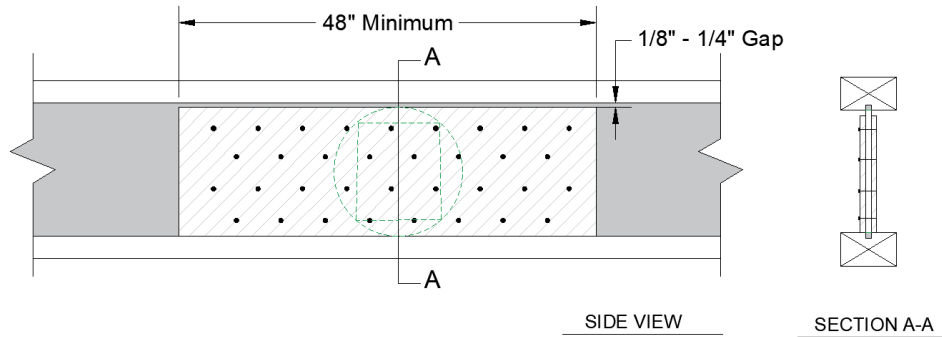


PinkWood PKI® Joists Standard Web Repair – Canada (LSD)

Web Hole Shear Restoration Repair:

PKI® web holes for mechanical, plumbing, and electrical services is quite common. Occasionally, however, a hole can be cut in the wrong place. The repair detail provided below restores the joist’s original shear capacity provided that the joist is uniformly loaded.

ROUND AND RECTANGULAR HOLES:

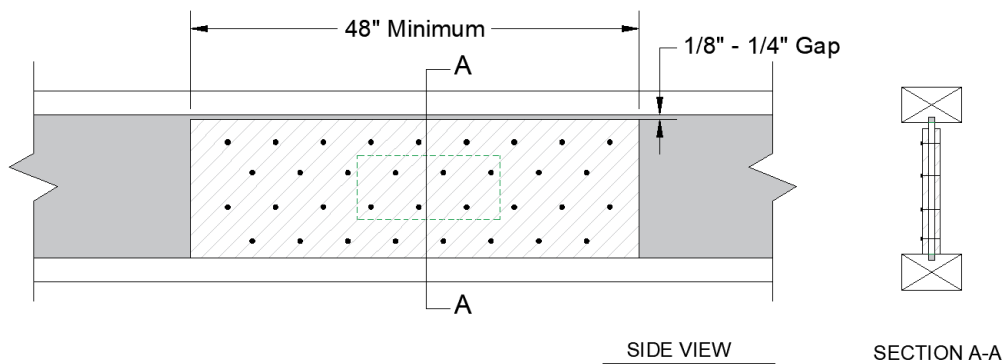


Repair Detail Limitations:

Joists Series	Joist Depth (in)	Round Hole - Max. Diameter (in)	Rectangular Hole - Max. Longest Dimension (in)	Max. Factored Shear at the Hole Location (lbs) with reinforcement
PKI®20, 35Plus	9.5	6 1/2	4 7/8	1990
	11.875	8 7/8	6 2/3	2345
	14	11	8 1/4	2650
	16	12	9	2950
PKI®23	9.5	6 1/2	4 7/8	2500
	11.875	8 7/8	6 2/3	2850
	14	10	7 1/2	3165
	16	10	7 1/2	3455
PKI®40	9.5	6 1/2	4 7/8	2115
	11.875	8 7/8	6 2/3	2565
	14	11	8 1/4	2960
	16	10	7 1/2	3340
PKI®50	11.875	8	6	3370
	14	9	6 3/4	3600
	16	9	6 3/4	3810

- Install minimum 23/32” x 48” long APA’s structural rated panels on both sides of joist, centered at the hole (covering web hole on both sides).
- A single hole is allowed within the 48” reinforcement.
- Apply construction adhesive to all contact surfaces.
- Fasten reinforcement to the web with 4 rows of 8d Common Nails (0.131” x 2.5”), staggered & clinched @ 4” o.c.. Min. end distance = 2”.
- Repair is only valid for uniformly loaded joists.
- Clear distance between the inside edge of any bearing support and the closest edge of the hole shall not be less than 24”.

DUCT CHASE (longest dimension exceeds $\frac{3}{4}$ of the max. allowed round hole, but it does not exceed the dimensions shown below):



Repair Detail Limitations:

Joists Series	Joist Depth (in)	Duct Chase Length (in)	Duct Chase Height (in)	Max. Factored Shear at the Hole Location (lbs) with reinforcement
PKI®20	9.5	16	6	1990
	11.875	18	8	2345
	14	18	10	2650
	16	18	12	2950
PKI®23	9.5	16	6	2500
	11.875	18	8	2850
	14	18	10	3165
	16	18	12	3455
PKI®35Plus	9.5	16	6	1990
	11.875	18	8	2345
	14	18	10	2650
	16	18	12	2950
PKI®40	9.5	16	6	2115
	11.875	18	8	2565
	14	18	10	2960
	16	18	12	3340
PKI®50	11.875	18	8	3370
	14	18	10	3600
	16	18	12	3810

- Install minimum 23/32" x 48" long APA's structural rated panels on both sides of joist, centered at the hole (covering web hole on both sides).
- A single hole is allowed within the 48" reinforcement.
- Apply construction adhesive to all contact surfaces.
- Fasten reinforcement to the web with 4 rows of 8d Common Nails (0.131" x 2.5") for depths ≤ 9.5 " and 6 rows of 8d Common Nails (0.131" x 2.5") for depths > 9.5 ", staggered & clinched @ 4" o.c. Min. end distance = 2"
- Repair is only valid for uniformly loaded joists.
- Clear distance between the inside edge of any bearing support and the closest edge of the hole shall not be less than 24".

For any other conditions contact Pinkwood Ltd. for engineering support.