



# Design of Filler Blocking with MiTek Hangers

Filler blocking should only be used as a last resort, when the supported members width is less than the supporting hanger width. If possible a solid piece of the same species as the main supported member should be used, if this is not possible, APA rated plywood or OSB may be used.

MiTek allows for 1/8" of space between the supported member and the hanger sides.

The filler blocking should be attached with enough fasteners to support the bearing area of said member in the bucket. These fasteners are separate from the joist fasteners specified in the hanger connection. Please reference the fastener values and spacing below to aid in your design.

When possible filler blocking shall be placed on both sides of a multi-ply supported member in order to minimize eccentric loading of the connector. Filler blocks should not extend more than 12" from the supporting member. If you are unable to meet these requirements please reach out to MiTek customer service for assistance.

Nail	Filler Block Thickness (in)	Shear Strength (Lbs.)							
		Side member Specific gravity = 0.50				Side member Specific gravity = 0.42			
		Main Member Species or Equivalent SG				Main Member Species or Equivalent SG			
		0.42	0.46	0.50	0.55	0.42	0.46	0.50	0.55
10d Common (0.148")	3/8	78	82	85	88	71	74	76	79
	7/16	80	84	87	90	72	75	77	80
	15/32	82	85	88	91	72	75	78	80
	19/32	88	92	95	98	76	79	81	84
	23/32	96	100	103	106	81	84	86	89
	1	108	113	118	123	96	99	101	104
16d Common (0.162")	1-1/2 <sup>4</sup>	100	109	118	128	100	109	118	128
	7/16	95	99	102	106	85	89	92	95
	15/32	96	100	104	108	86	89	92	95
	19/32	102	107	110	114	89	93	95	98
	23/32	110	115	118	122	94	98	100	103
1	129	135	141	146	109	113	115	118	

- 1) Nails need 10 times the diameter of embedment into main member.
- 2) Values are good for solid sawn lumber or SCL wood structural side members.
- 3) Data is derived from table 12Q, 12N & 12R of the 2018 NDS.
- 4) 1-1/2" side members assume a specific gravity equal to that of the main member.

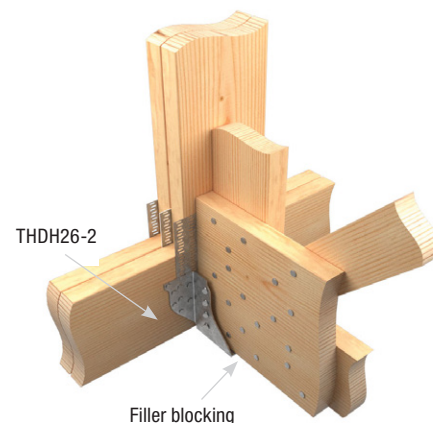
**Example:**

2x12" filler block with a specific gravity 0.50 added to THDH26-2 supporting DF (SG = 0.50) truss. Supported member design reaction is 4000 lbs. Bearing width of the filler block as a percentage of the total bearing area of the supported member. @ 100% DOL.

$$\frac{(1-1/2")}{3"} = 50\%$$

Filler bearing area percentage x total load applied to connector.  
0.50 \* 4000 lbs. = 2000 lbs.

Nails selected are 10d common, number of nails needed to attach each filler block =  $\frac{2000 \text{ lbs.}}{118 \text{ lbs. per nail}} = 17$  additional nails minimum to attach each filler block to main member.



**Load capacity of THDH26-2 with DF supporting member = 4375 lbs. @ 100%**

End Distance: 15 x Diameter (Dia.)  
Edge Distance: 2.5 x Dia.  
Spacing Between fasteners in a Row: 15 x Dia.  
Spacing Between staggered rows: 2.5 x Dia.

**Nail spacing per 2018 NDS**  
**Note:** Dimensions on the figure are minimums and may not be to scale

Information published in this document is valid until October 2023. Visit MiTek-US.com for the most current version or contact MiTek Engineering at 800-328-5934

**Customer Service & Technical Assistance**

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