITS3.56/11.88	(6) 10d	–	950	2,800	IUS3.56/11.88	(12) 10d	–	950	950	SUR/L410	(14) 16d	(6) 16d	1,370	1,370
14	ITS3.56/14	(6) 10d	–	960	960	IUS3.56/14	(12) 10d	–	960	960	SUR/L414	(18) 16d	(8) 16d	1,525	1,525
16	ITS3.56/16	(6) 10d	–	970	970	IUS3.56/16	(14) 10d	–	970	970	SUR/L414	(18) 16d	(8) 16d	1,670	1,670
18	MIT418	(8) 10d	(2) N10	2,255	1,665	MIU3.56/18	(26) 16d	(2) N10	2,255	2,255	SUR/L414	(18) 16d	(8) 16d	2,280	2,065
20	MIT420	(8) 10d	(2) N10	2,365	1,665	MIU3.56/20	(28) 16d	(2) N10	2,365	2,365	SUR/L414	(18) 16d	(8) 16d	2,390	2,065

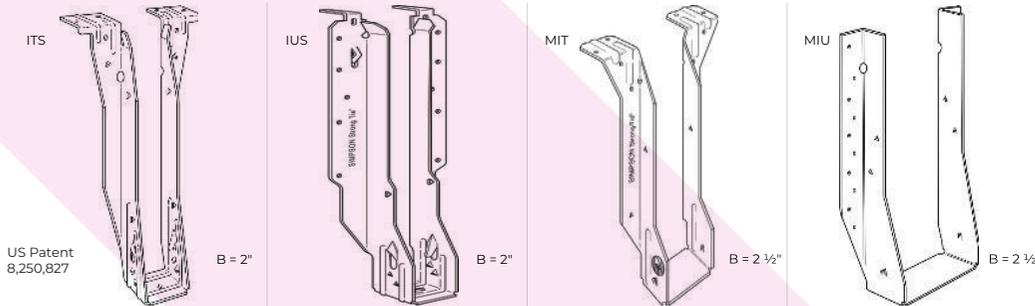
- Shaded hangers require web stiffeners at joist ends. Joist manufacturers may also require web stiffeners for non-shaded areas.
- THAI hangers shown are based on the "top flange" installation and require that the carrying member have a horizontal thickness of at least 2 1/2". Install four top nails and two face nails.
- The LSSR requires web stiffeners that are 4" wide and attached with (4) nails each side.
- LSSR nails and loads shown are for skewed rafter condition. See Wood Construction Connectors catalog for nailing options with higher loads.

### Fastener Sizes

N10 = 0.148" x 1 1/2"

10d = 0.148" x 3"

16d = 0.162" x 3 1/2"



#### ITS - 18 gauge

The ITS top-flange hanger with its Strong-Grip™ seat and Funnel Flange™ installs faster than any other top-flange hanger. Joist nails are not required. Has uplift resistance of 120 lbs.

#### IUS - 18 gauge

The IUS is a hybrid hanger that incorporates the advantages of both face-mount and top-flange hangers. Joist nails are not required. Has uplift resistance of 70 lbs.

#### MIT - 16 gauge

The MIT's Positive Angle Nailing helps minimize splitting of the I-joists' bottom flange. Features uplift capacity and extended seat design (to allow installation of slightly undercut joists). Has uplift resistance of 215 lbs.

#### MIU - 16 gauge

The MIU series features 16-gauge steel and extra nailing for higher loads. Has uplift resistance of 230 lbs.

# FRAMING CONNECTORS - SIMPSON STRONG-TIE®

## SINGLE I-JOISTS – US Allowable Loads (lb.)

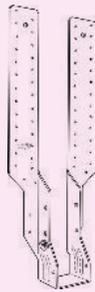


Joist Height	Adjustable Height					Field Slope & Skew				
	Model	Fastener Type		Download		Model	Fastener Type		Download	
		Header	JoistD	FS	PF		Header	JoistD	FS	PF
Single		PKI 10, PKI 20, PKI 23				Joist Width = 2 1/2"				
9 1/2	THAI322	(6) 10d	(2) N10	1,175	1,175	LSSR2.56Z	(13) 10DN	(9) N10	1,105	950
11 7/8	THAI322	(6) 10d	(2) N10	1,340	1,340	LSSR2.56Z	(13) 10DN	(9) N10	1,105	950
14	THAI322	(6) 10d	(2) N10	1,480	1,480	LSSR2.56Z	(13) 10DN	(9) N10	1,105	950
16	Reference Connector Catalog					Reference Connector Catalog				
Single		PKI 35-PLUS, PKI 40, PKI 50				Joist Width = 3 1/2"				
9 1/2	THAI422	(6) 10d	(2) N10	1,175	1,175	LSSR410Z	(20) N16	(13) N16	1,160	1,160
11 7/8	THAI322	(6) 10d	(2) N10	1,340	1,340	LSSR410Z	(20) N16	(13) N16	1,305	1,305
14	THAI422	(6) 10d	(2) N10	1,480	1,480	LSSR410Z	(20) N16	(13) N16	1,440	1,440
16	Reference Connector Catalog					Reference Connector Catalog				

Fastener Sizes
N10 = 0.148" x 1 1/2"
10DN = 0.148" x 2 1/2"
10d = 0.148" x 3"
N16 = 0.162" x 2 1/2"

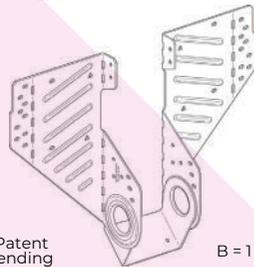
1. See notes on previous page.

THAI



B = 2 1/4"

LSSR



Patent Pending

B = 1 7/8"

SUL



B = See Wood Construction Connectors catalog.

### THAI - 18 gauge

This hanger has extra-long straps and can be field-formed to give height adjustability and top-flange hanger convenience. Positive angle nailing helps minimize splitting. Strap must be field-formed over the top of the header by a minimum of 2 1/2". Web stiffeners required. No uplift resistance.

### LSSR - 18 gauge most models LSSR - 410Z 16-gauge

The LSSR is the next generation of a field-adjustable rafter hanger. It can be installed after all the rafters have been tacked into place, is field-adjustable for skews up to 45° either up or down and features a hinged swivel seat that can adjust its slope 45° either up or down. Has uplift resistance of 510 lbs.

### SUR/L - 16 gauge HSUR/L - 14-gauge

All models are skewed 45°. Normally accommodates a 40°-50° skew. The installation of these hangers does not require a beveled end cut. Has uplift resistance of 165 lbs.

# FRAMING CONNECTORS - SIMPSON STRONG-TIE®

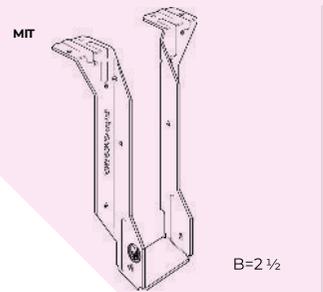
## DOUBLE I-JOISTS – US Allowable Loads (lb.)



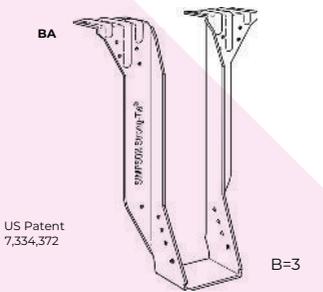
Joist Height	Top Flange					Face Mount					45° Skew						
	Model	Fastener Type		Download		Model	Fastener Type		Download		Model	Fastener Type		Download			
		Header	Joist	DF	SPF		Header	Joist	DF	SPF		Header	Joist	DF	SPF		
<b>Double</b>		<b>PKI 10, PKI 20, PKI 23</b>						<b>Joist Width = 5"</b>									
9 1/2	MIT39.5-2	(8) 16d	(2) N10	2,375	1,665	MIU5.12/9	(16) 16d	(2) N10	2,305	1,980	HSUR/L5.12/9	(12) 16d	(2) N10	1,785	1,535		
11 7/8	MIT311.88-2	(8) 16d	(2) N10	2,575	1,665	MIU5.12/11	(20) 16d	(2) N10	2,720	2,475	HSUR/L5.12/11	(16) 16d	(2) N10	2,380	2,045		
14	MIT314-2	(8) 16d	(2) N10	2,575	1,665	MIU5.12/14	(22) 16d	(2) N10	3,020	2,725	HSUR/L5.12/14	(20) 16d	(2) N10	2,975	2,560		
16	MIT5.12/16	(8) 16d	(2) N10	2,575	1,665	MIU5.12/16	(24) 16d	(2) N10	3,310	2,970	HSUR/L5.12/16	(24) 16d	(2) N10	3,330	2,865		
<b>Double</b>		<b>PKI 35-PLUS, PKI 40, PKI 50</b>						<b>Joist Width = 7"</b>									
9 1/2	BA7.12/9.5	(16) 16d	(8) N10	2,425	2,425	HU410-2	(18) 16d	(8) 16d	2,375	2,305	HU410-2X	(18) 16d	(8) 16d	2,145	1,845		
11 7/8	BA7.12/11.88	(16) 16d	(8) N10	2,800	2,800	HU412-2	(22) 16d	(8) 16d	2,720	2,720	HU412-2X	(22) 16d	(8) 16d	2,625	2,250		
14	BA7.12/14	(16) 16d	(8) N10	3,130	3,130	HU414-2	(26) 16d	(12) 16d	3,020	3,020	HU414-2X	(26) 16d	(12) 16d	3,020	2,665		
16	BA7.12/16	(16) 16d	(8) N10	3,445	3,445	HU414-2	(26) 16d	(12) 16d	3,305	3,305	HU414-2X	(26) 16d	(12) 16d	3,100	2,665		
18	BA7.12/18	(16) 16d	(8) N10	4,710	4,005	HU414-2	(26) 16d	(12) 16d	3,875	3,330	HU414-2X	(26) 16d	(12) 16d	3,100	2,665		
20	BA7.12/20	(16) 16d	(8) N10	4,720	4,005	HU414-2	(26) 16d	(12) 16d	3,875	3,330	HU414-2X	(26) 16d	(12) 16d	3,100	2,665		

**Fastener Sizes**  
**N10 = 0.148" x 1 1/2"**  
**16d = 0.162" x 3 1/2"**

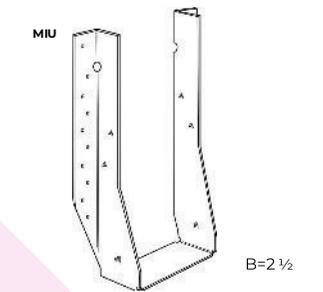
- Shaded hangers require web stiffeners at joist end Joist manufacturers may also require web stiffeners for non-shaded areas.
- THAI hangers shown are based on the "top flange" installation and require that the carrying member have a horizontal thickness of at least 2 1/2". Install four top nails and two face nails.
- The LSSR requires web stiffeners that are 4" wide and attached with (4) nails each side.
- LSSR nails and loads shown are for skewed rafter condition. See Wood Construction Connectors catalog for nailing options with higher loads.
- LSUs are not field skewable. (Field-slope only) Skewed option must be special ordered, specify skew angle.
- Skewed option must be special ordered. Specify skew angle and direction (e.g. HU414-2X R45°)



**MIT - 16 gauge**  
 The MIT's Positive Angle Nailing helps minimize splitting of the I-joist's bottom flange. Features uplift capacity and extended seat design (to allow installation of slightly undercut joists). Has uplift resistance of 215 lbs.



**BA - 14 gauge**  
 The BA is designed especially for use with multiple ply headers 1 1/2" to 1 3/4" thick, and may be used for weld-on applications. Has uplift resistance of 1,225 lbs.



**MIU - 16 gauge**  
 The MIU series features 16 gauge steel and extra nailing for higher loads. Has uplift resistance of 230 lbs.

# FRAMING CONNECTORS - SIMPSON STRONG-TIE®

## DOUBLE I-JOISTS – US Allowable Loads (lb.)

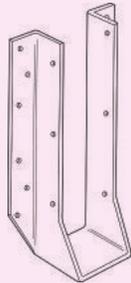


Joist Height	Adjustable Height					Field Slope & Skew				
	Model	Fastener Type		Download		Model	Fastener Type		Download	
		Header	Joist	DF	SPF		Header	JoistD	DF	SPF
Double		PKI 10, PKI 20, PKI 23					Joist Width = 5"			
9 ½	THAI-2 (W=5.125)	(6) 10d	(2) N10	2,095	2,095	LSU5.12	(24) 16d	(16) N10	1,790	1,550
11 ⅞	THAI-2 (W=5.125)	(6) 10d	(2) N10	2,095	2,095	LSU5.12	(24) 16d	(16) N10	1,790	1,550
14	THAI-2 (W=5.125)	(6) 10d	(2) N10	2,095	2,095	LSU5.12	(24) 16d	(16) N10	1,790	1,550
16	Reference Connector Catalog					Reference Connector Catalog				
Double		PKI 35-PLUS, PKI 40, PKI 50					Joist Width = 7"			
9 ½ - 20	Reference Connector Catalog					Reference Connector Catalog				

Fastener Sizes
N10 = 0.148" x 1 ½"
10d = 0.148" x 3"
16d = 0.162" x 3 ½"

1. See notes on previous page.

HU

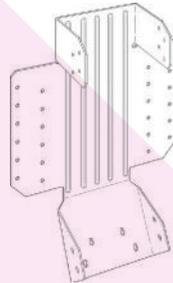


B=2 ½

### HU - 14 gauge

The HU series features uplift capacity and a large selection of sizes and load ranges. HU hangers have triangle holes that can be filled for increased loads. Web stiffeners required. See Wood Construction Connectors catalog for uplift resistance.

LSU

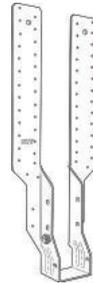


B=3 ½

### LSU - 14 gauge

LSU models provide uplift capacity and can be field sloped and/or skewed to 45°. Web stiffeners required when used with I-Joists. See Wood Construction Connectors catalog for uplift resistance.

THAI/  
THAI-2



B = See Wood Construction Connectors catalog.

### THAI - 18 gauge THAI-2 - 14 gauge

This hanger has extra-long straps and can be field-formed to give height adjustability and top-flange hanger convenience. Positive angle nailing helps minimize splitting. Strap must be field-formed over the top of the header by a minimum of 2 ½". Web stiffeners required. No uplift resistance.

# FRAMING CONNECTORS - MiTek®

## SINGLE PKI-JOIST – US Allowable Loads (lb.)



Joist Height	Top Mount Hangers <sup>4</sup>										Face Mount Hangers										
	USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>5</sup>				LVL		S-P-FL		USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>5</sup>				LVL		S-P-FL	
			Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%	Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%				Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%	Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%
			Qty	Type	Qty	Type								Qty	Type	Qty	Type				
Single	PKI 10, PKI 20, PKI 23										Joist Width = 2 ½"										
9 ½	TFL2595	2	6	10d	2	10dx 1½	1585	130	1215	100	THFI2595	2 ½	--	8	10d	--	--	960	120	845	95
11 ¾	TFL25118	2	6	10d	2	10dx 1½	1585	130	1215	100	THFI25118	2 ½	--	10	10d	--	--	1200	120	950	95
14	TFL2514	2	6	10d	2	10dx 1½	1585	130	1215	100	TFL2514	2 ½	Min	12	10d	--	--	1440	120	1265	95
											Max	14	1680	1480							
16	TFL2516	2	6	10d	2	10dx 1½	1585	130	1215	100	IHFL2516	2 ½	Min	14	10d	--	--	1680	50	1455	40
											Max	16	1920	1660							
Single	PKI 35-PLUS, PKI 40, PKI 50										Joist Width = 3 ½"										
9 ½	THO35950	2 ¾	10	10d	2	10dx 1 ½	2370	230	2370	175	IHFL35925	2 ½	--	10	10d	--	--	1200	50	1040	40
11 ¾	THO35118	2 ¾	10	10d	2	10dx 1 ½	2525	230	2265	175	IHFL35112	2 ½	Min	10	10d	--	--	1200	50	1040	40
											Max	12	1440	1245							
14	TFL2595	2 ¾	12	10d	2	10dx 1 ½	2400	230	1835	175	IHFL3514	2 ½	Min	12	10d	--	--	1440	50	1245	40
											Max	14	1680	1455							
16	TFL2595	2 ¾	12	10d	2	10dx 1 ½	2400	230	1835	175	IHFL3516	2 ½	Min	14	10d	--	--	1680	50	1455	40
											Max	16	1920	1660							

- 1: Shaded hangers require web stiffeners at joist ends. Web stiffeners may be required for non-shaded hangers by PinkWood.
- 2: Loads listed are based on hanger attachment to a DF or S-P-F species solid sawn or LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek USP Product Catalog for details.
- 3: Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 4: Top Mount Hangers assume supporting headers to have a minimum height of 5 ½" and a minimum thickness of the length of the top flange, whichever is greater. For wood nailer options or header materials not included in this table, refer to the current MiTek USP Product Catalog.
- 5: **NAILS:** 10d x 1 ½" nails are 0.148" diameter x 1 ½" long, 10d nails are 0.148" diameter x 3" long.

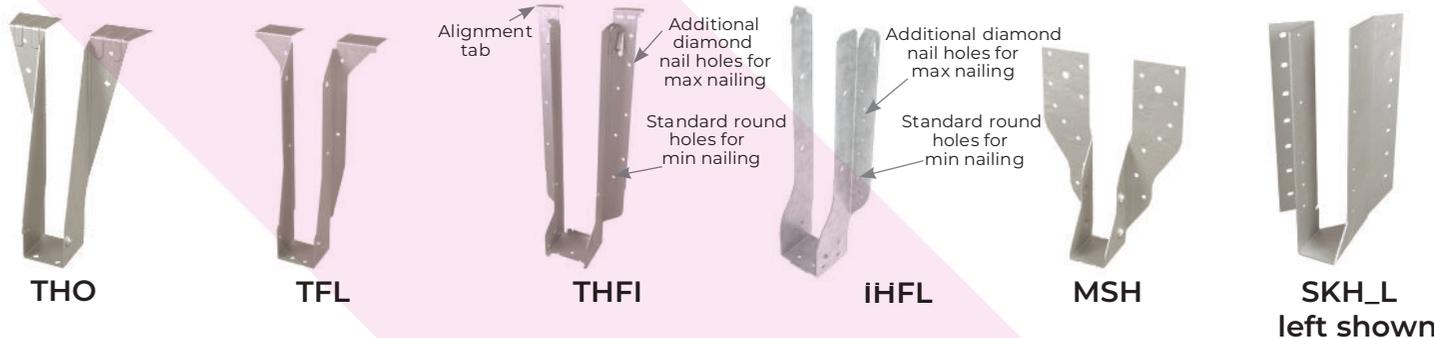
# FRAMING CONNECTORS - MiTek®

## SINGLE PKI-JOIST – US Allowable Loads (lb.)



Joist Height	Adjustable Height Hangers								Skewed 45° Hangers										
	USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>7</sup>				LVL	S-P-FL	USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>7</sup>				LVL		S-P-FL	
			Header		Joist							Down <sup>2</sup> 100%	Down <sup>2</sup> 100%	Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%
			Qty	Type	Qty	Type	Qty	Type						Qty	Type				
Single	PKI 10, PKI 20, PKI 23								Joist Width = 2 ½"										
9 ½	MSH322 <sup>5,7</sup>	1 ¾	6	10d	4	10dx 1½	2175	1720	THFI2595	2 ½	--	8	10d	--	--	960	120	845	95
11 7/8	MSH322 <sup>5</sup>	1 ¾	6	10d	4	10dx 1½	2175	1720	THFI25118	2 ½	--	10	10d	--	--	1200	120	950	95
14	MSH322 <sup>5</sup>	1 ¾	6	10d	4	10dx 1½	2175	1720	THFI2595	2 ½	--	8	10d	--	--	960	120	845	95
16	MSH322 <sup>5</sup>	1 ¾	6	10d	4	10dx 1½	2175	1720	THFI25118	2 ½	--	10	10d	--	--	1200	120	950	95
Single	PKI 35-PLUS, PKI 40, PKI 50								Joist Width = 3 ½"										
9 ½	MSH422 <sup>5,6</sup>	1 ¾	6	10d	6	10d	2355	1865	HD410_SK45L/R_BV <sup>4,8</sup>	2 ½	Min	14	16d	6	10d	2155	880	1895	775
									Max		20	10		3080		1465	2710	1285	
11 7/8	MSH422 <sup>5</sup>	1 ¾	6	10d	6	10d	2355	1865	HD410_SK45L/R_BV <sup>4,8</sup>	2 ½	Min	14	16d	6	10d	2155	880	1895	775
									Max		20	10		3080		1465	2710	1285	
14	MSH422 <sup>5</sup>	1 ¾	6	10d	6	10d	2355	1865	HD414_SK45L/R_BV <sup>4,8</sup>	2 ½	Min	18	16d	8	10d	2770	1165	2440	925
									Max		26	12		4005		1755	3520	1545	
16	MSH422 <sup>5</sup>	1 ¾	6	10d	6	10d	2355	1865	HD414_SK45L/R_BV <sup>4,8</sup>	2 ½	Min	18	16d	8	10d	2770	1165	2440	925
									Max		26	12		4005		1755	3520	1545	

- 1: Shaded hangers require web stiffeners at joist ends.
- 2: Loads listed are based on hanger attachment to a DF or S-P-F species solid sawn or LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek USP Product Catalog for details.
- 3: Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 4: Bevel cut required on end of joist to achieve design loads.
- 5: MSH allowable loads listed in this table assume Top-Min mounting condition installed with 4 - 10d top nails and 2 - 10d face nails. For MSH Face-Max and Top-Max mounting conditions not included in this table, refer to the current MiTek USP Product Catalog.
- 6: Flanges on the bucket of the hanger may extend above the top of the joist.
- 7: **NAILS:** 10d x 1 ½ nails are 0.148" dia. x 1 ½" long, 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3 ½" long.



# FRAMING CONNECTORS - MiTek®

## DOUBLE PKI-JOIST – US Allowable Loads (lb.)



Joist Height	Top Mount Hangers <sup>4</sup>										Face Mount Hangers										
	USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>5</sup>				LVL		S-P-FL		USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>5</sup>				LVL		S-P-FL	
			Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%	Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%				Header		Joist		Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%	Down <sup>2</sup> 100%	Uplift <sup>3</sup> 160%
			Qty	Type	Qty	Type								Qty	Type	Qty	Type				
Double	PKI 10, PKI 20, PKI 23										Joist Width = 2 ½"										
9 ½	THO25950-2	3	10	16d	6	10d	3640	1145	2790	880	IHF25925-2	2 ½	Min	10	10d	2	10d x 1½	1250	330	1100	260
												Max	24	16d				3530		3105	
11 ⅞	THO25118-2	3	10	16d	6	10d	3640	1145	2790	880	IHF25112-2	2 ½	Min	10	10d	2	10d x 1½	1250	330	1100	260
												Max	24	16d				3530		3105	
14	THO25140-2	3	12	16d	6	10d	4420	1145	3390	880	THF25140-2	2 ½	--	20	10d	6	10d	2660	1235	2340	975
16	THO25160-2	3	12	16d	6	10d	4420	1145	3390	880	THF25160-2	2 ½	--	24	10d	6	10d	3190	1235	2810	975
Double	PKI 35-PLUS, PKI 40, PKI 50										Joist Width = 3 ½"										
9 ½	THO35118	2 ¾	10	10d	2	10d	3100	1275	2370	1105	HD7100	2 ½	Min	10		--	--	1200		1040	
												Max	12	10d	--	--		1440	50	1245	40
11 ⅞	TFL2595	2 ¾	12	10d	2	10d	3075	1275	2350	1105	HD7120	2 ½	Min	12	10d	--	--	1440	50	1245	40
												Max	14					1680		1455	
14	TFL2595	2 ¾	12	10d	2	10d	3075	1275	2350	1105	HD7140	2 ½	Min	14	10d	--	--	1680	50	1455	40
												Max	16					1920		1660	
16	THO35950	2 ¾	10	10d	2	10d	3075	1275	2350	1105	HD7160	2 ½	--	10	10d	--	--	1200	50	1040	40

- 1: Shaded hangers require web stiffeners at joist ends.
- 2: Loads listed are based on hanger attachment to a DF or S-P-F species solid sawn or LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek USP Product Catalog for details.
- 3: Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 4: Top Mount Hangers assume supporting headers to have a minimum height of 5 ½" and a minimum thickness of the length of the header nails or the depth of the top flange, whichever is greater. For wood nailer options or header materials not included in this table, refer to the current MiTek USP Product Catalog.
- 5: **NAILS:** 10d nails are 0.148" dia. x 3" long, 16d nails are 0.162" dia. x 3 ½" long. 16d sinkers are 0.148" dia. x 3 ¼" long and may be used where 10d commons are specified.

CONNECTORS

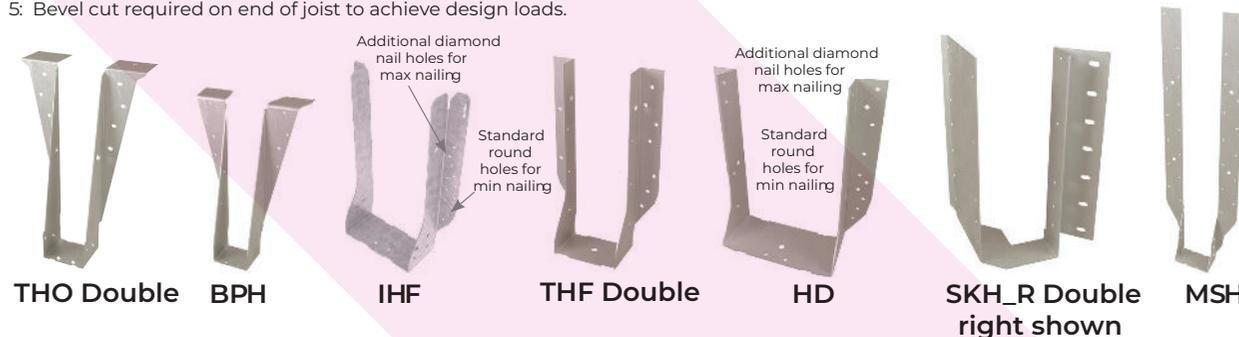
# FRAMING CONNECTORS - MiTek®

## DOUBLE PKI-JOIST – US Allowable Loads (lb.)



Joist Height	Adjustable Height Hangers								Skewed 45° Hangers										
	USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Fastener Schedule <sup>8</sup>				LVL	S-P-FL	USP Stock No. <sup>1</sup>	Length of Hanger Seat (in)	Min/Max	Fastener Schedule <sup>8</sup>				LVL	S-P-FL		
			Header		Joist							Down <sup>2</sup> 100%	Down <sup>2</sup> 100%	Header				Joist	
			Qty	Type	Qty	Type	Qty	Type						Qty	Type				
Double		<b>PKI 10, PKI 20, PKI 23</b>									<b>Joist Width = 2 ½"</b>								
9 ½	MSH2622-2 <sup>6</sup>	1 ¾	6	10d	4	10d	2355	1865	SKH2520L/R-2 <sup>5</sup>	3 ½	--	14	10d	10	10d	1710	1645	1480	1265
11 7/8	MSH2622-2 <sup>6</sup>	1 ¾	6	10d	4	10d	2355	1865	SKH2520L/R-2 <sup>5</sup>	3 ½	--	14	10d	10	10d	1710	1645	1480	1265
14	MSH2622-2 <sup>6</sup>	1 ¾	6	10d	4	10d	2355	1865	SKH2524L/R-2 <sup>5</sup>	3 ½	--	16	10d	10	10d	1950	1680	1690	1295
16	MSH2622-2 <sup>6</sup>	1 ¾	6	10d	4	10d	2355	1865	SKH2524L/R-2 <sup>5</sup>	3 ½	--	16	10d	10	10d	1950	1680	1690	1295
Double		<b>PKI 35-PLUS, PKI 40, PKI 50</b>									<b>Joist Width = 3 ½"</b>								
9 ½	MSH422-2 <sup>6,7</sup>	2	8	16d	6	16d	3740	2665	HD7100_SK45L/R.BV <sup>4,5</sup>	2 ½	Min	14	16d	6	16d	2155	980	1895	775
									Max		18	8		2770		1385	2440	1190	
11 7/8	MSH422-2 <sup>6</sup>	2	8	16d	6	16d	3740	2665	HD7120_SK45L/R.BV <sup>4,5</sup>	2 ½	Min	16	16d	6	16d	2465	980	2165	775
									Max		22	8		3390		1385	2980	1215	
14	MSH422-2 <sup>6</sup>	2	8	16d	6	16d	3740	2665	HD7140_SK45L/R.BV <sup>4,5</sup>	2 ½	Min	20	16d	8	16d	3080	1385	2710	1190
									Max		26	12		4005		2075	3520	1825	
16	MSH422-2 <sup>6</sup>	2	8	16d	6	16d	3740	2665	HD7140_SK45L/R.BV <sup>4,5</sup>	2 ½	Min	20	16d	8	16d	3080	1385	2710	1190
									Max		26	12		4005		2075	3520	1825	

- 1: Shaded hangers require web stiffeners at joist ends.
- 2: Loads listed are based on hanger attachment to a DF or S-P-F species solid sawn or LVL header. Some loads may be increased for duration of load adjustments. Refer to MiTek USP Product Catalog for details.
- 3: Uplift loads have been increased 60% for wind and seismic loading; no further increase shall be permitted.
- 4: Hangers are special order. Consult MiTek for pricing and lead times.
- 5: Bevel cut required on end of joist to achieve design loads.
- 6: MSH allowable loads listed in this table assume Top-Min mounting condition. For MSH Face-Max and Top-Max mounting conditions not included in this table, refer to the current MiTek USP Product Catalog.
- 7: Flanges on the bucket of the hanger may extend above the top of the joist.
- 8: **NAILS:** 10d nails are 0.148" dia. x 3" long and 16d nails are 0.162" dia. x 3 ½" long. 16d sinkers are 0.148" dia. x 3 ¼" long and may be used where 10d commons are specified.



CONNECTORS

## DESIGN SOFTWARE

PK-USA's PKI Series I-Joists are available in both Simpson Strong Tie and MiTek Software, the two leading third-party software suites that makes it seamless for engineers and design professionals to offer their clients the benefits of the PKI product line with minimal effort and maximum flexibility.

Simpson Strong-Tie® Building Technology Data Sheet

SIMPSON  
Strong-Tie



### EWP Studio™

Modeling and Structural Analysis Software

#### Description/Overview

Component Solutions® EWP Studio™ combines 3D layout, member design and material reporting. Choose from a wide array of EWP manufacturers' products and specify Simpson Strong-Tie connectors and fasteners with confidence. From single-member designs to complex, multi-level layouts, the flexibility of CS EWP Studio makes it an optimal design solution. Since CS EWP Studio supports most EWP products, as well as steel and dimensional lumber, it is your comprehensive design solution that adapts with you, regardless of EWP manufacturer.



#### Features

- Supports most engineered wood products available in the market in a single platform
- Loads are automatically distributed throughout the 3D model and applied to structural members
- Structural members are analyzed to meet or exceed design criteria, including Simpson Strong-Tie connectors and fasteners
- Utilize a wide array of tools to customize material reports and layouts for your final jobsite documents
- EWP Studio supports the IFC standard allowing building professionals to share relevant BIM data between CS EWP Studio, CS Truss Studio,™ and other BIM applications
- Configure and export project material data to point of sale and enterprise resource planning systems, including Pipeline for your estimating needs and CS Director™ for truss components
- Connects remote designers and users from different locations allowing access to shared material data, graphics libraries and project files



MORE  
INFO

Let's continue the conversation. Contact your Simpson Strong-Tie Building Technology Representative at (800) 999-8099 to find the right software solution for your business.

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## SAPPHIRE SUPPLY SOFTWARE ADVANTAGES

Designed to meet the needs of building material suppliers, MiTek's SAPPHIRE Supply is the one-stop solution for wholehouse estimating, framing layout and design.

#### CONFIDENCE IN YOUR ESTIMATES

- You (and your customers!) can be confident that your estimates and quotes are complete and accurate.
- Precisely lay out the framing members in 3D - eliminate "guesstimates."
- Produce a traceable, verifiable Bill of Materials - one that can visually track the materials needed for the project.

#### MAXIMIZE YOUR PRODUCTIVITY

- No need to learn multiple EWP software platforms, SAPPHIRE Supply includes the leading EWP manufacturers' products and design data.
- Simplify the software tools your team uses. This single software solution allows you to provide EWP design and layout AND whole-house estimates without multiple entry.
- Collaborate with your CM, sharing a single model to reduce multiple entry, multiple assumptions, and unnecessary errors.

#### OFFER A DIFFERENTIATED APPROACH

- Help your customers identify and resolve potential constructability issues before the home is shipped, and provide verification of its Buildability™.
- Other suppliers only provide a list of materials, but you can provide the list AND the installation guide, including a 3D model of the framed home.
- Through SAPPHIRE Viewer, offer your customers the benefits of collaboration by viewing and confirming your model and material quantities during the estimating process.
- Empower your customers' construction through Viewer, a superb tool for superintendents and framers.

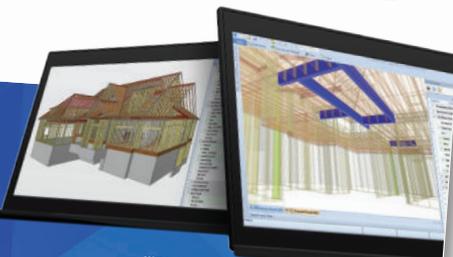
#### FEATURES

- + 3D Virtual Framing Model
- + EWP Dimension Lumber Layout and Design
- + Automated Hanger Selection
- + Point of Sale Integration
- + SAPPHIRE Viewer Collaboration
- + Generate more accurate quantities on all the materials you want to sell.
- + Customizable quote to fit your needs

MiTek®  
SAPPHIRE SUPPLY  
Software

MiTek®

For more information, call 800.328.5934 or go to:  
[Mitek-us.com/software/SAPPHIRE-Supply/](https://Mitek-us.com/software/SAPPHIRE-Supply/)



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SOFTWARE

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## SAFETY WARNINGS AND RESTRICTIONS

# PRODUCT STORAGE

Protect products from sun and water.

**Caution:** Wrap is slippery when wet. Use support blocks at 10' on center to keep products out of mud and water.

### SAFETY PRECAUTIONS



**DO NOT...**  
drill any holes  
over a support.



**DO NOT...**  
cut or notch  
top or bottom  
ords.



**DO NOT...**  
use conventional  
lumber for structural  
rim or band board.



**DO NOT...**  
install joists on  
an angle.



**DO NOT...**  
split the flange.  
Ensure proper toe  
nailing.



**DO NOT...**  
bevel cut the joist  
past the inside  
face of wall.



**DO NOT...**  
use conventional  
lumber combined  
with PKI Joists as  
built-up.



**DO NOT...**  
prolong exposure  
to the elements,  
(rain, snow, sun)  
either on site or at  
lumber yard.

## WARNING

Joists are  
unstable  
until braced  
laterally.

Bracing  
includes:

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

Lack of proper bracing during construction can result in serious injuries. Follow these guidelines:

1. All blocking, hangers, rim boards and rim joists at the end supports of the PKI Joists must be completely installed and properly nailed.
2. Lateral strength, like a braced end wall or an existing deck, must be established at the end of the bay. This can also be accomplished by a temporary or permanent deck (sheathing) fastened to the first four feet of joists at the end of the bay.
3. Safety bracing of 1x4 (minimum) must be nailed to a braced end wall or sheathed area (as in #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.
4. Sheathing must be completely attached to each PKI Joist before additional loads can be placed on the system.
5. Ends of cantilevers require safety bracing on both the top and the bottom flanges.
6. The flanges must remain straight within a tolerance of a 1/2" from true alignment.



**DO NOT...** walk on joists  
until braced. INJURY  
CAN OCCUR.



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



**DO NOT...** walk on joists  
that are lying flat.

## LIMITED LIFETIME WARRANTY - QUALITY AND PERFORMANCE

### WEBSHIELD® Fire Protective Panel

#### What Is Covered?

WEBSHIELD® Panels (FRI Assembly), when properly stored and installed by a certified installer onto a solid sawn flange wood I-joist in a residential dwelling and maintained per Pinkwood's published instructions, is warranted by PK-USA for adequacy of fire performance design values as outlined in ICC-ES AC-14 and as published by Pinkwood and against manufacturing defects for the lifetime of the residential structure. This limited warranty is transferable.

#### Conditions of Use and Limitations

This warranty does not cover the fire performance of the shielded joists outside the U.S. and Canada, nor perceived inadequacy of design, or perceived defects due to:

- Fungal growth, natural disaster, or any other cause beyond Pinkwood's control.
- Defects in the I-joist to which the WEBSHIELD panel is attached to.
- Defects in the residential structure due to construction and installation errors.
- Damage to the product prior to, during, or after installation.
- Noncompliance with installation instructions, applicable building code or generally accepted construction practices.
- Any alterations to the WEBSHIELD panel which fall outside of its Evaluation Services report.
- Mold, fungal decay or rot; termites or termite damage.
- Pressure or topical treatment not approved by PK-USA
- Fire events and loading that are in excess of a E119 modified test protocol

Note: Like any wood product, all wood-based joists may be at risk for fungal decay or rot when exposed to repeated wetting or high-moisture environments, particularly if not properly ventilated or subjected to water leaks. For this reason, building construction, design and use features must ensure that the WEBSHIELD panel and underlying Joists are protected from such exposure by accepted construction practices and adherence to applicable building codes.

#### Manufacturer's Rights

PK-USA's WEBSHIELD panels are manufactured to meet or exceed the rigorous engineering and testing standards set by every major code approval agency in North America. All PK-USA joist products are unconditionally guaranteed to be free of manufacturing defects.

PK-USA guarantees that its WEBSHIELD fire protective panel product, when installed and handled as per the WEBSHIELD installation guide, will perform in accordance with the published fire performance provisions and standards. In the unlikely event that a problem occurs due to a manufacturing defect, PK-USA shall be given a reasonable opportunity to inspect the product on site. If this evaluation reveals a problem due to manufacturing defects, the situation shall be promptly corrected.

#### What You Must Do

You must notify PK-USA in writing of any claim under this warranty within 30 days of the discovery of covered condition at the following address: PK-USA 14523 S. Palo Alto Dr., Herriman, UT 84096.

Upon request, you must provide Pinkwood with reasonable proof of product identification in the form of a sample, a photo-graph of the identifying stamp, or dated receipt.

#### Incidental or Consequential Damages

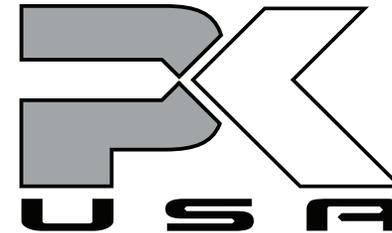
Pinkwood's sole responsibility is as set forth in this warranty and Pinkwood nor its agents will not be responsible for incidental, indirect or consequential damages unless such damages are legally authorized by state and provincial statutes.



For information about  
PK-USA and PK-JOIST's Engineered Wood Products  
visit our website at: [www.PK-USA.com](http://www.PK-USA.com)

Your Dealer is:

If no dealer is listed, call 702-400-2195



For further information and sales contact:  
Email: [JohnD@PK-USA.com](mailto:JohnD@PK-USA.com)  
Website: [www.PK-USA.com](http://www.PK-USA.com)

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