

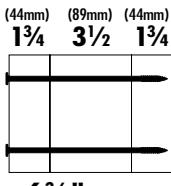
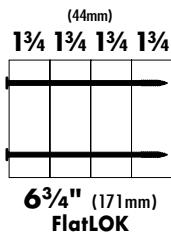
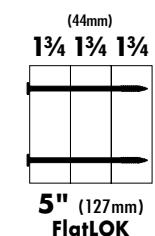
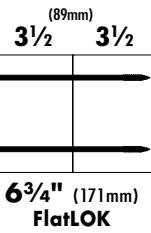
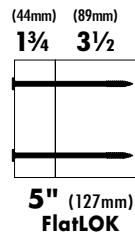
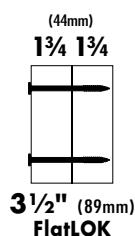
MULTIPLE MEMBER ENGINEERED WOOD BEAMS

CONNECTION DETAILS

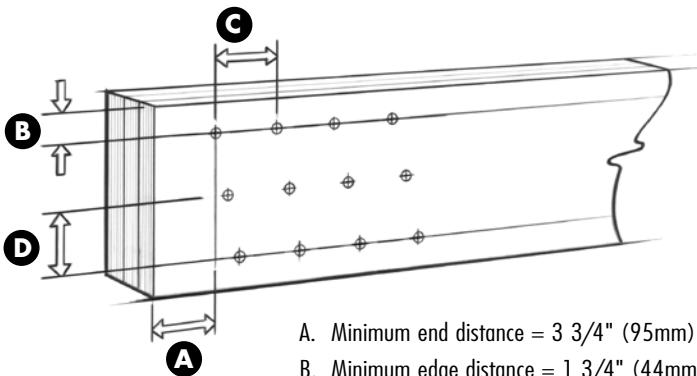
The FlatLOK Structural Wood Fastener has been designed specifically for use in joining multiple-ply structural wood beams. Using an impact driver, standard corded or cordless 1/2" low speed/high torque drill, install screws into the side of the outermost ply. As the thread fully engages the final ply, allow the underside of the washer head to pull the plies firmly together. Refer to the information in this bulletin for proper fastener size selection and fastening pattern.

MiTek® FlatLOK™ Structural Wood Screw

FASTENER SIZE SELECTION



MINIMUM SPACING REQUIREMENTS



- A. Minimum end distance = 3 3/4" (95mm)
- B. Minimum edge distance = 1 3/4" (44mm)
- C. Minimum spacing between fasteners in a row = 4" (102mm)
- D. Minimum spacing between rows of fasteners = 2 1/4" (57mm)

GENERAL GUIDELINES

- Beams wider than 7" require special consideration by a design professional or consultation with the engineered wood (EW) manufacturer. The values in this bulletin do not apply to this condition.
- Excessively warped or curved plies should never be forced into alignment by use of clamps, screws or bolts. Splitting may occur, potentially decreasing the carrying capacity of the beam.
- To avoid damaging the beam, fastener heads must not be countersunk.
- This bulletin applies only to EW beams. For applications using dimensional lumber or other configurations, a Professional Engineer may be consulted.
- For additional engineering data or technical assistance, please contact FastenMaster Technical Support at 800-518-3569 or visit our website at FastenMaster.com

FASTENER IDENTIFICATION

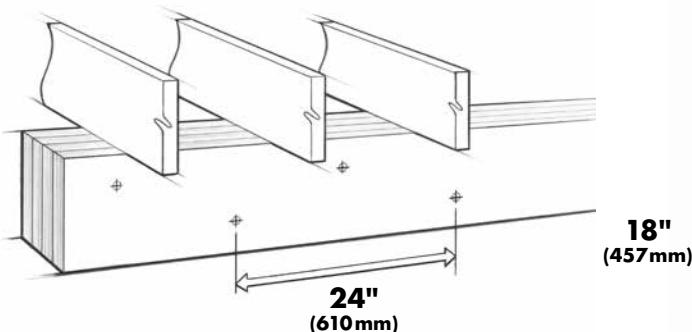
For easier selection and post-installation inspection, all FlatLOK fasteners carry an identifying head marking.

FlatLOK 3 1/2" (89mm) . . . F3.5
FlatLOK 5" (127mm) F5.0
FlatLOK 6 3/4" (171mm) . . . F6.7

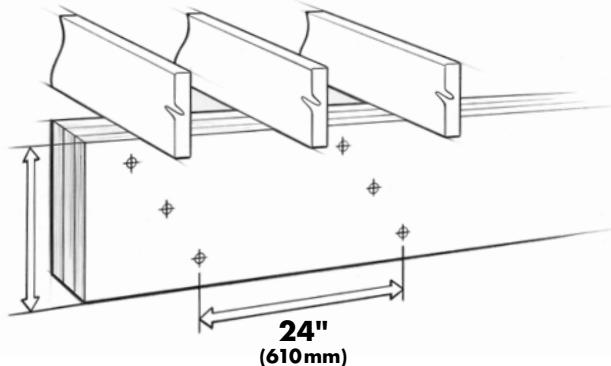
FASTENING PATTERN

Top Loaded Beams

Where floor joists rest atop beams measuring less than 18" (457mm) in depth, install 2 FlatLOKs every 24" (610mm) in a staggered pattern as shown.



For beam depths 18" or greater, increase this pattern to 3 FlatLOKs every 24" on center.

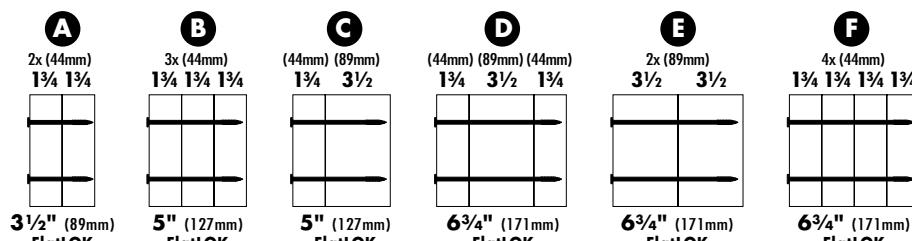


Side Loaded Beams

Where floor joists are mounted to the side of the beam (typically using joist hangers), the load chart below may be used to establish the proper pattern based on the design load as determined by the designer and noted on the plans.

- The factored uniform loads here are derived from tested fastener properties as reported in Technical Evaluation Report TER 1501-08. PE sealed versions of this report may be found at FastenMaster.com or drjengineering.org.
- A specific gravity of 0.5 was used for all engineered wood (EW) calculations.
- The uniform loads in this table relate only to the capacity of the fastener to transfer shear loads between plies. The capacity of the EW beam may be less and should be checked against the manufacturer's literature.
- Values listed reflect 100% stress level ($K_d=1.0$). The designer may apply adjustment factors to increase or decrease these loads per CSA086-14.
- The values in this table assume that the fasteners are loaded on either the point side or head side.

Assembly Type



FLATLOK	NO of SCREWS	SPACING between screws (in) (mm)	FACTORED UNIFORM LOAD CAPACITIES BY ASSEMBLY TYPE (LB/FT)					
			A	B	C	D	E	F
3 1/2" (89mm)	2	24	610	770				
	2	19.2	488	960				
	2	16	406	1160				
	3	24	610	1160				
	3	19.2	488	1440				
	3	16	406	1730				
5" (127mm)	2	24	610		600	780		
	2	19.2	488		750	980		
	2	16	406		900	1170		
	3	24	610		900	1170		
	3	19.2	488		1130	1460		
	3	16	406		1350	1760		
6 3/4" (171mm)	2	24	610				530	1220
	2	19.2	488				670	1530
	2	16	406				800	1830
	3	24	610				800	1830
	3	19.2	488				1000	2290
	3	16	406				1200	2750

- Standard Load Duration
- Resistance factor for connections of 0.8.