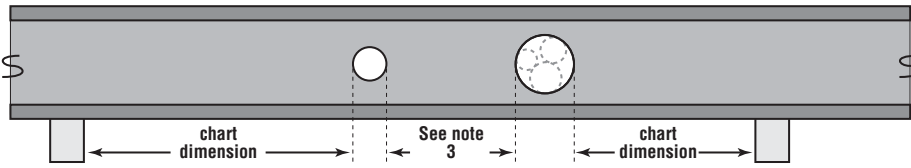


Hole Location for GPI Series Joists (Simple or Multiple Span)



Do not drill or cut flanges.



Chart dimension is minimum distance from inside face of support to nearest edge of hole.

Joist Depth	Joist Clear Span	Round Hole Diameter													
		2"	3"	4"	5"	6"	6½"	7"	8"	8½"	9"	10"	11"	12"	13"
9½"	10'	0'-6"	0'-6"	0'-9"	1'-6"	2'-6"	3'-3"								
	12'	0'-6"	0'-9"	1'-9"	2'-9"	4'-0"	4'-9"								
	14'	1'-0"	2'-0"	3'-0"	4'-3"	5'-6"	6'-0"								
	16'	0'-6"	0'-6"	1'-3"	3'-0"	4'-9"	5'-9"								
	18'	0'-6"	0'-6"	0'-9"	1'-9"	4'-0"	5'-0"								
11½"	12'	0'-6"	0'-6"	0'-9"	1'-0"	1'-6"	2'-0"	2'-6"	3'-9"	4'-9"					
	14'	0'-6"	0'-6"	0'-9"	1'-9"	2'-9"	3'-6"	4'-0"	5'-0"	6'-3"					
	16'	0'-6"	1'-0"	2'-0"	3'-0"	4'-0"	4'-9"	5'-3"	6'-6"	7'-6"					
	18'	0'-6"	0'-6"	1'-3"	2'-6"	4'-0"	4'-9"	5'-6"	7'-0"	8'-6"					
	20'	0'-6"	1'-3"	2'-6"	4'-0"	5'-3"	6'-0"	6'-9"	8'-6"	10'-0"					
	22'	0'-6"	0'-6"	1'-3"	3'-0"	4'-6"	5'-6"	6'-3"	8'-3"	10'-0"					
	24'	0'-6"	0'-6"	0'-9"	1'-0"	2'-6"	3'-9"	4'-9"	7'-3"	9'-3"					
14"	10'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"		
	12'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-0"	2'-3"	3'-3"	4'-6"		
	14'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	3'-6"	3'-9"	4'-9"	6'-0"		
	16'	0'-6"	0'-6"	0'-9"	1'-0"	1'-9"	2'-3"	2'-9"	4'-0"	5'-0"	5'-0"	6'-3"	7'-6"		
	18'	0'-6"	0'-6"	0'-9"	1'-0"	1'-3"	2'-0"	2'-6"	4'-0"	5'-3"	5'-3"	6'-9"	8'-6"		
	20'	0'-6"	0'-6"	0'-9"	1'-3"	2'-6"	3'-3"	3'-9"	5'-3"	6'-6"	6'-9"	8'-3"	10'-0"		
	22'	0'-6"	0'-6"	0'-9"	1'-0"	1'-3"	2'-0"	2'-9"	4'-6"	6'-0"	6'-3"	8'-0"	10'-3"		
	24'	0'-6"	0'-6"	0'-9"	1'-0"	2'-6"	3'-3"	4'-3"	5'-9"	7'-6"	7'-9"	9'-9"	11'-9"		
	26'	0'-6"	0'-6"	0'-9"	1'-0"	1'-3"	2'-3"	3'-3"	5'-0"	7'-0"	7'-3"	9'-6"	12'-0"		
	28'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-9"	3'-0"	5'-0"	7'-0"	7'-3"	9'-9"	12'-3"		
16"	14'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-3"	3'-6"	4'-6"	6'-0"
	16'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	2'-6"	3'-9"	4'-9"	6'-0"	7'-3"
	18'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	2'-3"	3'-9"	5'-0"	6'-6"	8'-3"
	20'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	3'-6"	3'-9"	5'-0"	6'-6"	8'-3"	10'-0"
	22'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	2'-9"	4'-3"	6'-0"	8'-0"	10'-0"
	24'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	3'-9"	4'-0"	5'-9"	7'-6"	9'-6"	11'-9"
	26'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-9"	3'-0"	5'-0"	7'-0"	9'-3"	11'-9"
	28'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	2'-3"	4'-0"	4'-3"	6'-3"	8'-6"	10'-9"	13'-6"
	30'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-9"	4'-0"	6'-3"	8'-6"	11'-0"	13'-9"

Not Permitted

Example below

NOTES:

- Hole locations are based on worst case of simple and multiple span conditions with uniform floor loads of 40 PSF live load and 10 or 20 PSF dead load, and spans from page 6.
- Holes not greater than 1.5" in diameter can be placed anywhere in the web, but the hole must be spaced a minimum horizontal clear distance of 2 times its diameter (but not less than 1") from any adjacent hole.
- For holes greater than 1.5" diameter, minimum clear distance between
 - two round holes is 2 times the diameter of the larger hole
 - a round hole and a rectangular hole is the larger of 2 times the hole diameter or twice the rectangular hole width
- For rectangular holes, the longest side may not exceed 75% of a round hole diameter permitted at that location; i.e., if an 8 inch round hole is permitted, the longest side of a rectangular hole centered at that location is 8" x 0.75 = 6".
- 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.

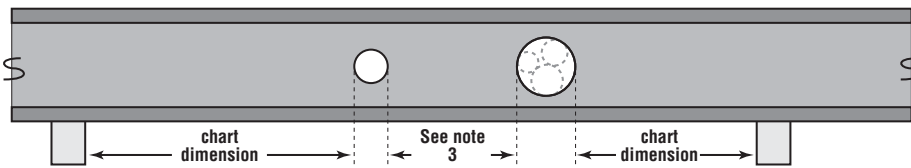
- For joists with more than one span, use the longest span to determine hole location in either span.
- All holes shown on this chart may be located vertically anywhere within the web; a clear distance of at least 1/8" must be maintained from the hole edge to the inner surface of the closest flange.
- For other conditions use FASTBeam® Analysis using FASTBeam software could permit larger holes, or holes closer to the supports than shown in this chart.

EXAMPLE:

Determine the allowable location of a 9" round hole in a 14" deep GPI Series joist which spans 20'.

Enter the chart in the left column and find 14" joist depth, move to the right and find 20' in the joist span column and move across the chart to intersect the 9" round hole column. The nearest allowable location to either bearing is 6'-9".

Hole Location for WI Series Joists (Simple or Multiple Span)



Do not drill or cut flanges.



Chart dimension is minimum distance from inside face of support to nearest edge of hole.

Joist Depth	Joist Clear Span	Round Hole Diameter													
		2"	3"	4"	5"	6 1/4"	7"	8"	8 1/2"	9"	10"	10 3/4"	11"	12"	12 3/4"
9-1/2"	10'	0'-6"	0'-6"	0'-9"	1'-9"	3'-3"									
	12'	0'-6"	1'-3"	2'-3"	3'-3"	4'-6"									
	14'	0'-6"	1'-0"	2'-3"	3'-6"	5'-6"									
	16'	0'-6"	0'-6"	2'-0"	3'-6"	5'-9"									
	18'	0'-6"	0'-6"	0'-9"	2'-6"	5'-0"									
11-7/8"	12'	0'-6"	0'-6"	0'-9"	1'-0"	1'-9"	2'-6"	3'-9"	4'-6"						
	14'	0'-6"	0'-6"	0'-9"	1'-9"	3'-3"	4'-0"	5'-3"	6'-0"						
	16'	0'-6"	1'-3"	2'-3"	3'-3"	4'-6"	5'-6"	6'-6"	7'-6"						
	18'	1'-6"	2'-6"	3'-6"	4'-6"	6'-0"	6'-9"	8'-0"	9'-0"						
	20'	0'-9"	2'-0"	3'-3"	4'-6"	6'-3"	7'-3"	8'-9"	9'-9"						
	22'	1'-6"	2'-9"	4'-0"	5'-6"	7'-3"	8'-3"	9'-9"	10'-9"						
24'	0'-6"	1'-9"	3'-3"	4'-9"	7'-0"	8'-3"	10'-0"	11'-3"							
14"	12'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-3"	1'-9"	2'-3"	3'-6"	4'-3"				
	14'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-6"	2'-6"	3'-3"	3'-9"	4'-9"	5'-9"			
	16'	0'-6"	0'-6"	0'-9"	1'-0"	2'-0"	2'-9"	4'-0"	4'-6"	5'-0"	6'-3"	7'-3"			
	18'	0'-6"	0'-6"	1'-0"	2'-0"	3'-3"	4'-3"	5'-3"	6'-0"	6'-6"	7'-9"	8'-9"			
	20'	0'-6"	0'-6"	0'-9"	1'-6"	3'-0"	4'-0"	5'-3"	6'-3"	6'-9"	8'-6"	9'-9"			
	22'	0'-6"	0'-6"	1'-6"	2'-9"	4'-3"	5'-6"	6'-9"	7'-9"	8'-3"	10'-0"	11'-3"			
	24'	0'-6"	1'-0"	2'-3"	3'-6"	5'-3"	6'-3"	7'-9"	8'-9"	9'-3"	10'-9"	12'-3"			
	26'	0'-6"	0'-6"	1'-0"	2'-6"	4'-6"	5'-9"	7'-6"	8'-6"	9'-3"	11'-3"	13'-0"			
28'	0'-6"	0'-9"	2'-3"	3'-9"	5'-9"	7'-0"	8'-9"	10'-0"	10'-6"	12'-6"	13'-9"				
16"	14'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-0"	1'-3"	2'-6"	3'-3"	3'-6"	4'-9"	5'-6"	
	16'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-0"	1'-6"	2'-3"	2'-9"	3'-9"	4'-9"	5'-0"	6'-3"	7'-0"
	18'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	2'-0"	3'-0"	3'-6"	4'-0"	5'-3"	6'-0"	6'-3"	7'-6"	8'-6"
	20'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-3"	2'-6"	3'-3"	3'-9"	5'-3"	6'-3"	6'-9"	8'-3"	9'-6"
	22'	0'-6"	0'-6"	0'-9"	1'-0"	1'-9"	2'-6"	3'-9"	4'-9"	5'-3"	6'-9"	7'-9"	8'-3"	9'-9"	11'-0"
	24'	0'-6"	0'-6"	0'-9"	1'-0"	2'-6"	3'-6"	4'-9"	5'-6"	6'-3"	7'-6"	8'-9"	9'-0"	10'-9"	12'-0"
	26'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	2'-3"	4'-0"	5'-0"	5'-6"	7'-3"	8'-9"	9'-3"	11'-3"	12'-9"
	28'	0'-6"	0'-6"	0'-9"	1'-0"	2'-6"	3'-6"	5'-3"	6'-3"	7'-0"	8'-9"	10'-3"	10'-9"	12'-9"	14'-3"
	30'	0'-6"	0'-6"	0'-9"	1'-9"	3'-9"	5'-0"	6'-6"	7'-6"	8'-3"	10'-0"	11'-6"	11'-9"	13'-9"	14'-9"
	32'	0'-6"	0'-6"	0'-9"	1'-0"	1'-0"	1'-3"	3'-6"	4'-9"	5'-6"	7'-9"	9'-6"	10'-3"	12'-9"	14'-6"

Not Permitted

Example below

NOTES:

- Hole locations are based on worst case of simple and multiple span conditions with uniform floor loads of 40 PSF live load and 10 or 20 PSF dead load, and spans from page 6.
- Holes not greater than 1.5" in diameter can be placed anywhere in the web, but the hole must be spaced a minimum horizontal clear distance of 2 times its diameter (but not less than 1") from any adjacent hole.
- For holes greater than 1.5" diameter, minimum clear distance between
 - two round holes is 2 times the diameter of the larger hole
 - a round hole and a rectangular hole is the larger of 2 times the hole diameter or twice the rectangular hole width
- For rectangular holes, the longest side may not exceed 75% of a round hole diameter permitted at that location; i.e., if an 8 inch round hole is permitted, the longest side of a rectangular hole centered at that location is 8" x 0.75 = 6".
- 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.
- For joists with more than one span, use the longest span to determine hole location in either span.
- All holes shown on this chart may be located vertically anywhere within the web; a clear distance of at least 1/8" must be maintained from the hole edge to the inner surface of the closest flange.
- For other conditions use FASTBeam®. Analysis using FASTBeam software could permit larger holes, or holes closer to the supports than shown in this chart.

EXAMPLE:

Determine the allowable location of a 9" round hole in a 14" deep WI Series joist which has multiple spans of 16' and 20'. Enter the chart in the left column and find 14" joist depth, move to the right and find 20' in the joist span column and move across the chart to intersect the 9" round hole column. The nearest allowable location to either bearing is 6'-9".