Technical Bulletin

DESIGN OF FILLER BLOCKING WITH MITEK HANGERS

Conditions for Blocking

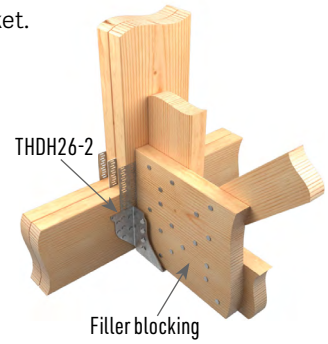
- MiTek allows a maximum 1/8" gap between the supported member and the hanger side flanges.
- Filler blocking may be used when the supported member's width is less than the hanger width.
- Filler blocking should only be used when other options are unavailable. The best practice is to install the correct-width hanger.

Preferred Filler Blocking Materials:

- Solid blocking of the same species as the main supported member.
- APA-rated plywood or OSB.

Attachment To Carried Member:

- Secure filler blocking with a minimum required quantity of fasteners to support the bearing area imposed by the block on the hanger bucket.
- The joist hanger fasteners should not be considered in the fixing of the filler block to the carried member.
- Refer to the fastener shear design values and spacing guidelines in the table below for your design.
- For multi-ply supported members, place filler blocking on both sides to minimize eccentric loading of the connector.
- Filler blocks should not extend more than 12" from the supporting member (header).
- If you are unable to meet these requirements, contact 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	94	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
	1-1/2[4]	100	109	118	128	100	109	118	128
16d Common (0.162")	7/16	95	99	102	106	84	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 require 10 times the diameter of embedment into main member. Clinch nails that penetrate through the opposite side.

2) Values apply to solid sawn lumber or SCL wood structural side members.

3) Data is derived from table 12Q, 12R & 12S of the 2018 NDS.

4) 1-1/2" side members assume a specific gravity equal to or hgher 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.

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

Filler bearing area percentage x total load applied to hanger.

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. Designer to verify proper nail quantities may be installed within spacing constraints.

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

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