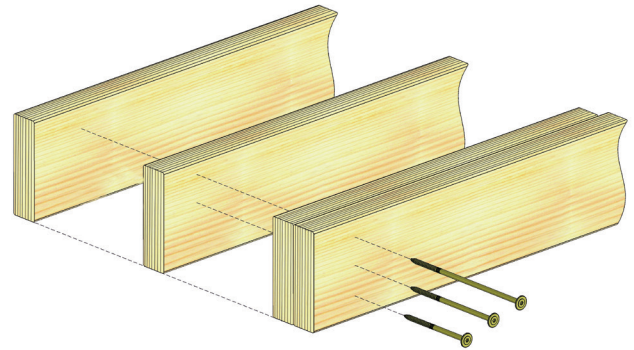


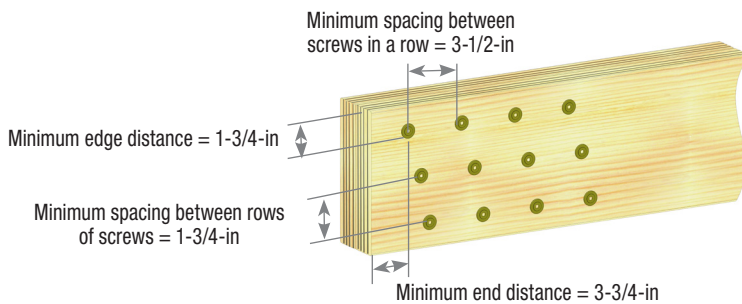


JOINING MULTI-PLY ENGINEERED WOOD (EWP) BEAMS

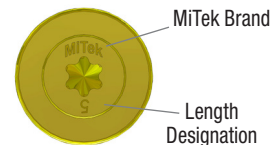
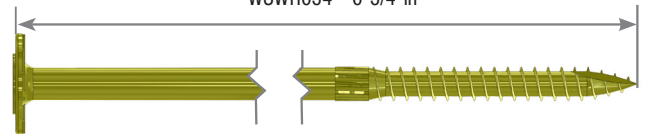
The MiTek WSWH Washer Head Structural Wood Screws have been designed specifically for use in joining wood members of multiple-ply engineered wood beams (LVL, LSL & PSL). Using a standard 1/2-in low speed/high torque drill, install screws into the side of the outermost ply. As the threads fully engage the final ply, allow the underside of the washer head to pull the plies firmly together. Washer head will install flush with the surface of the wood, but do not overdrive as this may damage the beam. Refer to the information in this bulletin for proper WSWH screw size selection and fastening pattern.



Minimum Spacing Requirements:



WSWH338 – 3-3/8-in
WSWH5 – 5-in
WSWH634 – 6-3/4-in

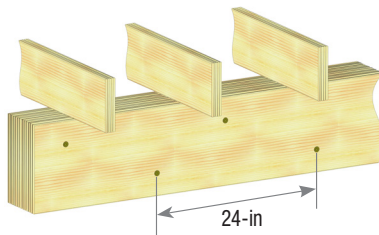


Fastener Identification

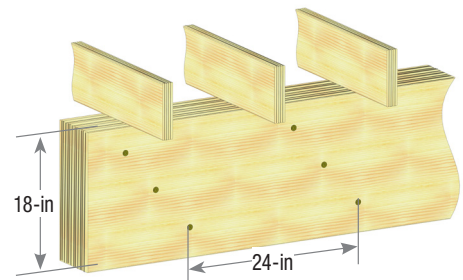
For easier selection and post installation inspection, all MiTek Wood Screws carry an identifying head marking.

Top Loaded Beams

Where floor joists rest on all plies of the beam, WSWH screws should be installed in two staggered rows at 24-in O.C. spacing. Maintain the minimum end and edge distance as indicated above.



For beam depths of 18-in or more, this pattern should be increased to three staggered rows of WSWH screws at 24-in on center.



General Guidelines:

- Beams wider than 7-in require special consideration by the design professional. The values on the next page do not apply.
- Excessively warped or curved LVL should never be forced into alignment by use of clamps, screws or bolts as splitting may occur, potentially decreasing the carrying capacity of the beam.
- The WSWH338, WSWH5, and WSWH634 are not designed for use with dimensional lumber. Refer to MiTek's *Joining Multiple Member (Multi-ply) Dimensional Lumber Wood Beams* Technical Bulletin as a guide for selecting the proper length wood screw for that application.
- A qualified designer or engineer should always be consulted for critical assemblies and fastening requirements.

Customer Service & Technical Assistance

continued on back

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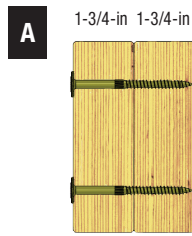
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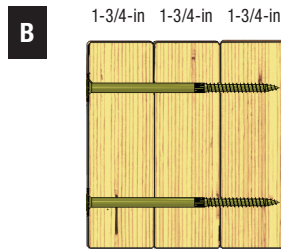


JOINING MULTI-PLY ENGINEERED WOOD (EWP) BEAMS

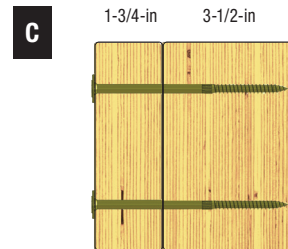
Fastener Size Selection by Assembly Type (2 rows shown)



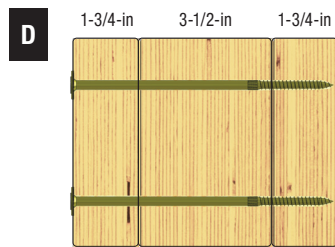
WSWH338
3-3/8-in



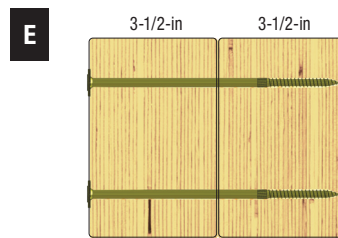
WSWH5
5-in



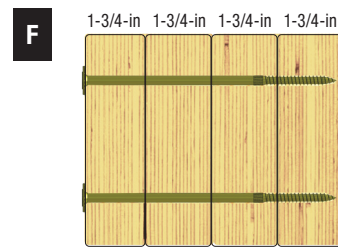
WSWH5
5-in



WSWH634
6-3/4-in



WSWH634
6-3/4-in



WSWH634
6-3/4-in

Side Loaded Beams

Where floor joists are joined to the side of the beam (typically using a joist hanger), this load chart must be used to establish the proper pattern based on the design load as determined by the engineer and noted on the plans.

Length (in)	MiTek Stock No.	No. of Screws Vertical Column	Spacing Between Screws in a Row (in)	Allowable Uniform Load Applied to Either Outside Member by Assembly Type (lbs/lineal ft) (See Graphics) ^{1,2,3,4,5}											
				EWP Wood Specific Gravity G ≥ 0.50						EWP Wood Specific Gravity G ≥ 0.42					
				A	B	C	D	E	F	A	B	C	D	E	F
3-3/8	WSWH338	2	24	600	--	--	--	--	--	525	--	--	--	--	--
			19.2	755						655					
			16	905						785					
			12	1205						1050					
		3	24	905	--	--	--	--	--	785	--	--	--	--	--
			19.2	1130						985					
			16	1355						1180					
			12	1805						1570					
5	WSWH5	2	24	--	430	535	--	--	--	--	325	545	--	--	--
			19.2		535	670					410	685			
			16		645	805					490	820			
			12		860	1075					655	1090			
		3	24	--	645	805	--	--	--	--	490	820	--	--	--
			19.2		805	1005					615	1025			
			16		965	1210					735	1230			
			12		1285	1610					980	1640			
6-3/4	WSWH634	2	24	--	--	--	380	715	380	--	--	--	290	730	290
			19.2				475	895	475				365	910	365
			16				570	1075	570				435	1090	435
			12				765	1430	765				580	1455	580
		3	24	--	--	--	570	1075	570	--	--	--	435	1090	435
			19.2				715	1345	715				545	1365	545
			16				860	1610	860				655	1640	655
			12				1145	2150	1145				870	2185	870
Head Side Multiplier ⁶				1.06	1.25	1	1.25	1	1.25	1.19	1.67	1	1.67	1	1.67

- 1) Allowable loads are derived from tested fastener values as reported in ICC-ES ESR-2761.
- 2) The uniform loads in this table relate only to the capacity of the fastener to transfer shear loads between plies. The equivalent specific gravity (SG) and the capacity of the EWP should be verified with manufacturer's literature.
- 3) Values listed reflect 100% load duration. ($C_D=1.0$) The designer may apply adjustment factors to increase or decrease these loads per the NDS based on conditions for each assembly.
- 4) Load values depicted assume all uniform load is applied to the outermost ply.
- 5) To minimize rotation, 7-in wide beams shall be side loaded only when loads are applied to both sides of the beam with the lesser loaded side bearing at least 25% of the overall design load.
- 6) When the uniform load is applied to the outermost ply with the screw head, listed allowable loads can be multiplied by this value.

New products or updated product information are designated in blue font.

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