

Multiple Member Connections



TrussLok-Z® - Multiple girder trusses & dimensional lumber

Report
CBP0603-1

TrussLok-Z® is for use with multiple girder trusses & dimensional lumber.

ADVANTAGES

FASTER & EASIER

- Self-drilling screws that require **no pre-drilling**
- Zip right in
- Single sided installation - up to four plies

STRONGER

- **Higher lateral capacity** than nails or screws of similar diameter

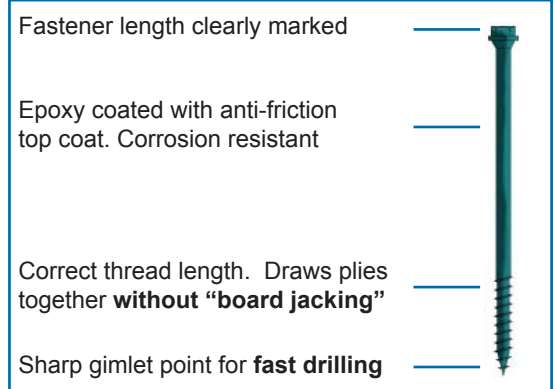
MORE DURABLE

- Manufactured from case-hardened steel with multi-layer epoxy coating to protect against corrosion

TrussLok-Z® fasteners are available in three lengths:

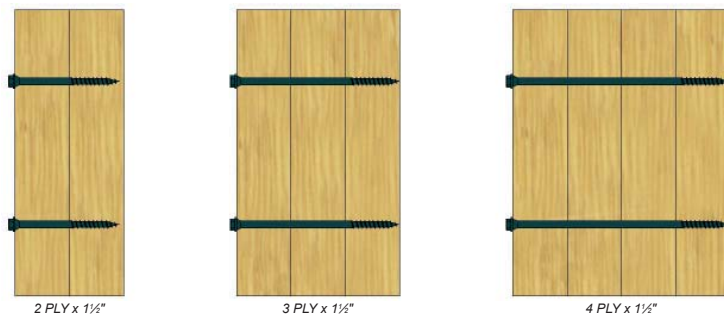
- 2 7/8" (73mm) for 2 ply 1 1/2" beam connections
- 4 1/2" (114mm) for 3 ply 1 1/2" beam connections
- 6" (152mm) for 4 ply 1 1/2" beam connections

The fastener length is marked on the head for positive identification once installed.

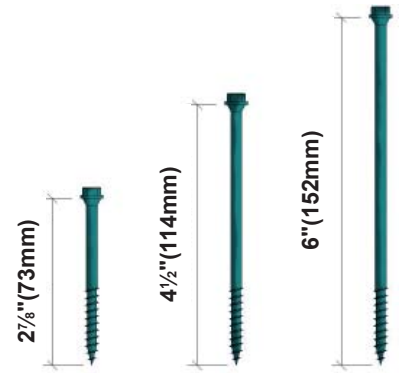


Typical connection detail of pairs of TrussLok-Z® fasteners at 24" o.c. in 2-ply LVL

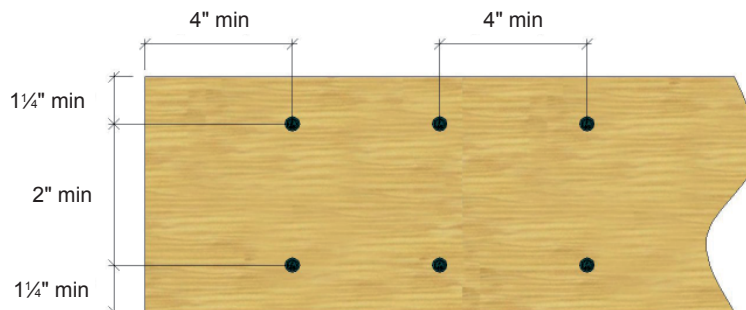
Head Style		0.37" (9.5mm) Hex Drive
Diameters	Shank	0.23" (5.8mm)
	Outer Thread	0.30" (7.7mm)
	Inner Thread	0.20" (5.1mm)
Thread Length		1.26" (32mm)



TrussLok-Z® in situ



TrussLok-Z® is available in 3 lengths



Toll Free 1-866-867-8867

Multiple Member Connections



TrussLok® - Multiple LVL, PSL or LSL

Multiple 1 3/4" Member Connections For Side-Loaded Beams

TrussLok® for use with multiple LVL, PSL or LSL members

Factored Uniform Load Resistance For Side-Loaded Beams													
# of 1 3/4" Members	Screw Size	2 rows - 24" o.c.		2 rows 19.2" o.c.		2 rows - 16" o.c.		3 rows - 24" o.c.		3 rows 19.2" o.c.		3 rows - 16" o.c.	
		kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF
2	3 5/8" TrussLok®	7.6	521	9.5	651	11.4	781	11.4	781	14.2	976	17.1	1171
3	5" TrussLok®	5.7	390	7.1	488	8.5	586	8.5	586	10.7	732	12.8	878
4	6 3/4" TrussLok®	5.1	347	6.3	434	7.6	521	7.6	521	9.5	651	11.4	781

Notes:

1. Fastener values based on CSA 086 and Derivation of Canadian Design Properties for TrussLok®, TrussLok-Z®, and LedgerLok® Screws report.
2. Use specific gravity of 0.42 when designing lateral connections.
3. Values are listed for Kd = 1.0.
4. Minimum end distance is 4", minimum edge distance is 1 1/2".
5. TrussLok® screw minimum spacing in a row = 4" o.c.
6. 24" o.c connection value may be doubled for 12" o.c spacing.
7. Consideration must be given to 7" wide beams that are side loaded to minimize rotation.
8. All TrussLok® screws may be installed from one side of multiple ply laminated beams.
9. Three (3) row connection allowed for 9 1/4" and deeper beams, middle row to be on centreline of beam.
10. For top loaded beams a minimum of 2 rows @ 24" o.c for beams up to 18" deep, for beams deeper than 18" use 3 rows @ 24" o.c.
11. Load Resistances given above for side loading lamination only, verify adequacy of beam in appropriate allowable load tables.

TrussLok-Z® - Multiple girder trusses & dimensional lumber

Multiple 1 1/2" D.Fir Member Connections For Side-Loaded Beams

TrussLok-Z® for use with multiple girder trusses & dimensional lumber

Factored Uniform Load Resistance For Side-Loaded Beams													
# of 1 1/2" D.Fir Members	Screw Size	2 rows - 24" o.c.		2 rows 16" o.c.		3 rows - 24" o.c.		3 rows - 16" o.c.		4 rows 24" o.c.		4 rows - 16" o.c.	
		kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF
2	2 1/8" TrussLok-Z®	7.9	542	11.9	813	11.9	813	17.8	1219	15.8	1084	23.7	1625
3	4 1/2" TrussLok-Z®	5.9	406	8.9	610	8.9	610	13.3	914	11.9	813	17.8	1219
4	6" TrussLok-Z®	5.3	361	7.9	542	7.9	542	11.9	813	10.5	722	15.8	1084

Multiple 1 1/2" SPF Member Connections For Side-Loaded Beams

TrussLok-Z® for use with multiple girder trusses & dimensional lumber

Factored Uniform Load Resistance For Side-Loaded Beams													
# of 1 1/2" SPF Members	Screw Size	2 rows - 24" o.c.		2 rows 16" o.c.		3 rows - 24" o.c.		3 rows - 16" o.c.		4 rows 24" o.c.		4 rows - 16" o.c.	
		kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF
2	2 1/8" TrussLok-Z®	6.5	446	9.8	669	9.8	669	14.7	1004	13.0	892	19.5	1339
3	4 1/2" TrussLok-Z®	4.9	335	7.3	502	7.3	502	11.0	753	9.8	669	14.7	1004
4	6" TrussLok-Z®	4.3	297	6.5	446	6.5	446	9.8	669	8.7	595	13.0	892

Notes:

1. Fastener values based on CSA 086 and Derivation of Canadian Design Properties for TrussLok®, TrussLok-Z®, and LedgerLok® Screws report.
2. Use specific gravity of 0.49 when designing lateral connections for D.Fir member connections and 0.42 for SPF member connections
3. Values are listed for Kd = 1.0.
4. Minimum end distance is 4", minimum edge distance is 1 1/2".
5. TrussLok-Z® screw minimum spacing in a row = 4" o.c.
6. 24" o.c. connection value may be doubled for 12" o.c spacing and quadrupled for 6" o.c spacing.
7. Consideration must be given to 6" wide beams that are side loaded to minimize rotation.
8. All TrussLok-Z® screws may be installed from one side of multiple ply laminated beams.
9. Two (2) row connection allowed for 2x4 and deeper beams, three (3) row connection allowed for 2x8 and deeper beams, middle row to be on centreline of beam, four (4) row connection allowed for 2x10 and deeper beams, middle rows spaced evenly between outer rows.
10. For top loaded beams a minimum of 2 rows @ 24" o.c. for beams up to 2x12.
11. Load Resistances given above for side loading lamination only, verify adequacy of beam in appropriate allowable load tables.



Multiple Member Connections



LedgerLok® - For Side-Loaded Ledgers

Side-loaded Ledger to SPF Studs

LedgerLok® for use with pressure treated dimensional lumber ledgers

Factored Uniform Load Resistance For Attachment of Ledger												
Screw Size	2 rows - 24" o.c.		2 rows 16" o.c.		3 rows - 24" o.c.		3 rows - 16" o.c.		4 rows 24" o.c.		4 rows - 16" o.c.	
	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF	kN/m	PLF
3½" LedgerLok®	2.7	187	4.1	281	4.1	281	6.1	421	5.5	374	8.2	561
5" LedgerLok®	3.0	206	4.5	309	4.5	309	6.8	463	6.0	412	9.0	618

Notes:

1. Fastener values based on CSA 086 and Derivation of Canadian Design Properties for TrussLok®, TrussLok-Z®, and LedgerLok® Screws report.
2. Use specific gravity of 0.42 when designing lateral connections.
3. Values are listed for Kd = 1.0.
4. Minimum end distance is 4", minimum edge distance is 1½".
5. LedgerLok® screw minimum spacing in a row = 4" o.c.
6. 24" o.c. connection value may be doubled for 12" o.c. spacing.
7. Two (2) row connection allowed for 2x4 and deeper ledgers, three (3) row connection allowed for 2x8 and deeper ledgers, middle row to be on centreline of beam, four (4) row connection allowed for 2x10 and deeper beams, middle rows spaced evenly between outer rows.

Basic Withdrawal Resistance (N/mm) of Lumber Species Groups for the FastenMaster range

Fastener	Douglas Fir (G=0.49)		Hem Fir (G=0.46)		Spruce-Pine-Fir (G=0.42)		Northern Species (G=0.35)	
	N/mm	lbs/in	N/mm	lbs/in	N/mm	lbs/in	N/mm	lbs/in
TrussLok®	82	468	73	416	62	354	45	256
TrussLok-Z®	107	610	97	553	85	485	64	365
LedgerLok®	113	645	103	588	91	519	72	411


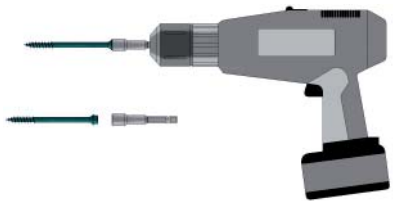
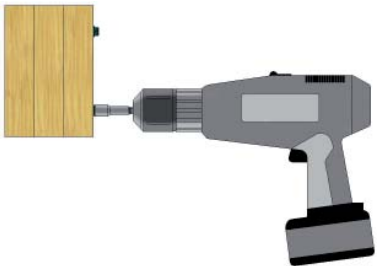
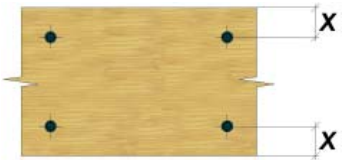
Notes on the FastenMaster range:

1. For applications outside the scope of those specified please contact Cullen Technical Department
2. To achieve stated figures always follow correct application and installation practice
3. FastenMaster®, TrussLok-Z®, TrussLok® & LedgerLok® are registered trademarks of OMG Inc.
4. Further information regarding FastenMaster is available on separate datasheets - Please contact Cullen Technical Department.

Multiple Member Connections



Installation

Stage 1	Stage 2
 <p>Select the correct FastenMaster fastener.</p> <p>TRUSSLOK® TRUSSLOK-Z® LEDGERLOK®</p> <p>TrussLok® - Multiple LVL, PSL & LSL members TrussLok-Z® - Multiple girder trusses & dimensional lumber LedgerLok® - For side-loaded ledgers</p>	 <p>Install using at least an 18V cordless drill (a hex driver bit is included in every box).</p> <p>No pre-drilling required</p>
Stage 3	Stage 4
 <p>Bring the underside of washer head flush with the timber surface.</p> <p>Do not countersink</p>	 <p>Always maintain the required minimum edge distance & spacing.</p> <p>These values vary</p>

TO ORDER FASTENMASTER:

TrussLok® for multiple LVL, PSL & LSL

Product code	Product Description	Box Quantity
FMTSL338-50	TrussLok fastener 3½"	50
FMTSL005-50	TrussLok fastener 5"	50
FMTSL634-50	TrussLok fastener 6¾"	50
FMTSL338B-250	TrussLok fastener 3½"	250
FMTSL005B-250	TrussLok fastener 5"	250
FMTSL634B-250	TrussLok fastener 6¾"	250

TrussLok-Z® for multiple girder trusses & dimensional lumber

Product code	Product Description	Box Quantity
FMTSZ278-50	TrussLok-Z fastener 2½"	50
FMTSZ412-50	TrussLok-Z fastener 4½"	50
FMTSZ006-50	TrussLok-Z fastener 6"	50
FMTSZ278B-500	TrussLok-Z fastener 2½"	500
FMTSZ412B-250	TrussLok-Z fastener 4½"	250
FMTSZ006B-250	TrussLok-Z fastener 6"	250

LedgerLok® for multiple Glulam & dimensional lumber

Product code	Product Description	Box Quantity
FMLL358-50	LedgerLok fastener 3¾"	50
FMLL005-50	LedgerLok fastener 5"	50
FMLL358-250	LedgerLok fastener 3¾"	250
FMLL005-250	LedgerLok fastener 5"	250



HEX DRIVER
BIT SUPPLIED WITH EVERY BOX
Additional drivers available on request