



TimberLOK®

HEAVY DUTY WOOD SCREW & RAFTER/TRUSS TO TOP PLATE CONNECTION

FEATURES

- No predrilling
- Faster and easier than 3/8" lag screws
- Countersinking head style
- Guaranteed corrosion resistance. ACQ approved
- IBC/IRC code compliant. ICC-ES ESR-1078
- Free bit in every package

LENGTHS: 2 1/2", 4", 6", 8", 10"

PACKAGING QUANTITIES

12 pc clamshell, 50 pc box, 250 pc bucket
500 pc bucket (2 1/2" only)

DESCRIPTION

TimberLOK is a heavy duty wood screw available in a variety of lengths and packaging sizes for applications such as attaching rafter or trusses to the top plate, landscape timbers, fences, decks, headers, stair stringers and more.

MEET CODE. LOWER COST.

The 6" TimberLOK is used by professional contractors nationwide to meet code and lower costs for rafter and truss to top plate connections.

Meet Code: Tested and proven to meet the most recent IRC/IBC requirements for rafter and truss to top plate connections in most applications. Lower Cost: Requires no predrilling, saving time and labor.



INSTALLATION PROCEDURE

TimberLOK should be installed using a high torque, 1/2" variable speed drill (18V if cordless). Choose the proper length so that threads fully engage the main member or bottom piece. Bring washer head flush to wood surface or countersink head flush.

For **rafter or truss to top plate applications**, the 6" TimberLOK is easily installed at a 15-30° angle. For detailed installation instructions, including fastening requirements, please refer to our **Rafter or Truss to Top Plate technical bulletins**. These instructions are included in all box and bucket packaging as well as being available for download from our website. A design professional should be consulted for all other critical connections, to include the number and location of all fasteners to meet national and local code requirements.

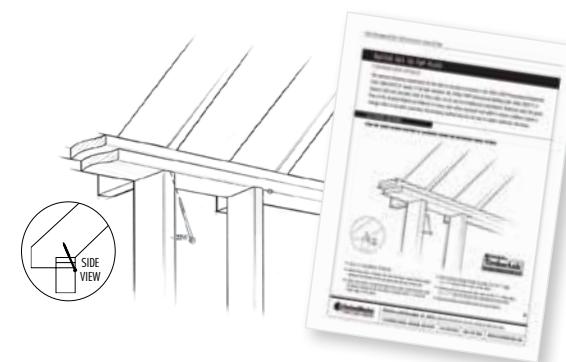
GUARANTEED CORROSION RESISTANCE

TimberLOK is guaranteed not to rust or corrode for the life of the project. The coating on this fastener has been tested in wood treatment chemicals, such as ACQ, and found to provide equivalent protection to code-approved hot-dipped galvanized coatings. TimberLOK is not recommended for use in saltwater applications (within 1,000 ft).

TimberLOK SKU Selection Guide			
LENGTH	TYPICAL APPLICATIONS	PACKAGING QTY	SKU
2 1/2"	Doubling/sistering up 2x header or carrying beams	12 pc clamshell	FMTLOK212-12
		50 pc box	FMTLOK212-50
		500 pc bucket	FMTLOK212-500
4"	Attaching 2x to 4x structures - fencing	12 pc clamshell	FMTLOK04-12
		50 pc box	FMTLOK04-50
		250 pc bucket	FMTLOK04-250
6"	Replacing hurricane ties on rafters or trusses. Joining multiple 4x timbers	12 pc clamshell	FMTLOK06-12
		50 pc box	FMTLOK06-50
		250 pc bucket	FMTLOK06-250
8"	Building up 6x landscape walls	12 pc clamshell	FMTLOK08-12
		50 pc box	FMTLOK08-50
		250 pc bucket	FMTLOK08-250
10"	Post and Beam construction	12 pc clamshell	FMTLOK10-12
		50 pc box	FMTLOK10-50
		250 pc box	FMTLOK10-250



ADDITIONAL RESOURCES



FastenMaster Technical Bulletins

Our **Rafter to Top Plate and Truss to Top Plate technical bulletins**, which include detailed installation instructions, fastening requirements and design loads, are available for download from our website.

For additional technical data, refer to pages 45 and 46 of this catalog



ask the **FastenMaster**®

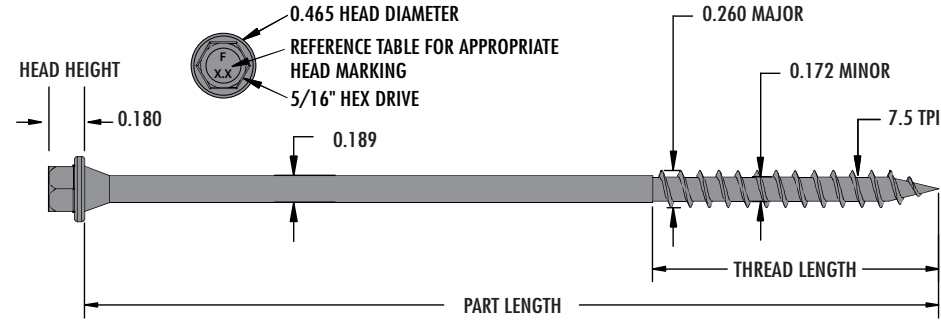
Ask the FastenMaster Installation Video

Our Ask the FastenMaster video series includes installation information for many of our products, including our TimberLOK Rafter Tail or Truss to Top Plate Connection video. These can be viewed on our website.

For technical support or to place an order: 800-518-3569 or www.FastenMaster.com

TimberLOK[®]

PRODUCT SPECIFICATION



TimberLOK Selection Guide			
Part Length	Thread Length	Head Markings	Part Number
2 1/2"	1 1/4"	F2.5	FMTLOK212
4"	2"	F4.0	FMTLOK04
6"	2"	F6.0	FMTLOK06
8"	2"	F8.0	FMTLOK08
10"	2"	F10.0	FMTLOK10

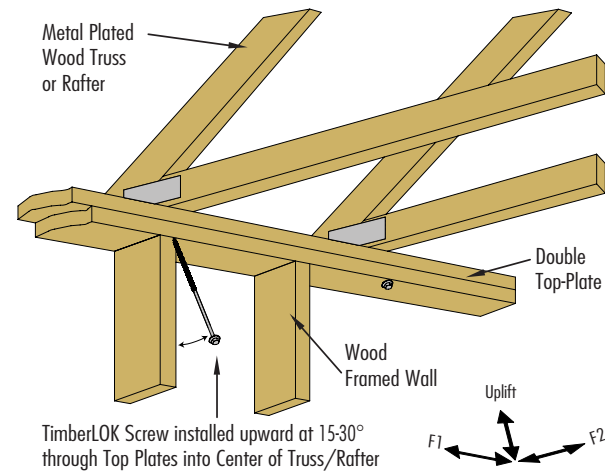
TIMBERLOK SAMPLE APPLICATIONS

Truss/Rafter to Top Plate Connection

The 6" TimberLOK[®] can be used in many cases as a replacement for hurricane ties used to resist uplift and lateral loads on trusses and rafters attached to the top plates of the wall. To verify the adequacy for your specific connection, make sure the allowable loads in **Table A** exceed the design loads on the plan or allowable loads for the connector being specified. For instructions and additional technical information, consult the **Truss and Rafter to Top Plate Technical Evaluation Report, TER No. 1105-02**, available at www.FastenMaster.com.

Table A Allowable Loads (160)								
Uplift			Shear Parallel to Wall			Shear Perpendicular to Wall		
SPF H. Fir	D. Fir	S. Pine	SPF H. Fir	D. Fir	S. Pine	SPF H. Fir	D. Fir	S. Pine
410	510	570	340	380	410	370	420	450

- Table A Footnotes**
- A standard wind load duration factor of 1.6 has been applied per NDS Table 2.3.3. Adjustments to lower this factor may be made at the engineers discretion. No further increase allowed
 - Assumes a nominal 2x truss chord installed over double top plate or 3" of solid wood
 - For applications with members of different species, use the allowable load corresponding to the lowest specific gravity
 - Tabulated loads based on ICC-ES Report ESR #1078. Additional third party system testing used to confirm values and adequacy of edge and end distances



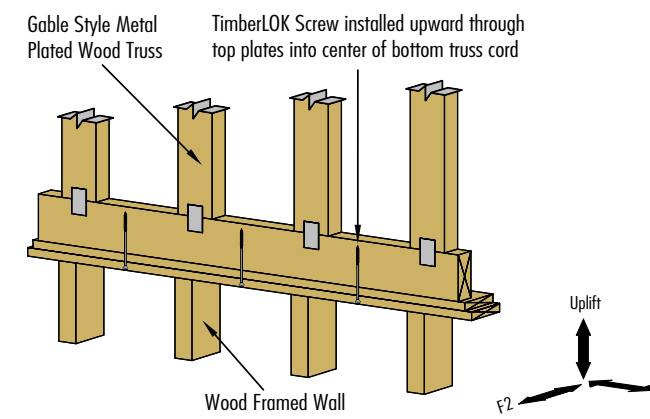
Gable Truss Connection and Drag Truss Connection

The 4" and 6" TimberLOK[®] can be used in gable and drag trusses to resist the uplift and shear forces from wind and seismic events. The current methods for making these connections include the use of angled connectors and multiple nails. In most cases, the TimberLOK fasteners can be placed at equal or greater spacing than the ties they are replacing. Refer to **Table B** for proper design of these connections. For instructions and additional technical information, consult the **Gable Truss to Top Plate Technical Evaluation Report, TER No. 1304-02**, or **Drag Strut to Wall Plate Technical Evaluation Report, TER No. 1306-01**, available at www.FastenMaster.com.

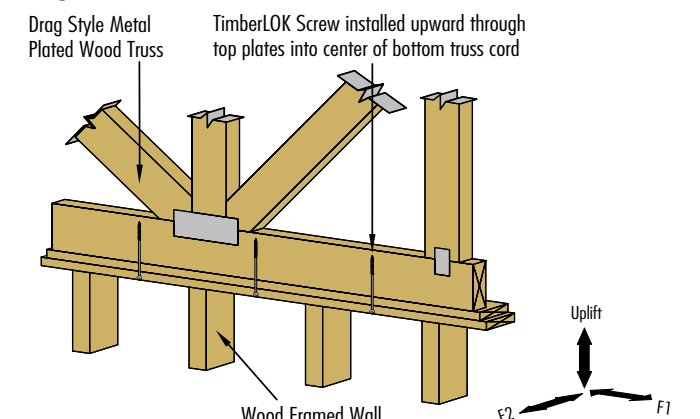
Table B Allowable Loads (160)								
Uplift			Shear Parallel to Wall			Shear Perpendicular to Wall		
SPF/H. Fir	D. Fir	S. Pine	SPF/H. Fir	D. Fir	S. Pine	SPF/H. Fir	D. Fir	S. Pine
410	510	570	370	420	420	340	380	380

- Table B Footnotes**
- A standard wind load duration factor of 1.6 has been applied per NDS Table 2.3.3. Adjustments to lower this factor may be made at the engineers discretion. No further increase allowed
 - Assumes a nominal 2x truss chord installed over 2x rim, single or double top plate
 - For applications with members of different species, use the lowest allowable load to design the connection
 - Tabulated loads based on ICC-ES Report ESR #1078. Additional third party system testing used to confirm values and adequacy of edge and end distances

Gable Truss Connection



Drag Truss Connection

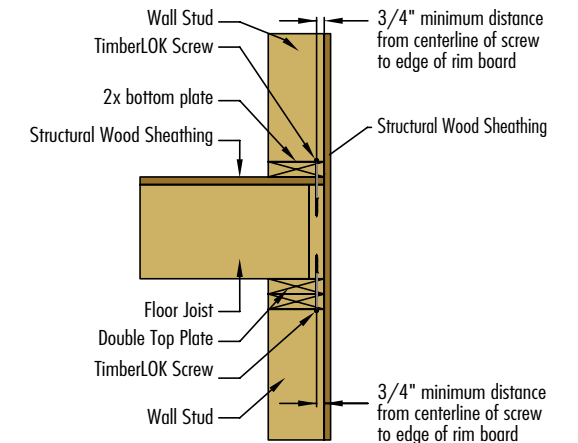


Shear Wall Connection

The 4", 6" and 8" TimberLOK[®] can be used in shear wall or portal frame construction to resist the shear forces exerted on the top and bottom wall plates to the adjacent rim. Typically, the shear being transferred between these plies can only be accomplished through the use of excessive nail patterns. The increased strength of the TimberLOK fastener, as shown in **Table C**, allows for greater connection strength with significantly less fasteners. For instructions and additional technical information, consult the **Wall to Rim Joist Technical Evaluation Report, TER No. 1306-05**, available at www.FastenMaster.com.

Table C Allowable Loads (160)			
Shear Parallel to Wall		Shear Perpendicular to Wall	
SPF/H. Fir	D. Fir/S. Pine	SPF/H. Fir	D. Fir/S. Pine
340	380	370	420

- Table C Footnotes**
- A standard wind load duration factor of 1.6 has been applied per NDS Table 2.3.3. Adjustments to lower this factor may be made at the engineers discretion. No further increase allowed
 - Assumes full thread penetration into wood rim board with a minimum 2" nominal thickness
 - Tabulated loads based on ICC-ES Report ESR #1078. Additional testing to ASTM D-1761 used to confirm adequate minimum edge and end distances
 - For applications with members of different species, use the lowest allowable load to design the connection



For technical support or to place an order: 800-518-3569 or www.FastenMaster.com

REFERENCE CHARTS

The following tables are taken from ICC-ES ESR-1078 Evaluation Report. These can be used for reference when designing connections other than those described in the preceding pages. Please refer to the full report for additional information including conditions of use and minimum edge and end distances. This can be found at www.FastenMaster.com or www.icc-es.org.

Table 1 Reference Withdrawal Design Values (W) ^{1,2,3} [Reference withdrawal design values (W) are in pounds per inch of thread penetration into side grain of main member]							
Fastener	Thread Length, L ⁴ (inches)	W (lbf./in.) for Specific Gravities of:					
		0.57	0.55	0.50	0.46	0.43	0.42
OlyLog/TimberLOK	1.25 or 2.0	270	260	220	200	180	170
HeadLOK	2.0	290	270	230	200	180	170
LedgerLOK/LogHog	2.0 or 3.0	330	310	270	240	220	210
TrussLOK	1 1/2	—	—	180	—	—	—
ThruLOK ⁽⁶⁾	NA	1140	1060	900	780	700	680

For SI: 1 inch = 25.4 mm, 1 lbf/in = 175 N/m.

¹Tabulated reference withdrawal design values, W, apply to fasteners driven into the side grain of the main member, such that the screws are oriented perpendicular to the grain and loaded in direct withdrawal.

²Reference withdrawal design values must be multiplied by all applicable adjustment factors, in accordance with Section 4.1.

³Reference withdrawal design values are to be multiplied by the length of thread penetration into the main member, but must not exceed the head pull-through design values given in Table 2. Threaded length includes the tapered tip.

⁴See Tables 1A through 1F for thread lengths corresponding to specific fastener model numbers.

⁵The ThruLOK must be used with the ThruLOK washer and nut (supplied with the fastener). The nut must be installed such that it is snug against the main member, and at least 1/2" of the threaded portion of the shank (not including the tip) is within the nut.

⁶Tabulated withdrawal values for the ThruLOK are based on the head pull-through design values given in Table 2, as these values will govern designs in which the screw is subject to axial tension, where the ThruLOK is properly installed with the ThruLOK washer and nut (see footnote 5 above).

Table 2 Reference Head Pull-Through Design Values (P) ^{1,2}							
Fastener	Minimum Side Member Thickness (inches)	P (lbf) for Specific Gravities of:					
		0.57	0.55	0.50	0.46	0.43	0.42
OlyLog/TimberLOK	1.5	220	200	160	130	110	110
HeadLOK	1.5	630	600	520	460	410	400
LedgerLOK/LogHog	1.5	320	290	240	200	180	170
TrussLOK	1.5	—	—	260	—	—	—
ThruLOK ⁽³⁾	1.5	1140	1060	900	780	700	680

For SI: 1 inch = 25.4 mm, 1 pound = 4.448 kPa.

¹Reference head pull-through design values, P, must be multiplied by all applicable adjustment factors, in accordance with Section 4.1

²Design values apply to connections with minimum side member thicknesses, t, as given above

³The ThruLOK must be used with the ThruLOK washer and nut (supplied with the fastener). The nut must be installed such that it is snug against the main member, and at least 1/2" of the threaded portion of the shank (not including the tip) is within the nut

Table 3 Reference Lateral Design Values (Z) for Single Shear (Two Member) Wood-to-Wood Connections Loaded Parallel (Z) or Perpendicular (Z _⊥) to the Grain ^{1,2}									
Fastener		Minimum Side Member Thickness ³ , t _s (inches)	Minimum Main Member Penetration ⁴ , p (inches)	Z (lbf) for Minimum Specific Gravities of:					
				0.50		0.46		0.42	
Designation	Length (inches)			Z	Z _⊥	Z	Z _⊥	Z	Z _⊥
OlyLog/TimberLOK	2 1/2	1 1/2	1	240	220	220	200	200	180
	4 & longer	1 1/2	2 1/2	280	260	260	230	240	210
	6 & longer	2 1/2	3 1/2	290	270	270	250	250	230
	8 & longer	3	5	290	270	260	250	240	230
HeadLOK	2 7/8	1 1/2	1 3/8	240	210	220	180	210	150
	4 1/2	1 1/2	3	280	260	260	240	250	220
	6 & longer	1 1/2	4 1/2	290	270	270	250	250	230
	6 & longer	2 1/2	3 1/2	300	280	280	260	270	240
	8 & longer	3	5	290	280	280	260	260	230
LedgerLOK	3 5/8	1 1/2	1 1/2	—	260	—	220	—	220
	3 5/8	1 1/2	2 1/8	310	310	290	280	270	250
	5	1 1/2	3 1/2	320	300	300	280	280	260
LogHog	9 & longer	6	3	310	300	290	280	270	260
TrussLOK	3 3/8	1 3/4	1 5/8	320	290	300	270	280	260
	5	1 3/4	3 1/4	330	300	310	270	290	250
	6 3/4	1 3/4	5	330	310	310	290	290	270
Fastener		Minimum Side Member Thickness ³ , t _s (inches)	Minimum Main Member Penetration ⁴ , p (inches)	Z (lbf) for Minimum Specific Gravities of:					
				0.5		0.46		0.42	
Designation	Length (inches)			Z	Z _⊥	Z	Z _⊥	Z	Z _⊥
ThruLOK ⁽⁵⁾	6 1/4	1 1/2	3 1/4 4 1/4	350	320	320	300	300	270
	7	1 1/2	4 5	350	330	320	300	300	270
	8	1 1/2	3 1/2 4 1/2	350	330	320	300	300	270

For SI: 1 inch = 25.4 mm, 1 pound = 4.448kPa.

¹Tabulated reference lateral design values, Z, apply to single shear (two-member) connections with wood main and side members having specific gravity as shown, in which the screw is oriented perpendicular to the grain and loaded laterally either parallel or perpendicular to the grain. For connections in which the main and side members have different specific gravities, use the lower of the two. Gaps are not permitted between the main and side members.

²Values must be multiplied by all applicable adjustment factors, in accordance with Section 4.1.

³Side members with thicknesses greater than the tabulated minimum side member thickness may be used, provided the corresponding tabulated minimum main member penetration is still achieved for the given screw length.

⁴Minimum main member penetration is the minimum length of the screw (including threaded, unthreaded and tip length) that must be embedded within the main member.

⁵The ThruLOK must be installed with the washer and nut, and must penetrate through the opposite face of the main member a sufficient distance to allow the nut to be tightened snugly against the main member, with at least 1/2", and no more than 1 1/2" of the ThruLOK screw engaged within the nut.

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