

PINKWOOD I-JOISTS Made Better

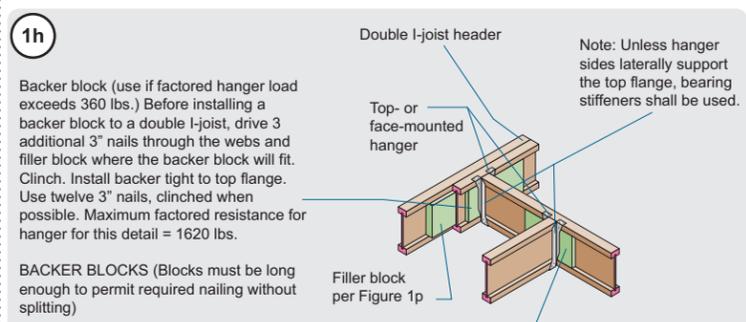
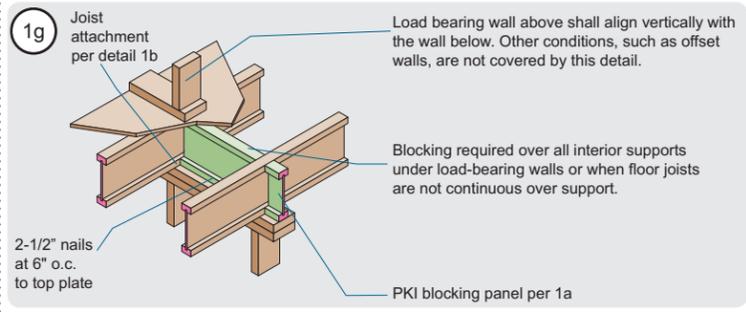
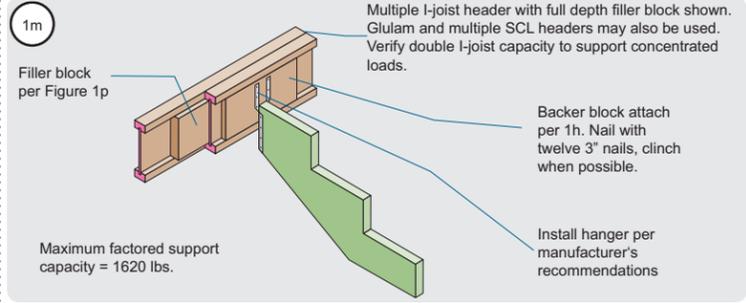
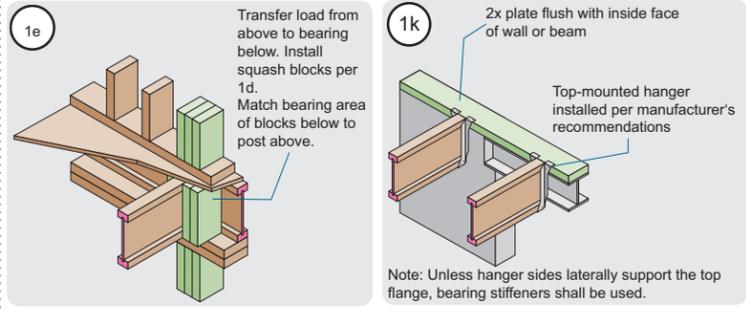
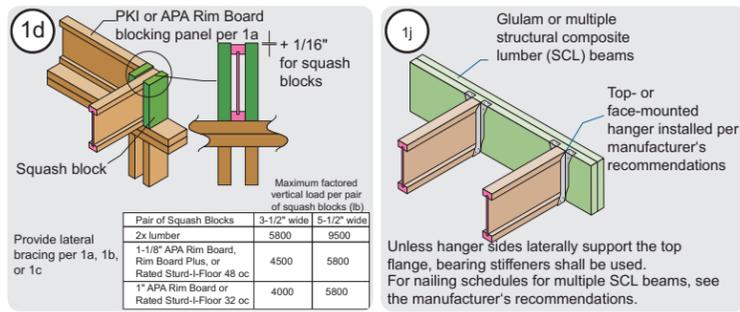
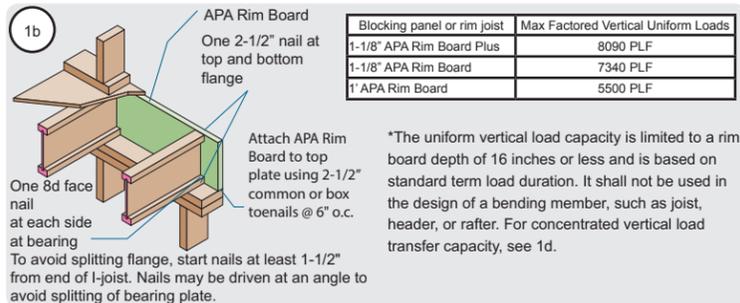
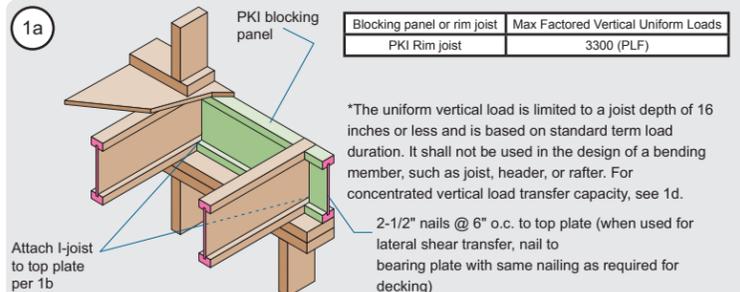
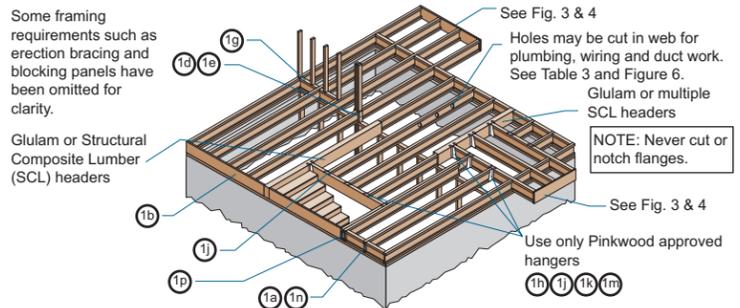
Canadian Handling & Installation Recommendations



DO NOT walk on joists until braced. INJURY CAN OCCUR.
DO NOT stack building materials on unbraced joists. Stack only over beams or walls.
DO NOT walk on joists that are lying flat.

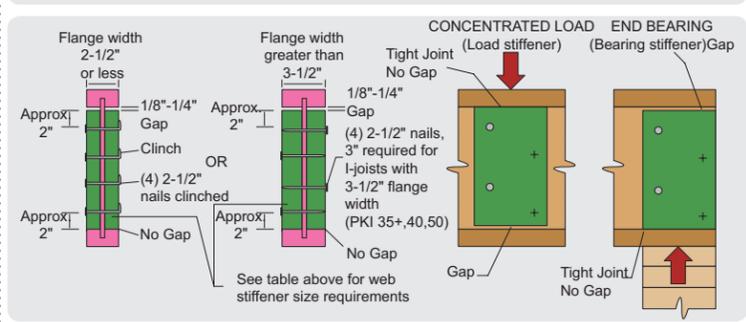
Customer service and support:
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PKI 10 SERIES	PKI 20 SERIES	PKI 23 SERIES	PKI 35+ SERIES	PKI 40 SERIES	PKI 50 SERIES
Depths: 9 1/2", 11 1/2", 14", 16"	9 1/2", 11 1/2", 14", 16"	9 1/2", 11 1/2", 14", 16"	9 1/2", 11 1/2", 14", 16"	9 1/2", 11 1/2", 14", 16", 24"	11 1/2", 14", 16", 24"
Clear Size: 2 1/2" x 1 1/2"	2 1/2" x 1 1/2"	2 1/2" x 1 1/2"	3 1/2" x 1 1/2"	3 1/2" x 1 1/2"	3 1/2" x 1 1/2"
Webstock: 1/4" OSB	1/4" OSB	1/4" OSB	1/4" OSB	1/4" OSB	1/4" OSB



Flange Width	Material Thickness Required ^(a)	Minimum Depth ^(b)
2-1/2"	1"	5-1/2"
3-1/2"	1-1/2"	7-1/4"

- Minimum grade for backer block material shall be Utility grade SPF (south) or better for solid sawn lumber and Rated Sheathing or Single Floor grade for wood structural panels.
- For face-mount hangers use net joist depth minus 3-1/4" for joists with 1-1/2" thick flanges. For 1-5/16" thick flanges use net depth minus 2-7/8".



1p FILLER BLOCK REQUIREMENTS FOR DOUBLE I-JOIST CONSTRUCTION

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

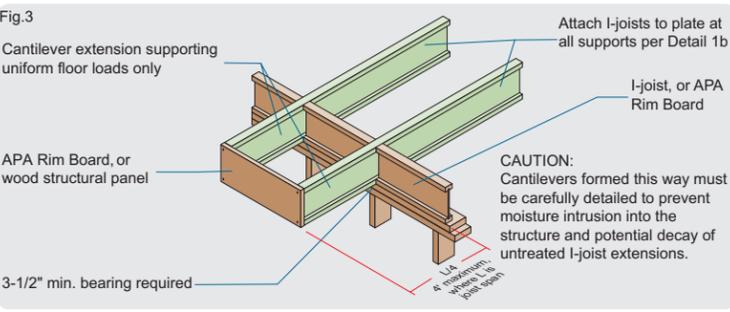
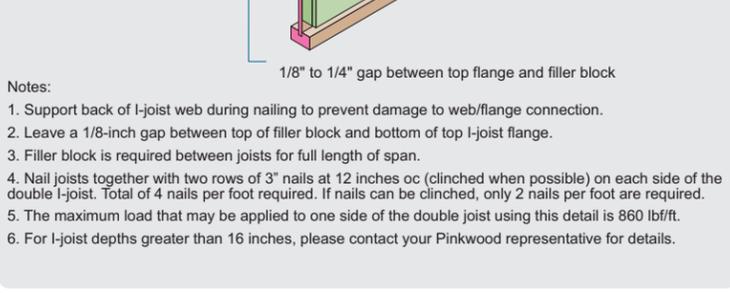


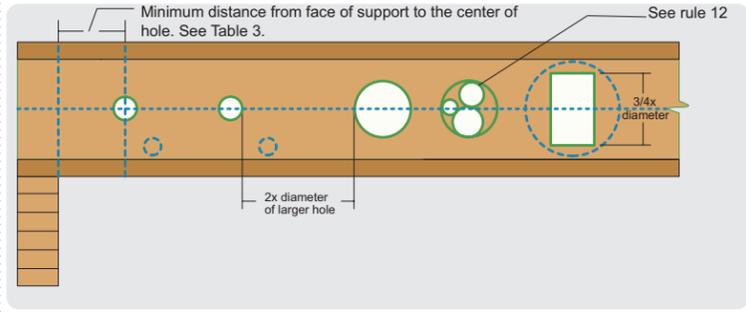
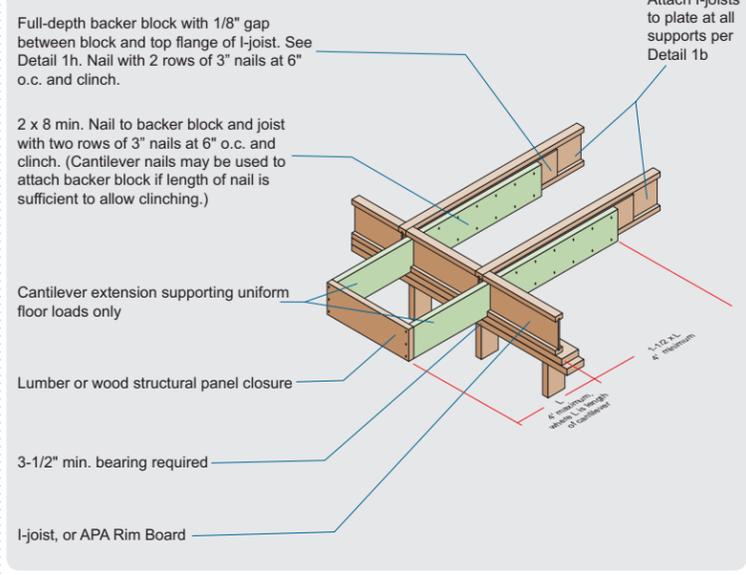
TABLE 5. LOCATION OF CIRCULAR HOLES IN PKI JOIST WEBS

Joist Depth	Series	SAF	Minimum Distance from Inside Face of Any Supports to Center of Hole (ft-in)															
			Round Hole Diameter (in.)															
			2	3	4	5	6	6 1/4	7	8	8 5/8	9	10	10 3/4	11	12	12 3/4	
9 1/2"	PKI10	12.91	1'-1"	1'-2"	1'-8"	2'-11"	4'-4"	4'-9"	5'-2"	5'-7"	6'-3"	6'-9"	7'-11"	8'-4"				
	PKI20	14.09	1'-1"	1'-2"	2'-5"	3'-9"	5'-2"	5'-7"	6'-3"	6'-9"	7'-11"	8'-4"						
	PKI23	14.83	1'-1"	1'-6"	2'-11"	4'-4"	5'-10"	6'-3"	6'-9"	7'-11"	8'-4"							
	PKI35+	15.32	1'-1"	2'-1"	3'-5"	4'-9"	6'-3"	6'-9"	7'-11"	8'-4"								
	PKI40	16.81	2'-0"	3'-4"	4'-9"	6'-4"	7'-11"	8'-4"										
11 7/8"	PKI10	14.81	1'-1"	1'-2"	1'-8"	2'-10"	3'-2"	4'-2"	5'-6"	6'-7"								
	PKI20	16.32	1'-1"	1'-2"	1'-5"	2'-8"	3'-11"	4'-3"	5'-2"	6'-8"	7'-11"							
	PKI23	17.52	1'-1"	1'-2"	2'-6"	3'-10"	4'-3"	5'-4"	6'-10"	8'-2"								
	PKI35+	17.67	1'-1"	1'-2"	2'-4"	3'-7"	4'-10"	5'-2"	6'-2"	7'-9"	9'-1"							
	PKI40	19.96	1'-5"	2'-9"	4'-1"	5'-6"	6'-11"	7'-3"	8'-5"	10'-1"	11'-2"							
14"	PKI10	20.08	1'-1"	1'-2"	2'-7"	4'-5"	4'-10"	6'-3"	8'-2"	9'-6"								
	PKI20	16.24	1'-1"	1'-2"	1'-3"	1'-8"	1'-11"	2'-9"	4'-0"	4'-9"	5'-3"	6'-8"	8'-2"					
	PKI23	17.69	1'-1"	1'-2"	1'-5"	2'-7"	2'-10"	3'-9"	5'-0"	5'-10"	6'-4"	7'-10"	9'-8"					
	PKI35+	19.24	1'-1"	1'-2"	1'-3"	2'-2"	2'-6"	3'-6"	4'-11"	5'-10"	6'-4"	8'-0"	9'-9"					
	PKI40	18.42	1'-1"	1'-2"	1'-3"	2'-5"	3'-7"	3'-10"	4'-9"	6'-11"	7'-6"	9'-4"	11'-5"					
16"	PKI10	22.63	1'-1"	2'-2"	3'-5"	4'-9"	6'-1"	6'-5"	7'-6"	8'-11"	9'-11"	10'-6"	12'-2"	13'-7"				
	PKI20	20.08	1'-1"	1'-2"	1'-2"	2'-4"	3'-11"	4'-4"	5'-6"	7'-3"	8'-4"	9'-0"	10'-11"	12'-5"				
	PKI23	18.97	1'-1"	1'-2"	1'-3"	1'-5"	1'-8"	2'-6"	3'-8"	4'-5"	4'-10"	6'-1"	7'-1"	7'-5"	9'-3"	11'-3"		
	PKI35+	19.90	1'-1"	1'-2"	1'-3"	1'-3"	1'-4"	1'-5"	2'-9"	3'-7"	4'-1"	5'-8"	7'-0"	7'-5"	9'-5"	11'-7"		
	PKI40	18.71	1'-1"	1'-2"	1'-2"	1'-5"	2'-6"	2'-10"	3'-8"	4'-10"	5'-7"	6'-1"	7'-4"	8'-4"	8'-9"	11'-0"	13'-0"	
PKI50	25.17	1'-1"	1'-2"	1'-2"	2'-2"	3'-7"	3'-11"	5'-1"	6'-7"	7'-7"	8'-2"	9'-10"	11'-1"	11'-7"	13'-5"	15'-0"		

WEB HOLE SPECIFICATIONS

- One of the benefits of using I-joists in residential floor construction is that holes may be cut in the joist webs to accommodate electrical wiring, plumbing lines and other mechanical systems, therefore minimizing the depth of the floor system.
- Rules for cutting holes in PKI Joists
- The distance between the inside edge of the support and the centerline of any hole shall be in compliance with the requirements of Table 5.
 - I-joist top and bottom flanges must NEVER be cut, notched or otherwise modified.
 - Whenever possible, field-cut holes should be centered on the middle of the web.
 - 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 1/4 inch. A minimum of 1/8 inch should always be maintained between the top or bottom of the hole and the adjacent I-joist flange.
 - The sides of square holes or longest sides of rectangular holes should not exceed three-fourths of the diameter of the maximum round hole permitted at that location.
 - 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 5.
 - Holes measuring 1-1/2 inches or smaller shall be permitted anywhere in a cantilevered section of a PKI Joist. Holes of greater size may be permitted subject to verification.
 - A 1-1/2-inch hole or smaller can be placed anywhere in the web provided that it meets the requirements of rule number 6 above.
 - All holes shall be cut in a workman-like manner in accordance with the restrictions listed above and as illustrated in Figure 6.
 - Limit three maximum-size holes per span.
 - 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.

Fig. 4



Notes:

- Above table may be used for I-joist spacing of 24 inches o.c. or less.
 - Hole location distance is measured from inside face of supports to center of hole.
 - Distances in this chart are based on uniformly loaded joists.
 - Hole sizes and/or locations that fall outside the scope of this table may be acceptable based on analysis of actual hole size, span, spacing and loading conditions. The I-joist shear capacity at the location of a circular web hole (V_n) is calculated using the following equation:

$$V_n = \text{Published Shear Value} \times \left[\frac{\text{Joist Depth} - \text{Hole Diameter}}{\text{Joist Depth}} \right]$$
- (e) SAF = Span Adjustment Factor, used as defined below:

OPTIONAL:

Table 5 is based on the I-joists used at their maximum span. If the I-joists are placed at less than their full allowable span, the maximum distance from the centerline of the hole to the face of any support (D) as given above may be reduced as follows:

$$D_{\text{reduced}} = \frac{L_{\text{actual}}}{\text{SAF}} \times D$$

Where: D_{reduced} = Distance from the inside face of any support to center of hole, reduced for less-than-maximum span applications (ft). The reduced distance shall not be less than 12 inches from the face of the support to edge of the hole.

L_{actual} = The actual measured span distance between the inside faces of supports (ft).

SAF = Span Adjustment Factor given in this table.

D = The minimum distance from the inside face of any support to center of hole from this table.

If $\frac{L_{\text{actual}}}{\text{SAF}}$ is greater than 1, use 1 in the above calculation for $\frac{L_{\text{actual}}}{\text{SAF}}$

